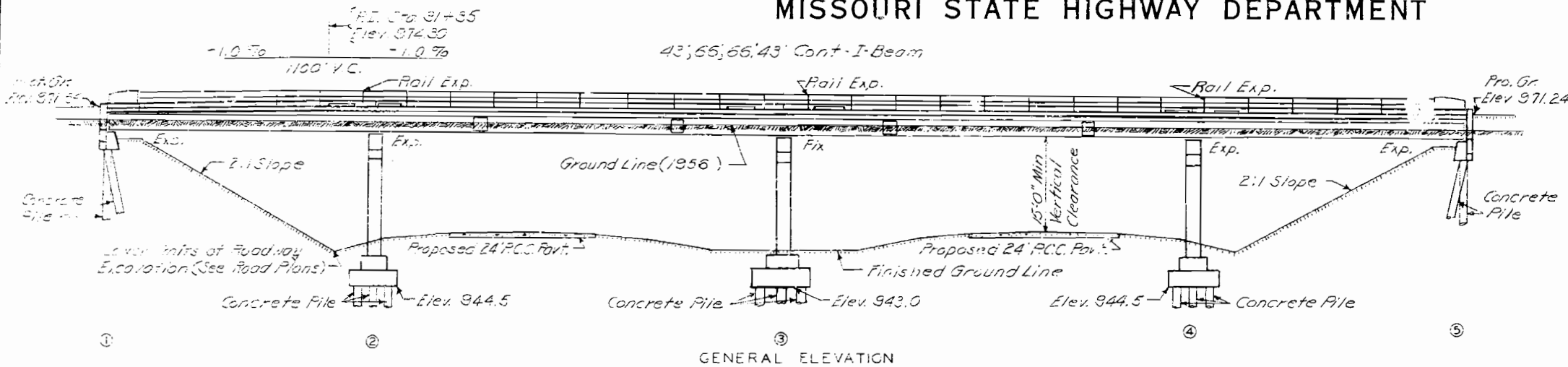
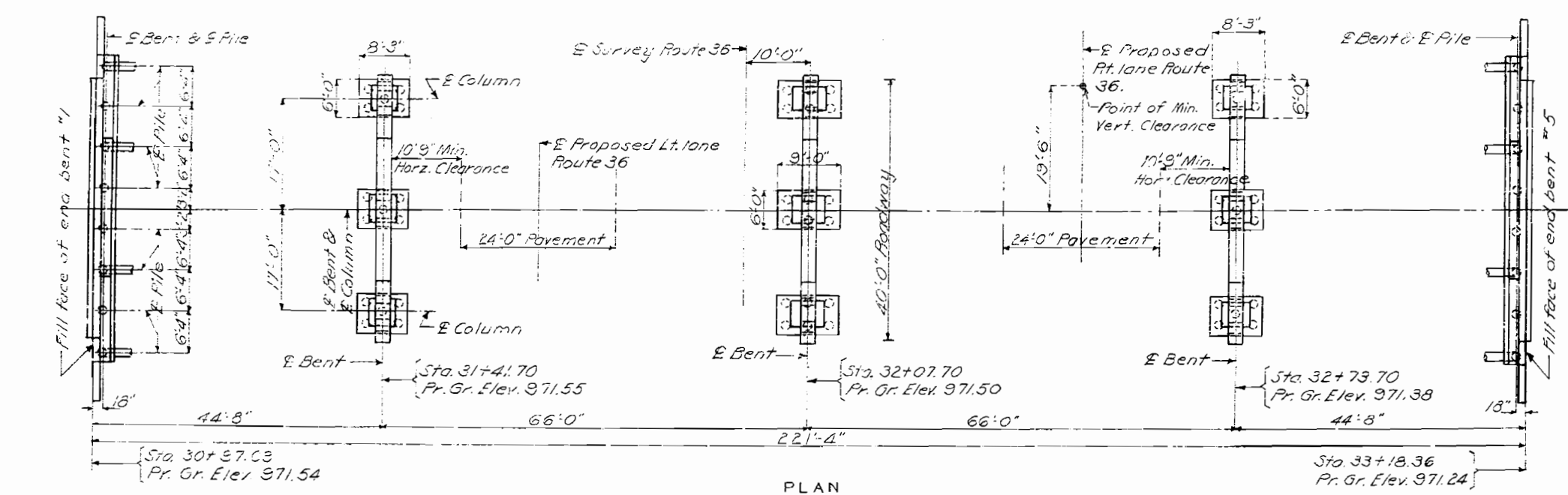


MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	8	



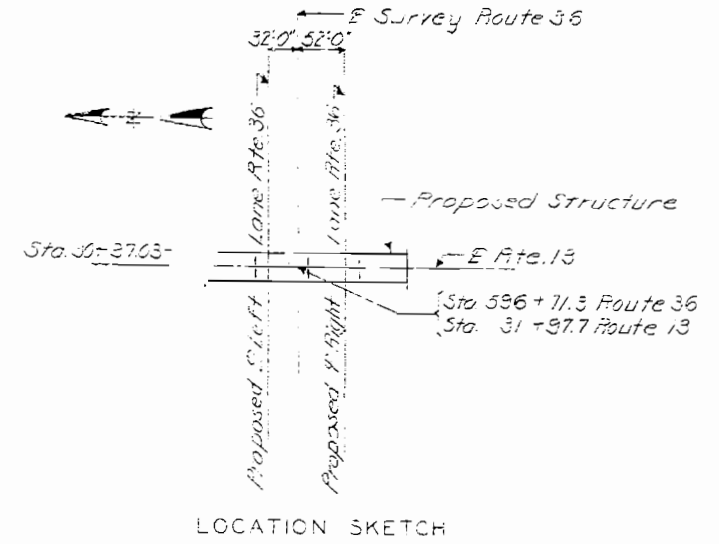
Note: All piling shall be cast-in-place concrete pile in accordance with Special Provisions for concrete pile. Estimated quantities shown on plans are based on the following lengths: 16 @ 45'-0" and 43 @ 30'-0" these lengths are approximate only. Proper lengths to give required bearing and penetration are to be determined by the Contractor.  
All piling shall be driven to sustain a load of at least 30 tons per pile and with tips to at least Elev. 935.0 at Bents No. 1 & 5.  
All piling shall be driven with a steam hammer.



GENERAL NOTES:  
Design Specification A.S.H.O. 1953  
Loading H-20-44 (Future wearing surface 15' 1/2")  
Concrete Stress 1,200 psi  
Reinforcing Steel Stress 20,000 psi  
Structural Steel Stress 18,000 psi  
Concrete for superstructure shall be class "B1" air-entrained (See Special Provisions)  
Concrete for substructure shall be class "B" air-entrained. If the contractor desires he may use Class "B1" in lieu of Class "B" for concrete in substructure with payment on the basis of Class "B" concrete.  
Rivets 3/4" dia; Holes 5/8" dia except as noted.  
Field connections shall be riveted or if the Contractor desires he may use high tensile steel bolts with carburized washers in place of rivets except for connections noted in handrail details.  
If high tensile steel bolts are used they shall be placed in such a manner that the nuts are in the least exposed position.  
Paint: Shop, none; field contact surfaces of bolted field connection except where high tensile bolts are used, one coat of red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by Contractor, except as noted for pile shells. Red lead required shall be furnished by Contractor. Payment for cleaning and painting such surfaces will be included in unit price bid for Fabricated Structural Steel.  
Where Joint Filler is specified on the plans it shall conform with the requirements for Gray Rubber Compounds Joints as given in Section 59-22B of the Standard Specifications.  
Steel shells for cast-in-place piles shall be painted as specified for steel piles in Section 22-30 of the Standard Specifications.  
Qualification of welding operators will be required.

Item	ESTIMATED QUANTITIES		
	Substr.	Superstr.	Total
Class I Excavation for Structure	Cu. Yds. 330		330
Class "B" Concrete	Cu. Yds. 174.9		174.9
Class "B1" Concrete	Cu. Yds.	256.6	256.6
Reinforcing Steel	Lbs. 19,890	70,880	90,770
* Fabricated Structural Steel	Lbs.	233,660	233,660
Gray Iron Alloy Castings	Lbs.	1,150	1,150
Concrete Piles in Place	Lin. Ft. 2,160		2,160
Steel Castings	Lbs.	4,980	4,980

Note: All excavation for bridge will be paid for as Class I Excavation for Structure.  
\* Final pay weight for Fabricated Structural Steel will be based on using field rivets except for bolted connections specified for handrail.  
Estimated Quantities of Class I Excavation for structure includes only amount of excavation below Roadway Excavation (See Special Provision)



Permits must be obtained for all truck loads over legal length. Items of material which can not be transported by truck with overall length less than 75'-0" must be shipped by rail to the specified shipping point.  
B.M. Elev. 971.02 40' Lt. 2 Nails in 18" Catalpa Stump  
Sta. 596-45 U.S.G.S. Datum (1929 Adj)

BRIDGE OVER ROUTE 36  
STATE ROAD FROM HAMILTON SOUTH  
ABOUT 0.5 MILE S. OF HAMILTON  
PROJECT NO. F-335 (14) (RTE 13) STA. 30+97.03  
CALDWELL COUNTY  
SUBMITTED BY J.A. Williams DATE 12-13-1957  
APPROVED BY Roy M. Whitton DATE 12-13-1957

Drawn Aug 1957 by O.J.S.  
Checked/Mex 1957 by D.E.

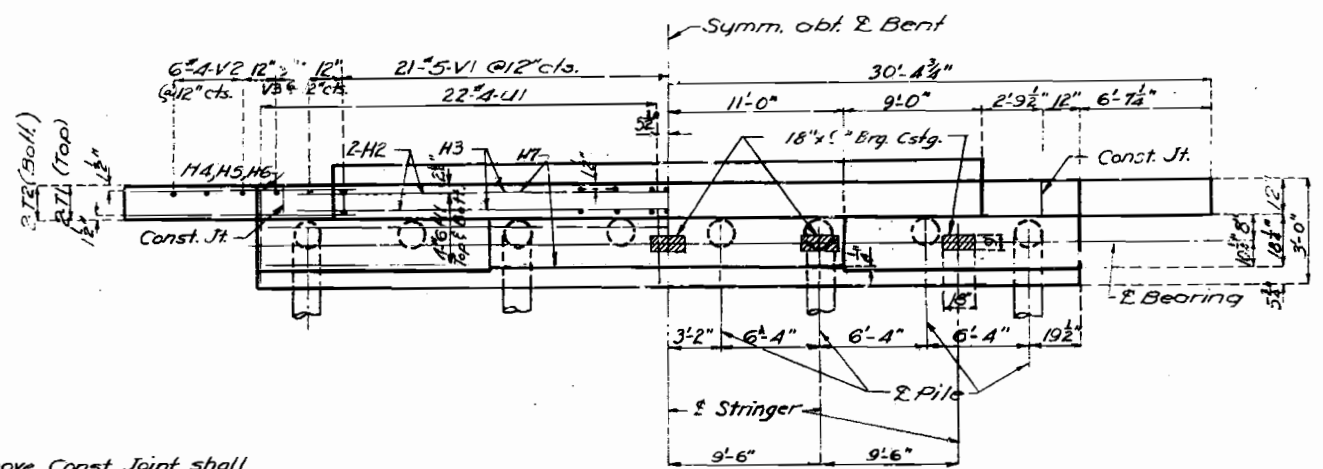
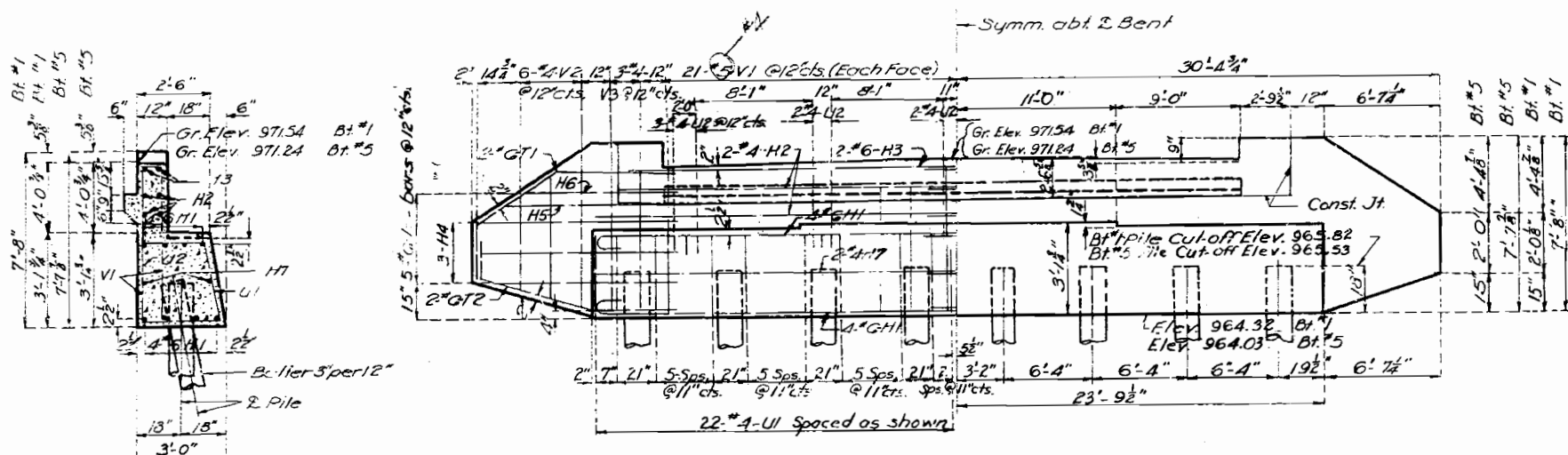
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 7

ST. G. HORS  
A-10

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		55	2	



DETAILS OF END BENT NO. 1 & NO. 5

Note: Backwall above Const. Joint shall not be poured, until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.

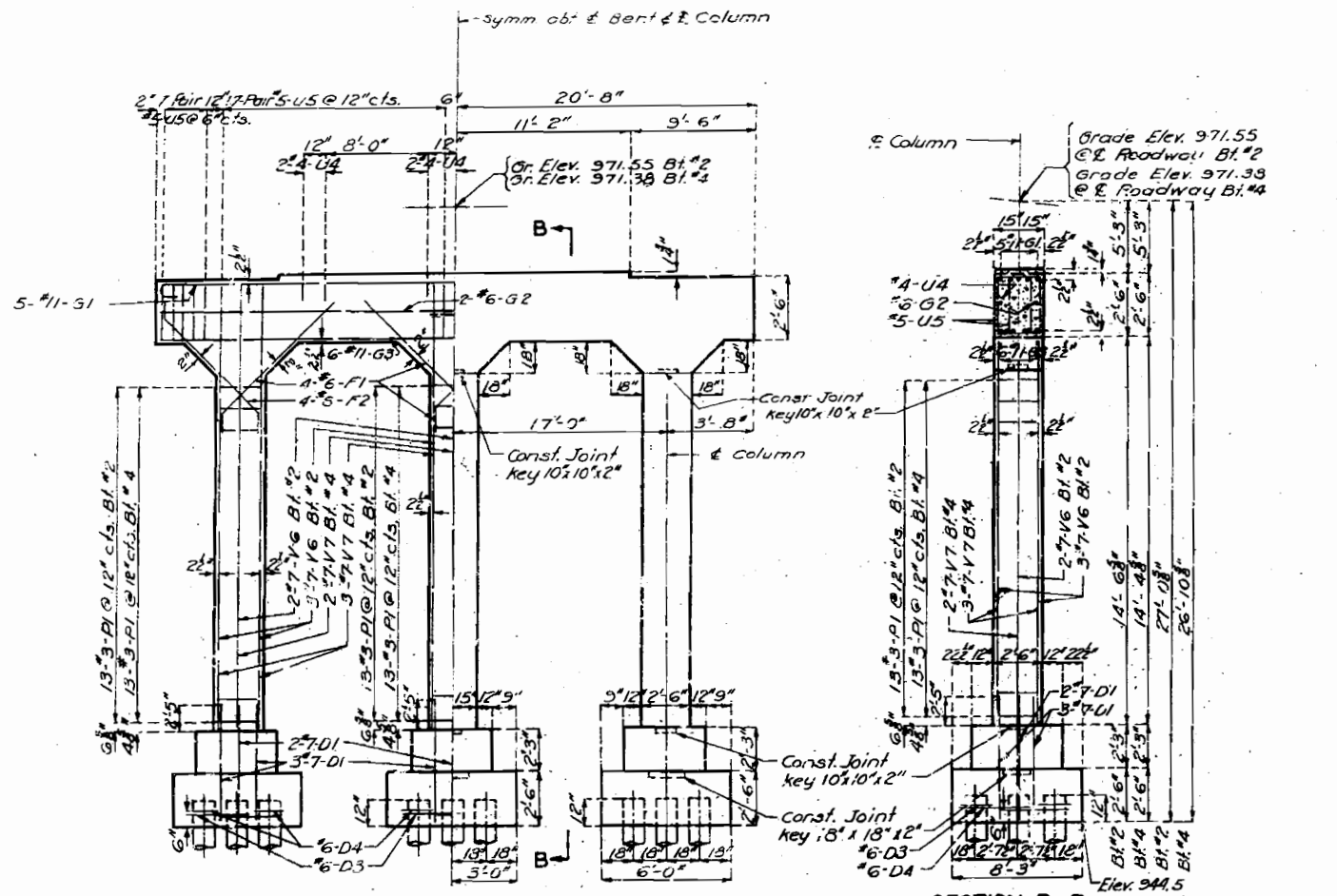
Note: Backwall above Const. Joint shall not be poured, until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.

COMPLETE BILL OF REINFORCING STEEL										
No.	Size	Length	Mark	Location	Cutting Diagrams & Bending Sketches	No.	Size	Length	Mark	Location
<b>End Bents No. 1 &amp; 5</b>										
32	#6	25'-9"	H1	Beam		6A	#5	32'-9"	S1	Slab
16	#4	23'-9"	H2	Backwall		17A	#5	16'-0"	S2	"
8	#6	23'-9"	H3	Backwall		87A	#5	22'-6"	S3	"
12	#6	8'-6"	H4	Wing		87B	#5	24'-3"	S4	"
4	#6	6'-9"	H5	"		40	#5	3'-0"	S5	"
4	#6	5'-3"	H6	"		20	#5	3'-9"	R3	End Post
8	#4	24'-3"	H7	Beam		20	#5	4'-3"	C1	Curb
8	#6	12'-6"	T1	Wing		24	#5	22'-6"	C5	"
8	#6	10'-6"	T2	"		24	#5	33'-9"	C3	"
88	#4	11'-3"	U1	Beam		4	#5	6'-0"	C4	"
26	#4	3'-3"	U2	"	32	#4	3'-9"	R1	End Post	
62	#4	6'-6"	V1	Backwall	20	#5	6'-6"	R2	End Post	
12	#4	10'-0"	V2	Wing	388	#5	3'-6"	C2	Curb	
12	#4	7'-3"	V3	Backwall						
20	#2	19'-9"	W1	Beam						
<b>Int. Bents No. 2 &amp; 4</b>										
48	#7	7'-0"	D1	Footing						
24	#6	7'-9"	D3	"						
24	#6	9'-9"	O4	"						
32	#6	8'-3"	F1	Col. Haunch						
16	#6	8'-3"	F2	"						
10	#11	43'-6"	G1	Beam						
8	#6	21'-6"	G2	"						
12	#11	41'-0"	G3	"						
18	#3	9'-9"	P1	Column						
192	#5	8'-0"	U5	Beam						
14	#4	3'-3"	U4	"						
24	#7	16'-9"	V6	Col. Bent #2						
24	#7	16'-6"	V7	" #4						
20	#2	19'-9"	W1	Beam						
<b>Int. Bent No. 3</b>										
24	#7	7'-0"	D1	Footing						
16	#6	7'-9"	D3	"						
12	#6	10'-9"	D5	"						
16	#6	8'-3"	F1	Col. Haunch						
8	#6	8'-3"	F2	"						
5	#11	43'-6"	G1	Beam						
4	#6	21'-6"	G2	"						
7	#10	41'-0"	G4	"						
42	#3	9'-9"	P1	Column						
96	#5	8'-6"	U3	Beam						
7	#4	3'-3"	U4	"						
24	#7	17'-9"	V5	Column						
10	#2	3'-9"	W1	Beam						

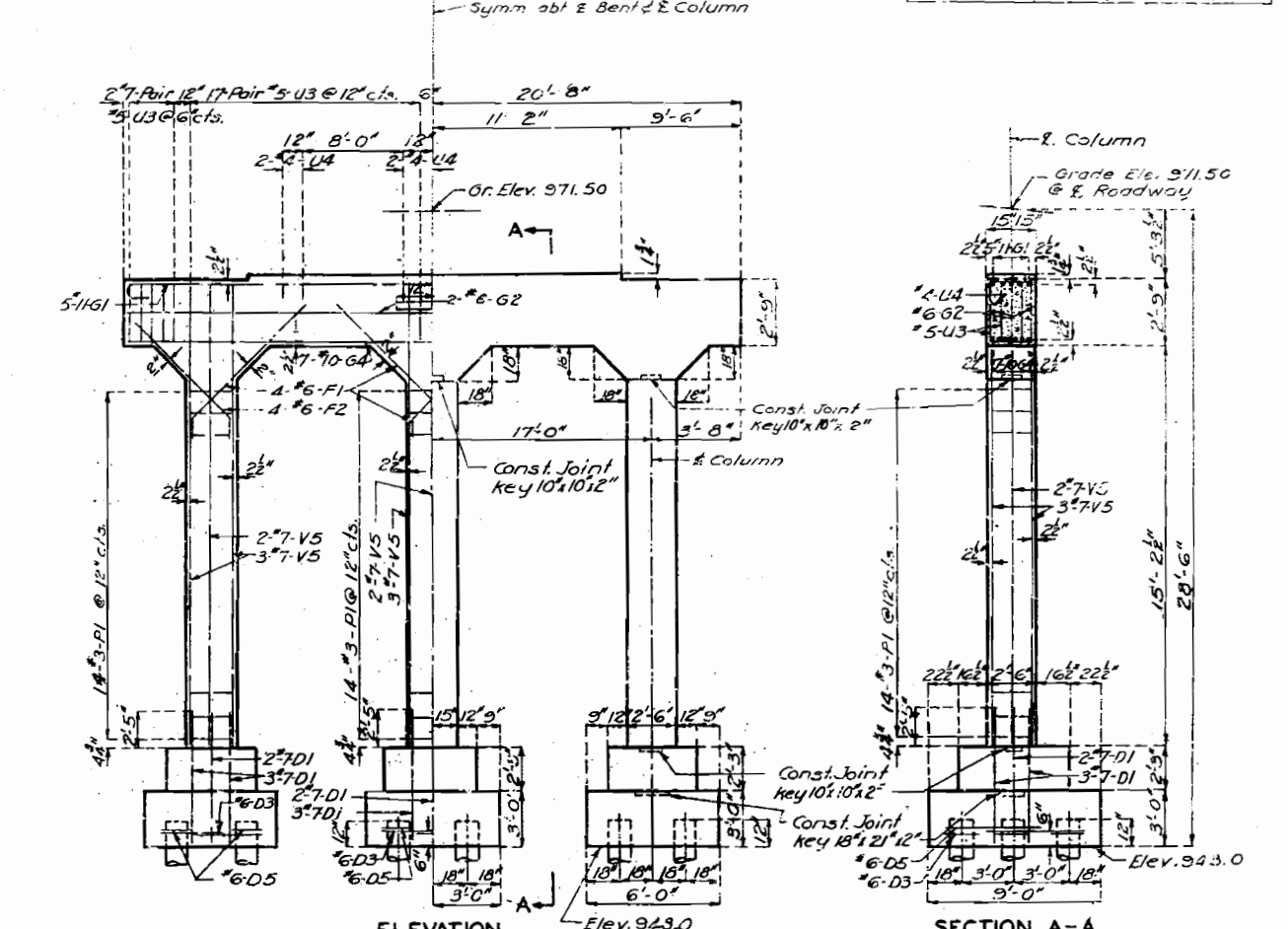
BRIDGE OVER ROUTE 36  
 STATE ROAD FROM HAMILTON, SOUTH  
 ABOUT 0.5 MILE S. OF HAMILTON  
 PROJECT NO. F-335 (14) (RTE. 13) STA. 30 + 97.03  
 CALDWELL COUNTY

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO			3	7



ELEVATION  
SECTION B-B  
PLAN  
DETAILS OF INTERMEDIATE BENTS NO. 2 & 4



ELEVATION  
SECTION A-A  
PLAN  
DETAILS OF INTERMEDIATE BENT NO. 3

BRIDGE OVER ROUTE 36  
STATE ROAD FROM HAMILTON SOUTH  
ABOUT 0.5 MILE S. OF HAMILTON  
PROJECT NO. F-335 (14) (RTE. 13) STA. 30+97.03  
CALDWELL COUNTY

Assembled AUG. 1957 by O.J.S. & J.H.K.  
Checked MAR. 1957 by D.B.

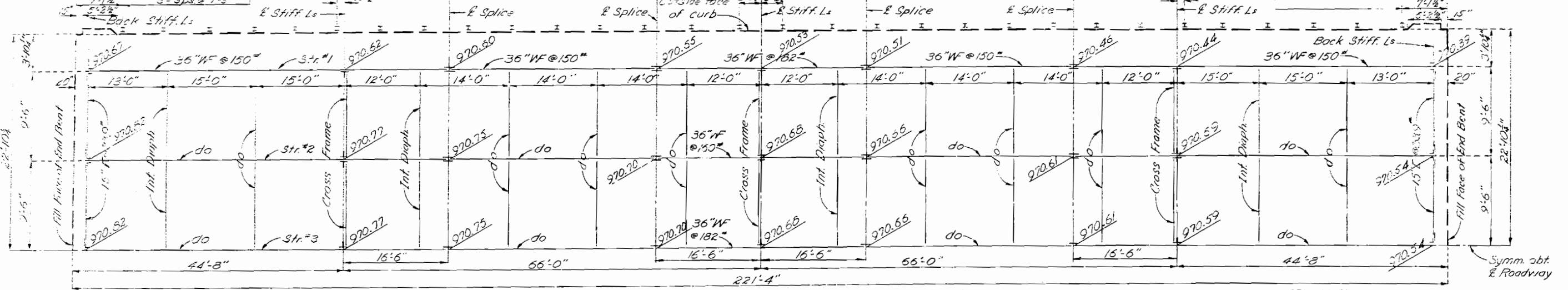
Note: This drawing is not to scale. Follow dimensions.

Sheet No 3 of 7

MISSOURI STATE HIGHWAY DEPARTMENT

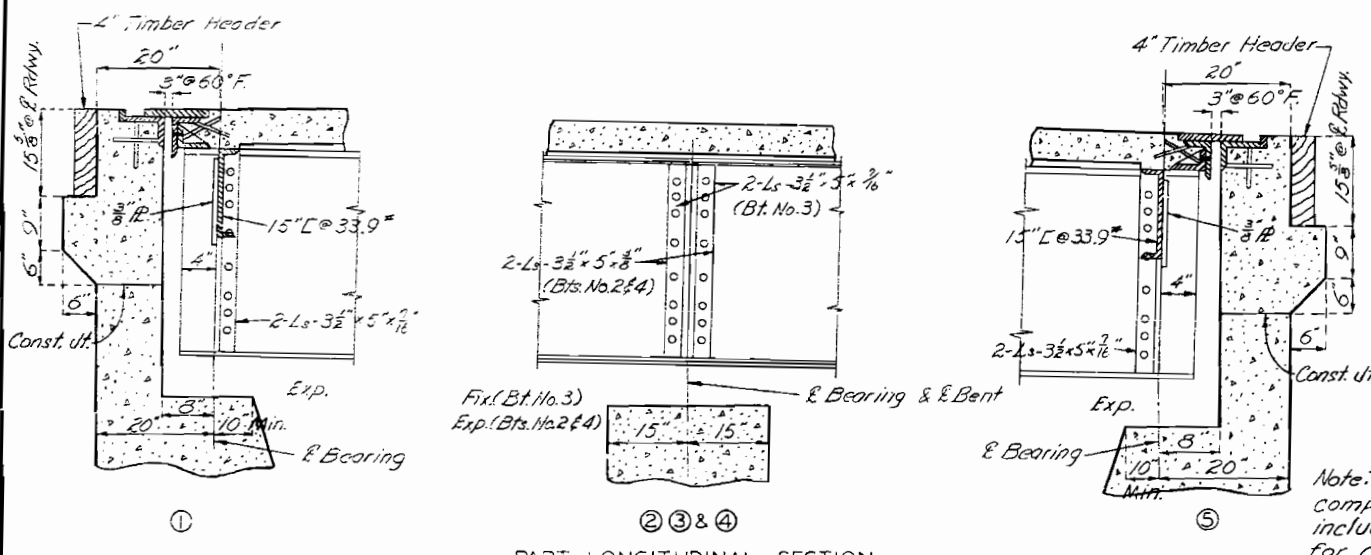
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	11	

Note: All longitudinal dimensions shown are parallel to grade, at top of slab.



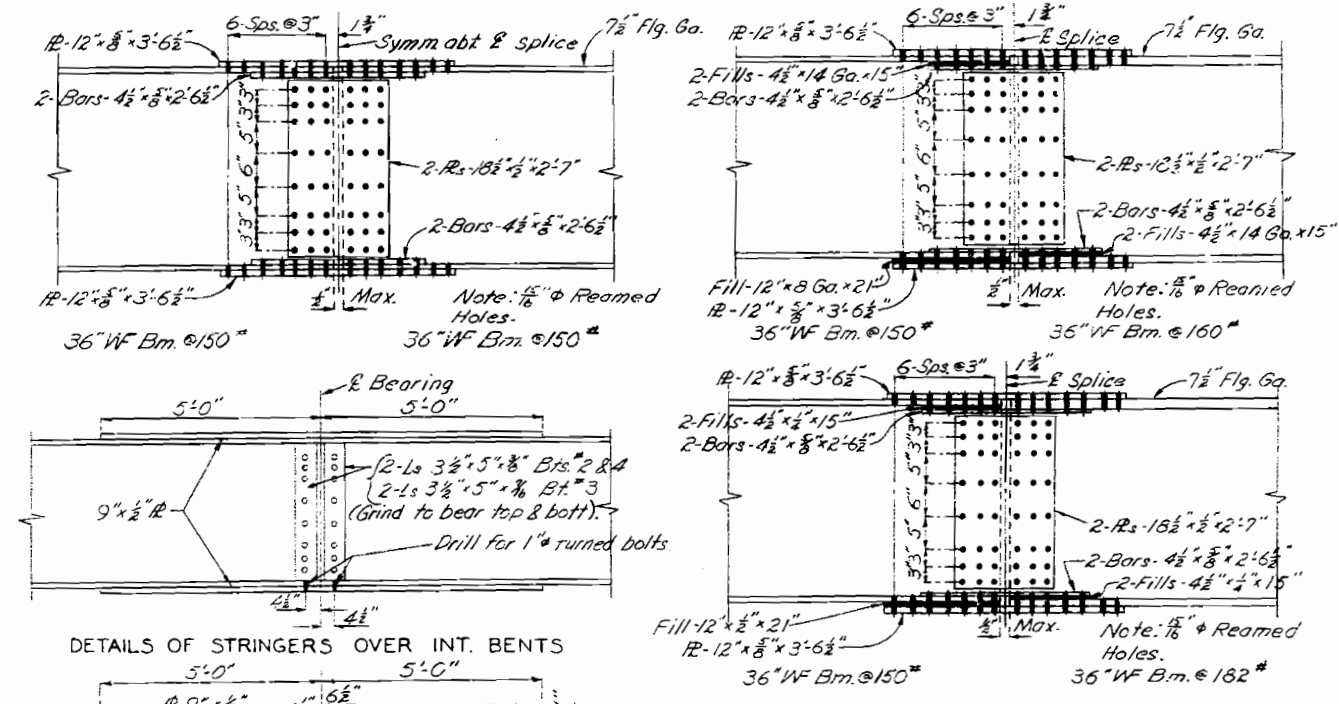
PLAN OF STRUCTURAL STEEL

Note: Elevations shown at splices and E's bearing are at top of WF beams at those locations.



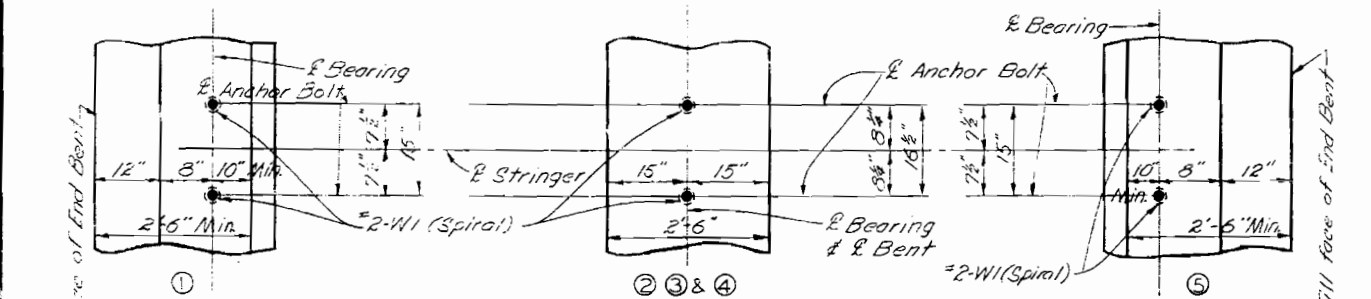
PART LONGITUDINAL SECTION

Note: Cost of timber headers complete in place to be included in price bid for concrete.

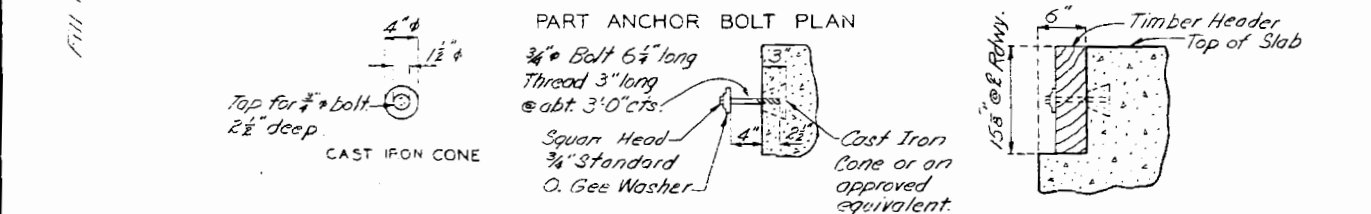


DETAILS OF STRINGERS OVER INT. BENTS

DETAILS OF BEAM SPLICES



PART ANCHOR BOLT PLAN



DETAILS OF TIMBER HEADER

PART SECTION SHOWING ANCHOR BOLT WELL

Note: Holes for all anchor bolts shall be formed in substructure by placing and setting with template 4" Wells of depth shown. Grout for anchor bolt wells shall contain Iron Oxide (Embeco or an approved equivalent).

Note: Preheating will be required in accordance with the American Welding Society Specifications. This will apply to the welding of plates to the top and bottom flanges of beams.

BRIDGE OVER ROUTE 36  
STATE ROAD FROM HAMILTON SOUTH  
ABOUT 0.5 MILE S. OF HAMILTON  
PROJECT NO. F-335 (14) (RTE 13) STA. 30 + 97.03  
CALDWELL COUNTY

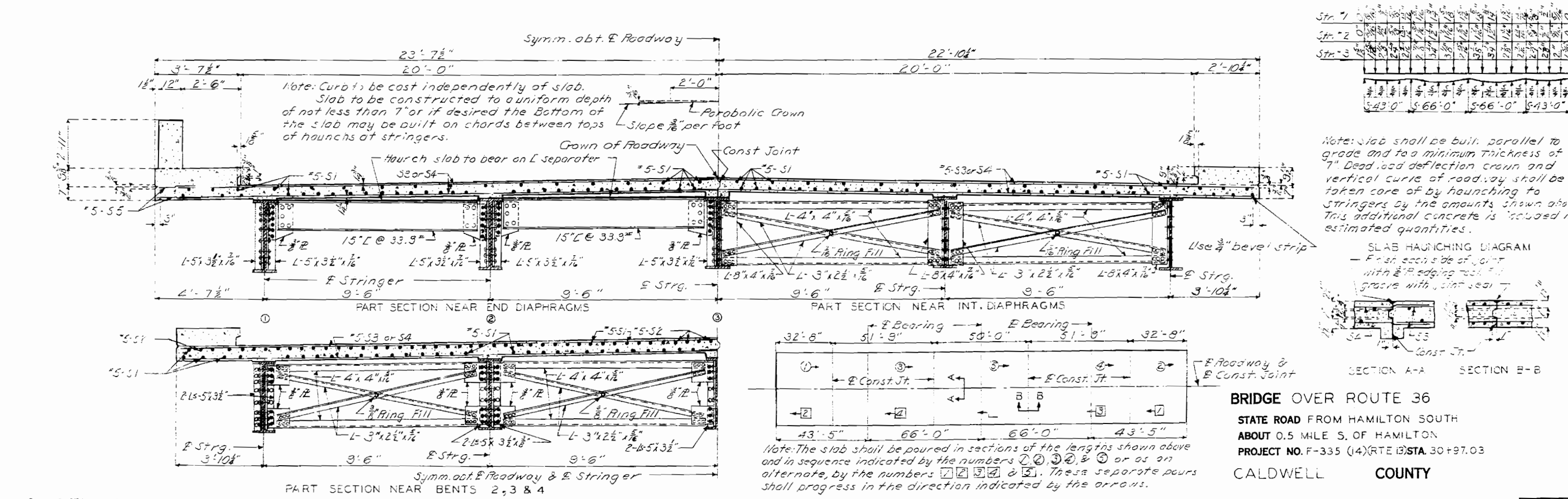
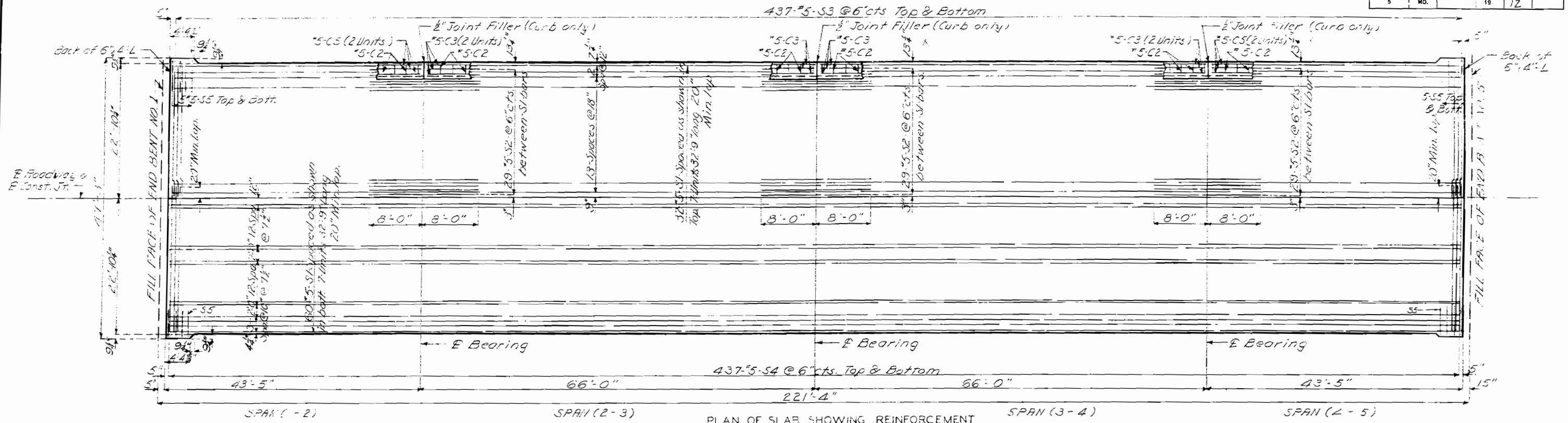
Drawn JULY 1957 by J.D.R.  
Checked NOV 1957 by D.E.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 7.

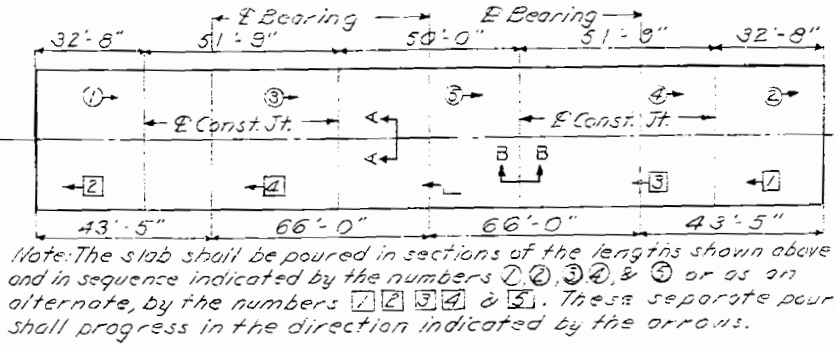
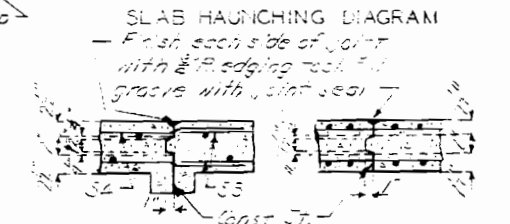
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	12	



Str. 1	Str. 2	Str. 3
5' 43' 0"	5' 66' 0"	5' 66' 0"
5' 43' 0"	5' 66' 0"	5' 66' 0"

Note: Slab shall be built parallel to grade and to a minimum thickness of 7\"/>



Note: The slab shall be poured in sections of the lengths shown above and in sequence indicated by the numbers 1, 2, 3, 4, & 5 or as an alternate, by the numbers 1, 2, 3, 4, & 5. These separate pours shall progress in the direction indicated by the arrows.

BRIDGE OVER ROUTE 36  
 STATE ROAD FROM HAMILTON SOUTH  
 ABOUT 0.5 MILE S. OF HAMILTON  
 PROJECT NO. F-335 (14) (RTE B) STA. 30+97.03  
 CALDWELL COUNTY

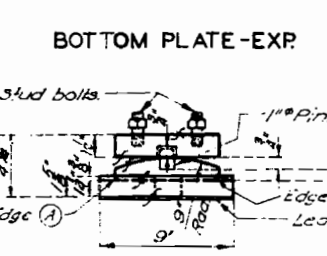
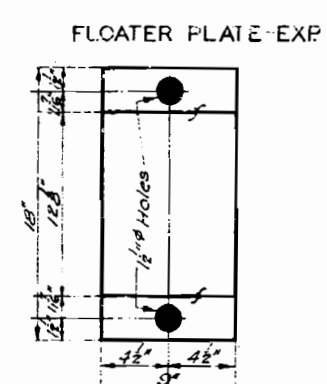
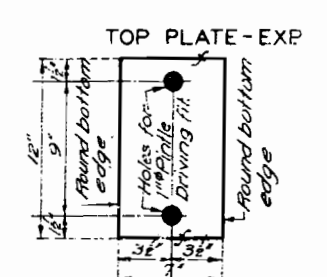
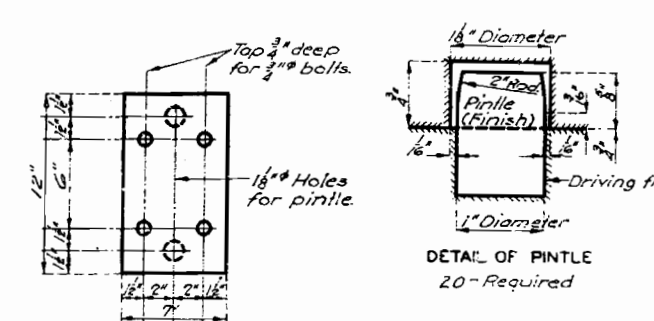
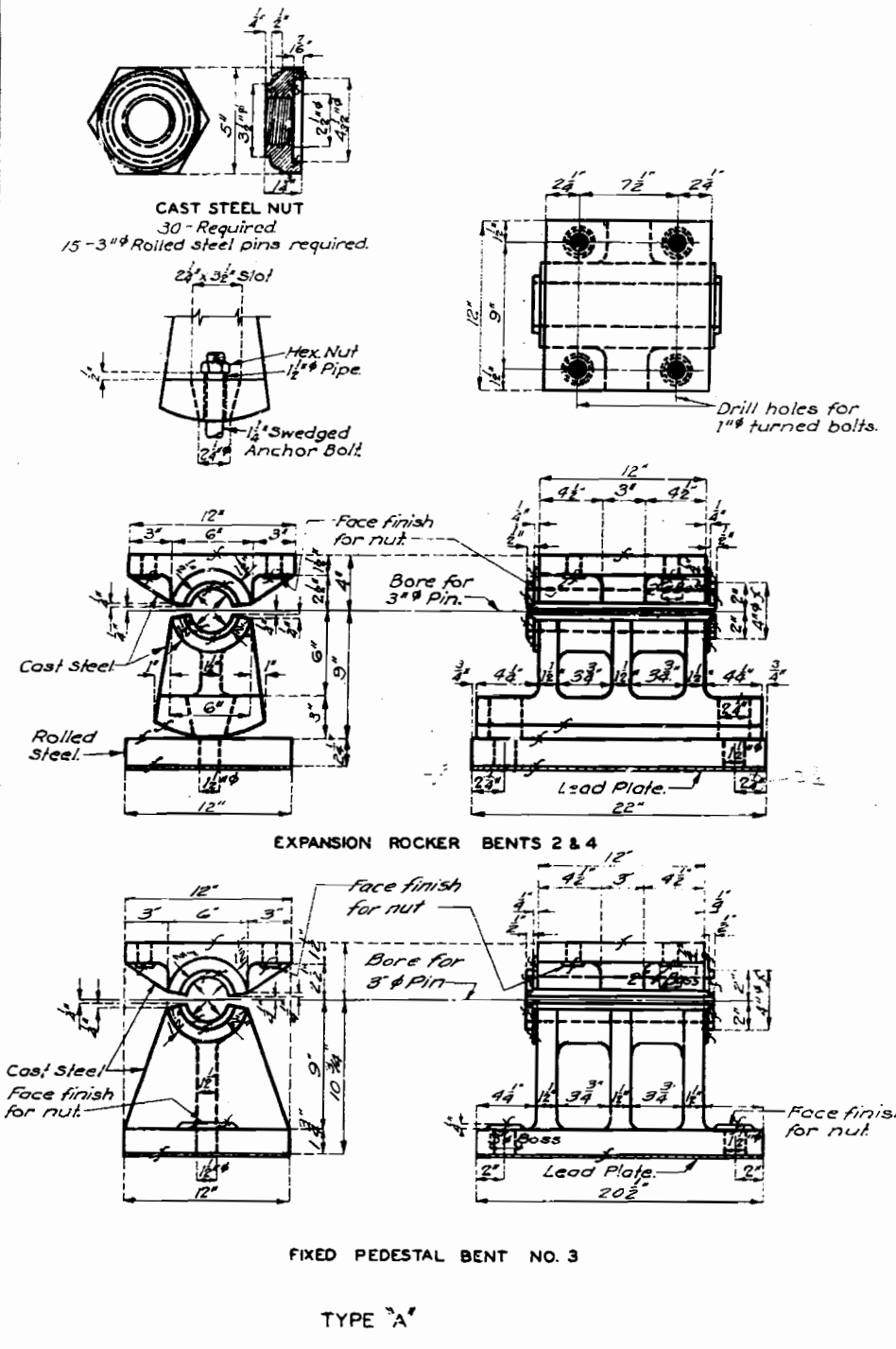
Drawn Aug 1957 by G.J.S.  
 Checked Nov. 1957 by D.B.

Note: This drawing is not to scale. Follow dimensions.

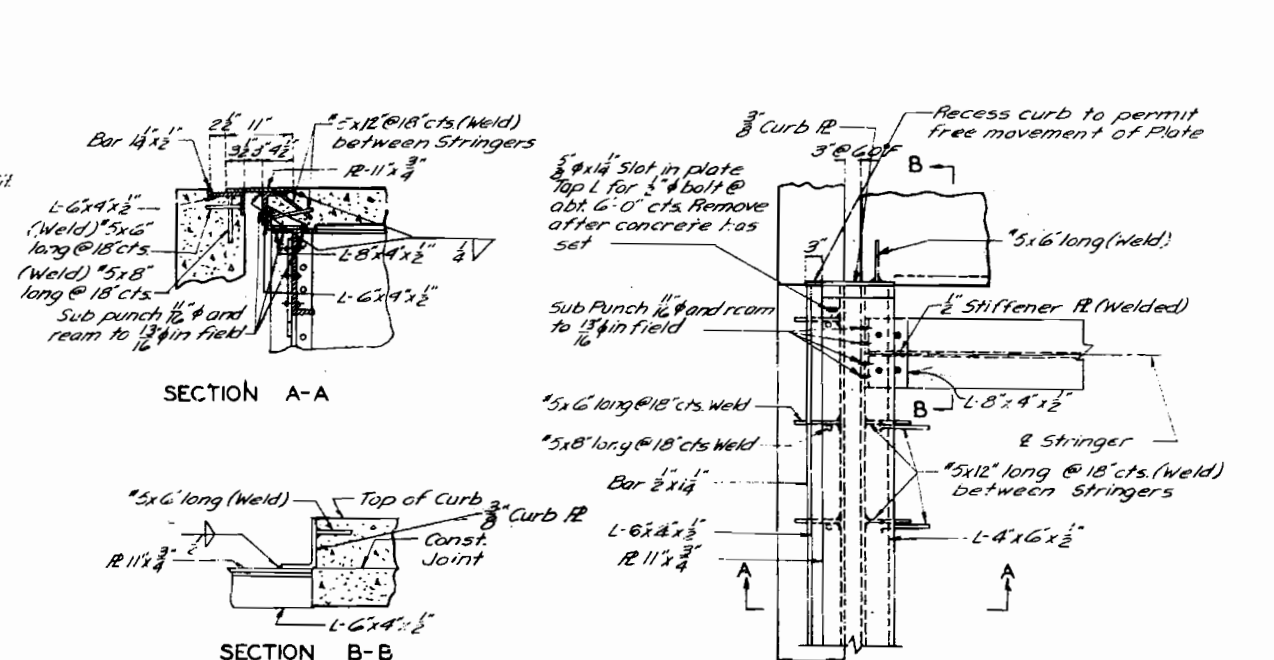
SLAB POURING SEQUENCE  
 Sheet No. 5 of 7

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO			5	5



END ELEVATION - EXP BEARING FOR BENTS NO. 1 & 5  
**TYPE "B"**



Note: Expansion devices shall be fabricated in one section and shall be bent to conform to crown of roadway.  
#5 Reinforcing bars shall be structural grade.

**GENERAL NOTES FOR BEARINGS:**

Finish all surfaces marked X.  
All fillets for Type "A" castings shall have 3/8" radius.  
Material for Type "A" castings shall be Cast steel, except as noted. Material for Type "B" castings shall be either gray iron alloy or cast steel but payment will be made as Gray Iron Alloy.  
All pins, bolts, nuts, pipe sleeves, rolled steel and pintles shall be paid for as Structural steel.  
Anchor bolts for Type "A" and Type "B" castings shall be 1 1/2" swaged bolts with Hex nuts and shall extend 12" into concrete.

Lead Plates under bearings shall be approximately 5" thickness and weigh 5 1/2" Sq Ft. Cost of lead plates shall be included in price bid for other items.  
Edge (A) to be rounded (1/8" - 3/8" Radius)

DETAILS OF BEARING CASTINGS

Note: This drawing is not to scale. All dimensions.

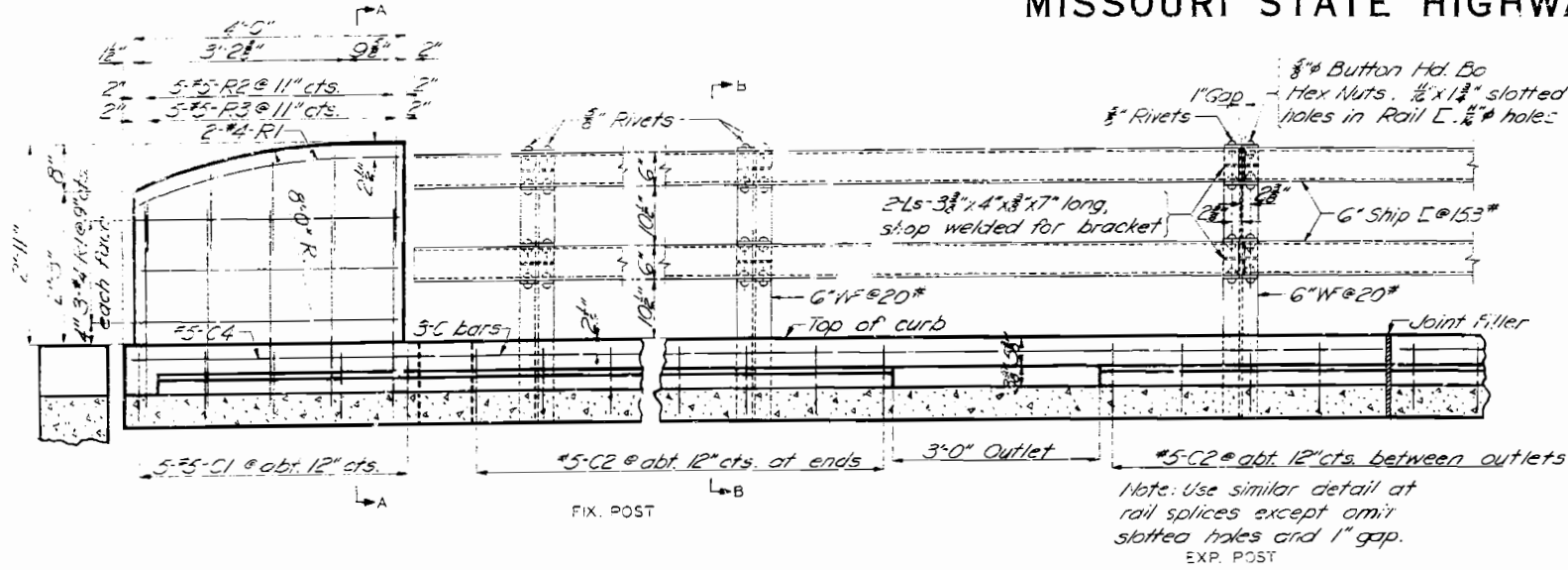
Sheet No. 6 of 7

**BRIDGE OVER ROUTE 36**  
STATE ROAD FROM HAMILTON SOUTH  
ABOUT 0.5 MILE S. OF HAMILTON  
PROJECT NO. F-335 (14) (RTE. 13) STA. 30+97.03  
CALDWELL COUNTY

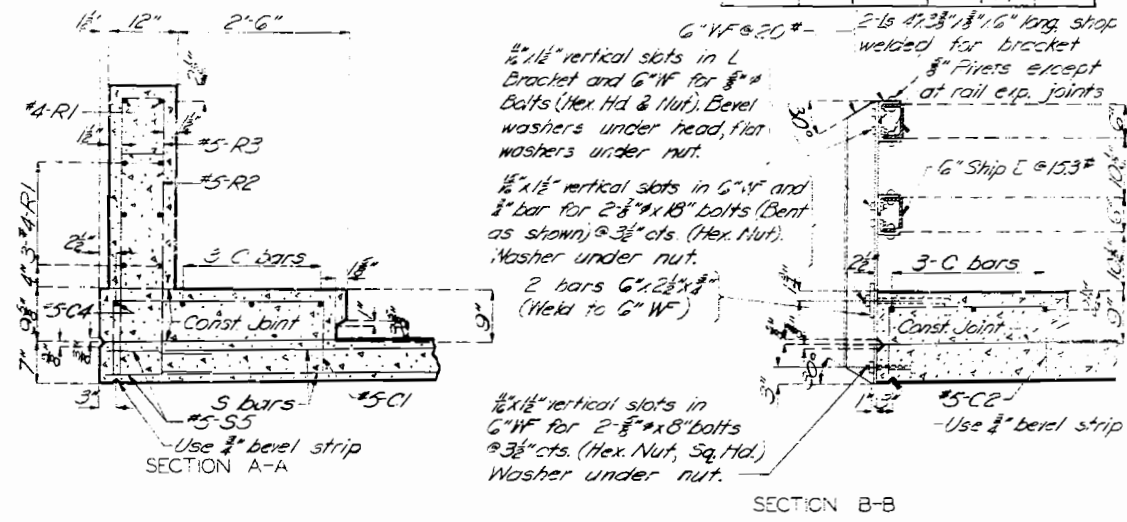
Assembled July 1957 By O.U.S. & U.C.F.  
Checked Nov 1957 D.B.

MISSOURI STATE HIGHWAY DEPARTMENT

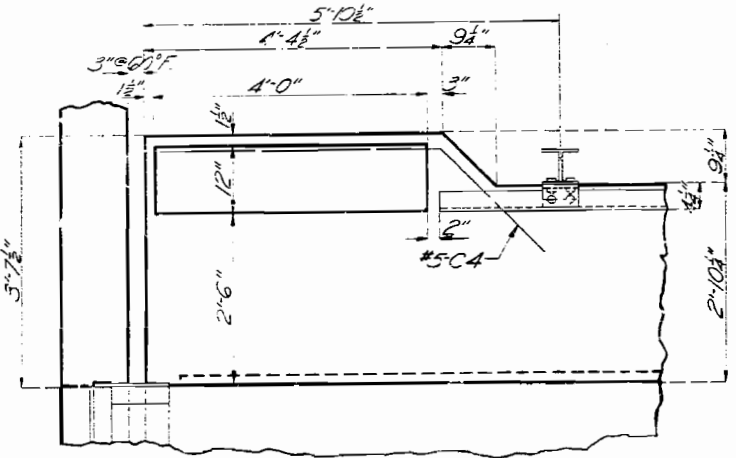
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	14	



TYPICAL RAIL ELEVATIONS



SECTION B-B



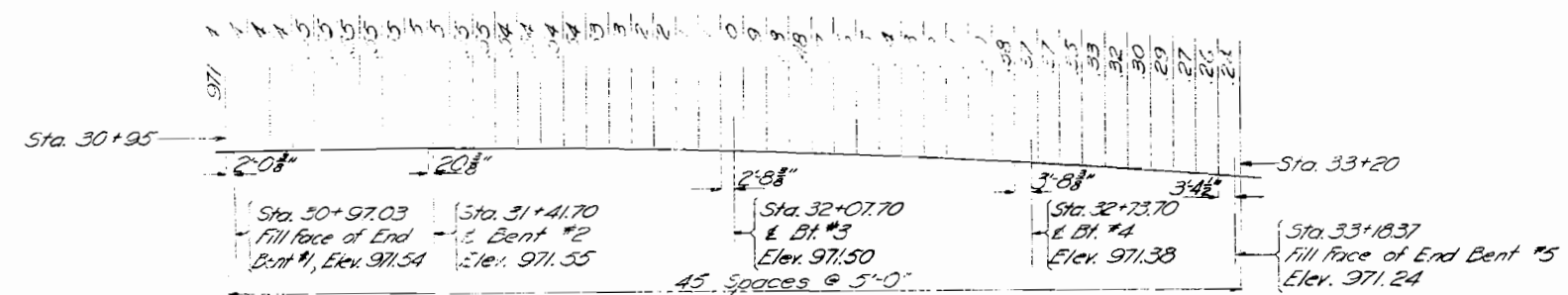
PLAN OF END POST

Notes: All concrete shall be Class B1.  
 Top of curbs and end posts to be built parallel to grade. Vertical faces of end posts to be vertical. All exposed edges of end posts to be beveled  $\frac{3}{8}$ ".  
 6" WF posts to be set normal to grade.  
 6" E rails shall be fabricated to conform to horizontal and vertical alignment of curb.  
 6" E rails to be adjusted for horizontal alignment by use of full size metal shims placed between rail support and the rail connection angles. Shims of  $\frac{3}{8}$ " and  $\frac{1}{4}$ " thickness to be furnished with structural steel. Cost of shims to be included in price bid for other items.

HANDRAIL DETAILS

Note: Use bevel as shown for exposed faces of all filled joints.

DETAIL OF BEVEL FOR FILLED JOINTS



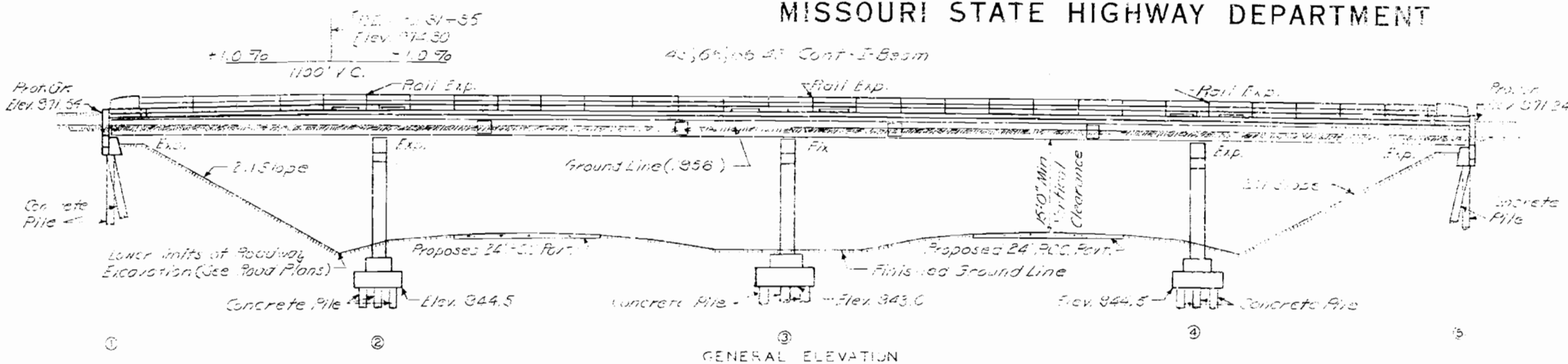
GRADE ELEVATIONS AT ROADWAY

BRIDGE OVER ROUTE 36  
 STATE ROAD FROM HAMILTON SOUTH  
 ABOUT 0.5 MILE S. OF HAMILTON  
 PROJECT NO F-335(14)(RTE 13) STA. 30 +97.03  
 CALDWELL COUNTY

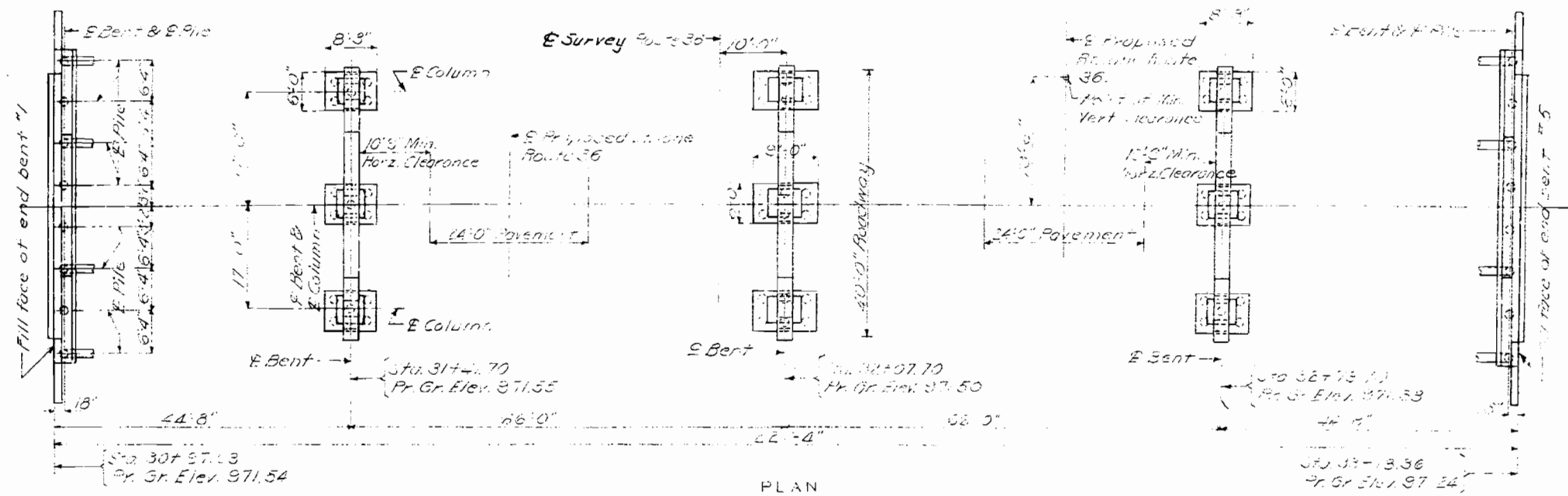
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	100-10-10	10	11	

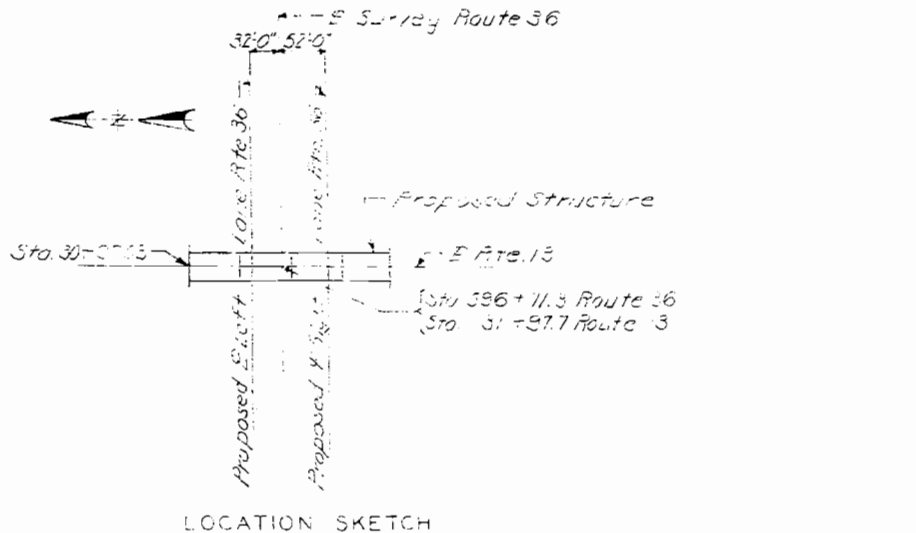
FINAL PLANS



Notes: Piling were driven with a steam hammer. All piling were driven to a lead of at least 30 ton per pile and with tips to at least Elev. 935.0 at Bents No. 1 & 5. All piling were driven with a steam hammer.



GENERAL NOTES: 1. Design in accordance with A.A.S.H.O. 1953. 2. Concrete Stress 1,500 psi. 3. Reinforcing Steel Stress 20,000 psi. 4. Concrete for structure shall be Class B. 5. If the contractor is to use Class B concrete, payment in the bid shall be for Class B concrete.



CONTINGENT ITEM	TAKE OVER REINFORC STEEL POUND	1505
<b>FINAL QUANTITIES</b>		
Excavation for structure	Cu. Yds. 375.0	375.0
Class B Concrete	Cu. Yds. 174.9	174.9
Class B1 Concrete	Cu. Yds. 256.6	256.6
Reinforcing Steel	Lbs. 71320	91570
Fabricated Structural Steel	Lbs. 236390	236380
Cast Iron Alloy Castings	Lbs. 1150	1236
Concrete Piles in Place	Lt. Ft. 1236	49.80
Steel Castings	Lbs. 49.80	123.96
CONTINGENT ITEM (Estimated for Bent No. 1 & 5)	Lbs. 2510	2510

Note: All excavation for bridge was done for the use of the structure. \* Final pay weight for fabricated structural steel are based on using rivets except for bolted connections suitable for handrail. Estimated Quantities of Class B Excavation for structure includes only amount of excavation below roadway excavation (See Special Provision) \*\* SEE CHANGE ORDER # 2

Steel shells for cast-in-place piles were specified in the contract. The contractor was to provide the steel shells for the piles. The contractor was to provide the steel shells for the piles. The contractor was to provide the steel shells for the piles.

97166 15' ON S.W. CORNER WEST WINDSHILL STA. 33+18.36 = 97188 276.30

STATE ROAD NO. 100-10-10 ABOUT 0.5 MILE S. OF HAMILTON PROJECT NO. F-300-4 (ROUTE 100+97.0)

CALDWELL COUNTY SUBMITTED BY J.L. Williams DATE 12-13-1957 APPROVED BY Rex M. Whitten DATE 12-13-1957

Drawn Aug 1957 by U.J.S. Checked Nov 1957 by D.E.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. A-8-1

FINAL PLANS

ENCLOSURE 4-10

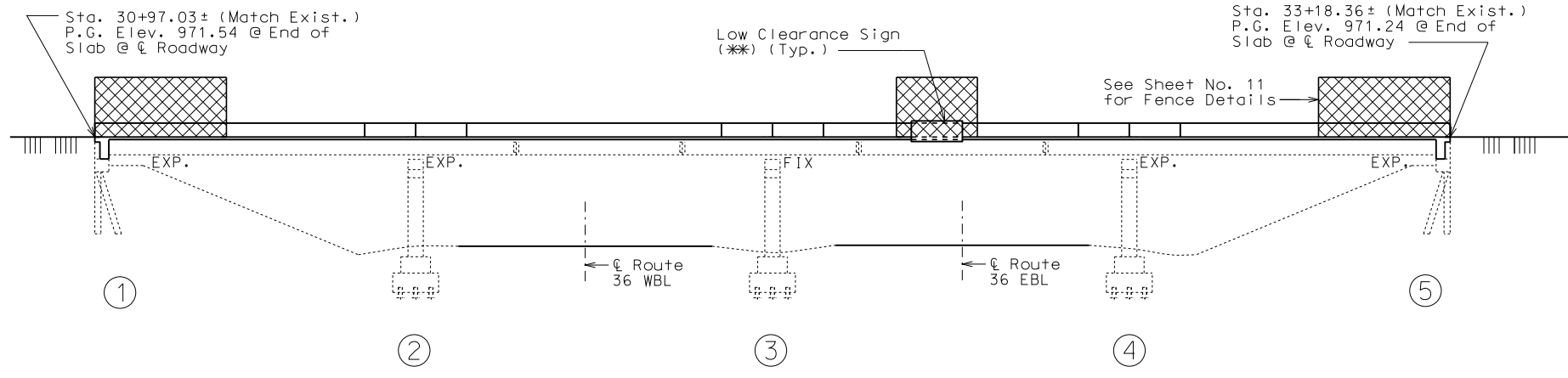
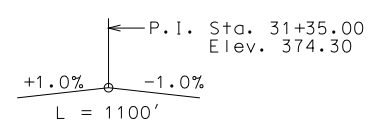


## MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

### U.I.P., REDECK AND MAKE COMPOSITE EXISTING (43'-66'-66'-43') CONTINUOUS I-BEAM SPANS

#### GENERAL NOTES:

- Design Specifications:**  
 2002 - AASHTO 17th Edition  
 Load Factor Design  
 Seismic Performance Category A
- Design Loading:**  
 H20-44 (1953), HS20-44 (New Construction)  
 35#/Sq. Ft. Future Wearing Surface  
 Earth 120 #/Cu. Ft., Equivalent Fluid Pressure 45#/Cu. Ft.  
 Fatigue Stress - Case II
- Design Unit Stresses:**  
 Class B-1 Concrete (Safety Barrier Curb)  $f'c = 4,000$  psi  
 Class B-2 Concrete (Superstructure, except Safety Barrier Curb)  $f'c = 4,000$  psi  
 Reinforcing Steel (Grade 60)  $fy = 60,000$  psi
- Joint Filler:**  
 All joint filler shall be in accordance with Sec 1057 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.
- Miscellaneous:**  
 Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.  
 Contractor shall verify all dimensions in field before ordering new material.  
 "Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.  
 The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved bituminous paint.  
 Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.
- Concrete Protective Coating:**  
 Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.
- Traffic:**  
 Existing structure shall be closed during construction.
- Structural Steel Protective Coating:**  
 Protective Coating: Calcium Sulfonate System in accordance with Sec 1081.  
 Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for "Overcoating of Structural Steel (Calcium Sulfonate System)". The cost of surface preparation will be considered completely covered by the contract unit price per sq. foot for "Surface Preparation for Overcoating Structural Steel".  
 Rust Penetrating Sealer: The rust penetrating sealer shall be applied to the surfaces of all bearings, overlapping steel plates, pin connections, pin and hanger connections and other locations where rust bleeding, pack rust and layered rust is occurring. The cost of the rust penetrating sealer will be considered completely covered by the contract lump sum price for "Calcium Sulfonate Rust Penetrating Sealer".  
 Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per sq. foot for "Calcium Sulfonate Primer".  
 Topcoat: The color of the topcoat shall be Gray (Federal Standard #26373). The cost of the topcoat will be considered completely covered by the contract unit price per sq. foot tons for "Calcium Sulfonate Topcoat".



GENERAL ELEVATION

\*\* Low clearance sign. Roadway Item. See Roadway Plans for details.

Estimated Quantities		
Item	Unit	Total
Removal of Existing Bridge Decks	sq. foot	10,117
(72 in) Pedestrian Fence (Structures)	linear foot	440
Slab on Steel	sq. yard	1,123
* Safety Barrier Curb	linear foot	443
Substructure Repair (Unformed)	sq. foot	40
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Slab Drain	each	10
Surface Preparation for Overcoating Structural Steel	sq. foot	9,600
Calcium Sulfonate Rust Penetrating Sealer	lump sum	1
Calcium Sulfonate Primer	sq. foot	9,600
Calcium Sulfonate Topcoat	sq. foot	9,600
Shear Connectors	each	2370

\* Safety Barrier Curb shall be cast-in-place option or slip-form option.

Estimated Quantities for Slab on Steel		
Item	Unit	Total
Class B-2 Concrete	cu. yard	248.7
Reinforcing Steel (Epoxy Coated)	pound	98,870

The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard with the horizontal dimensions as shown on the plan of slab. Payment for stay-in-place forms, 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 as shown on the plans and in accordance with Sec 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.

Slab shall be cast-in-place with conventional forming or stay-in-place corrugated metal forms. Precast prestressed panels will not be permitted.

Concrete for slab haunches, based on Theoretical Slab Haunching Diagram, is included in the Estimated Quantities for Slab on Steel.

#### REPAIRS TO BRIDGE OVER ROUTE 36

STATE ROAD FROM HAMILTON SOUTH  
 ABOUT 0.5 MILE S. OF HAMILTON  
 STA. 30+97.03± (Match Existing)

STD. 617.10
STD. 706.35

Designed Jan. 2009  
 Detailed May 2009  
 Checked Sep. 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 12



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/14/2009

ROUTE 13 STATE MO  
 DISTRICT BR SHEET NO. 1

COUNTY CALDWELL

JOB NO. J1S2149  
 CONTRACT ID.

PROJECT NO.

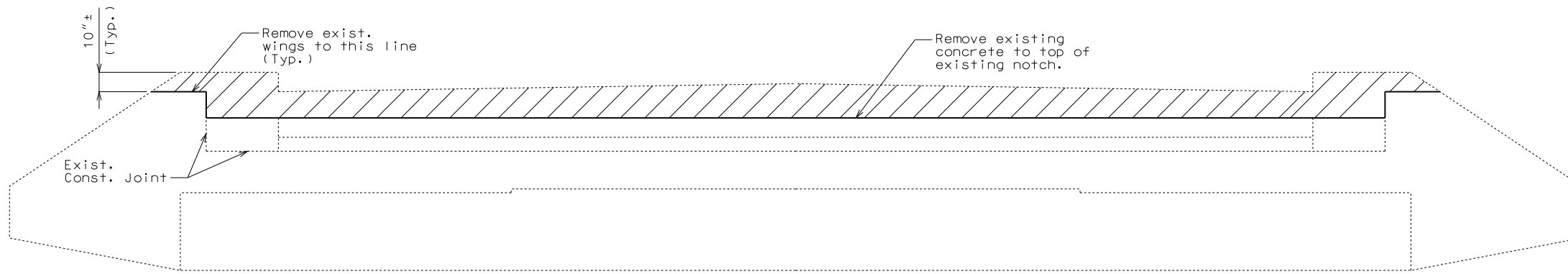
BRIDGE NO. A00101

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



### DETAILS OF CONCRETE REMOVAL @ END BENTS

#### Notes:

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Decks. Vertical backwall and wingwall reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

Steel end diaphragms may be removed and reinstalled prior to slab pour. The cost of this work will be considered completely covered by the contract unit price for Removal of Existing Bridge Decks.

A smooth level surface shall be provided at Bents No. 1 & 5 removal lines.

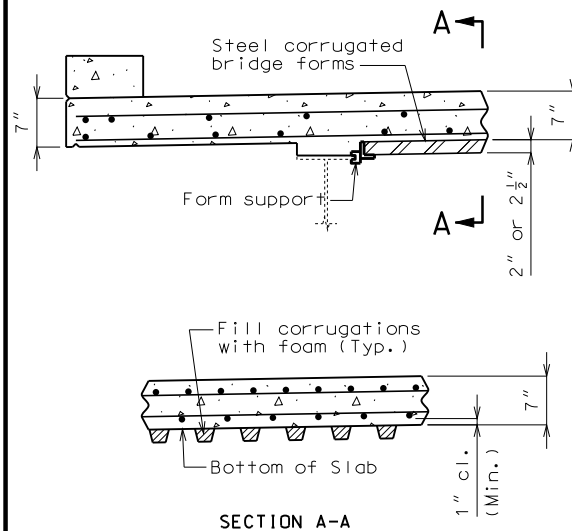
#### Notes:

#### Stay-In-Place Forms:

Permanent steel bridge deck forms, supports closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

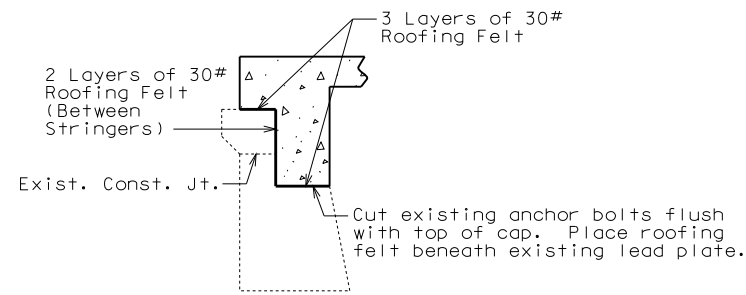
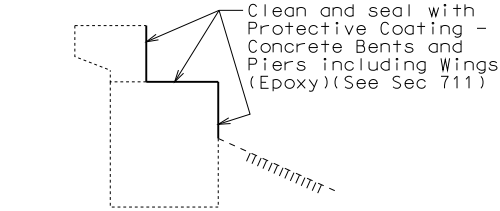
Form sheets shall not rest directly on the top of stringers. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the flanges of the stringers will not be permitted. All steel fabrication and construction shall be in accordance with Sec's 1080 and 712. MoDOT certified field welders will not be required for welding of the form supports.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

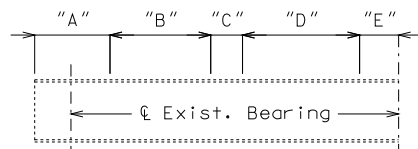


OPTIONAL STAY-IN-PLACE FORM DETAILS

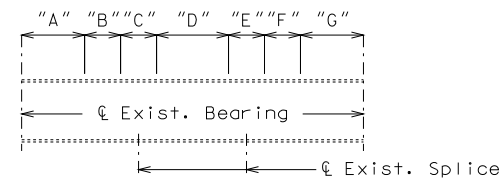
TYPICAL SECTION THRU END BENTS NO. 1 & 5 SHOWING PROTECTIVE COATING



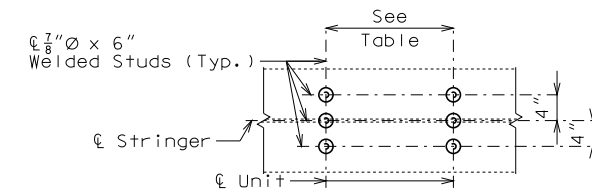
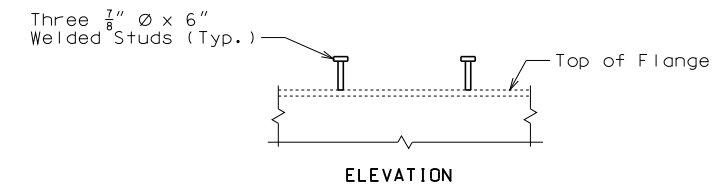
PART SECTION THRU SLAB AT END BENTS NO. 1 & 5



ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR END BEAMS



ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR MID BEAMS



DETAILS OF SHEAR CONNECTORS

#### Notes:

Shear connectors shall be in accordance with Sec 712, 1037 and 1080.

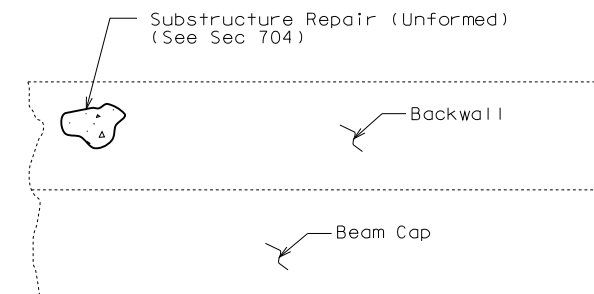
The cost of supply and installing shear connectors will be considered completely covered by the contract unit price for shear connectors.

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING								
Beam	S.C. per unit	"A"	"B"	"C"	"D"	"E"	"F"	"G"
End Beam (Spans 1-2 & 5-4)	3	3"±	35 Units @ 10" cts.	6"±	3 Units @ 12" cts.	12'-3"±	--	--
Mid Beam (Spans 2-3 & 4-3)	3	13'-5 3/4"±	3 Units @ 6" cts.	4'-4 1/4"±	35 Units @ 10" cts.	4'-4 1/4"±	3 Units @ 6" cts.	13'-5 3/4"±
Total shear connectors required								2370

### DETAILS OF END BENTS NO. 1 & NO. 5

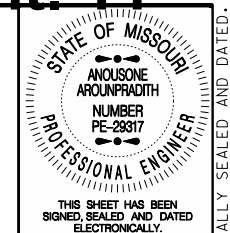
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 12



PART ELEVATION SHOWING SUBSTRUCTURE REPAIR AT END BENTS

DESCRIPTION	DATE



DATE PREPARED 12/9/2009	
ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 3
COUNTY CALDWELL	
JOB NO. J1S2149	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A00101	

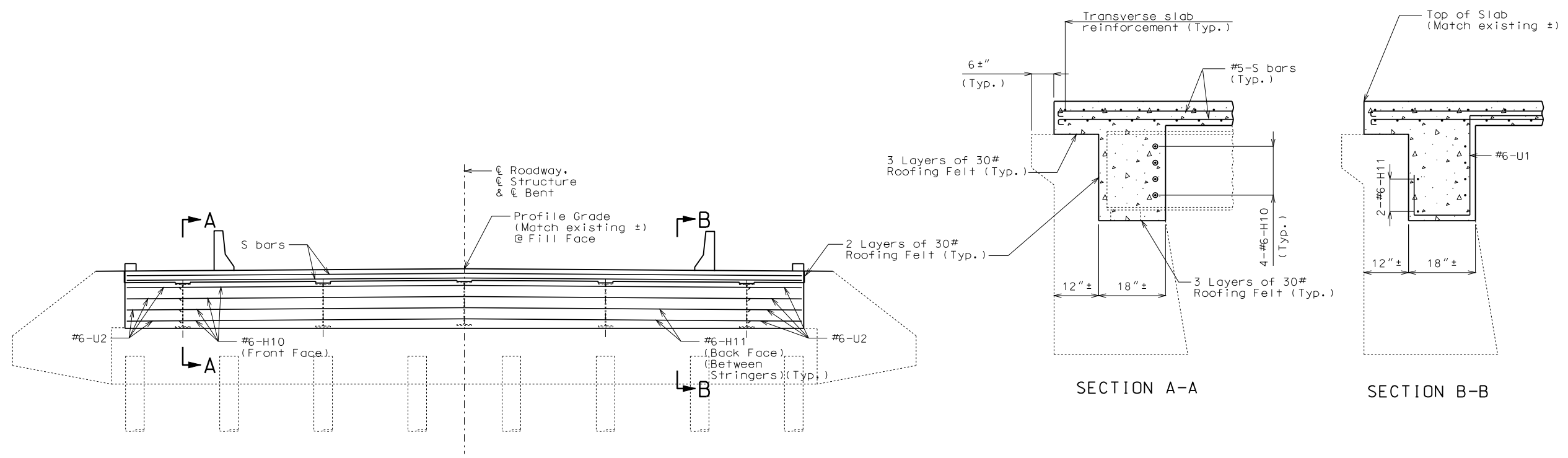
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

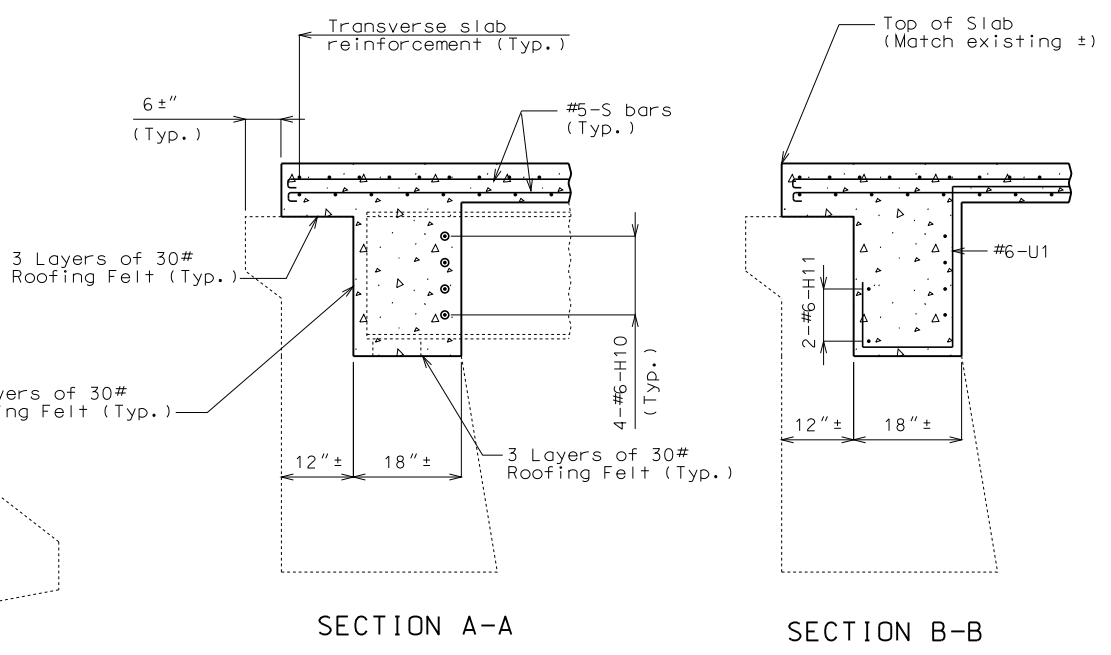
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



**SECTION NEAR END BENTS**

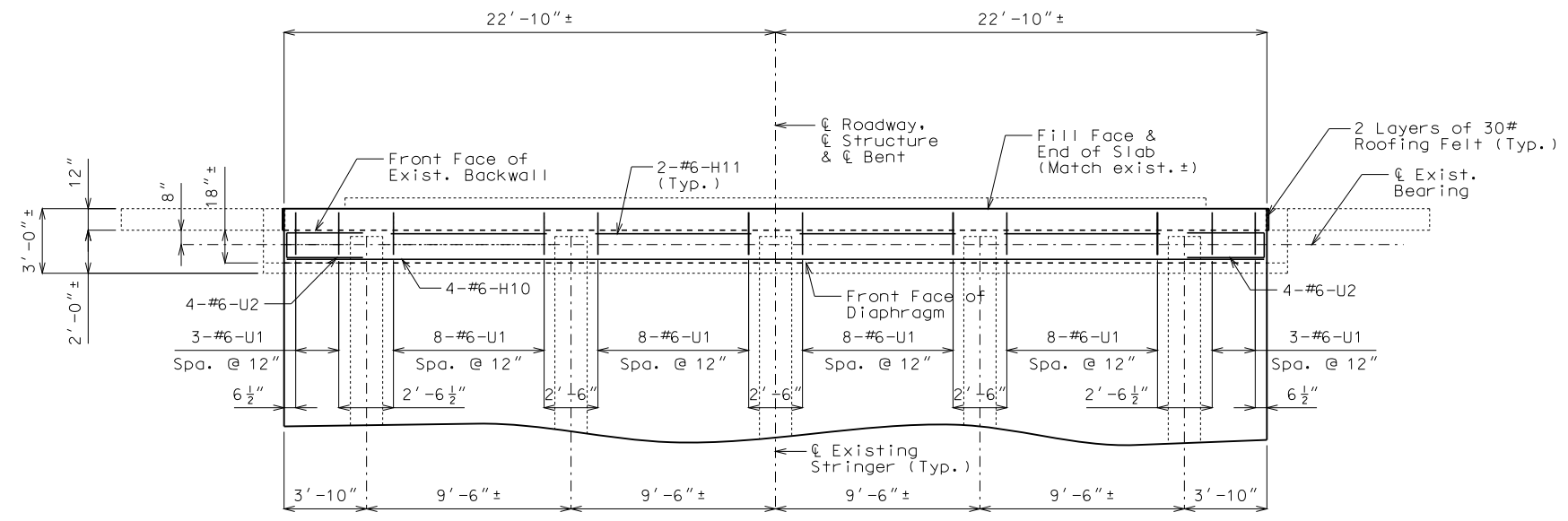
Note: Existing steel end diaphragms not shown for clarity.



**SECTION A-A**

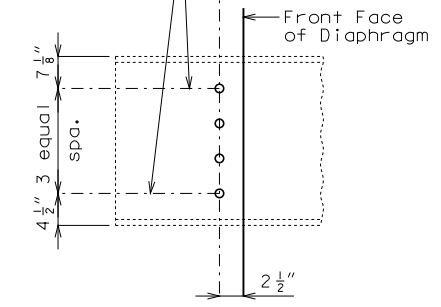
**SECTION B-B**

Note:  
The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-2 surface preparation before concrete is poured. Payment for cleaning steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.



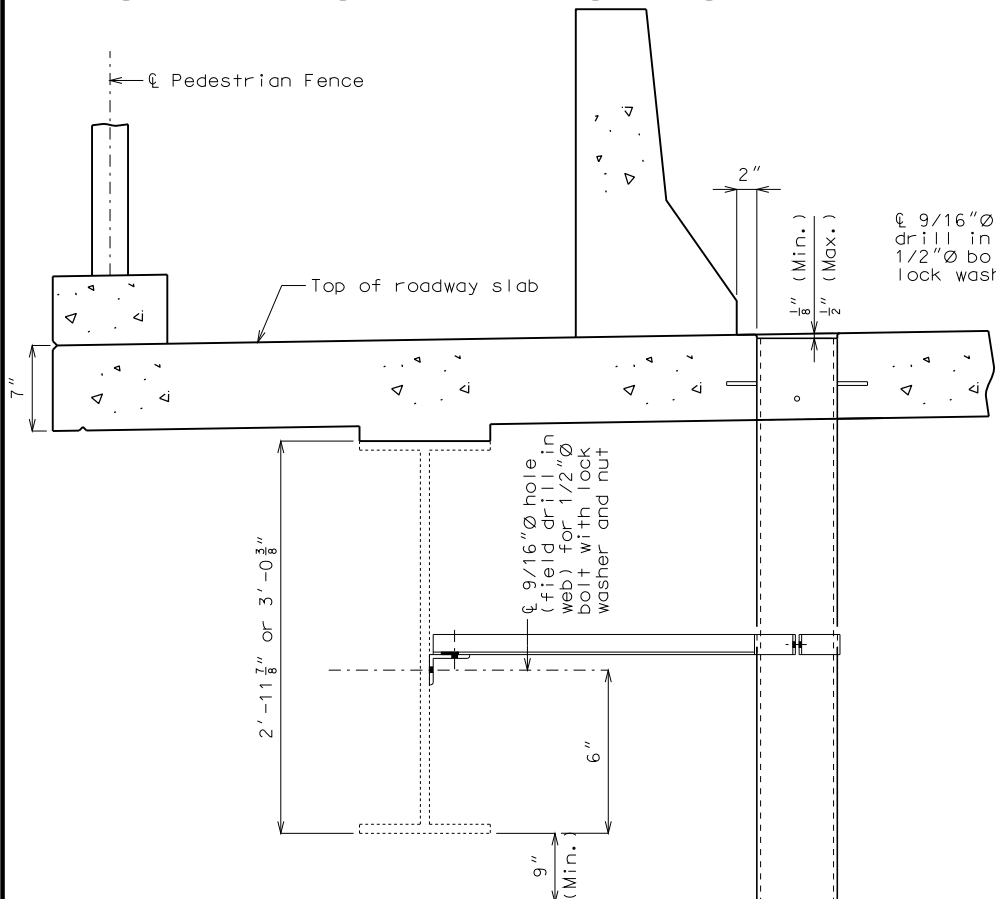
**PART PLAN**

∅ 1 1/16" holes in each stringer. Cost of field drilling holes in existing webs will be considered completely covered by the contract unit price for Slab on Steel.

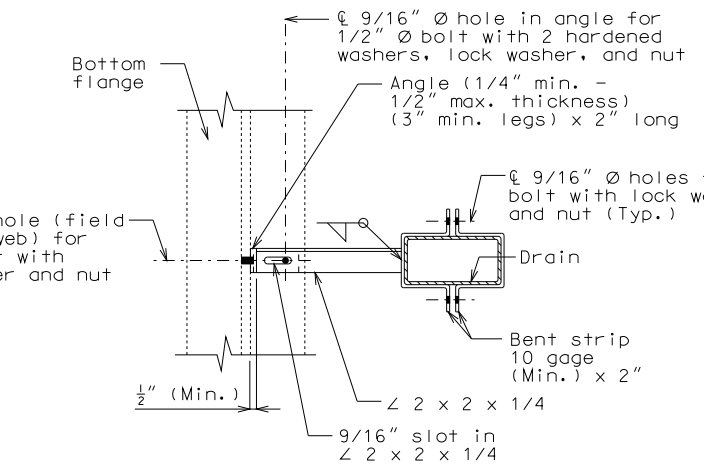


**DETAIL OF WEB HOLES AT END BENTS**

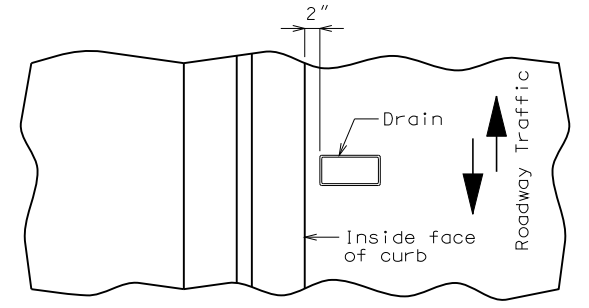
**DETAILS OF END BENTS NO. 1 & 5**



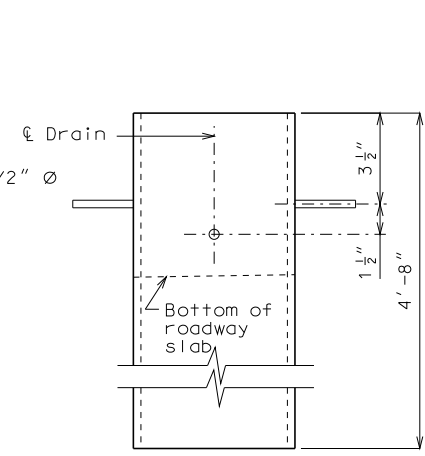
PART SECTION NEAR DRAIN



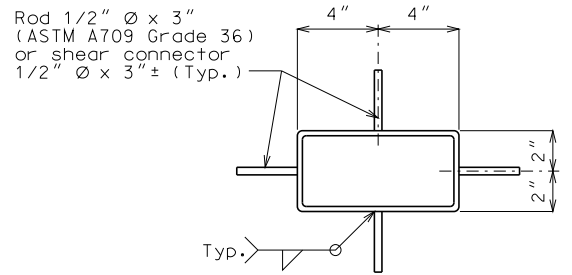
PART SECTION SHOWING BRACKET ASSEMBLY



PART PLAN OF SLAB AT DRAIN



ELEVATION OF DRAIN



PLAN OF DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY

Notes:

Slab drains may be fabricated of either 1/4" welded sheets of ASTM A709 Grade 36 steel or from 1/4" structural steel tubing ASTM A500 or A501.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

Outside dimensions of drains are 8" x 4".

Locate drains in slab by dimensions shown in Part Section Near Drain.

Shift reinforcing steel in field where necessary to clear drains.

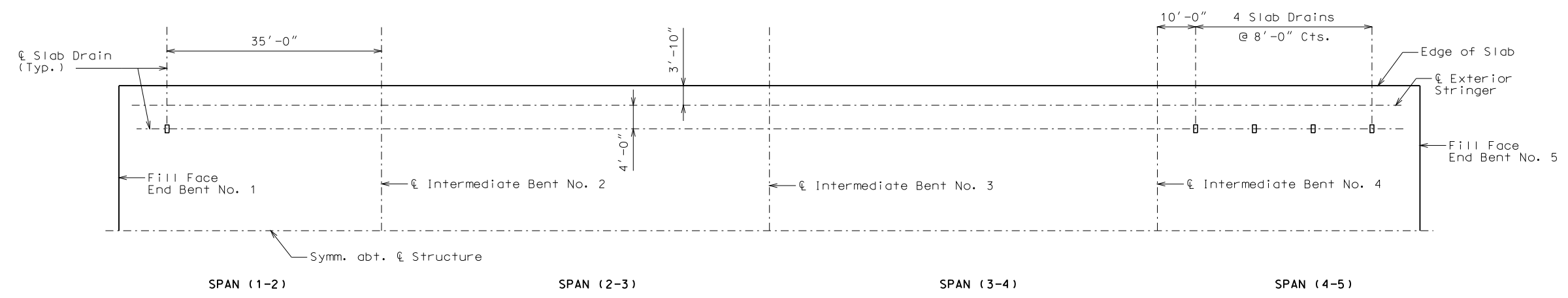
The drains and bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.

Shop drawings will not be required for the slab drains and the bracket assembly.

The bolt hole for the bracket assembly attachment shall be field drilled in the web of the existing stringer.

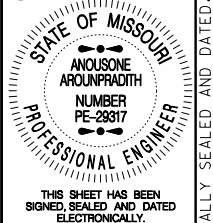
Slab drain locations shall be shifted the minimum extent necessary to allow for existing stringer for bracket assembly attachment.



PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

Note: Longitudinal dimensions are horizontal. (Left side shown. Right side similar.)

SLAB DRAIN DETAILS



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 4

COUNTY CALDWELL

JOB NO. J1S2149

CONTRACT ID.

PROJECT NO.

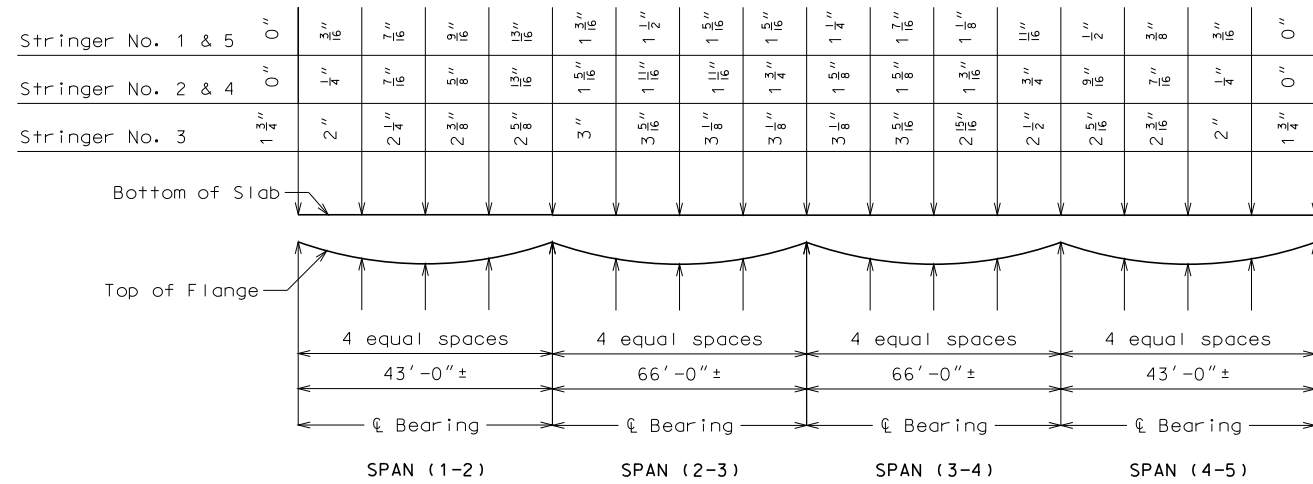
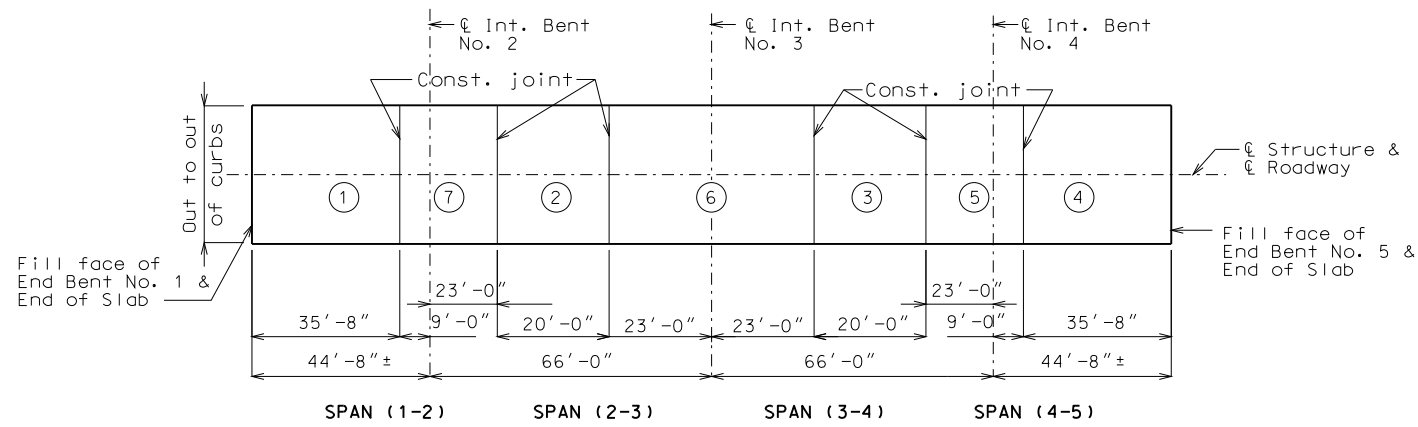
BRIDGE NO. A00101

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



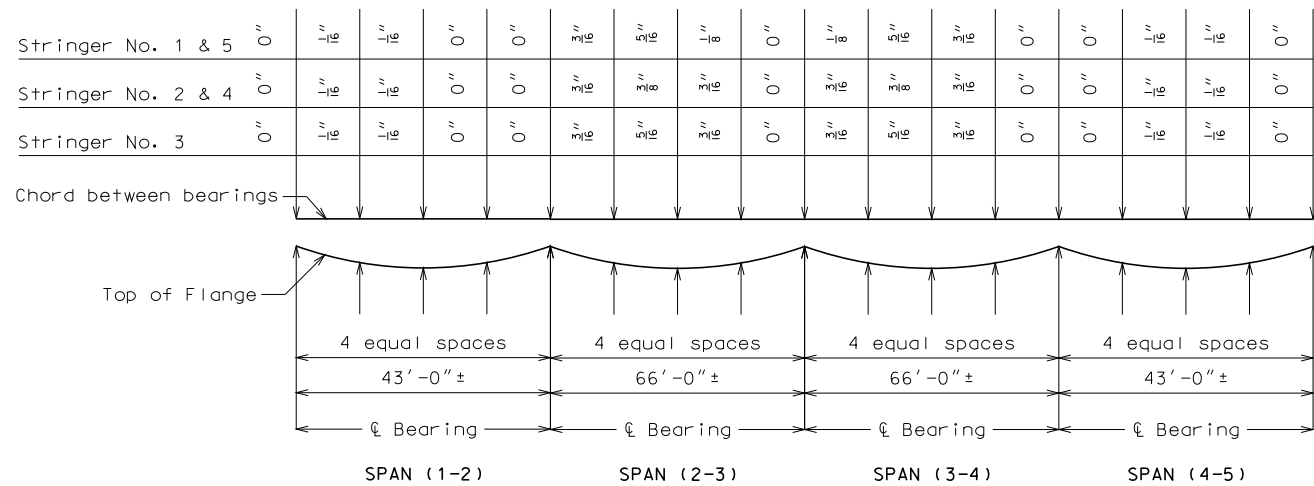
Note:

If stringer or slab elevations differ from those shown on the plans, it shall be necessary to adjust the slab haunches or adjust the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for variation in haunching or grade adjustments.

	Sequence of Pours							Min. rate of pour cu. yds./hr.	
	Direction							With retarder	No retarder
Basic sequence	1	2	3	4	5	6	7	25	25
	Either direction								
Alternate pours to the basic skip sequence are subject to the approval of the engineer in accordance with Sec 703.									
Alternate "A" pours	1	7 + 2	6 + 3	5 + 4				25	33
	End to 7	1 to 6	2 to 5	3 to end					
Alternate "B" pours	1 + 7 + 2	6 + 3	5 + 4					25	33
	End to 6	2 to 5	3 to end						
Alternate "C" pours	1 + 7 + 2	6 + 3 + 5 + 4						25	33
	End to 6	2 to end							
Alternate "D" pours	1 + 7 + 2 + 6 + 3 + 5 + 4							25	33
	End to end								

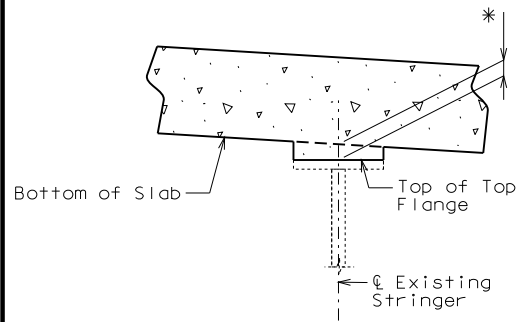
Note: The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

**SLAB POURING SEQUENCE**



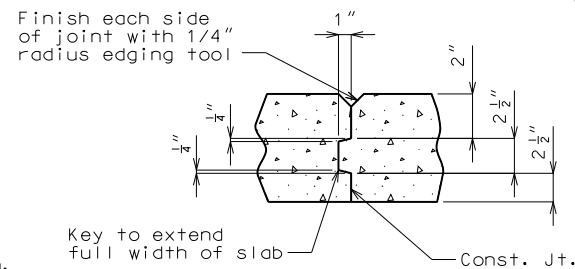
**DEAD LOAD DEFLECTION**

Note: 19.4% of dead load deflection is due to the weight of structural steel: (Stringers No. 1 & 5)  
20.4% for (Stringers No. 2 & 4)  
18.3% for (Stringer No. 3)  
Dead load deflection includes weight of structural steel, concrete slab, and barrier curb.

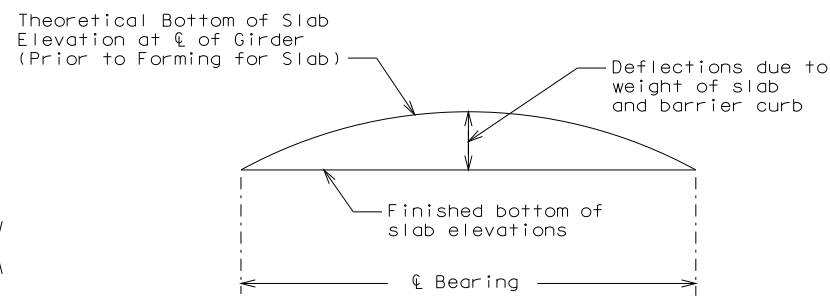


\* See Theoretical Slab Haunching Diagram.

**THEORETICAL SLAB HAUNCH**



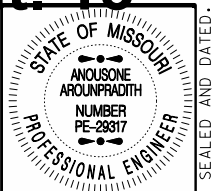
**SLAB CONSTRUCTION JOINT DETAILS**



**TYPICAL SLAB ELEVATIONS DIAGRAM**

	Theoretical Bottom of Slab Elevations at center of Girder (Prior to Forming for Slab) **																			
	Span (1-2) (43'-0" center brg - center brg.)				Span (2-3) (66'-0" center brg - center brg.)				Span (3-4) (66'-0" center brg - center brg.)				Span (4-5) (43'-0" center brg - center brg.)							
	center brg.	.25	.50	.75	center brg.	center brg.	.25	.50	.75	center brg.	center brg.	.25	.50	.75	center brg.	center brg.	.25	.50	.75	center brg.
Stringer No. 1 & No. 5	970.66	970.67	970.67	970.67	970.67	970.67	970.68	970.68	970.65	970.62	970.62	970.61	970.59	970.55	970.49	970.49	970.47	970.44	970.41	970.37
Stringer No. 2 & No. 4	970.81	970.82	970.82	970.82	970.82	970.82	970.83	970.83	970.80	970.77	970.77	970.76	970.74	970.70	970.64	970.62	970.59	970.56	970.52	
Stringer No. 3	970.95	970.97	970.97	970.97	970.97	970.97	970.98	970.98	970.95	970.92	970.92	970.91	970.89	970.85	970.79	970.79	970.76	970.74	970.71	970.67

\*\* Elevations are based on a constant slab thickness of 7" and include allowance for theoretical dead load deflections due to weight of slab and barrier curb.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

ROUTE: 13 STATE: MO

DISTRICT: BR SHEET NO.: 5

COUNTY: CALDWELL

JOB NO.: J1S2149

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A00101

DESCRIPTION:

DATE:

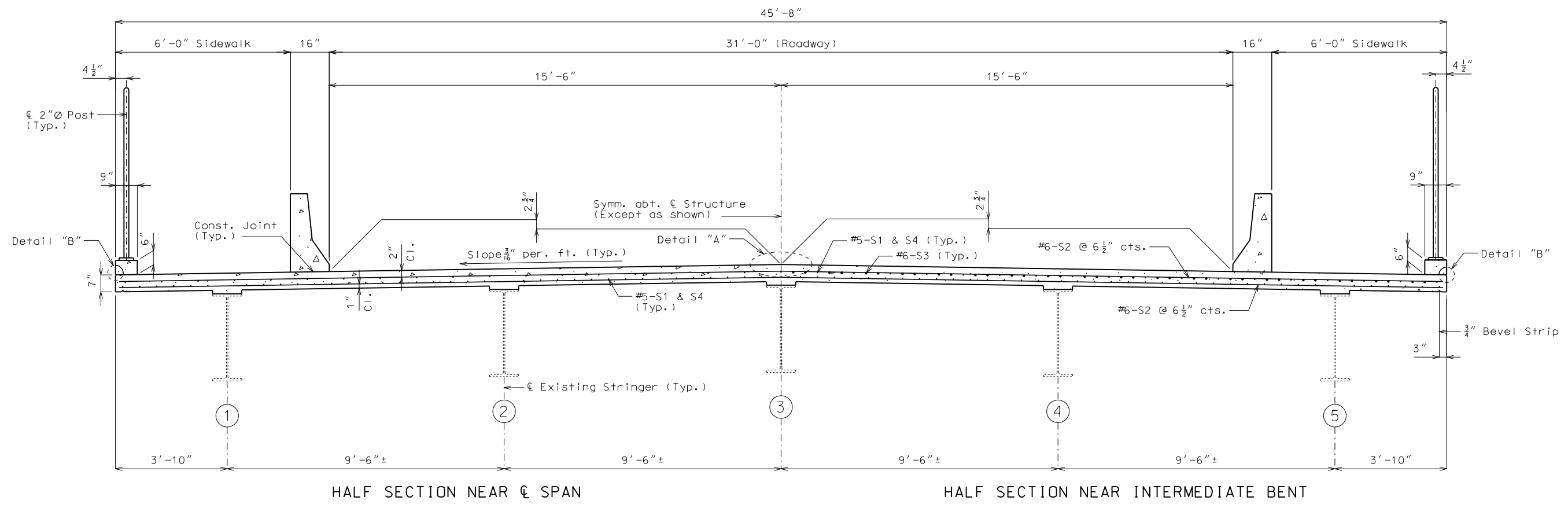
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

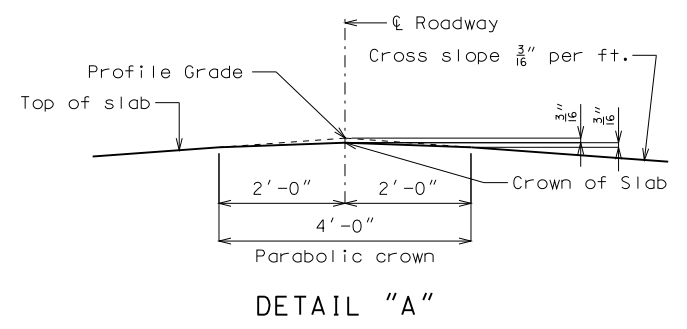
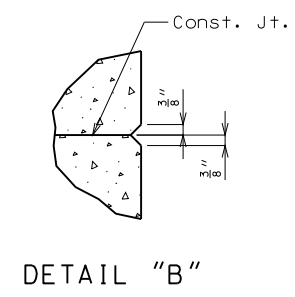
MoDOT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

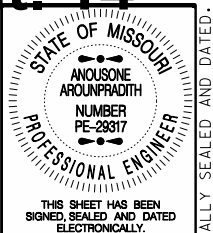


HALF SECTION NEAR Q SPAN

HALF SECTION NEAR INTERMEDIATE BENT



- Notes:
- For Dead Load Deflections and Theoretical Slab Haunching Diagram, see Sheet No. 5.
  - For details and reinforcement of Safety Barrier Curb not shown, see Sheets No. 8 and 9.
  - For Slab Pouring Sequence and Slab Construction Joint Details, see Sheet No. 5.
  - For Plan of Slab Showing Top Reinforcement and Plan of Slab Showing Bottom Reinforcement, see Sheet No. 7.
  - For location and details of slab drains, see Sheet No. 4.
  - For details and reinforcement of Pedestrian Curb, see Sheet No. 10.
  - For details of Pedestrian Fence, see Sheet No. 11.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	6

COUNTY: CALDWELL  
 JOB NO.: J1S2149  
 CONTRACT ID.:  
 PROJECT NO.:  
 BRIDGE NO.: A00101

DATE	DESCRIPTION

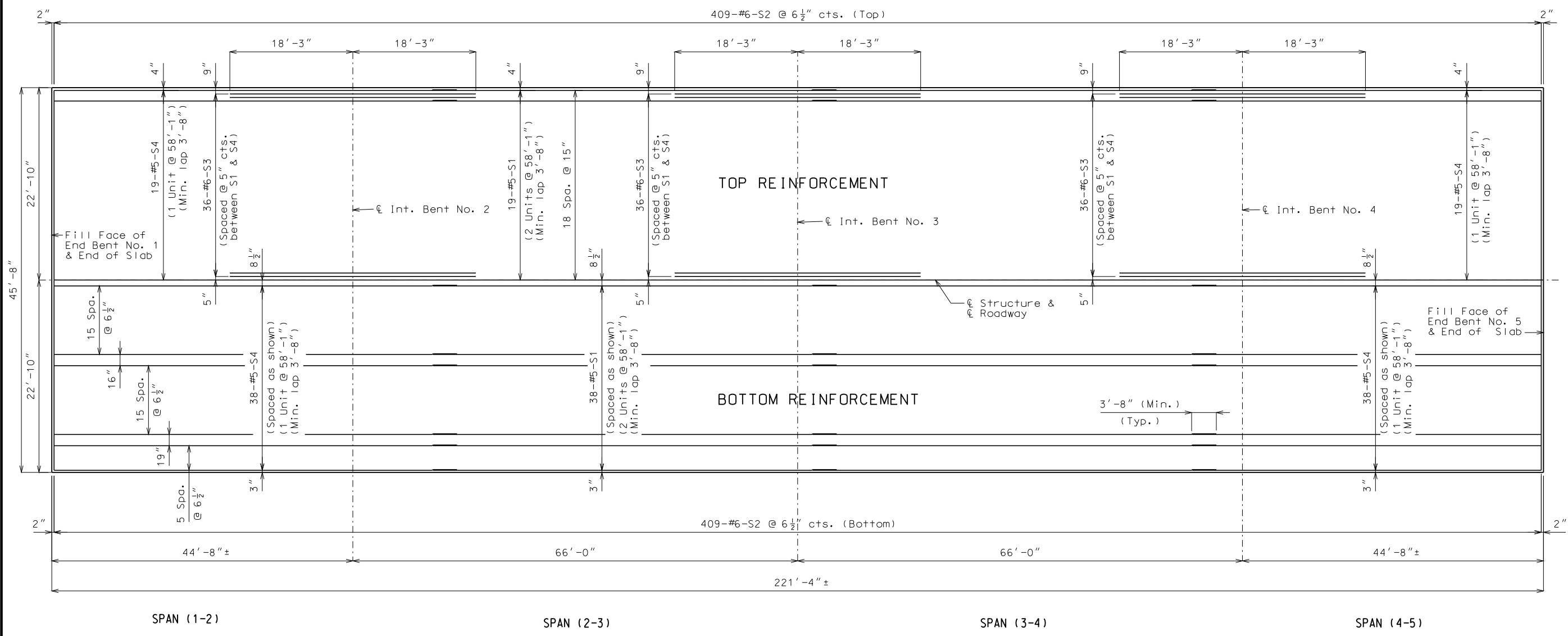
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

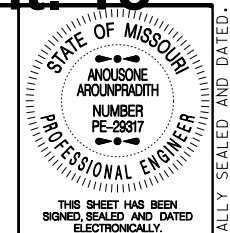
Notes:

- For Dead Load Deflections and Theoretical Slab Haunching Diagram, see Sheet No. 5.
- For details and reinforcement of Safety Barrier Curb not shown, see Sheets No. 8 and 9.
- For Slab Pouring Sequence and Slab Construction Joint Details, see Sheet No. 5.
- For Section Thru Slab, see Sheet No. 6.
- For location and details of slab drains, see Sheet No. 4.
- For details and reinforcement of Pedestrian Curb, see Sheet No. 10.
- For details of Pedestrian Fence, see Sheet No. 11.



PLAN OF SLAB SHOWING REINFORCEMENT

Note: Longitudinal dimensions are horizontal.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

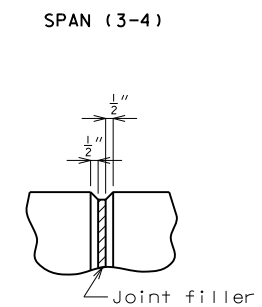
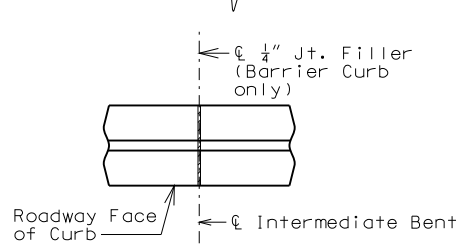
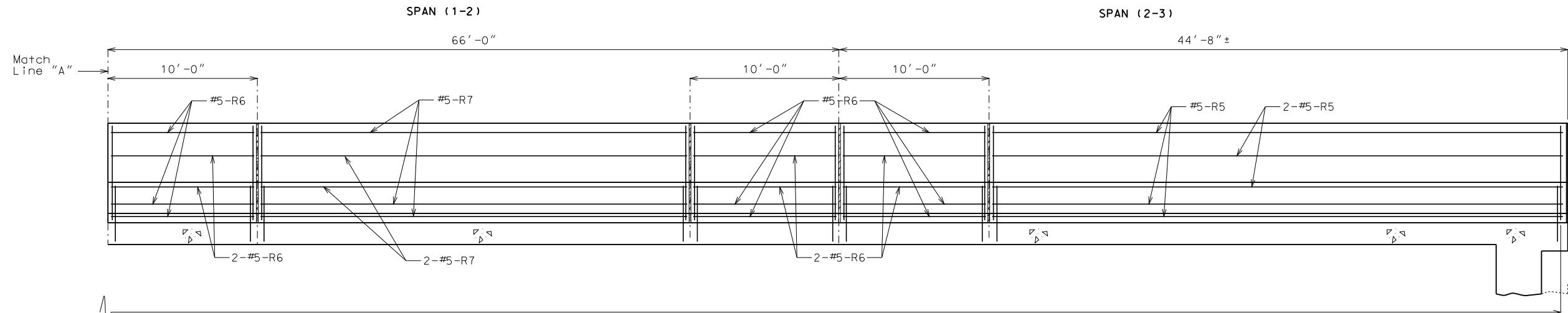
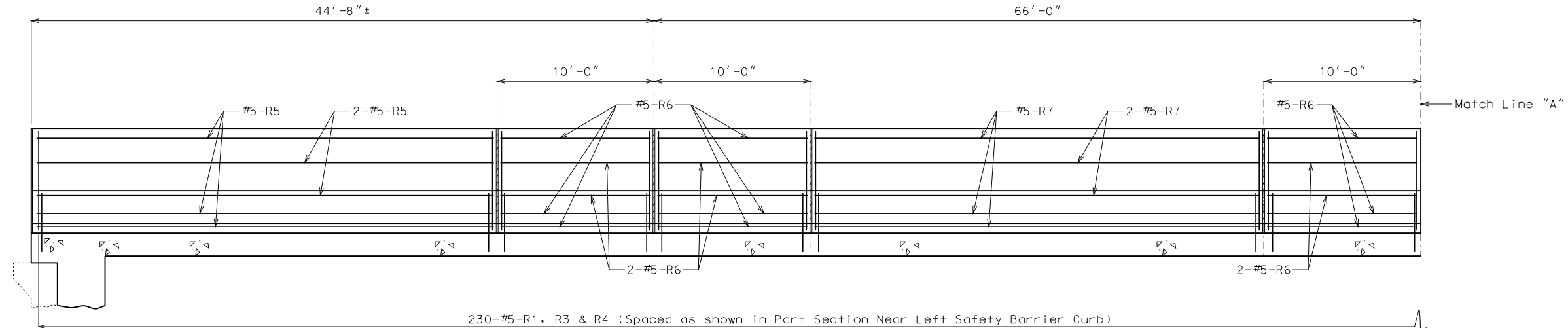
ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	7
COUNTY	
CALDWELL	
JOB NO.	
J1S2149	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A00101	

DATE	DESCRIPTION

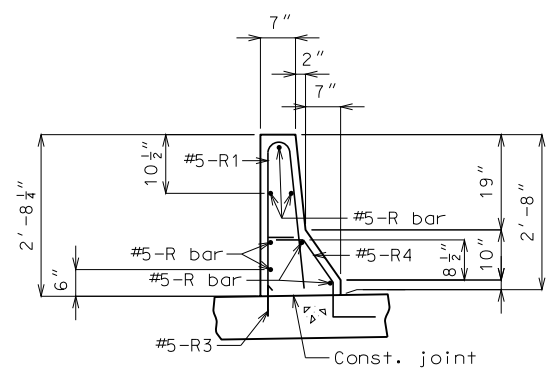
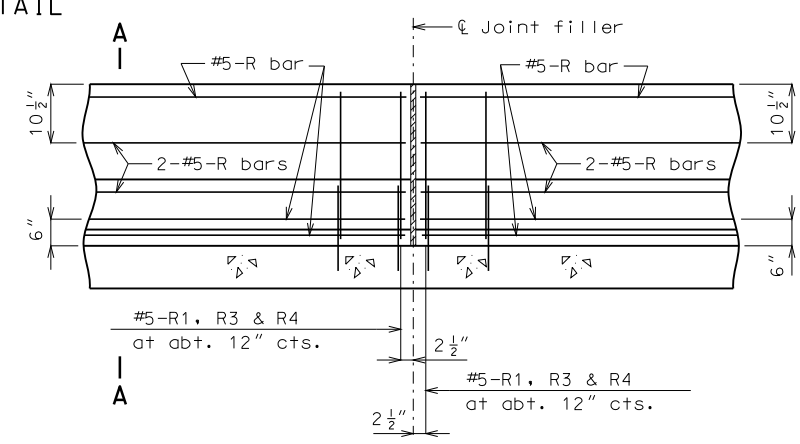
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



**SECTION NEAR LEFT SAFETY BARRIER CURB**  
(Right safety barrier curb similar)  
Note: Longitudinal dimensions are horizontal.

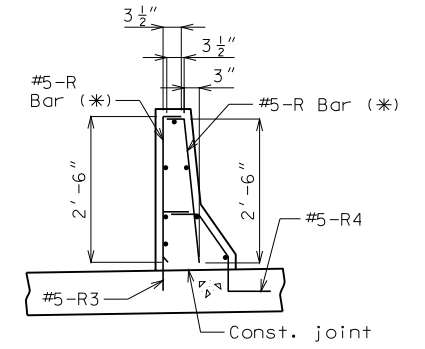


**Notes:**  
Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.  
All exposed edges of safety barrier curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.  
Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for safety barrier curb per linear foot.  
Concrete in the safety barrier curb shall be Class B-1.

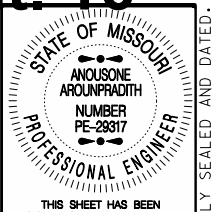
Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.  
Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Safety Barrier Curb".  
The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.

**Notes:**  
Use a minimum lap of 2'-11" for #5 horizontal safety barrier curb bars.  
The cross-sectional area above the slab = 2.27 sq. ft.

**R-BAR PERMISSIBLE ALTERNATE SHAPE**



(\* ) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	8

COUNTY: CALDWELL  
JOB NO.: J1S2149  
CONTRACT ID.:  
PROJECT NO.:  
BRIDGE NO.: A00101

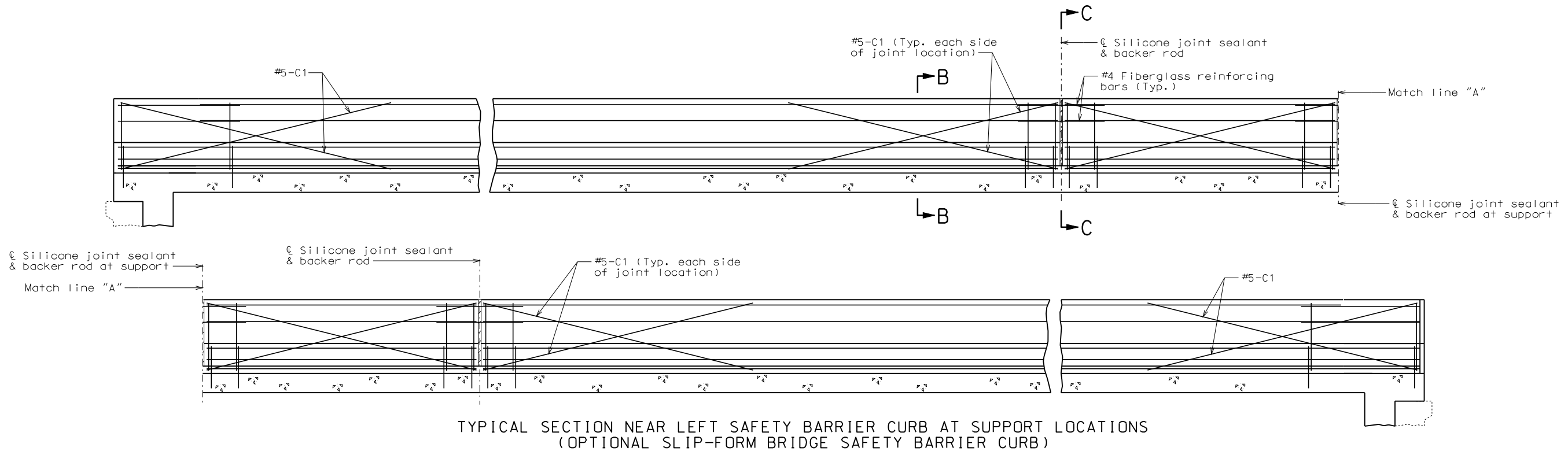
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.





**Notes:**

Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.

Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for safety barrier curb per linear foot.

Concrete in the safety barrier curb shall be Class B-1.

Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.

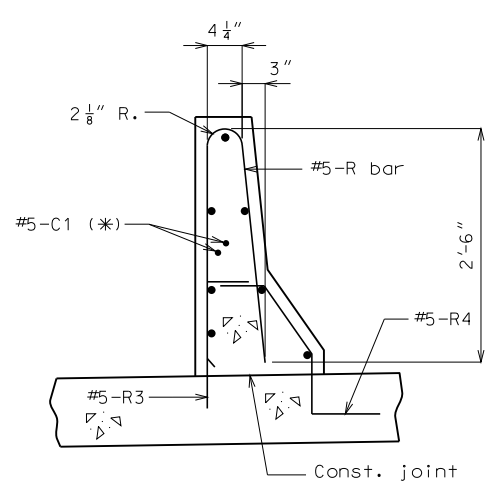
**Notes:**

Joint sealant and backer rods shall be used on all slip-form barrier curbs instead of joint filler and shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

C Bars (Slip-form option only) shall be used in addition to cast-in-place conventional forming reinforcement for bridge safety barrier curb.

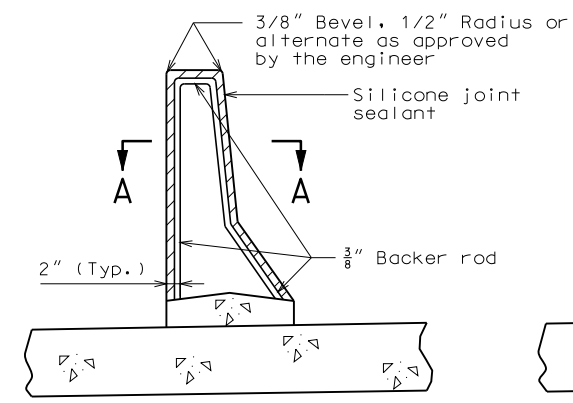
For Slip-Form option, all sides of the safety barrier curb shall have a vertically broomed finish and the curb top shall have a transversely broomed finish.

Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Safety Barrier Curb".

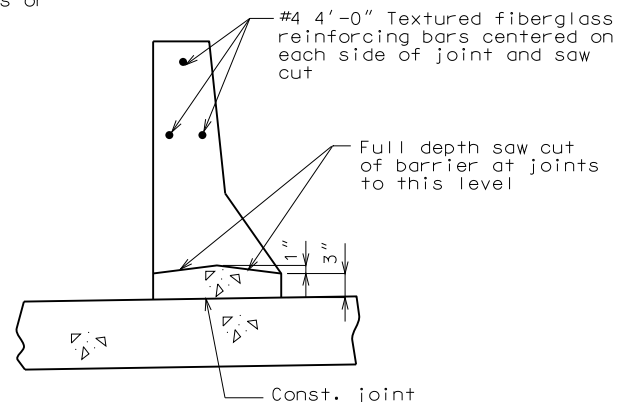


PART SECTION B-B

**Note:**  
(\*) Each side of joint location.

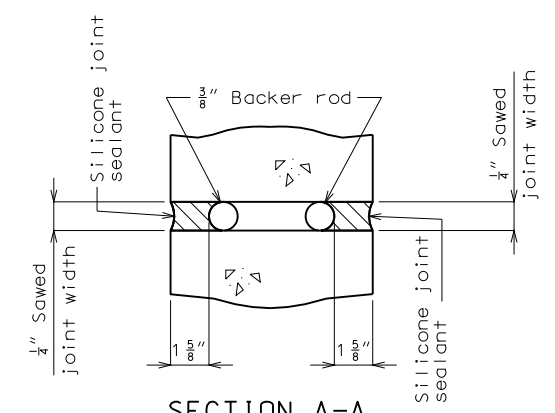


SECTION THRU JOINT



PART SECTION C-C

**OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB**  
(Left barrier curb shown, right barrier curb similar.)



SECTION A-A

**Note:**  
Cost of silicone joint sealant and backer rod, complete-in-place, will be considered completely covered by the contract unit price for Safety Barrier Curb.

STATE OF MISSOURI  
ANOUSONE AROUNPRADITH  
NUMBER PE-28317  
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/9/2009

ROUTE: 13 STATE: MO  
DISTRICT: BR SHEET NO.: 9

COUNTY: CALDWELL  
JOB NO.: J1S2149  
CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A00101

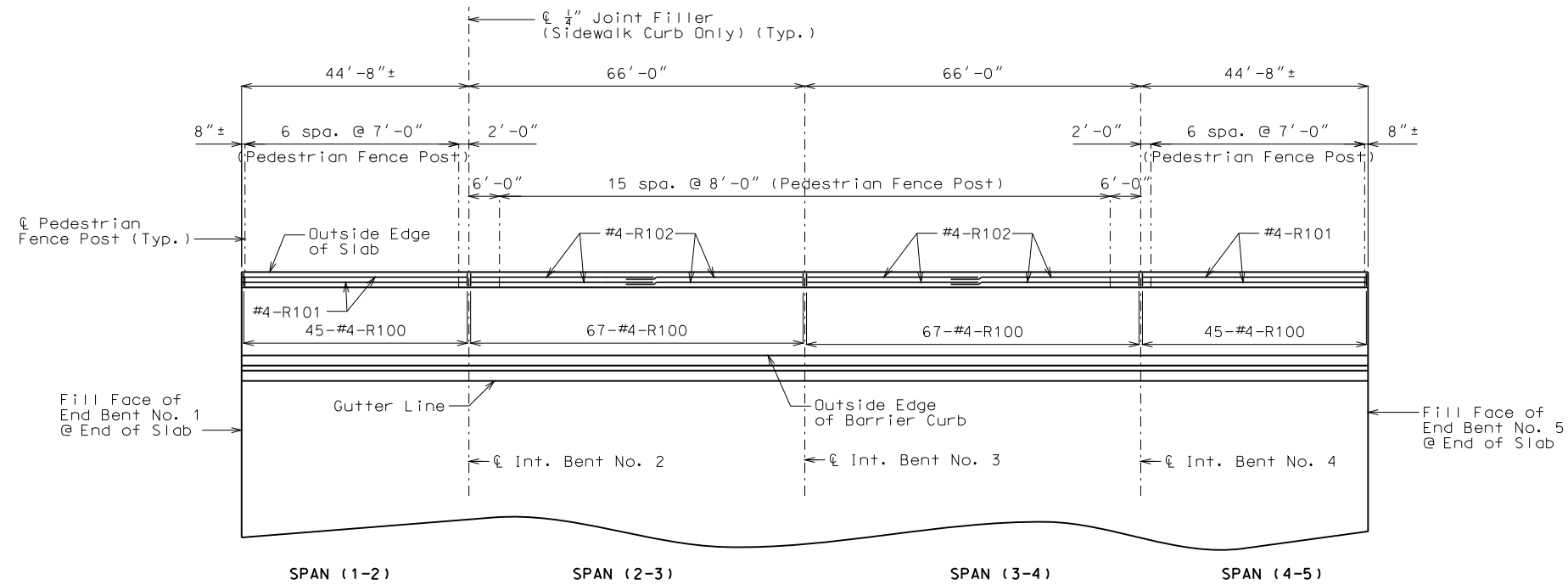
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

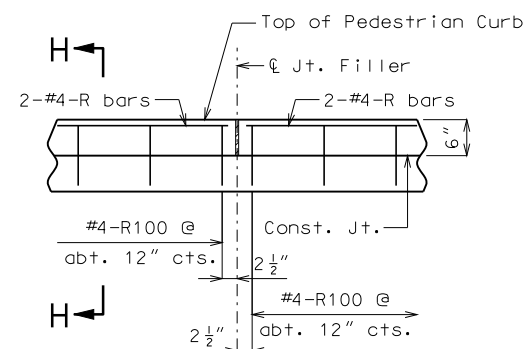
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

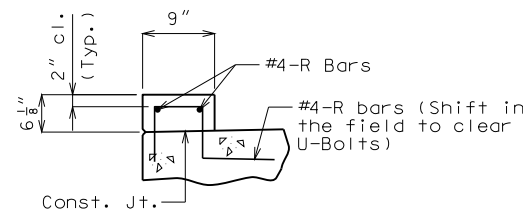


PART PLAN SHOWING PEDESTRIAN CURB & FENCE POST SPACING

(Longitudinal dimensions are horizontal.)



PART ELEVATION OF PEDESTRIAN CURB ON SLAB



SECTION H-H

Note: The cross-sectional area above the slab = 0.38 sq. ft.

Pedestrian Curb Notes:

Top of the pedestrian curb shall be built parallel to grade with curb joints normal to grade.

All exposed edges of the pedestrian curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for slab on steel.

Concrete in the pedestrian curb shall be Class B-1.

Measurement of the pedestrian curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of curb to end of curb.

The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 will not be permitted.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/9/2009

ROUTE 13 STATE MO

DISTRICT BR SHEET NO. 10

COUNTY CALDWELL

JOB NO. J1S2149

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A00101

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/9/2009

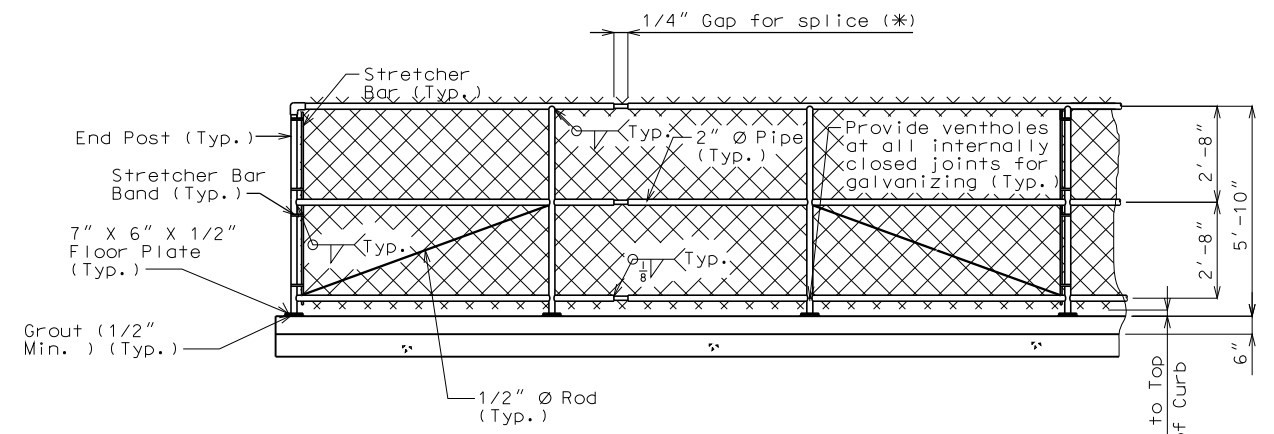
ROUTE 13 STATE MO  
DISTRICT BR SHEET NO. 11

COUNTY CALDWELL  
JOB NO. J1S2149  
CONTRACT ID.

PROJECT NO.  
BRIDGE NO. A00101

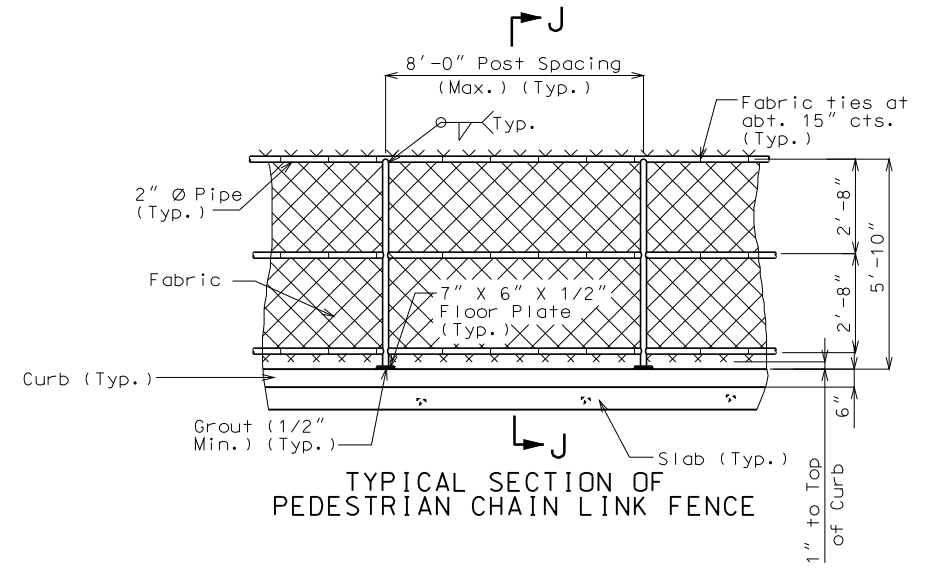
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

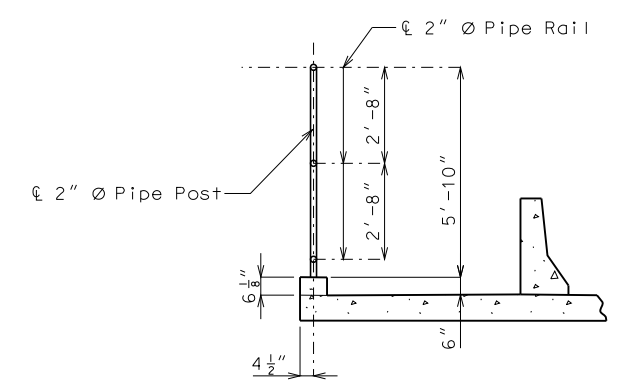


TYPICAL SECTION NEAR SPLICE GAP

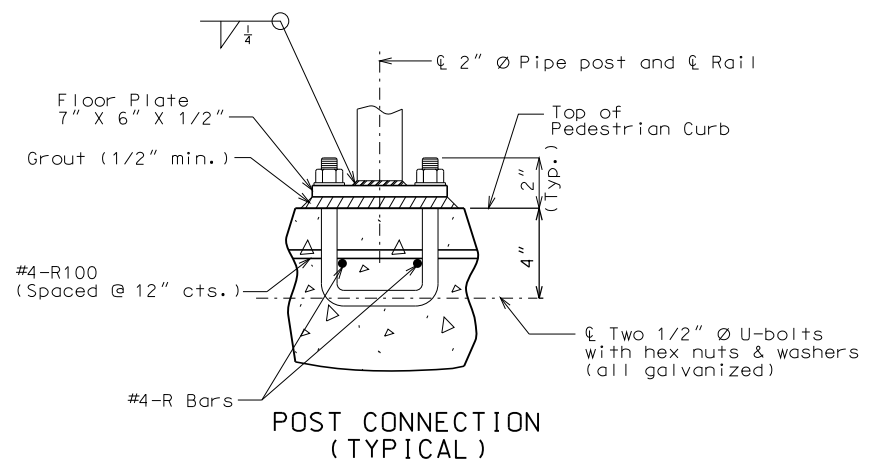
\* At about 30'-0" centers with at least one splice gap between pull posts.



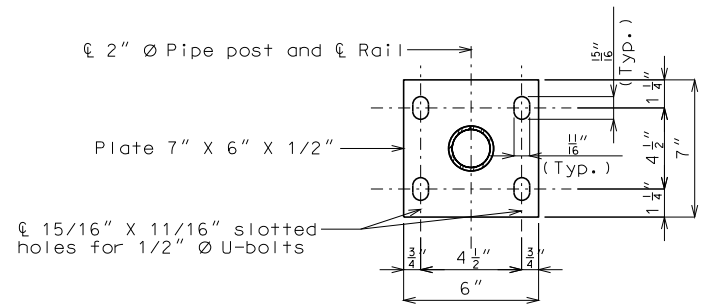
TYPICAL SECTION OF PEDESTRIAN CHAIN LINK FENCE



SECTION J-J



POST CONNECTION (TYPICAL)



PLAN OF FLOOR PLATE

NOTE:

Pedestrian guard fence (Chain link type) shall be in accordance with Sec 1043 except all fabric shall have the top and bottom edges knuckled.

All rail post shall be vertical. Grout of 1/2" minimum thickness shall be placed under floor plates to provide for vertical alignment of rail posts.

Payment for furnishing, galvanizing and erecting the fence and frame complete with anchor bolts and washers will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures) per linear foot.

Dimensions of pedestrian guard fence are measured horizontally.

The maximum spacing allowed for the braced panels (Pull posts) is 100 ft.

Connect the lower end of the 1/2" Ø rod to the end of the braced panel to which the stretcher bar is attached.

Core wire size for wire fabric shall be 6 gage minimum.

DETAILS OF PEDESTRIAN CHAIN LINK FENCE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



## MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (43'-66'-66'-43') CONTINUOUS I-BEAM SPANS

### GENERAL NOTES:

Design Specifications:  
2002 - AASHTO 17th Edition  
Load Factor Design  
Seismic Performance Category A

Design Loading:  
H20-44 (1953), HS20-44 (New Construction)  
35#/Sq. Ft. Future Wearing Surface  
Earth 120 #/Cu. Ft., Equivalent Fluid Pressure 45#/Cu. Ft.  
Fatigue Stress - Case II

Design Unit Stresses:  
Class B-1 Concrete (Safety Barrier Curb)  $f'c = 4,000$  psi  
Class B-2 Concrete (Superstructure, except Safety Barrier Curb)  $f'c = 4,000$  psi  
Reinforcing Steel (Grade 60)  $fy = 60,000$  psi

Joint Filler:  
All joint filler shall be in accordance with Sec 1057 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.

Miscellaneous:  
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

"See" refers to the sections in the standard and supplemental specifications unless specified otherwise.

The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved bituminous paint.

Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Concrete Protective Coating:  
Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Traffic:  
Existing structure shall be closed during construction.

Structural Steel Protective Coating:

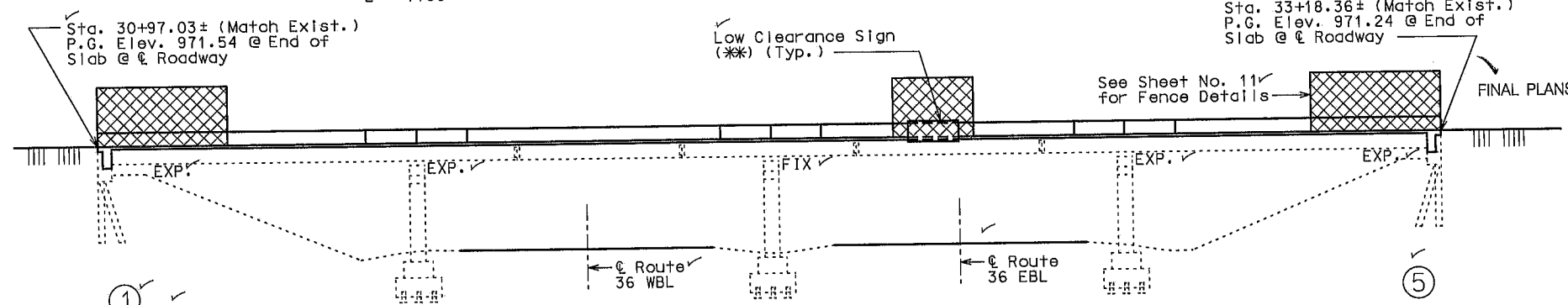
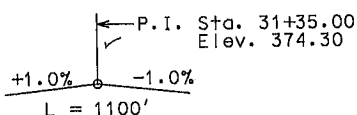
Protective Coating: Calcium Sulfonate System in accordance with Sec 1081.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for "Overcoating of Structural Steel (Calcium Sulfonate System)". The cost of surface preparation will be considered completely covered by the contract unit price per sq. foot for "Surface Preparation for Overcoating Structural Steel".

Rust Penetrating Sealer: The rust penetrating sealer shall be applied to the surfaces of all bearings, overlapping steel plates, pin connections, pin and hanger connections and other locations where rust bleeding, pack rust and layered rust is occurring. The cost of the rust penetrating sealer will be considered completely covered by the contract lump sum price for "Calcium Sulfonate Rust Penetrating Sealer".

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per sq. foot for "Calcium Sulfonate Primer".

Topcoat: The color of the topcoat shall be Gray (Federal Standard #26373). The cost of the topcoat will be considered completely covered by the contract unit price per sq. foot for "Calcium Sulfonate Topcoat".



GENERAL ELEVATION

\*\* Low clearance sign. Roadway Item. See Roadway Plans for details.

Quantities		
Item	Unit	Total
Removal of Existing Bridge Decks	sq. foot	10,117
(72 in) Pedestrian Fence (Structures)	linear foot	440
Slab on Steel	sq. yard	1,123
Safety Barrier Curb	linear foot	443
Substructure Repair (Unformed)	sq. foot	0.0
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Slab Drain	each	10
Surface Preparation for Overcoating Structural Steel	sq. foot	9,600
Calcium Sulfonate Rust Penetrating Sealer	lump sum	1
Calcium Sulfonate Primer	sq. foot	9,600
Calcium Sulfonate Topcoat	sq. foot	9,600
Shear Connectors	each	2370
LINE 5001 ITEM 703-99.01 MISC. CONCRETE	LUMP SUM	1.0
LINE 5002 ITEM 712-36.20 DRAINAGE SYSTEM STRUCTURE	LUMP SUM	1.0

\* Safety Barrier Curb shall be cast-in-place option or slip-form option.

Quantities for Slab on Steel		
Item	Unit	Total
Class B-2 Concrete	cu. yard	251.0
Reinforcing Steel (Epoxy Coated)	pound	98,870

The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard with the horizontal dimensions as shown on the plan of slab. Payment for stay-in-place forms, 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 as shown on the plans and in accordance with Sec 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.

Slab shall be cast-in-place with conventional forming or stay-in-place corrugated metal forms. Precast prestressed panels will not be permitted. Concrete for slab haunches, based on Theoretical Slab Haunching Diagram, is included in the Estimated Quantities for Slab on Steel.

REPAIRS TO BRIDGE OVER ROUTE 36  
STATE ROAD FROM HAMILTON SOUTH  
ABOUT 0.5 MILE S. OF HAMILTON  
STA. 30+97.03± (Match Existing)

STD. 617.10  
STD. 706.35

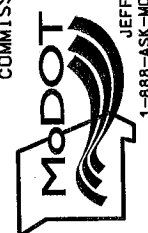
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED: 9/2/2010  
ROUTE: 13  
DISTRICT: BR  
STATE: MO  
COUNTY: CALDWELL  
JOB NO.: J1S2149  
CONTRACT ID.: 100122-108  
PROJECT NO.: FAF-13-4(28)  
BRIDGE NO.: A00101

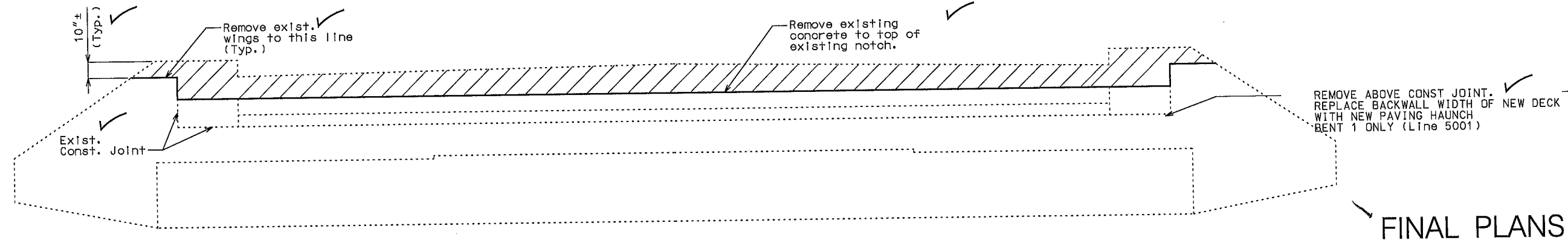
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

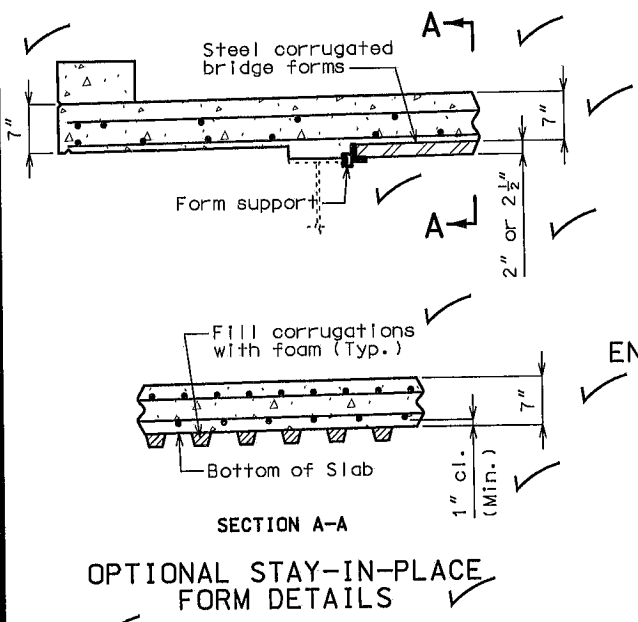


FINAL PLANS

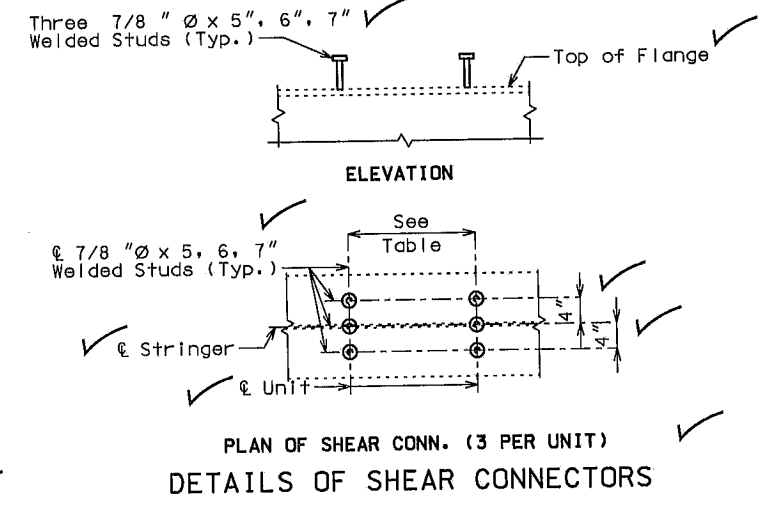
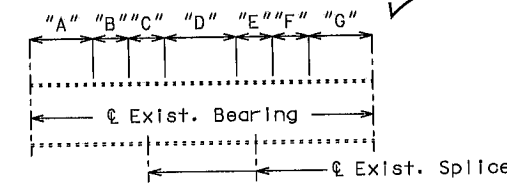
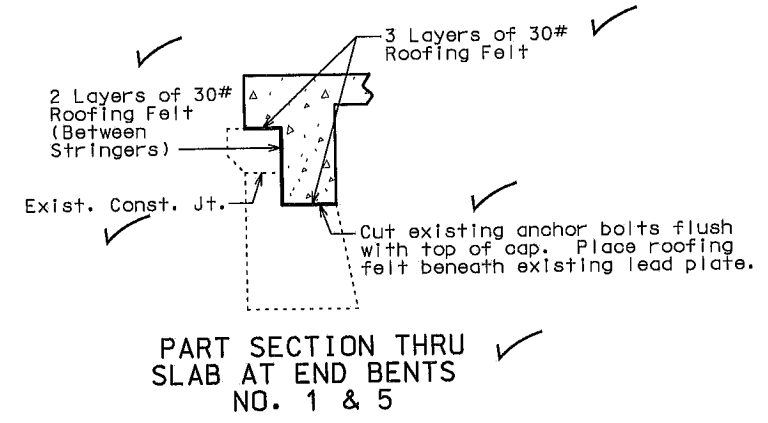
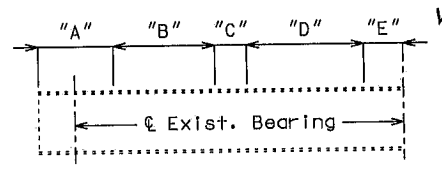
DETAILS OF CONCRETE REMOVAL @ END BENTS

Notes:  
 The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Decks. Vertical backwall and wingwall reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.  
 Steel end diaphragms may be removed and reinstalled prior to slab pour. The cost of this work will be considered completely covered by the contract unit price for Removal of Existing Bridge Decks.  
 A smooth level surface shall be provided at Bents No. 1 & 5 removal lines.

Notes:  
 Stay-In-Place Forms:  
 Permanent steel bridge deck forms, supports closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.  
 Form sheets shall not rest directly on the top of stringers. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the flanges of the stringers will not be permitted. All steel fabrication and construction shall be in accordance with Sec's 1080 and 712. MDDOT certified field welders will not be required for welding of the form supports.  
 Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.



TYPICAL SECTION THRU END BENTS NO. 1 & 5 SHOWING PROTECTIVE COATING



DETAILS OF SHEAR CONNECTORS

Notes:  
 Shear connectors shall be in accordance with Sec 712, 1037 and 1080.  
 The cost of supply and installing shear connectors will be considered completely covered by the contract unit price for shear connectors.

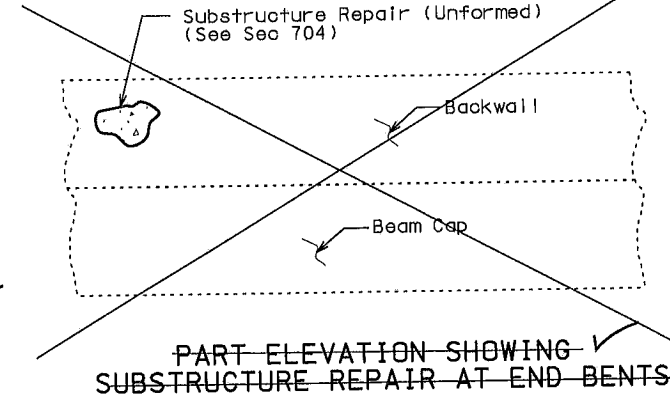
Notes:  
 7" Shear connectors used at Girder 3; Span 2-3 (37 Units), Span 1-2 (3 units) and Span 3-4 (42 units)  
 5" Shear connectors used at Girders 1, 2, & 5; Span 4-5 (30 Units)  
 Remainder: 6" Shear connectors

ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR END BEAMS

ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR MID BEAMS

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING								
Beam	S.C. per unit	"A"	"B"	"C"	"D"	"E"	"F"	"G"
End Beam (Spans 1-2 & 5-4)	3	3"±	35 Units @ 10" ots.	6"±	3 Units @ 12" ots.	12'-3"±	---	---
Mid Beam (Spans 2-3 & 4-3)	3	13'-5 3/4"±	3 Units @ 6" ots.	4'-4 1/4"±	35 Units @ 10" ots.	4'-4 1/4"±	3 Units @ 6" ots.	13'-5 3/4"±
Total shear connectors required								2370

DETAILS OF END BENTS NO. 1 & NO. 5



"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED: 9/2/2010

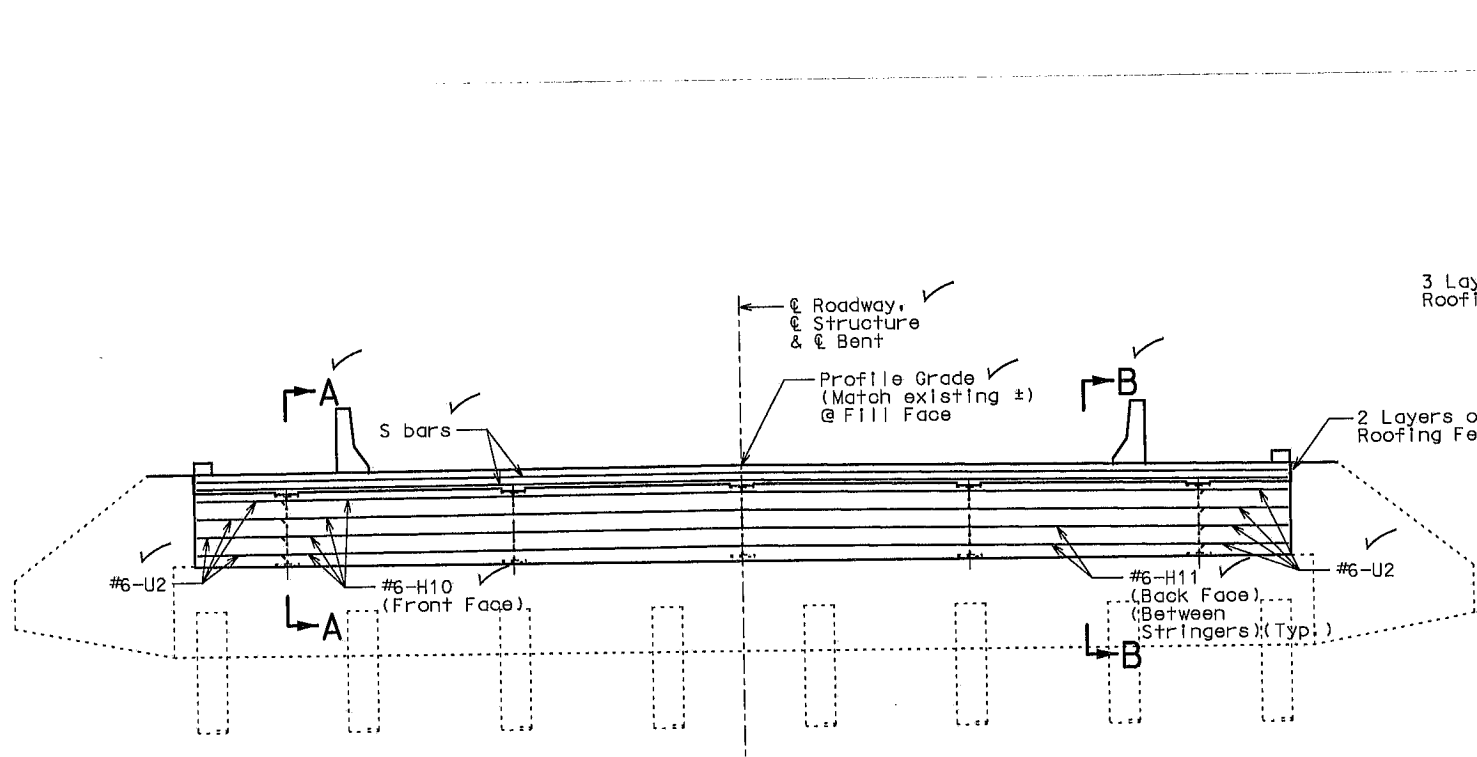
ROUTE: 13 STATE: MO DISTRICT: BR COUNTY: CALDWELL SHEET NO.: 2

JOB NO.: J1S2149 CONTRACT ID.: 100122-108 PROJECT NO.: FAF-13-4(28) BRIDGE NO.: A00101

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

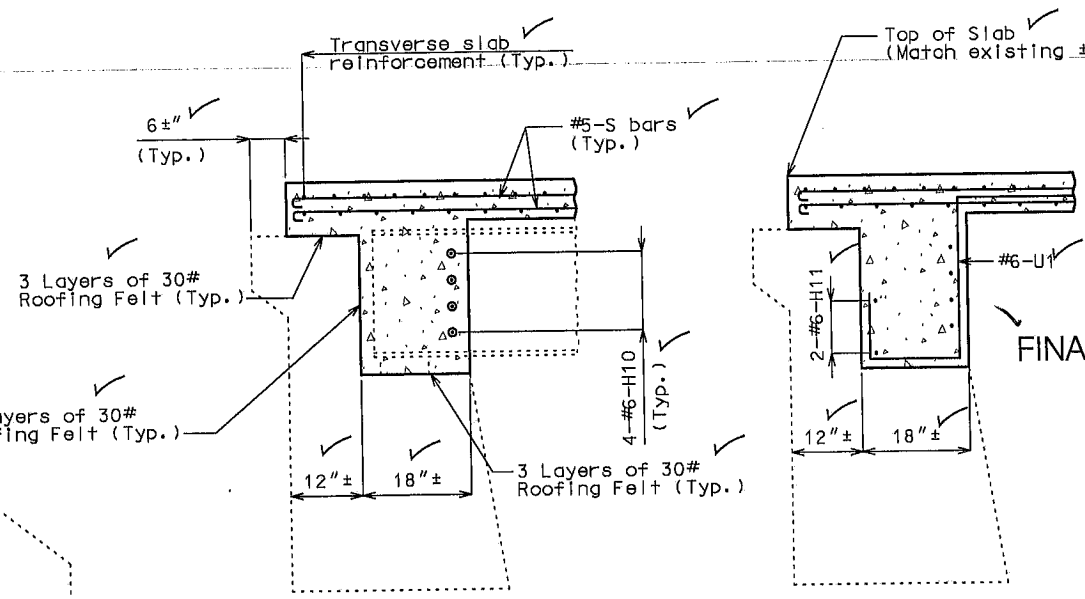
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MDDOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SECTION NEAR END BENTS

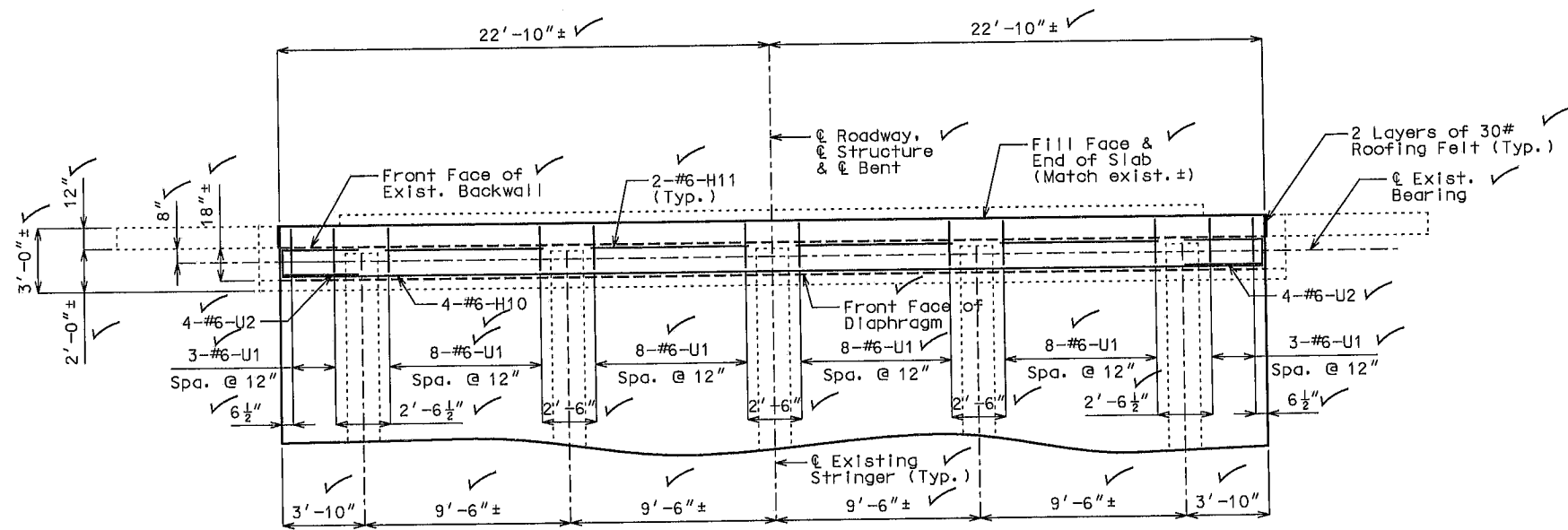
Note: Existing steel end diaphragms not shown for clarity.



SECTION A-A

SECTION B-B

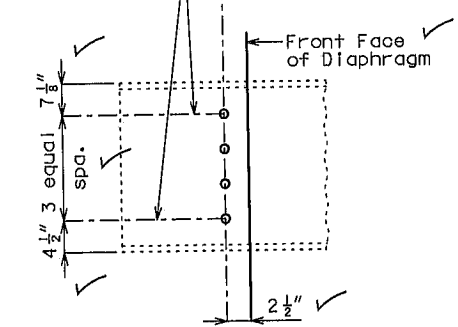
FINAL PLANS



PART PLAN

Note:  
The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-2 surface preparation before concrete is poured. Payment for cleaning steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

Ø 1 1/16" holes in each stringer. Cost of field drilling holes in existing webs will be considered completely covered by the contract unit price for Slab on Steel.



DETAIL OF WEB HOLES AT END BENTS

DETAILS OF END BENTS NO. 1 & 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	
9/2/2010	
ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	3
COUNTY	
CALDWELL	
JOB NO.	
J1S2149	
CONTRACT ID.	
100122-108	
PROJECT NO.	
FAF-13-4(28)	
BRIDGE NO.	
A00101	

DESCRIPTION	DATE

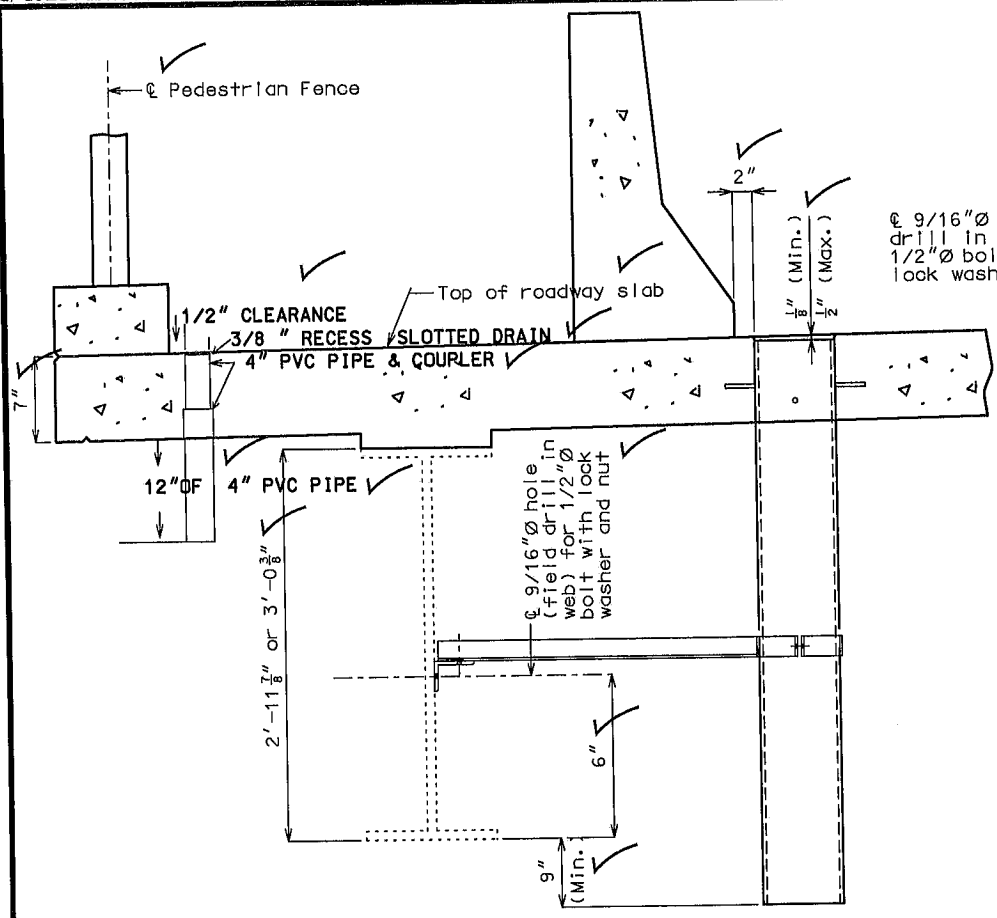
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITAL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

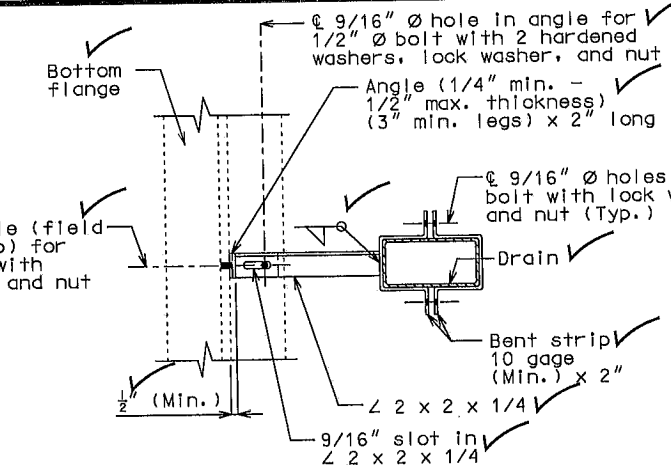
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

dra6\_slab\_stl Effective: Aug. 2008 Supercedes: Dec. 2001 E3002E

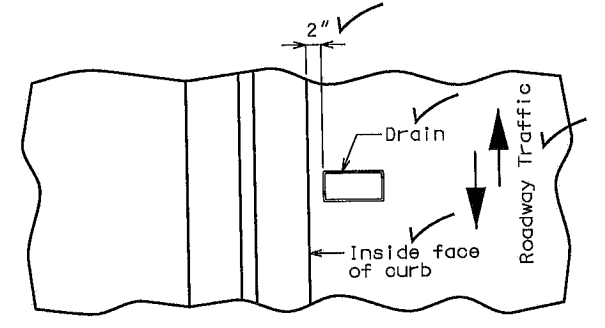
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."



PART SECTION NEAR DRAIN

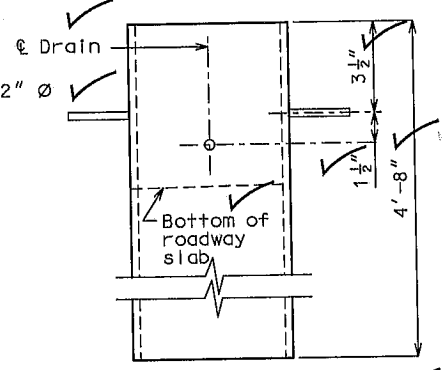


PART SECTION SHOWING BRACKET ASSEMBLY

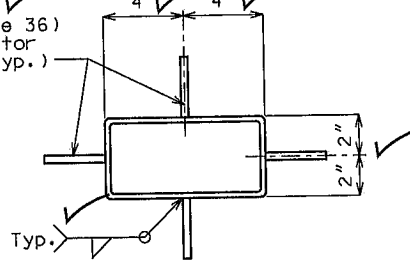


PART PLAN OF SLAB AT DRAIN

DETAILS OF DRAINS TRANSVERSE TO ROADWAY



ELEVATION OF DRAIN

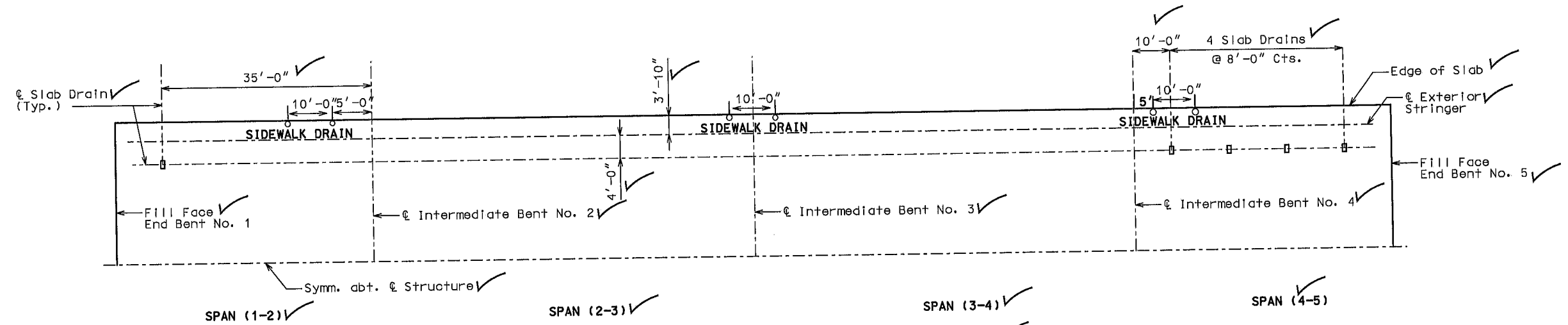


PLAN OF DRAIN

FINAL PLANS

Notes:

- Slab drains may be fabricated of either 1/2" welded sheets of ASTM A709 Grade 36 steel or from 1/2" structural steel tubing ASTM A500 or A501.
- Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.
- Outside dimensions of drains are 8" x 4".
- Locate drains in slab by dimensions shown in Part Section Near Drain.
- Shift reinforcing steel in field where necessary to clear drains.
- The drains and bracket assembly shall be galvanized in accordance with ASTM A123.
- All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.
- Shop drawings will not be required for the slab drains and the bracket assembly.
- The bolt hole for the bracket assembly attachment shall be field drilled in the web of the existing stringer.
- Slab drain locations shall be shifted the minimum extent necessary to allow for field drilling bolt hole in web of existing stringer for bracket assembly attachment.
- Sidewalk Drains of 4" PVC Pipe extend 1' below bottom of deck. 3/8" slotted drains 3/8" below finish grade.



PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

Note: Longitudinal dimensions are horizontal. (Left side shown. Right side similar.)

SLAB DRAIN DETAILS

DATE PREPARED	9/9/2010
ROUTE	131
STATE	MO
DISTRICT	BRV
SHEET NO.	4
COUNTY	CALDWELL
JOB NO.	J1S2149
CONTRACT ID.	100122-108
PROJECT NO.	FAF-13-4(28)
BRIDGE NO.	A00101

DESCRIPTION	DATE

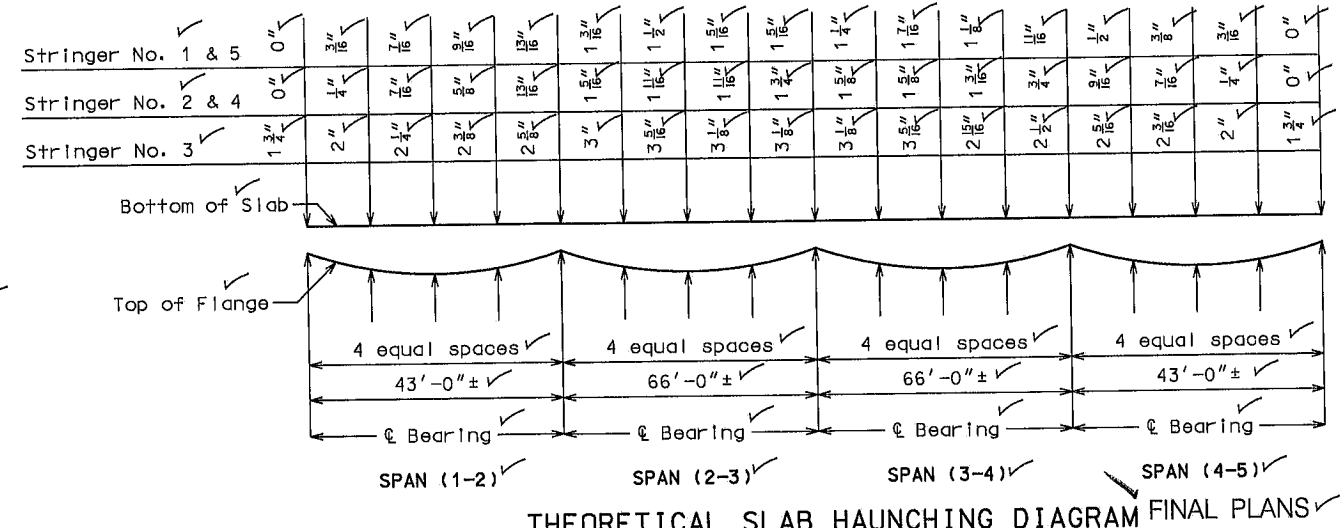
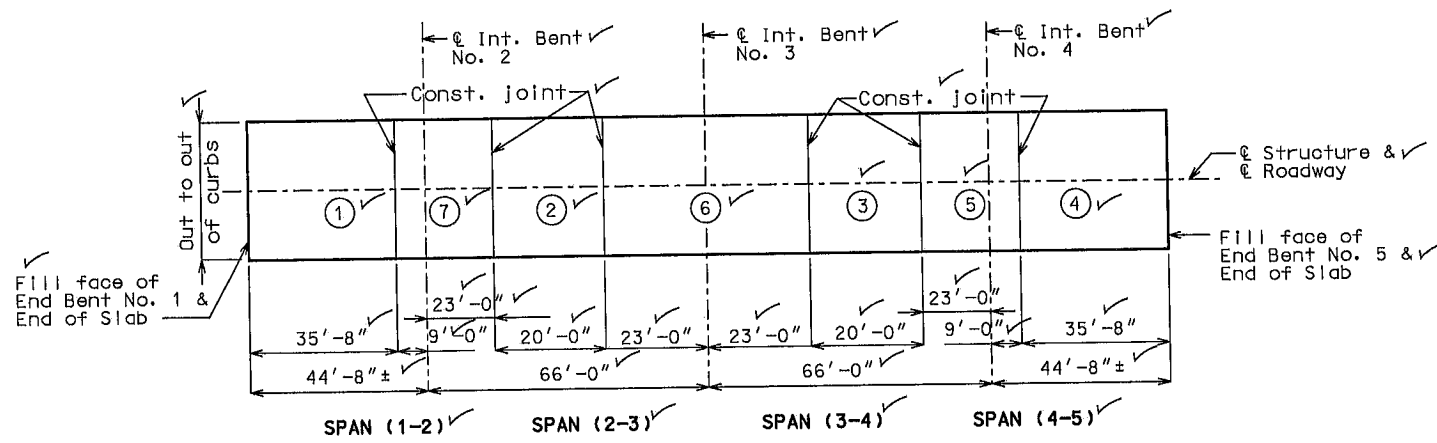
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

**MoDOT**

105 WEST CAPITAL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

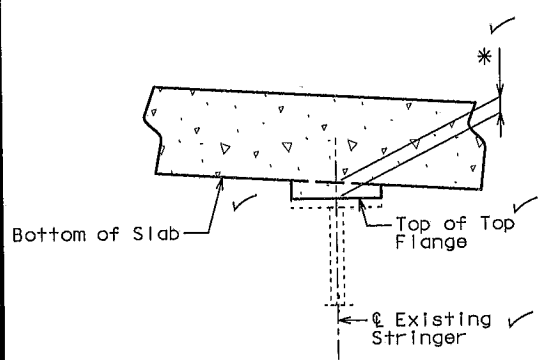




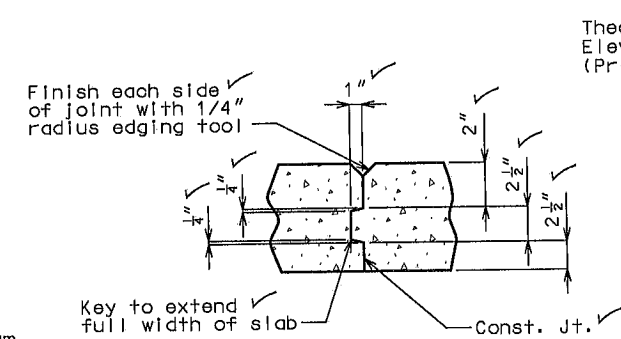
Sequence of Pours	Direction							Min. rate of pour cu. yds./hr.			
	1	2	3	4	5	6	7	With retarder	No retarder		
Basic sequence	1	2	3	4	5	6	7	25	25		
Alternate pours to the basic skip sequence are subject to the approval of the engineer in accordance with Sec 703.											
Alternate pours "A"	1	7 + 2	6 + 3	5 + 4						25	33
Alternate pours "B"	1 + 7 + 2	6 + 3	5 + 4						25	33	
Alternate pours "C"	1 + 7 + 2	6 + 3 + 5 + 4						25	33		
Alternate pours "D"	1 + 7 + 2 + 6 + 3 + 5 + 4	End to end							25	33	

Note: The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

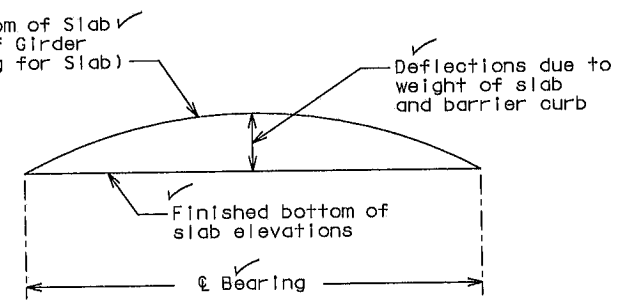
SLAB POURING SEQUENCE



\* See Theoretical Slab Haunching Diagram. THEORETICAL SLAB HAUNCH

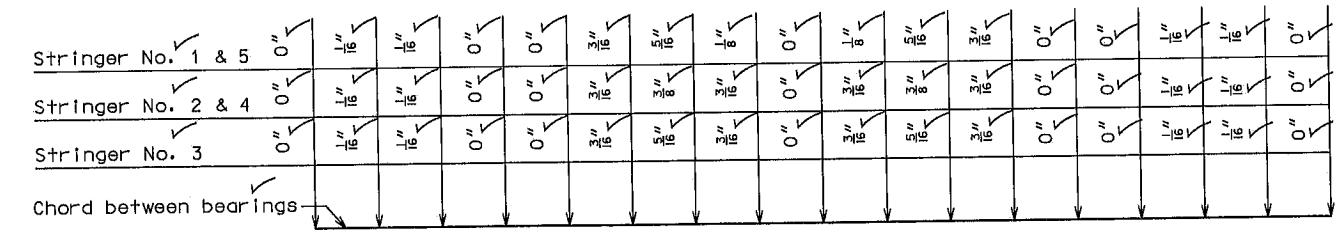


SLAB CONSTRUCTION JOINT DETAILS



TYPICAL SLAB ELEVATIONS DIAGRAM

Note: If stringer or slab elevations differ from those shown on the plans, it shall be necessary to adjust the slab haunches or adjust the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for variation in haunching or grade adjustments.



DEAD LOAD DEFLECTION

Note: 19.4% of dead load deflection is due to the weight of structural steel: (Stringers No. 1 & 5) 20.4% for (Stringers No. 2 & 4) 18.3% for (Stringer No. 3) Dead load deflection includes weight of structural steel, concrete slab, and barrier curb.

	Span (1-2) (43'-0" & brg - & brg.)				Span (2-3) (66'-0" & brg - & brg.)				Span (3-4) (66'-0" & brg - & brg.)				Span (4-5) (43'-0" & brg - & brg.)							
	& brg.	.25	.50	.75	& brg.	.25	.50	.75	& brg.	.25	.50	.75	& brg.	.25	.50	.75	& brg.			
Stringer No. 1 & No. 5	970.66	970.67	970.67	970.67	970.67	970.67	970.68	970.68	970.65	970.62	970.62	970.61	970.59	970.55	970.49	970.49	970.47	970.44	970.41	970.37
Stringer No. 2 & No. 4	970.81	970.82	970.82	970.82	970.82	970.82	970.83	970.83	970.80	970.77	970.77	970.76	970.74	970.70	970.64	970.64	970.62	970.59	970.56	970.52
Stringer No. 3	970.95	970.97	970.97	970.97	970.97	970.97	970.98	970.98	970.95	970.92	970.92	970.91	970.89	970.85	970.79	970.79	970.76	970.74	970.71	970.67

\*\* Elevations are based on a constant slab thickness of 7" and include allowance for theoretical dead load deflections due to weight of slab and barrier curb.

THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

DATE PREPARED: 9/2/2010

ROUTE: 13 STATE: MO

DISTRICT: BR SHEET NO: 5

COUNTY: CALDWELL

JOB NO: J1S2149

CONTRACT ID: 100122-108

PROJECT NO: FAF-13-4(28)

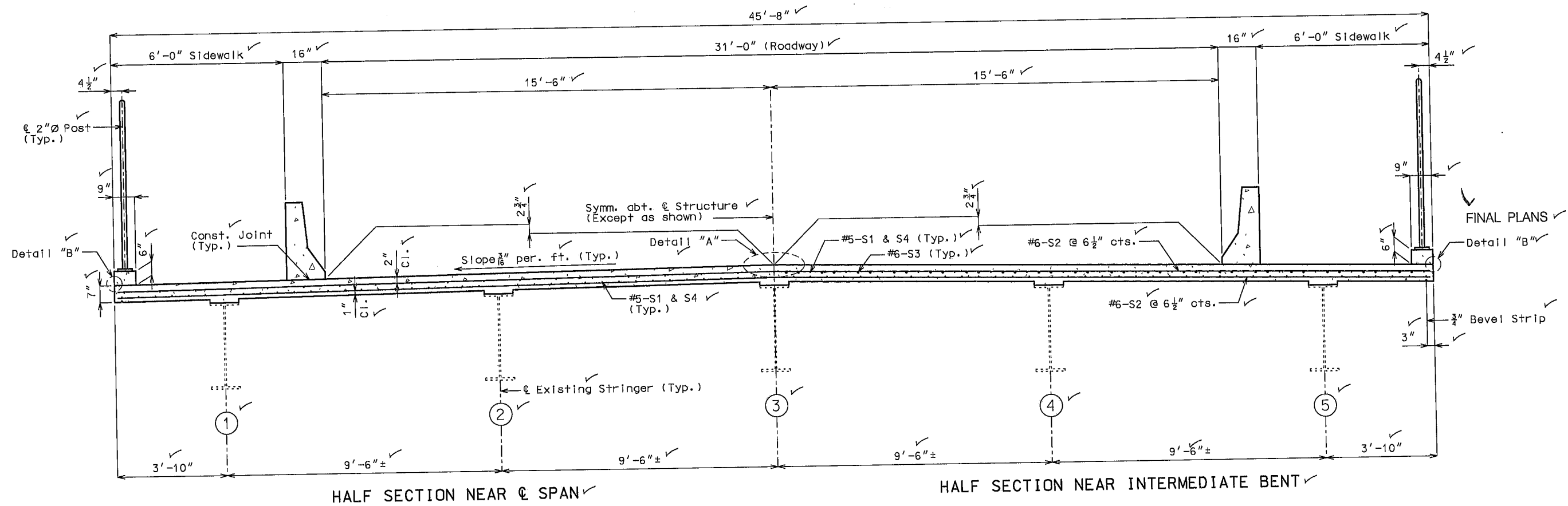
BRIDGE NO: A00101

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

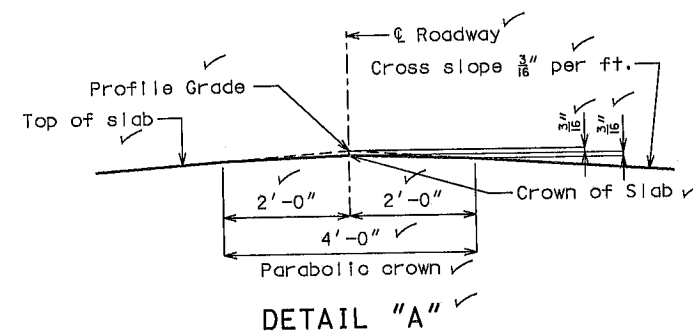
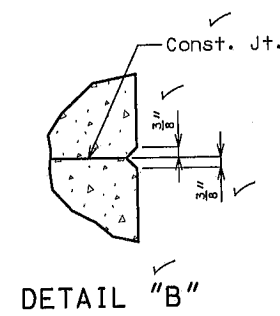
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



HALF SECTION NEAR  $\phi$  SPAN ✓

HALF SECTION NEAR INTERMEDIATE BENT ✓



Notes: ✓

- For Dead Load Deflections and Theoretical Slab Haunching Diagram, see Sheet No. 5. ✓
- For details and reinforcement of Safety Barrier Curb not shown, see Sheets No. 8 and 9. ✓
- For Slab Pouring Sequence and Slab Construction Joint Details, see Sheet No. 5. ✓
- For Plan of Slab Showing Top Reinforcement and Plan of Slab Showing Bottom Reinforcement, see Sheet No. 7. ✓
- For location and details of slab drains, see Sheet No. 4. ✓
- For details and reinforcement of Pedestrian Curb, see Sheet No. 10. ✓
- For details of Pedestrian Fence, see Sheet No. 11. ✓

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	
9/2/2010	
ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	6
COUNTY	
CALDWELL	
JOB NO.	
J1S2149	
CONTRACT ID.	
100122-108	
PROJECT NO.	
FAF-13-4(28)	
BRIDGE NO.	
A00101	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

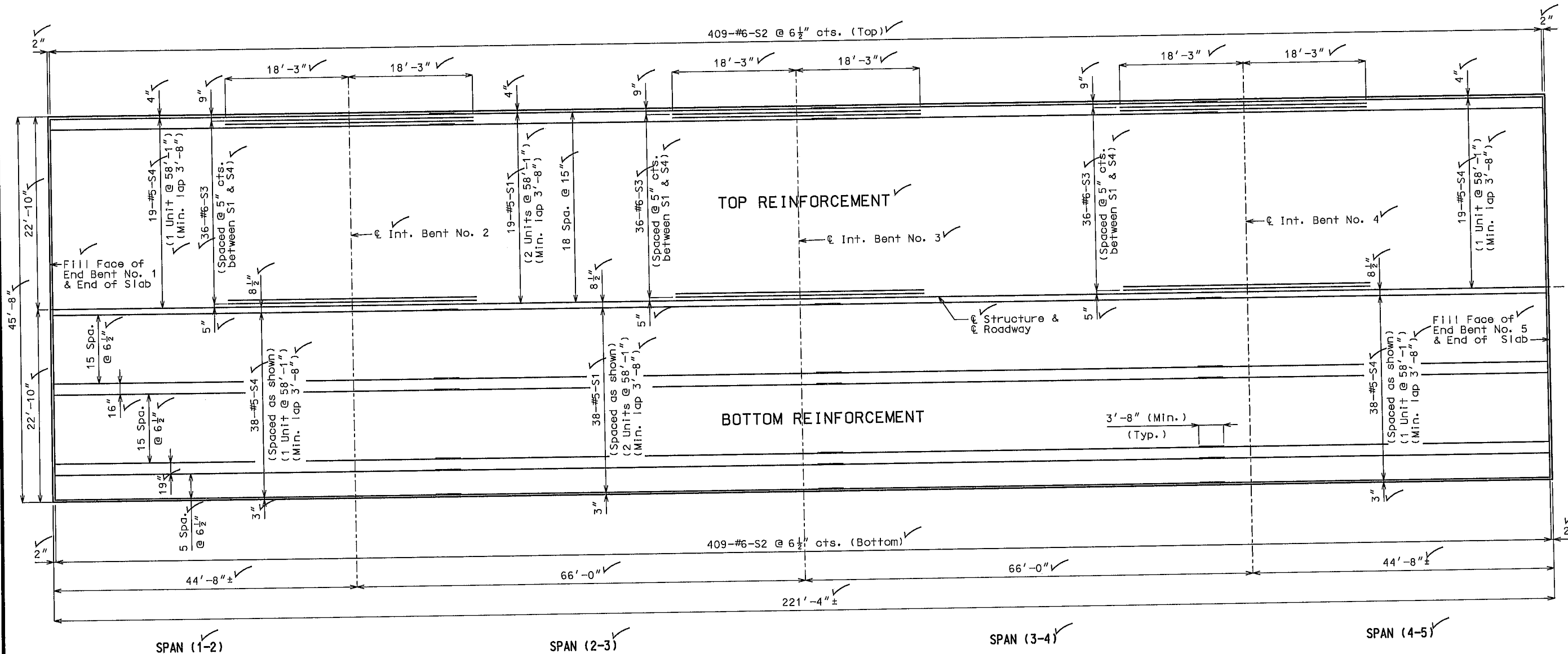


105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

- Notes: ✓  
 For Dead Load Deflections and Theoretical Slab Haunching Diagram, see Sheet No. 5. ✓  
 For details and reinforcement of Safety Barrier Curb not shown, see Sheets No. 8 and 9. ✓  
 For Slab Pouring Sequence and Slab Construction Joint Details, see Sheet No. 5. ✓  
 For Section Thru Slab, see Sheet No. 6. ✓  
 For location and details of slab drains, see Sheet No. 4. ✓  
 For details and reinforcement of Pedestrian Curb, see Sheet No. 10. ✓  
 For details of Pedestrian Fence, see Sheet No. 11. ✓

✓ FINAL PLANS ✓



PLAN OF SLAB SHOWING REINFORCEMENT ✓  
 Note: Longitudinal dimensions are horizontal. ✓

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED		9/2/2010
ROUTE	STATE	13 MO
DISTRICT	SHEET NO.	BR 7
COUNTY		CALDWELL
JOB NO.		J1S2149
CONTRACT ID.		100122-108
PROJECT NO.		FAF-13-4(28)
BRIDGE NO.		A00101

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

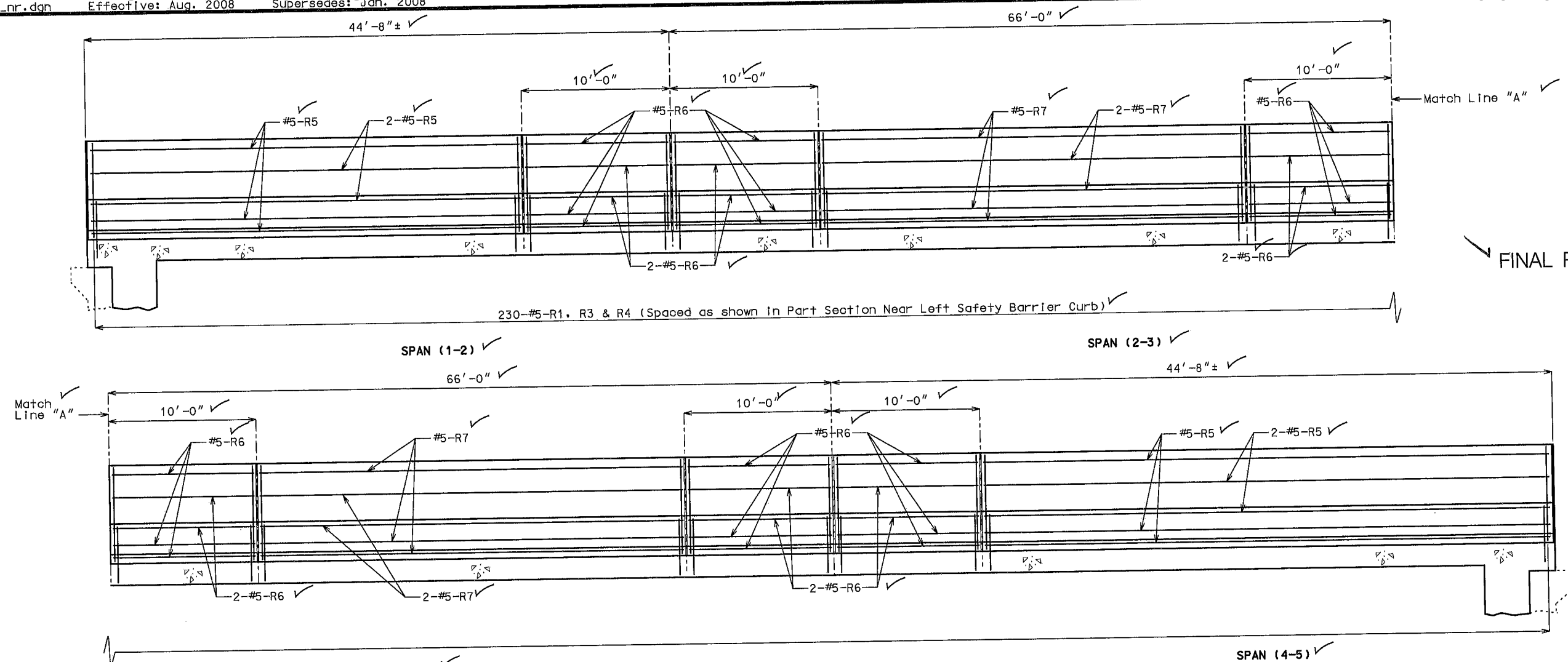
105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ban02\_elev\_nr.dgn Effective: Aug. 2008 Supersedes: Jan. 2008

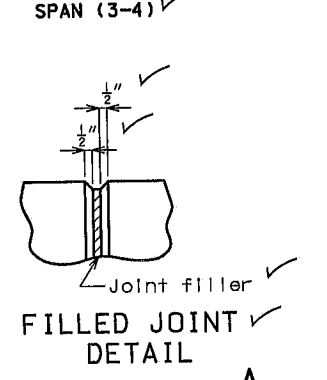
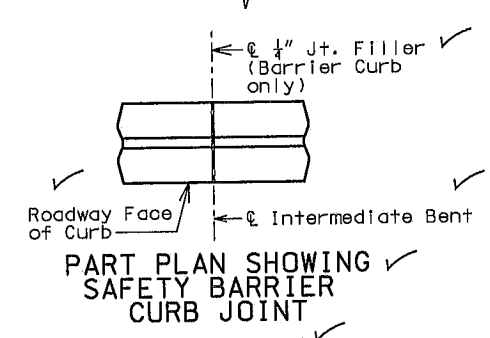
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 9/2/2010	
ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 8
COUNTY CALDWELL	
JOB NO. J1S2149	
CONTRACT ID. 100122-108	
PROJECT NO. FAF-13-4(28)	
BRIDGE NO. A00101	



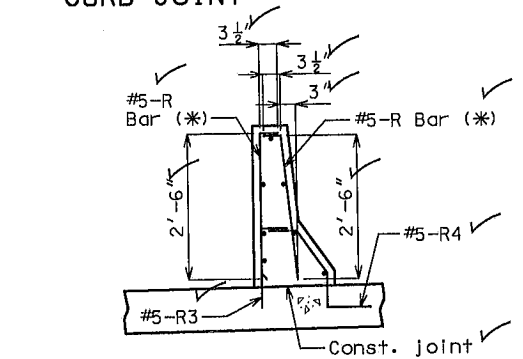
FINAL PLANS

230-#5-R1, R3 & R4 (Spaced as shown in Part Section Near Left Safety Barrier Curb)



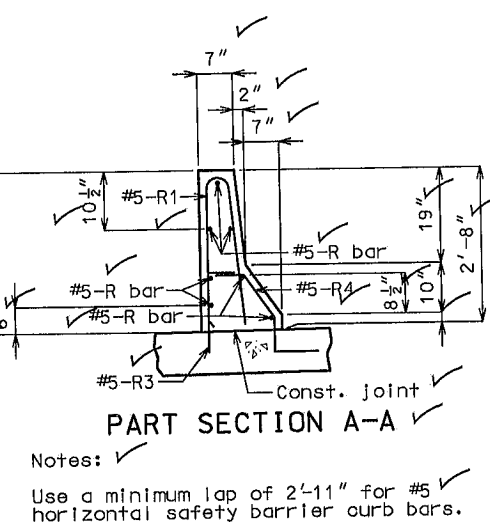
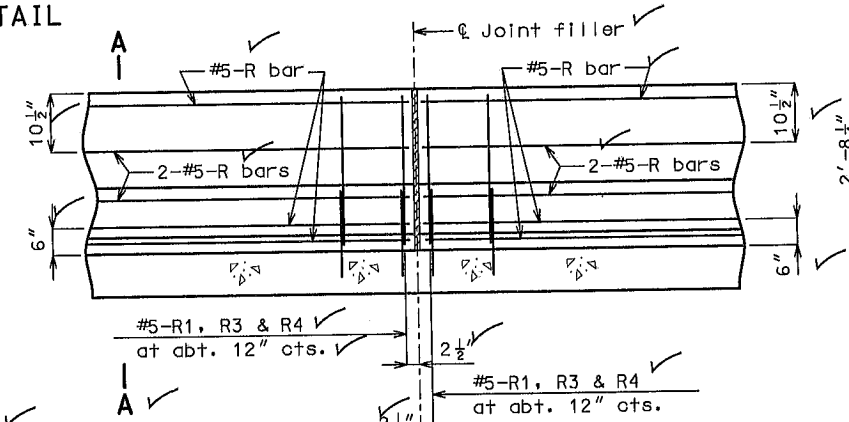
**SECTION NEAR LEFT SAFETY BARRIER CURB**  
(Right safety barrier curb similar)  
Note: Longitudinal dimensions are horizontal.

- Notes:
- Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
  - All exposed edges of safety barrier curb shall have either a 1/4" radius or a 3/8" bevel, unless otherwise noted.
  - Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for safety barrier curb per linear foot.
  - Concrete in the safety barrier curb shall be Class B-1.
  - Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.
  - Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Safety Barrier Curb".
  - The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.



**R-BAR PERMISSIBLE ALTERNATE SHAPE**

(\* The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)



Notes:

- Use a minimum lap of 2'-11" for #5 horizontal safety barrier curb bars.
- The cross-sectional area above the slab = 2.27 sq. ft.

**PART SECTION NEAR LEFT SAFETY BARRIER CURB**  
(CAST-IN-PLACE CONVENTIONAL FORMING OPTION)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 12

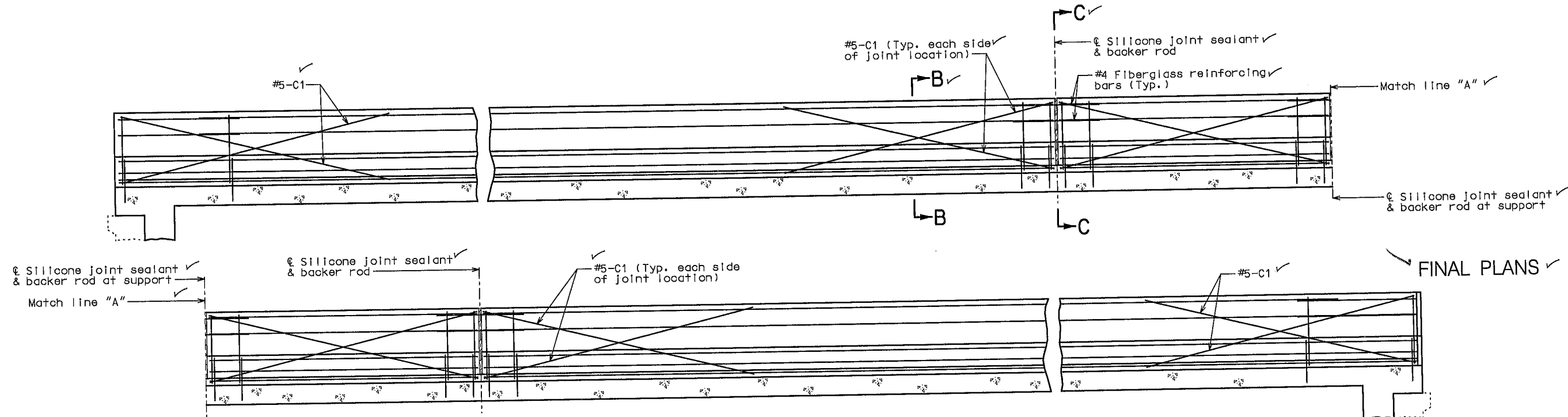
Detailed June 2009  
Checked Sep. 2009

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ban09\_slip\_nr\_in.dgn Effective: Mar. 2009 Supercedes: Aug. 2008



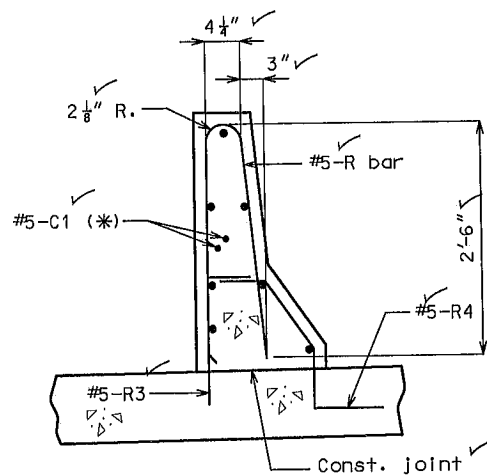
TYPICAL SECTION NEAR LEFT SAFETY BARRIER CURB AT SUPPORT LOCATIONS  
(OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB)

Notes:

- Top of safety barrier curb shall be built parallel to grade with barrier curb joints normal to grade.
- Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for safety barrier curb per linear foot.
- Concrete in the safety barrier curb shall be Class B-1.
- Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.
- The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.

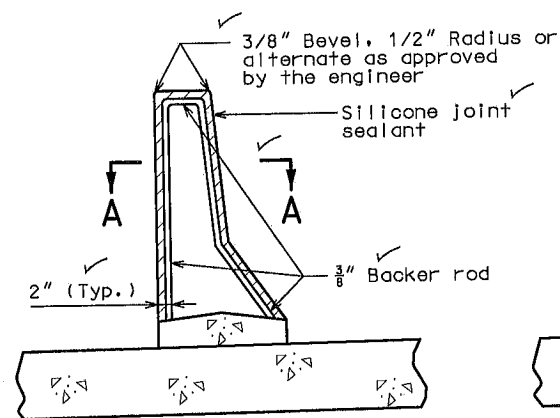
Notes:

- Joint sealant and backer rods shall be used on all slip-form barrier curbs instead of joint filler and shall be in accordance with Sec 717 for silicone joint sealant for saw out and formed joints.
- C Bars (Slip-form option only) shall be used in addition to cast-in-place conventional forming reinforcement for bridge safety barrier curb.
- For Slip-Form option, all sides of the safety barrier curb shall have a vertically broomed finish and the curb top shall have a transversely broomed finish.
- Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Safety Barrier Curb".

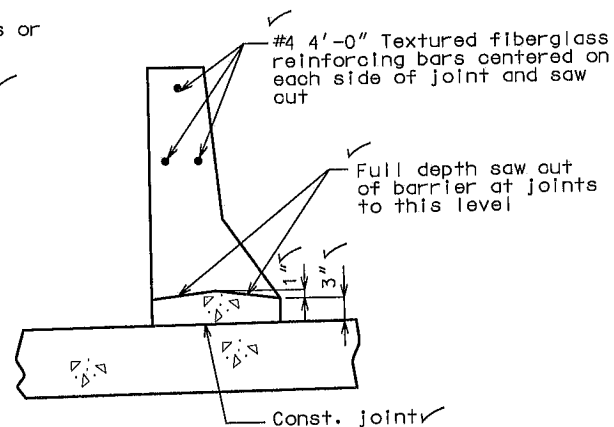


PART SECTION B-B

Note: (\*): Each side of joint location.

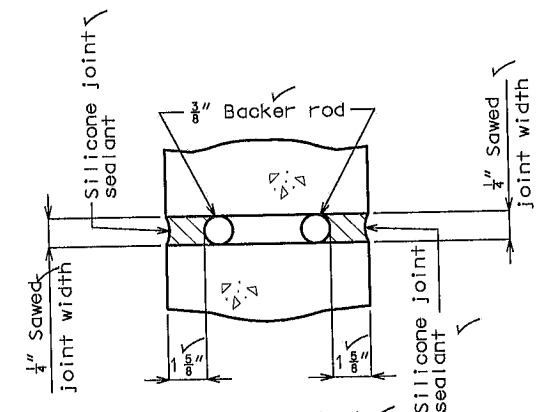


SECTION THRU JOINT



PART SECTION C-C

OPTIONAL SLIP-FORM BRIDGE SAFETY BARRIER CURB  
(Left barrier curb shown, right barrier curb similar.)



SECTION A-A

Note: Cost of silicone joint sealant and backer rod, complete-in-place, will be considered completely covered by the contract unit price for Safety Barrier Curb.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	9/2/2010
ROUTE	13
STATE	MO
DISTRICT	BR
SHEET NO.	9
COUNTY	CALDWELL
JOB NO.	J1S2149
CONTRACT ID.	100122-108
PROJECT NO.	FAF-13-4(28)
BRIDGE NO.	A00101

DESCRIPTION

DATE

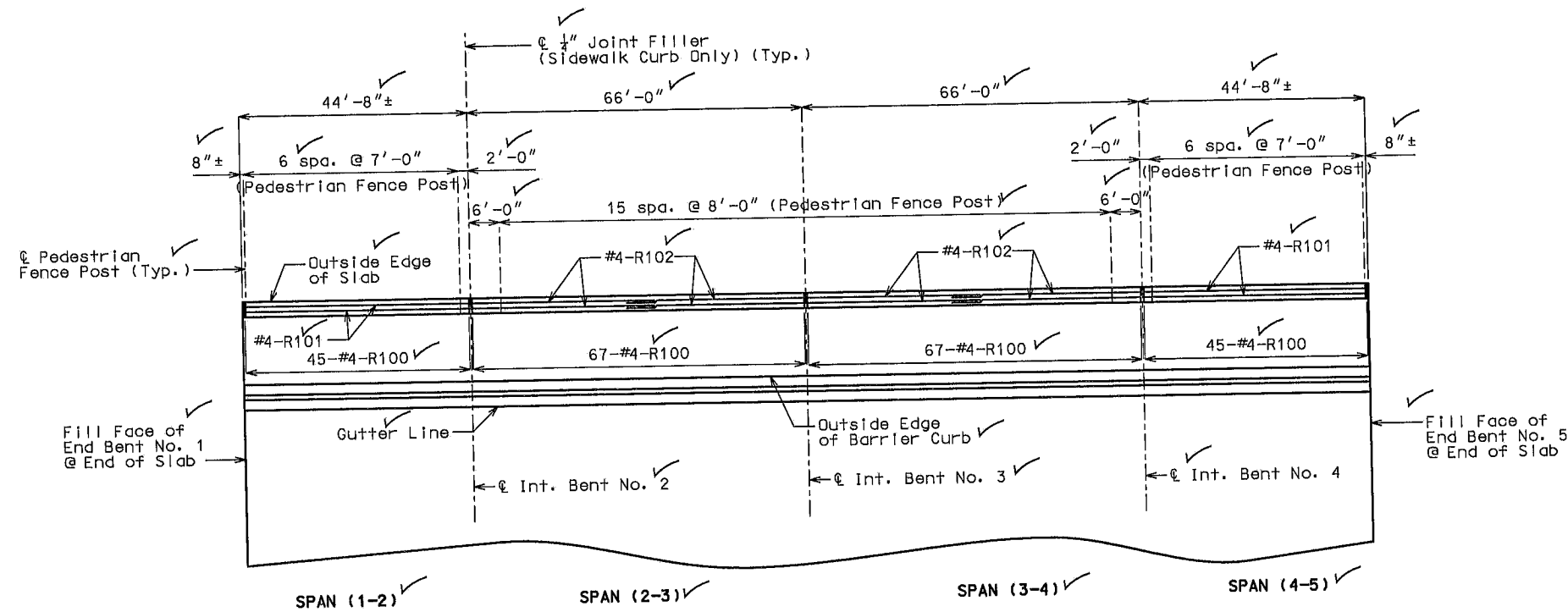
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITAL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MOTDOT (1-888-275-6636)

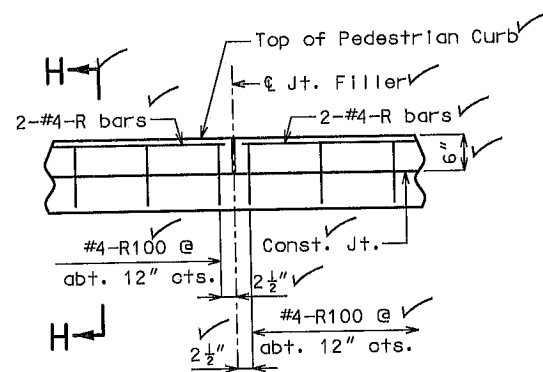
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

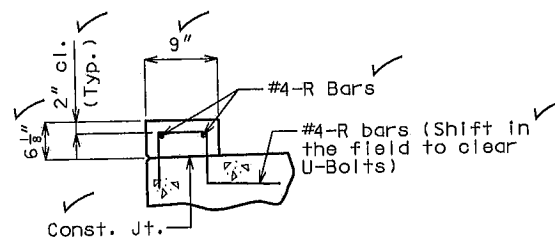


PART PLAN SHOWING PEDESTRIAN CURB & FENCE POST SPACING

(Longitudinal dimensions are horizontal.)



PART ELEVATION OF PEDESTRIAN CURB ON SLAB



SECTION H-H

Note: The cross-sectional area above the slab = 0.38 sq. ft.

Pedestrian Curb Notes:

- Top of the pedestrian curb shall be built parallel to grade with curb joints normal to grade.
- All exposed edges of the pedestrian curb shall have either a 1/4" radius or a 3/8" bevel, unless otherwise noted.
- Payment for all concrete and reinforcement, complete-in-place, will be considered completely covered by the contract unit price for slab on steel.
- Concrete in the pedestrian curb shall be Class B-1.
- Measurement of the pedestrian curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of curb to end of curb.
- The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 will not be permitted.

FINAL PLANS

DATE PREPARED 9/2/2010	
ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 10
COUNTY CALDWELL	
JOB NO. J1S2149	
CONTRACT ID. 100122-108	
PROJECT NO. FAF-13-4(28)	
BRIDGE NO. A00101	

DESCRIPTION	DATE

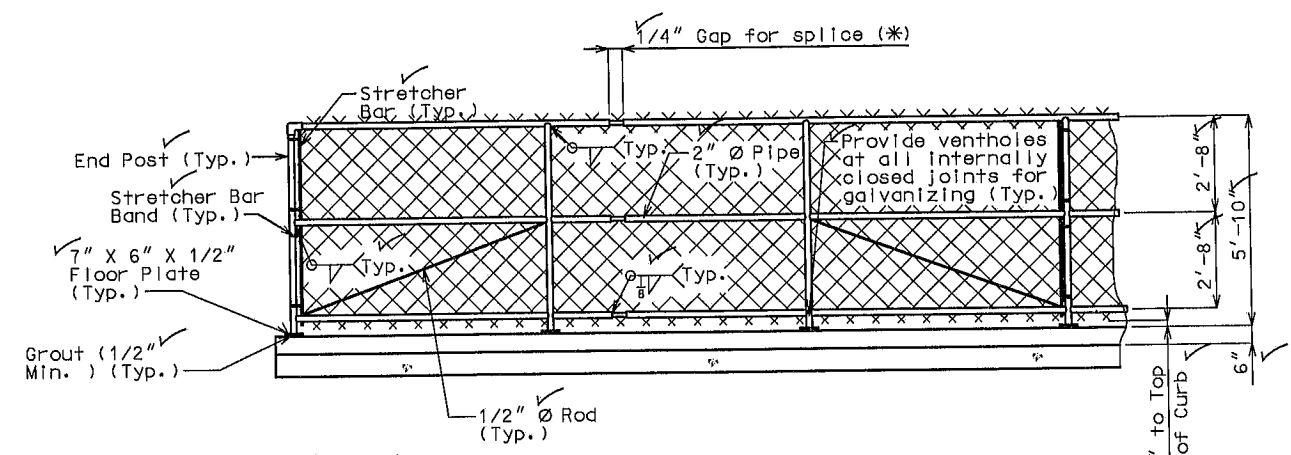
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITAL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

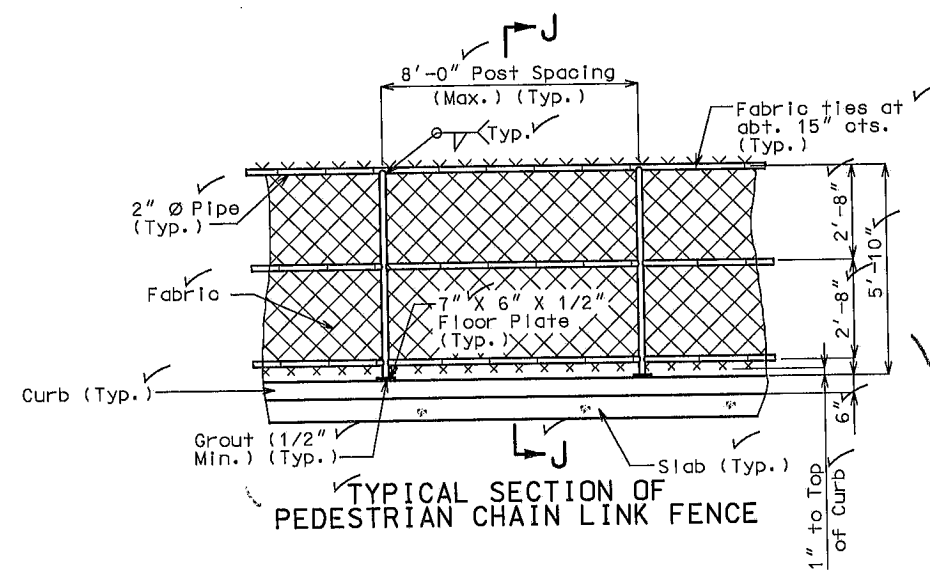
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

fen\_01\_fence\_112In Effective: Aug. 2008 Supercedes: June 2005

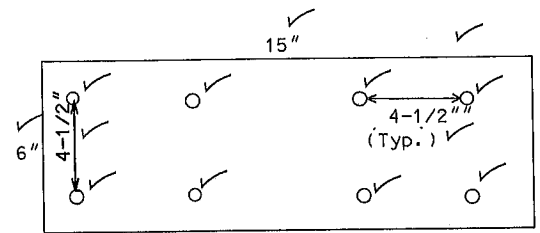
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."



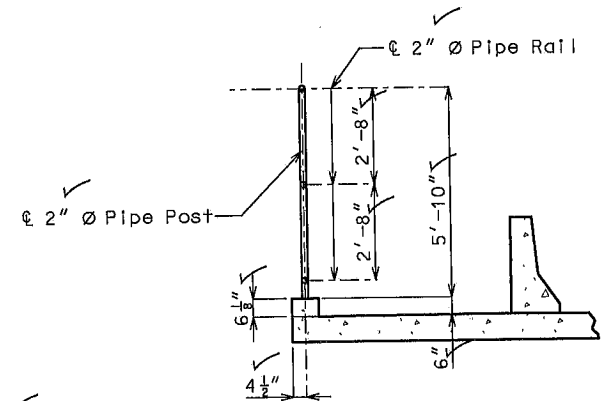
TYPICAL SECTION NEAR SPLICE GAP  
\* At about 30'-0" centers with at least one splice gap between pull posts.



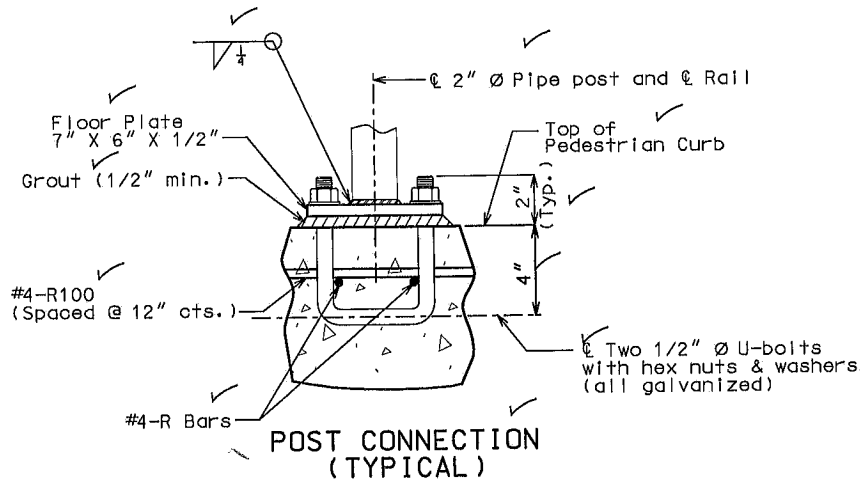
FINAL PLANS



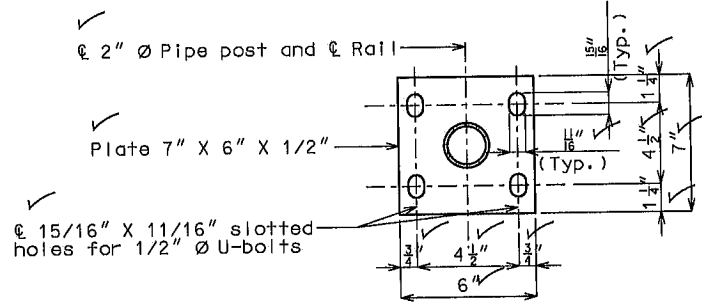
NOTE:  
1/2" X 6" X 15" GALVINIZED PLATE ADDED TO FENCE POST AT BENT 5 BOTH LT & RT. THIS CORRECTED BOLT MISPLACEMENT FOR POST SUPPORT.



SECTION J-J



POST CONNECTION (TYPICAL)



PLAN OF FLOOR PLATE

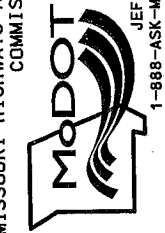
NOTE:  
Pedestrian guard fence (Chain link type) shall be in accordance with Sec 1043 except all fabric shall have the top and bottom edges knuckled.  
All rail post shall be vertical. Grout of 1/2" minimum thickness shall be placed under floor plates to provide for vertical alignment of rail posts.  
Payment for furnishing, galvanizing and erecting the fence and frame complete with anchor bolts and washers will be considered completely covered by the contract unit price for (72 in.) Pedestrian Fence (Structures) per linear foot.  
Dimensions of pedestrian guard fence are measured horizontally.  
The maximum spacing allowed for the braced panels (Pull posts) is 100 ft.  
Connect the lower end of the 1/2" diameter rod to the end of the braced panel to which the stretcher bar is attached.  
Core wire size for wire fabric shall be 6 gage minimum.

DATE PREPARED		9/9/2010	
ROUTE	STATE	BR	SHEET NO.
13	MO	11	11
COUNTY		CALDWELL	
JOB NO.		J1S2149	
CONTRACT ID.		100122-108	
PROJECT NO.		FAF-13-4(28)	
BRIDGE NO.		A00101	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

## DETAILS OF PEDESTRIAN CHAIN LINK FENCE

Detailed Nov. 2009  
Checked Nov. 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 12

FOR INFORMATION ONLY

A00102, Sht. 32

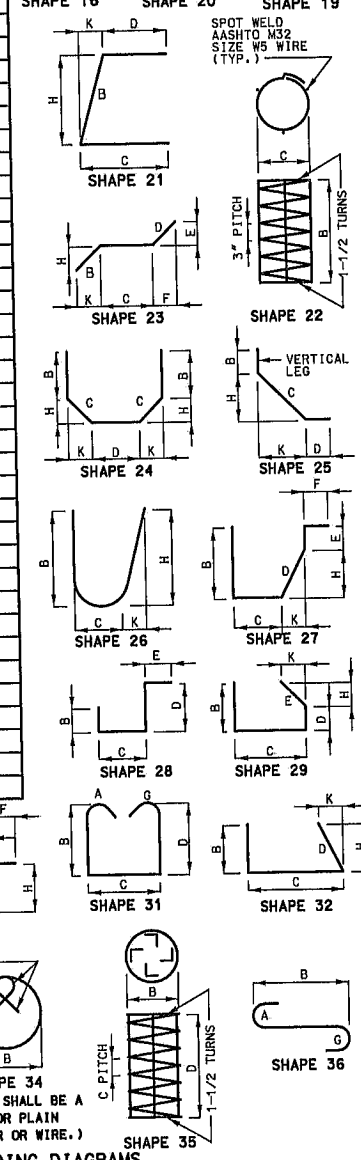
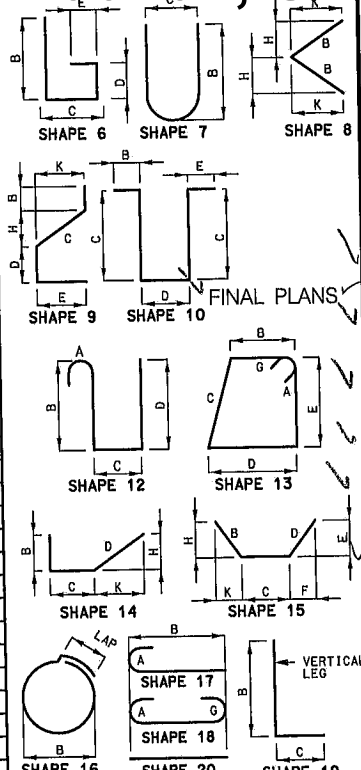
barbill\_l Effective: Aug. 2008 Supersedes: Feb. 2006

BILL OF REINFORCING STEEL

Table with columns: NO. REQ'D, MARK NO., LOCATION, DIMENSIONS (B, C, D, E, F, H, K), NOMINAL LENGTH, ACTUAL LENGTH, WEIGHT. Includes sub-totals for slab on girder and safety curb.

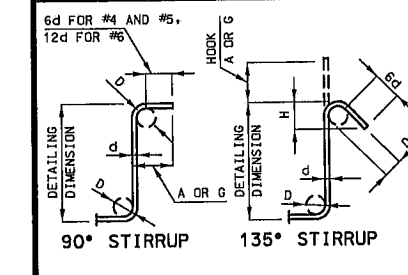
BILL OF REINFORCING STEEL

Table with columns: NO. REQ'D, MARK NO., LOCATION, DIMENSIONS (B, C, D, E, F, H, K), NOMINAL LENGTH, ACTUAL LENGTH, WEIGHT.



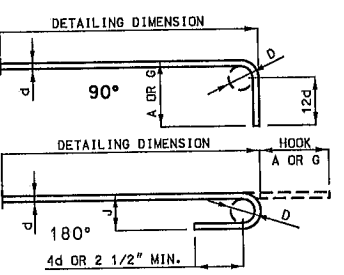
THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

DATE PREPARED 9/9/2010
ROUTE 13 STATE MO
DISTRICT BR SHEET NO. 12
COUNTY CALDWELL
JOB NO. J1S2149
CONTRACT ID. 100122-108
PROJECT NO. FAF-13-4(28)
BRIDGE NO. A00101



STIRRUP HOOK DIMENSIONS table with columns: BAR SIZE, D (IN.), 90° HOOK, 135° HOOK, APPROX. H.

NOTE: UNLESS OTHERWISE NOTED DIAMETER 'D' IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS table with columns: BAR SIZE, D (IN.), ALL GRADES, 180° HOOKS, 90° HOOKS.

TWO ADDITIONAL #4-R102, #5-R6 & #6-S3 ARE INCLUDED IN THE BAR BILL FOR TESTING.
NOTE: ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.

Detailed Nov. 2009
Checked Nov. 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 12