

Shop Plans



⌘ Shop plans are the plans of fabricated items, prepared by the shop fabricator, detailing the item's dimensions, material, and proposed fabrication process.

Some items requiring shop drawings



- ⌘ Precast Box Culverts
- ⌘ Prestressed Girders
- ⌘ Steel Girders
- ⌘ Large Concrete Pipe
- ⌘ Bridge Railing
- ⌘ MSE Retaining Walls
- ⌘ Cross-Brace Diaphragms
- ⌘ Sign Bridge Truss
- ⌘ Fixed and Breakaway Sign Posts
- ⌘ Pavement Terminals
- ⌘ Five Bolt Insert Assembly
- ⌘ Shim Plates
- ⌘ Deck Drains
- ⌘ Strip Seal Expansion Joints
- ⌘ Steel Diaphragms (Straight)

Submittal for review and approval



⌘ Content

⌘ Format

⌘ Submittal

Content



⌘ Plans shall include

- ☑ Material type including ASTM and spec. book references
- ☑ Dimensions and sizes of fabricated items
- ☑ Weld details
- ☑ Paint system
- ☑ Erection details

Format



⌘ PDF

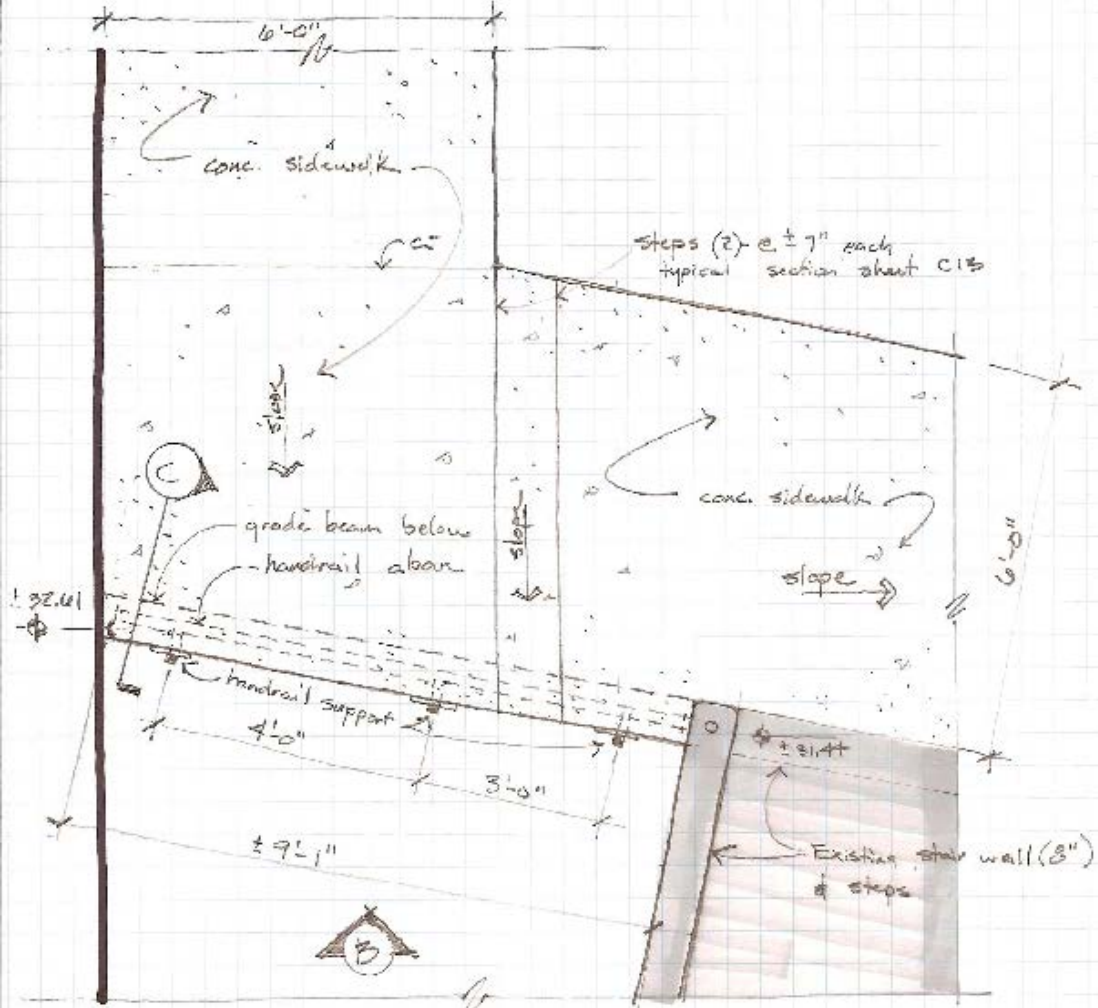
⌘ Every page shall include

- ☑ State project number
- ☑ County
- ☑ Structure number
- ☑ Fabricator name and address

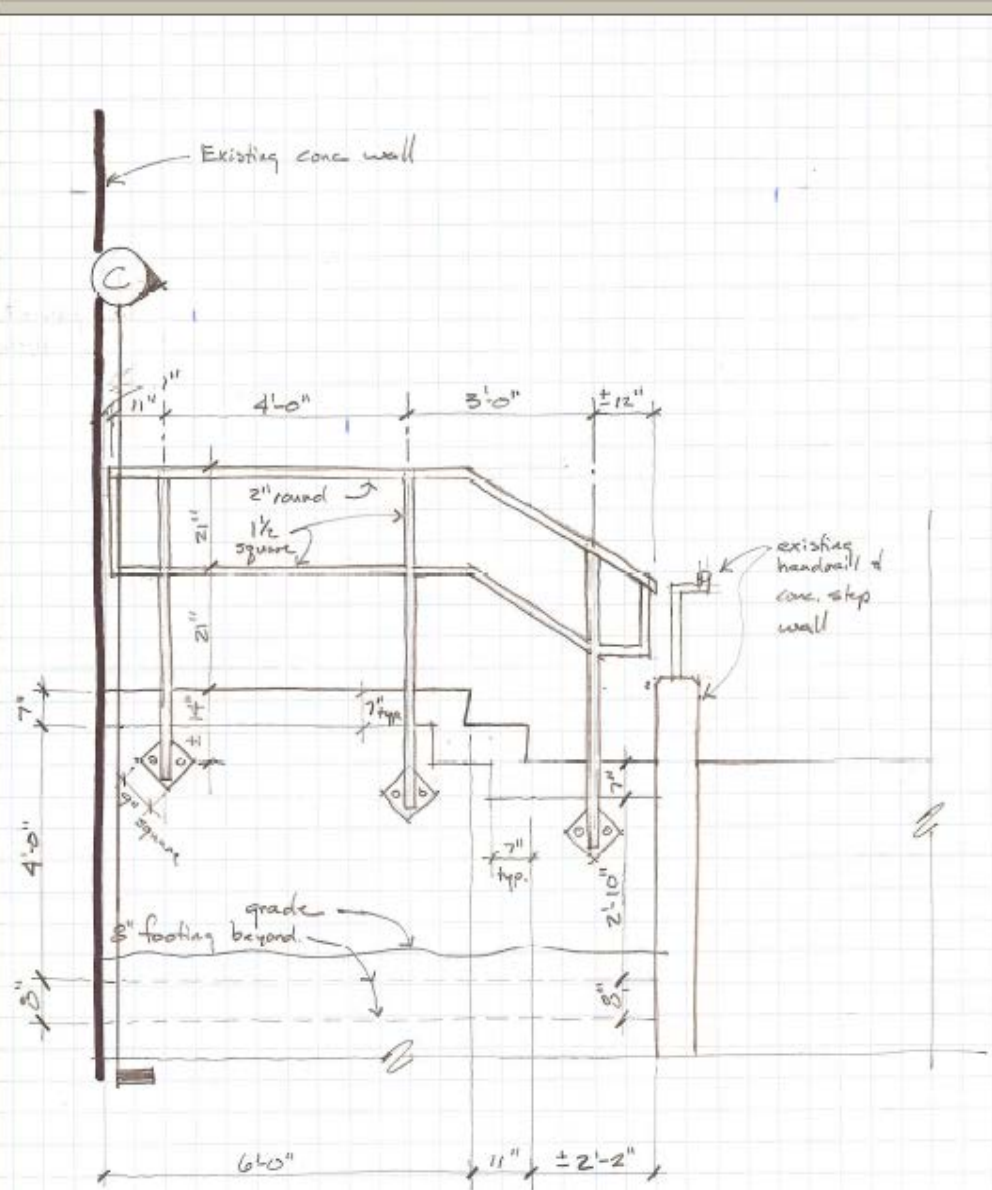
Submittal



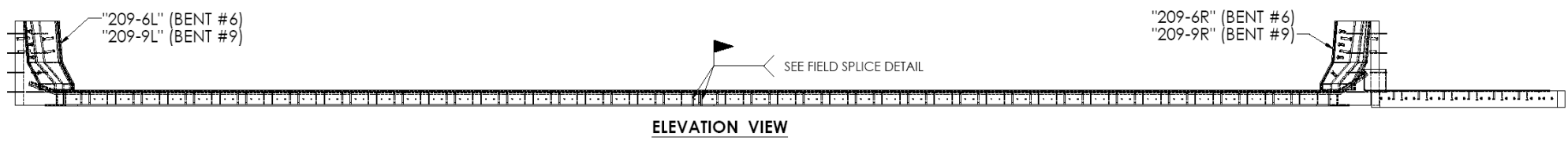
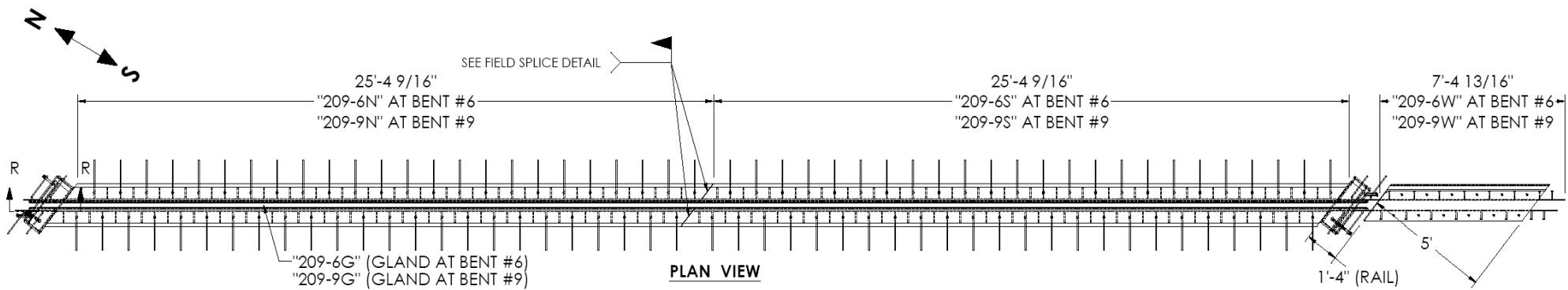
- ⌘ Plans for state designed projects sent to BCE by E-mail
- ⌘ Plans for consultant designed projects get E-mailed to Consultant for review and final set goes to BCE for distribution and fabrication



(A) PLAN DETAIL (Exist step tie in)
 $\frac{1}{2}" = 1'-0"$



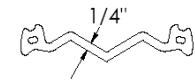
(B) WALL, STEP & RAILING ELEVATION
 $\frac{1}{2}" = 1'-0"$



EXPANSION JOINTS (TYP. AT BENT 6 & BENT 9)

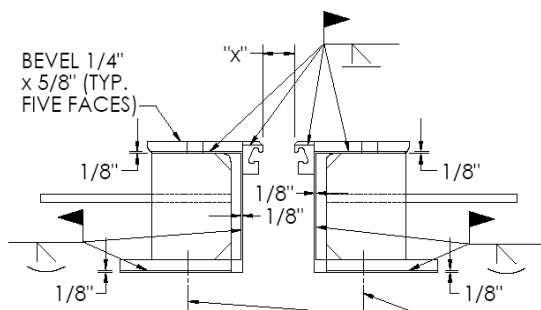
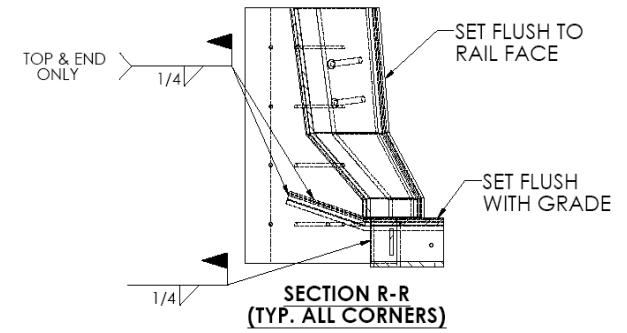
SHIPPING WEIGHT FOR ALL PRODUCTS NEEDED FOR SHOWN LOCATIONS IS 15,100 LBS.

INSTALL GAP TABLE		
TEMP (F)	"x" AT BENT 9	"x" AT BENT 6
30	2 3/4"	3 1/4"
40	2 9/16"	2 15/16"
50	2 3/8"	2 5/8"
60	2 3/16"	2 5/16"
70	2"	2"
80	1 13/16"	1 11/16"
90	1 5/8"	1 3/8"



"A2R-XTRA" SERIES STRIP SEAL (BENT #6)
"A2R-400" SERIES STRIP SEAL (BENT #9)

MIN. JOINT OPENING FOR EASE OF INSTALLATION = 1 1/2"



BEVEL AND FIELD SPlice DETAIL
(ALL CONFIGURATIONS SIMILAR)

FIELD DRILL ϕ 15/16" AND FASTEN WITH (2) 7/8" BOLTS, WASHER "pw1", & SHIMS FOR EACH GIRDER PER PLAN.

NOTES:

1. ALL PLATES AND BARS SHALL BE ASTM A709, GRADE 36. MATERIAL UNDER 1/4" MAY BE ASTM A1011, GRADE 36. THE 1/2" DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496. WELD ANCHORS SHALL MEET ASTM A108. STEEL EXTRUSION SHALL BE D.S. BROWN TYPE "SSA2", GRADE A36. NEOPRENE STRIP SHALL BE D.S. BROWN "A2R-400" & "A2R-XTRA" AND CONFORM TO ASTM D2628. LUBE ADHESIVE SHALL CONFORM TO ASTM D4070.
2. ALL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION PER ASTM A123.
3. ALL HARDWARE INCLUDING BOLTS, NUTS, WASHERS AND CAP SCREWS SHALL BE GALVANIZED PER ASTM A153.
4. ALL WELDING AND INSPECTION SHALL BE IN CONFORMANCE WITH THE AASHTO/AWS BRIDGE WELDING CODE D1.5M/D1.5:2008.

WELDED FIELD SPlice NOTES:

1. GRIND PROTECTIVE COATING FROM BEVELED AND NON BEVELED SURFACES TO BE WELDED. WELD MULTIPLE PASSES USING 7018 ROD UNTIL FULL. GRIND TOP SURFACE TILL FLUSH. REPAIR GALVANIZING TO ALL AREAS USING THE ZINC-BASED SOLDER METHOD IN CONFORMANCE WITH ASTM A780. NO WELD INSIDE AREA FOR NEOPRENE GLAND.

Rev.	Date	Description
1	3/08/11	Submitted for approval.
2		
3		

BACKCHARGES: Back charges of any nature for corrective work or replacement material will not be accepted unless authorized by Seller. Costs that are incurred without the Seller's prior approval will be the Buyer's responsibility.




PROJECT	BRIDGE NO. 50-205-209		
STATE NO.	SD/DOT P 0042(33)366, PCN004D		
FEDERAL NO.			
CONTRACTOR	Sioux Falls Construction Co.		
FABRICATOR	IronWorks - a div. of PCi Roads		
LOCATION	11th St over Big Sioux Rv., Minnehaha Co., SD		
ITEM	Expansion Device at Bent 6 & 9	DRAWN BY	BCK
Contractor Job No.	11-802	CHECKED BY	MSS
IronWorks Job No.	1016903-01	DATE	3/08/11

Shop Plans Status



- ⌘ U:\br\construction\shopplans & Falsework Status\shop Plans Status.xls
- ⌘ This page now has a link to electronic copies of Shopplans



⌘ What should you do if you receive a prefabricated item on the job and the Project Engineer has not received approved shop drawings?

Conclusion

- ⌘ Shop Plans should be used on the job, not stuck in a project file somewhere.
- ⌘ Shop Plans **MUST** be approved by the OBD prior to fabrication and have this stamp.



Questions??

