

11-9-12 LETTING ITEM 011

INDEX OF SHEETS:

1. COVER SHEET
2. SUMMARY OF QUANTITIES, GENERAL NOTES
3. DISTRICT STANDARDS MAXIMUM WIDTH
- 4.- 8. STRUCTURAL STEEL REPAIR PLANS
9. SUBSTRUCTURE REPAIRS PLAN

STANDARDS:

- 701101-02 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701411-08 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
- 701426-04 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS > 45 MPH
- 701901-02 TRAFFIC CONTROL DEVICES
- 720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

**FAI ROUTE 80 (I-80)
SECTION (81-1B)M-3
ROCK ISLAND COUNTY
C-92-004-09**

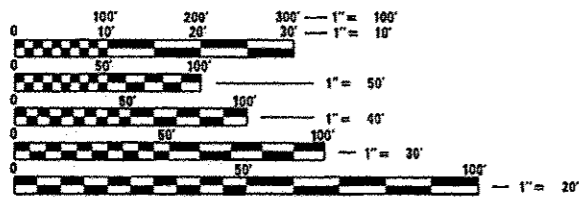
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS
80	1B1-1B3	ROCK ISLAND	9
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 64E33	

X941=10

D-92-088-08



**PROJECT LOCATION
SN: 081-0011**



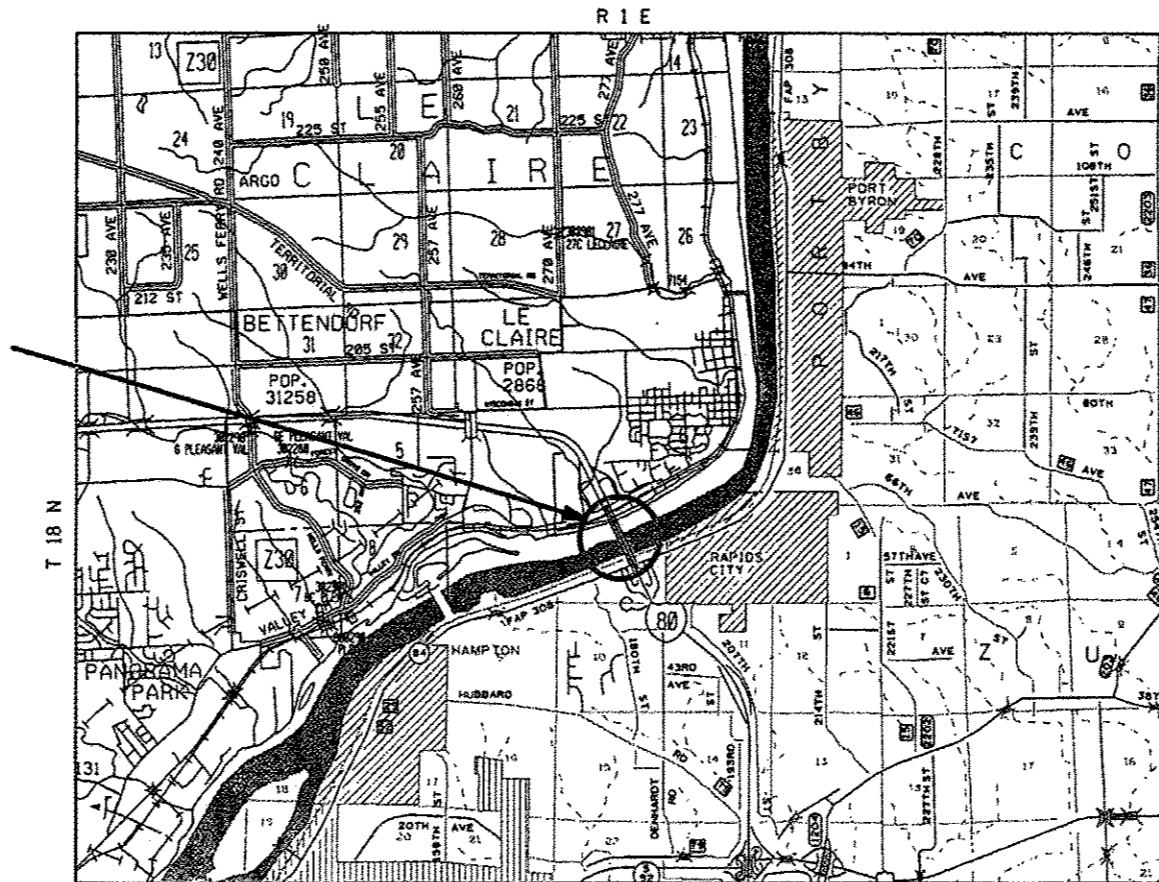
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: Mahmoud Etemadi (815)-284-5393

HAMPTON TOWNSHIP, SECTION 3

CONTRACT NO. 64E33



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 17, 2012

Eric S. Thakulidze
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 5, 2012
John D. Baranzelli PE
acting ENGINEER OF DESIGN AND ENVIRONMENT

October 5, 2012
William R. Frey
acting DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

SUMMARY OF QUANTITIES

GENERAL NOTES

Pay Item Number	Description	Units	URBAN
			100 % STATE 0014 Total Quantity
52000320	NEOPRENE EXPANSION JOINT 2"	FOOT	66
52000340	NEOPRENE EXPANSION JOINT 4"	FOOT	66
67100100	MOBILIZATION	L SUM	1
70100420	TRAFFIC CONTROL AND PROTECTION STANDARD 701411	EACH	2
70100700	TRAFFIC CONTROL AND PROTECTION STANDARD 701406	L SUM	1
Z0001905	STRUCTURAL STEEL REPAIR	POUND	800
X0327286	SUBSTRUCTURE REPAIRS (GROUT BAGS)	L SUM	1

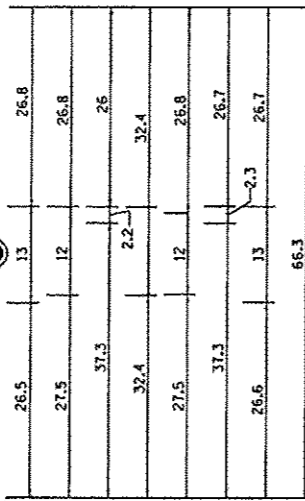
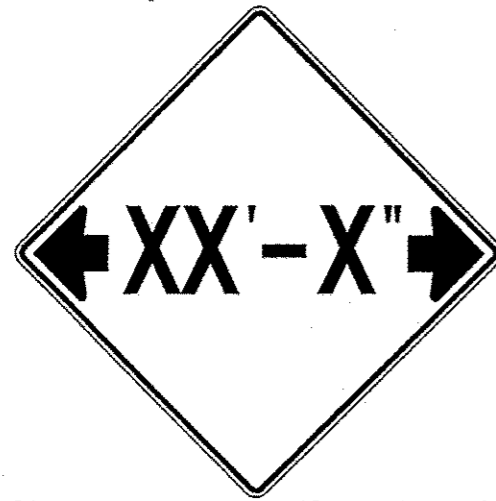
The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123.

All Borrow/Waste/Use sites must be approved by the Department prior to removing any material from the project or initiating any earth moving activities, including temporary stockpiling outside the limits of construction.

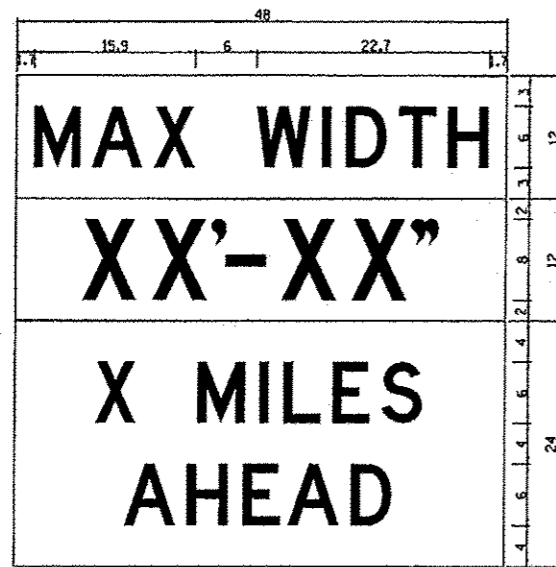
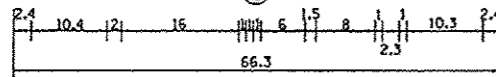
The cost of the removal of existing expansion joints is included in the pay item Neophrene Expansion Joint 2" and Neophrene Expansion Joint 4".

FILE NAME *	USER NAME * bortsza	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Summary of Quantities				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
\\CENTRAL\Share\A02\BRV\CONSTANTIN\64E33	3 1 88 Repairs\64E33 500.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	I-80	(81-1B)M-4	Rock Island	9	2
	PLOT SCALE * 1/8" = 100.0000' / in.	CHECKED -	REVISED -												
	PLOT DATE * Mon Aug 08 07:33:48 2012	DATE -	REVISED -												
											CONTRACT NO. 64E33			ILLINOIS FED. AID PROJECT	

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



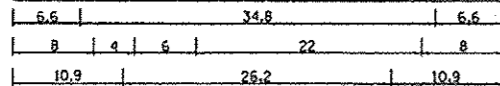
NOTES
 W12-2 - Horizontal Clearance Sign
 48.0" across sides, 1.9" Radius,
 0.8" Border, 0.5" Indent, Black on
 Orange; Standard Arrow Custom
 10.4" X 8.1" 180° Black 1/2 Inch
 D Series Lettering; Standard Arrow
 Custom 10.4" X 8.1" 0"



W12-1103 (Width Is 8D);
 No border, Black on White;
 (MAX WIDTH) D;

No border, Black on Orange;
 (XX'-XX'') D;

No border, Black on White;
 (X MILES) D; (AHEAD) D;



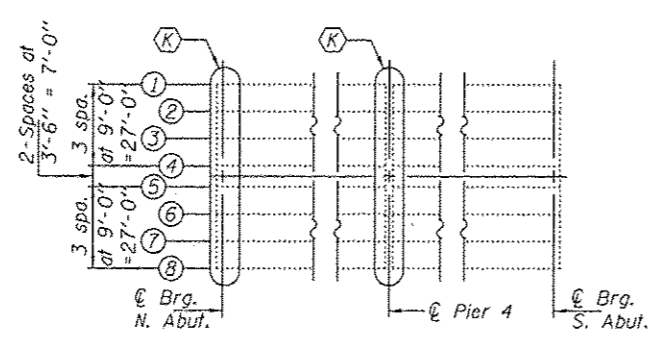
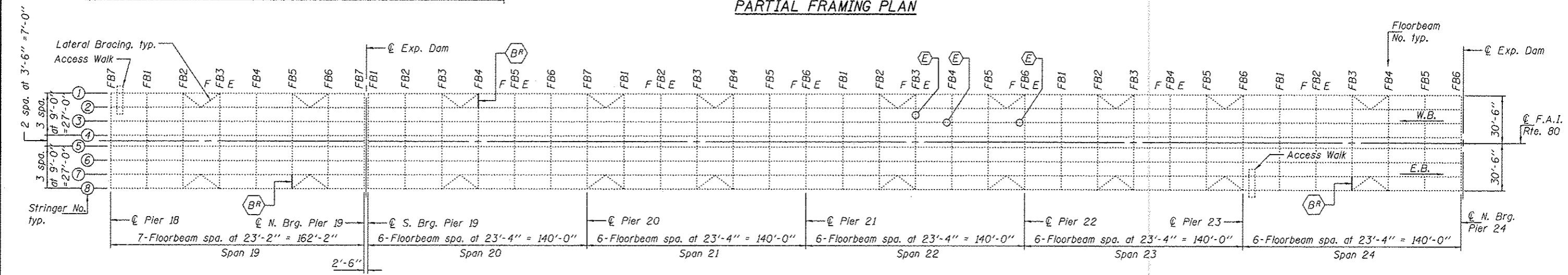
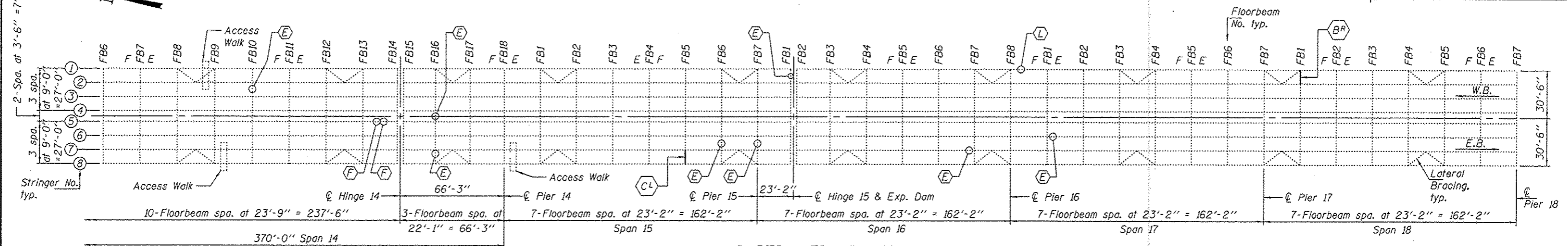
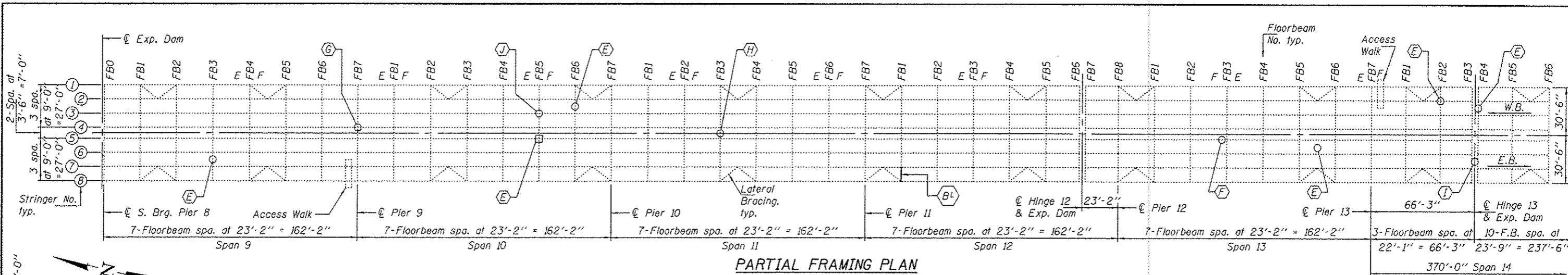
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 5-15-09

INFORMATIONAL WARNING SIGNS (FOR NARROW TRAVEL LANES) 39.2

DESIGNED -	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. OF SHEETS	CONTRACT NO.	ILLINOIS FED. AID PROJECT
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVISED				
DRAWN -	PASSED	REVISED				
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED				



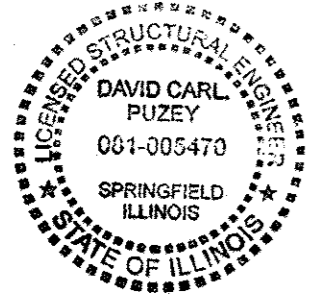
- ⬡ - Knee Brace Replacement (See sheet 2 of 6)
- ⬢ - Loose or Missing Bolts (See sheet 3 of 6)
- ⬣ - Repair Conduit Hanger (See sheet 3 of 6)
- ⬤ - Structural Steel Repair (See sheet 4 of 6)
- ⬥ - Structural Steel Repair (See sheet 4 of 6)
- ⬦ - Structural Steel Repair (See sheet 4 of 6)
- ⬧ - Structural Steel Repair (See sheet 4 of 6)
- ⬨ - Replace Neoprene Expansion Joint (See sheet 5 of 6)
- ⬩ - Scour Countermeasures (See sheet 6 of 6)

Note:
Girders, lateral bracing between girders and inspection walkway not shown for clarity.

See sheet 2 of 6 for General Notes

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	800
Neoprene Expansion Joint, 2"	Foot	66
Neoprene Expansion Joint, 4"	Foot	66
Substructure Repairs (Grout Bags)	L.S.	1



Expires: November 30, 2012

DESIGNED - Adrian J. Holloway	EXAMINED - <i>Timothy A. Adams</i>	DATE - SEPTEMBER 19, 2012
CHECKED - <i>[Signature]</i>	PASSED - <i>[Signature]</i>	
DRAWN - Kyle M. Stoffen		
CHECKED - <i>[Signature]</i>		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
I-80 OVER THE MISSISSIPPI RIVER
SN 081-0011
SHEET NO. 1 OF 6 SHEETS

F.A. RTE. 80	SECTION (81-18M-3)	COUNTY ROCK ISLAND	TOTAL SHEETS 9	SHEET NO. 4
CONTRACT NO. 64E33			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

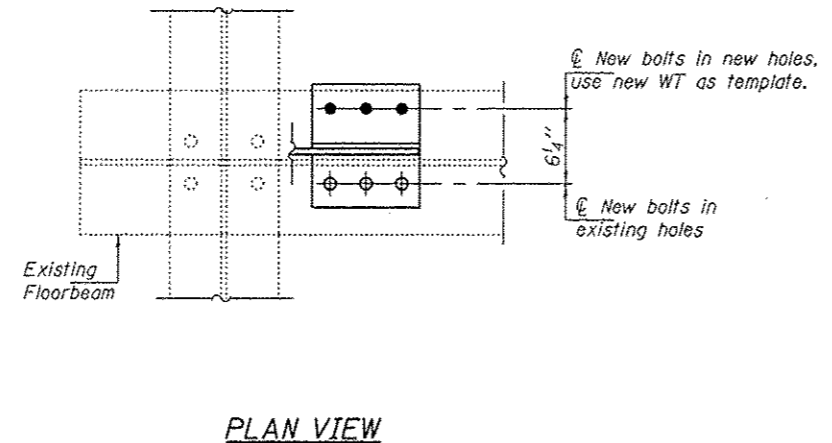
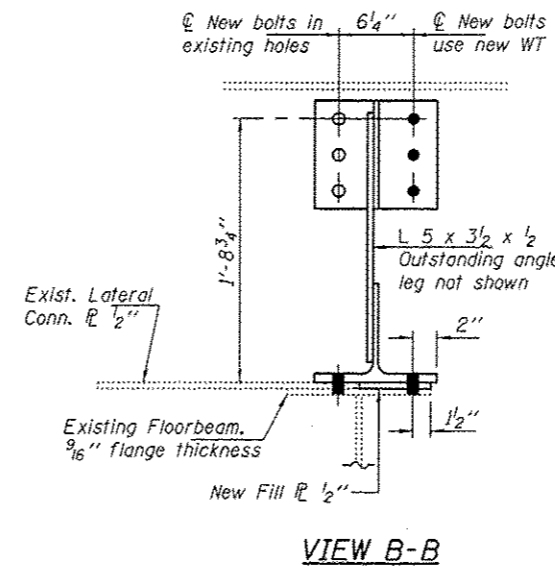
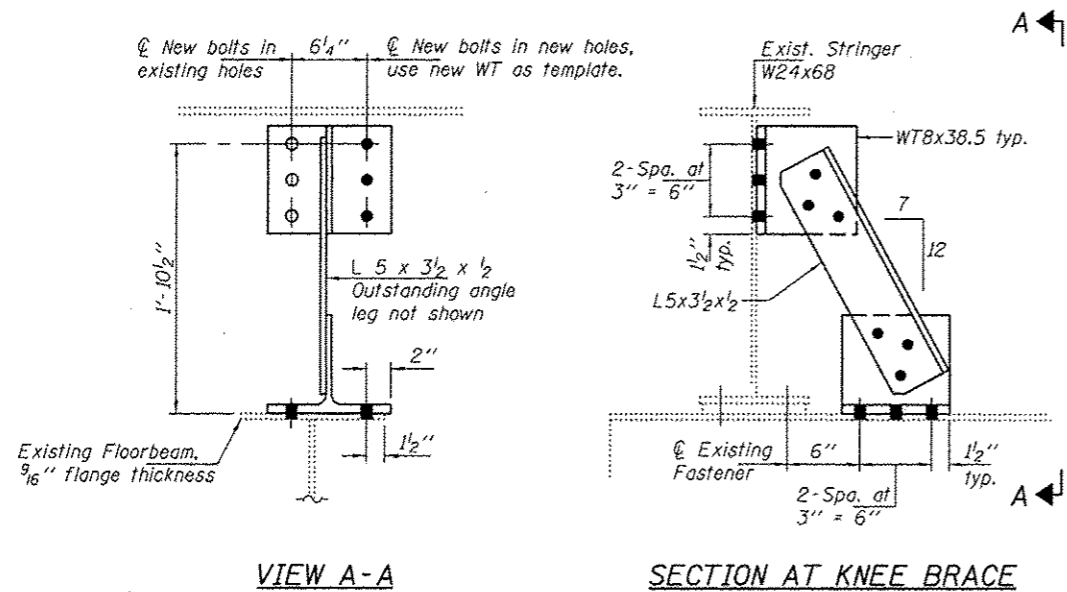
Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

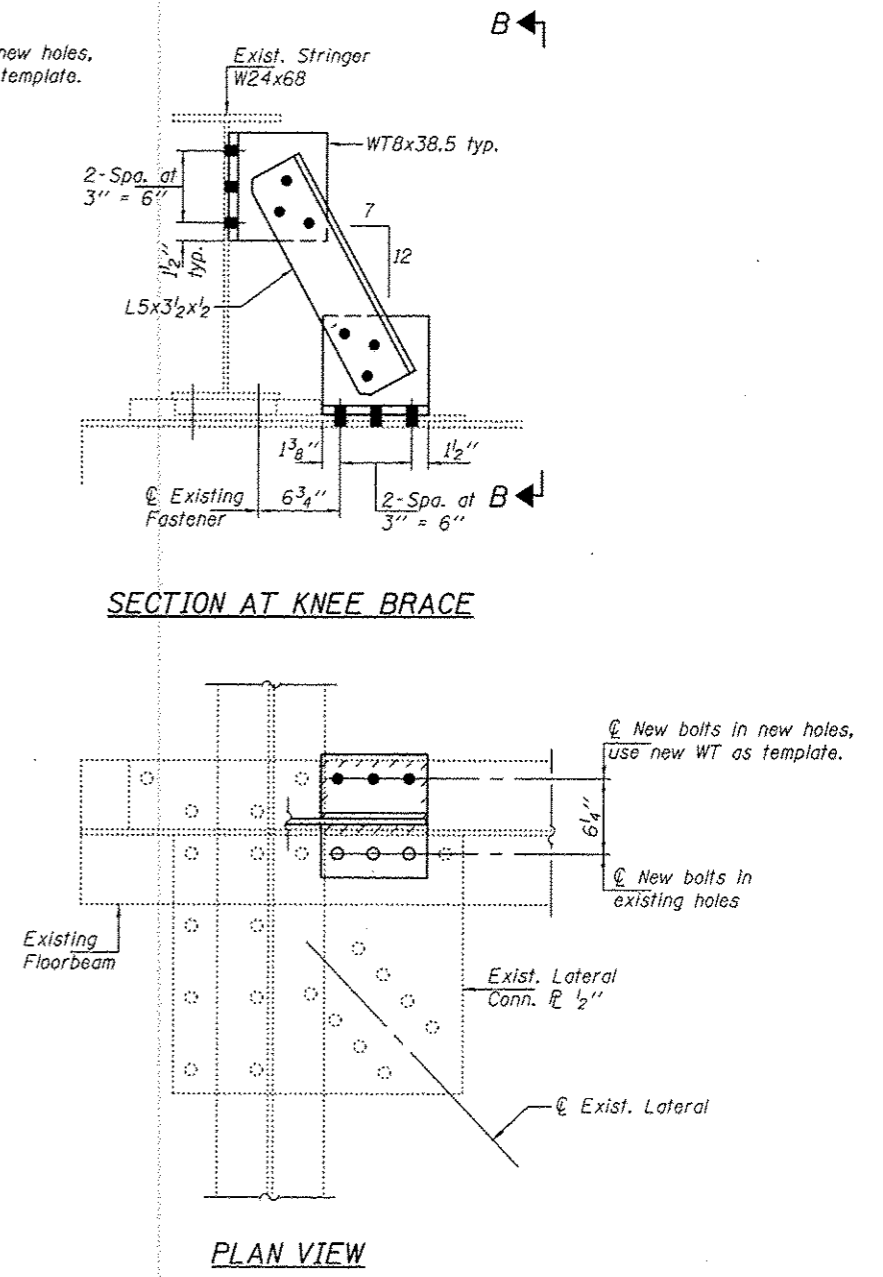
Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.



KNEE BRACE REPLACEMENT C WITHOUT LATERAL CONNECTION

Note: Dimensions based on existing Knee Brace, Mk. 330C.

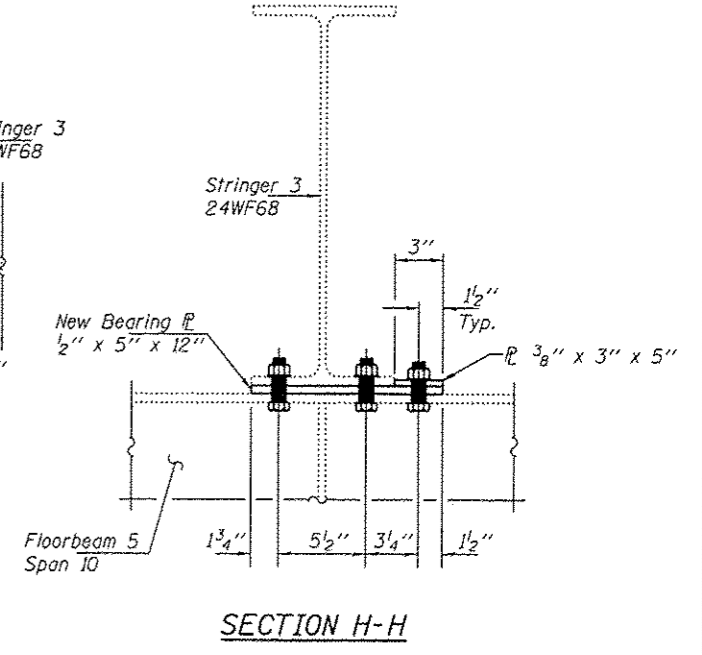
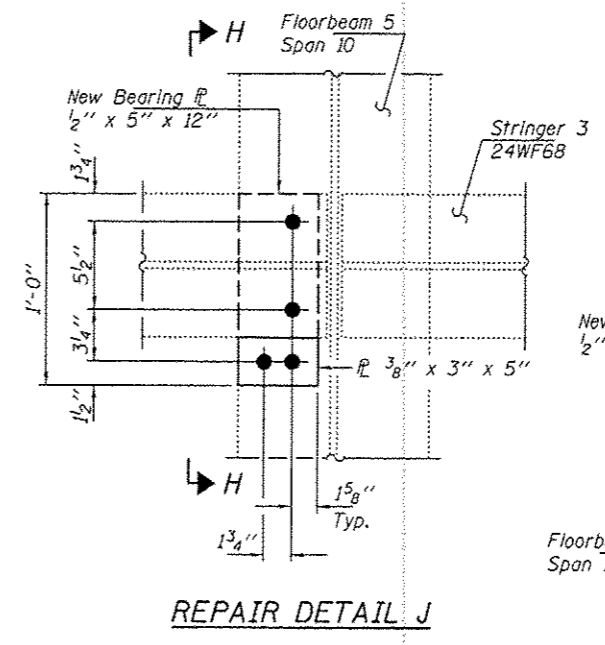
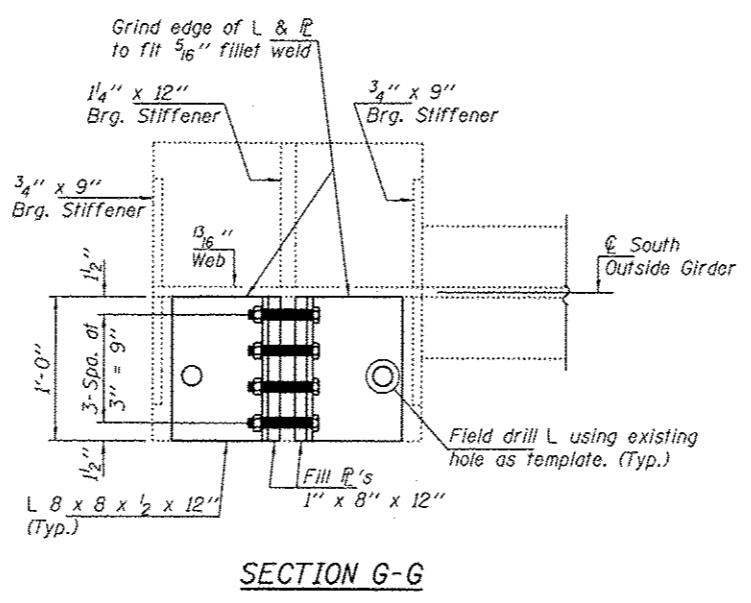
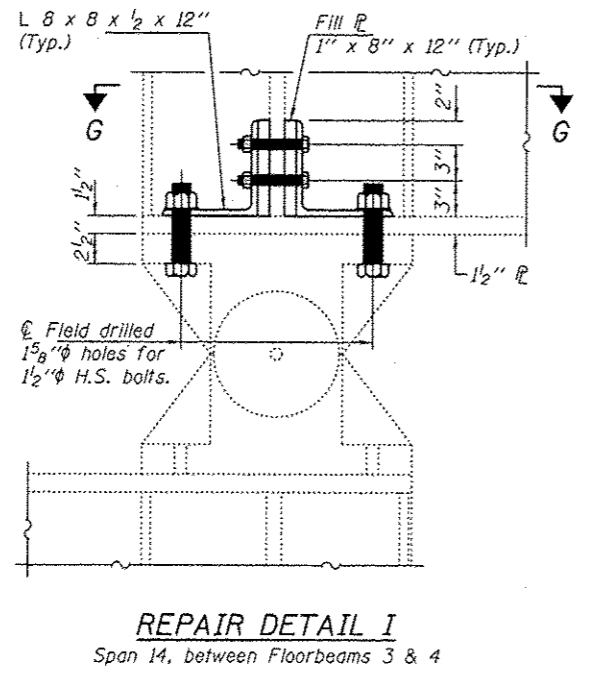
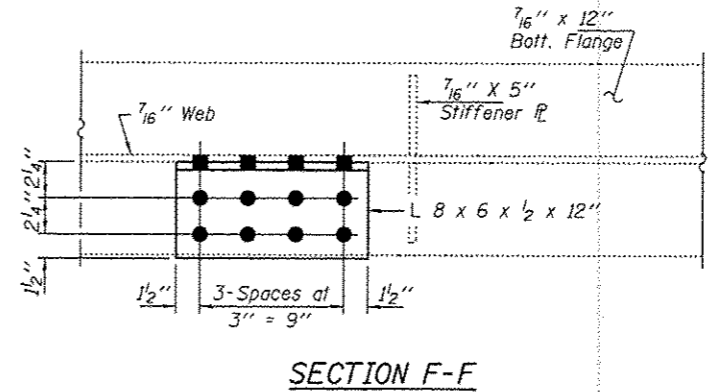
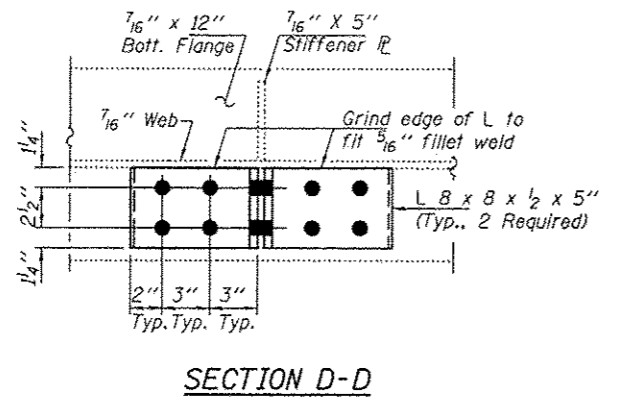
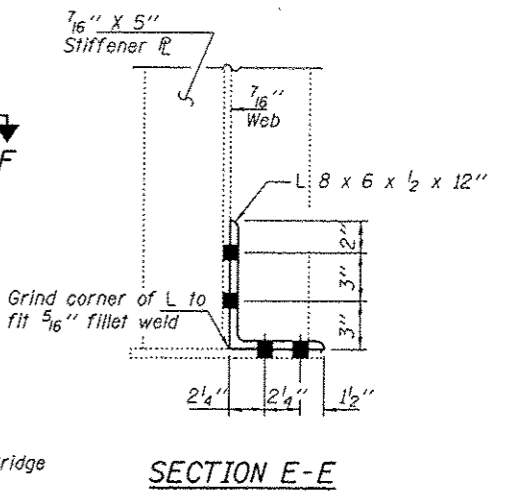
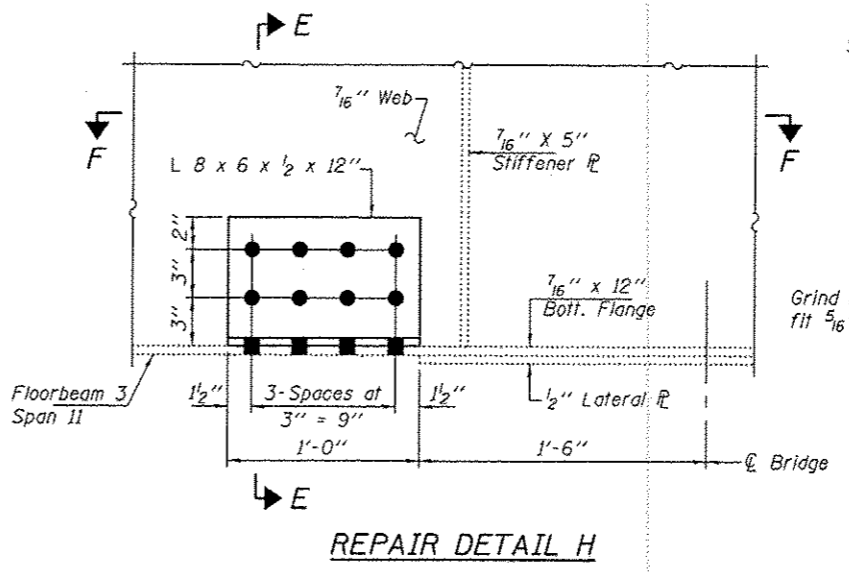
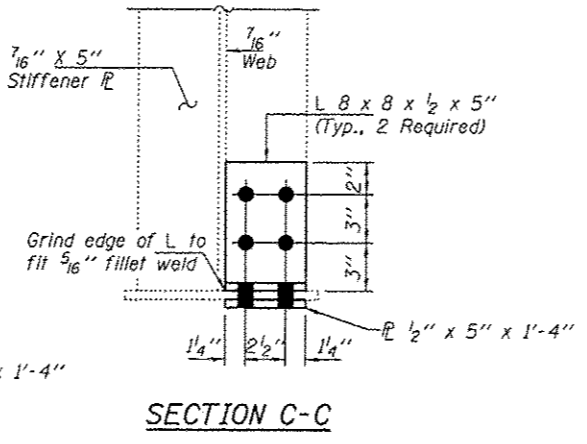
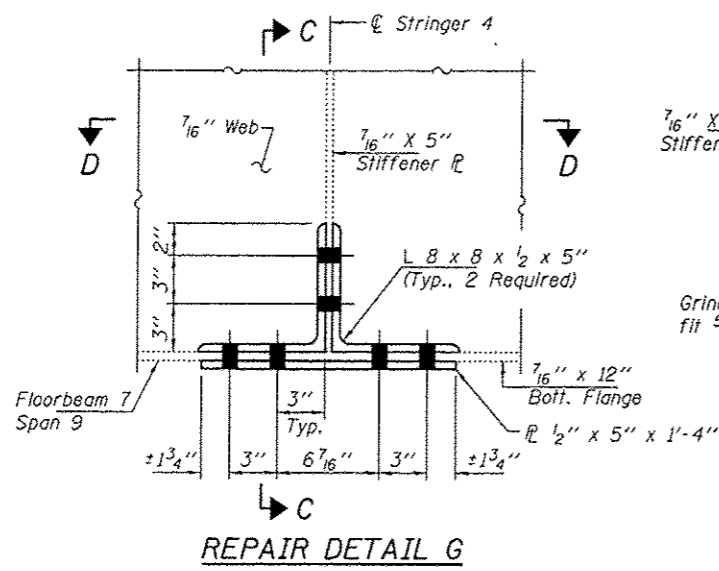
Notes:
 For knee brace replacement locations, see sheet 1 of 6.
 For details of new knee braces, see sheet 3 of 6. Knee braces left and right are identical, location of fill plates and field drilled holes vary.
 $\frac{15}{16}$ " ϕ Holes for $\frac{7}{8}$ " ϕ HS A325 Bolts.
 Reference to knee brace mark numbers are from 1965 original shop drawings, sheet no. 330. See sheet 4A of 6.



KNEE BRACE REPLACEMENT B WITH LATERAL CONNECTION

Note: Dimensions based on existing Knee Brace, Mk. 330B

DESIGNED - ATH	EXAMINED - <i>Timothy A. [Signature]</i>	DATE - SEPTEMBER 19, 2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	KNEE BRACE REPAIR DETAILS SN 081-0011	F.A. RTE. 80	SECTION (81-1B)M-3	COUNTY ROCK ISLAND	TOTAL SHEETS 9	SHEET NO. 5	
CHECKED - MKC	PASSED - <i>Carl [Signature]</i>				CONTRACT NO. 64E33					
DRAWN - Kyle M. Steffen					SHEET NO. 2 OF 6 SHEETS					
CHECKED - ATH MKC					ILLINOIS FED. AID PROJECT					



DESIGNED - ATH	EXAMINED - <i>Timothy A. Bracht</i>	DATE - SEPTEMBER 19, 2012
CHECKED - MKC	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl Perry</i>	
CHECKED - ATH MKC	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

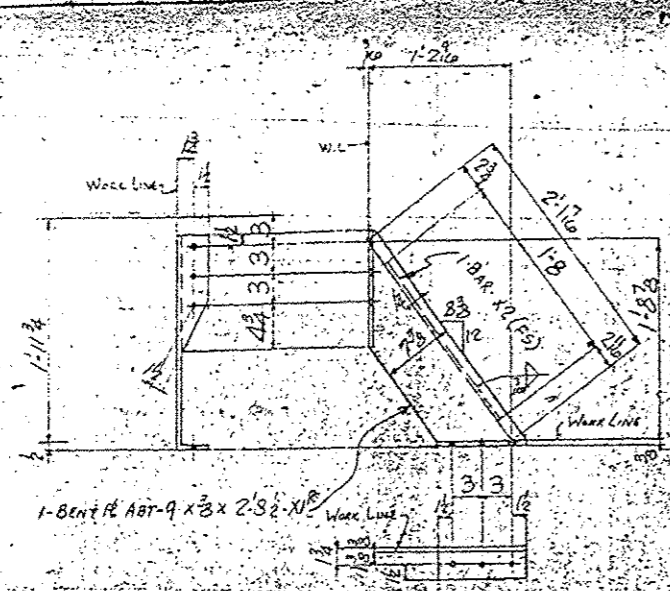
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS G THRU J
SN 081-0011

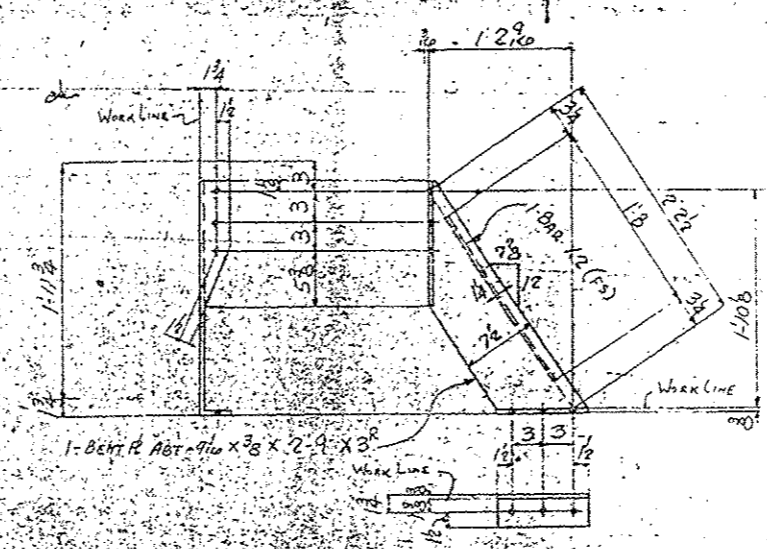
SHEET NO. 4 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(81-1B)M-3	ROCK ISLAND	9	7
ILLINOIS FED. AID PROJECT				

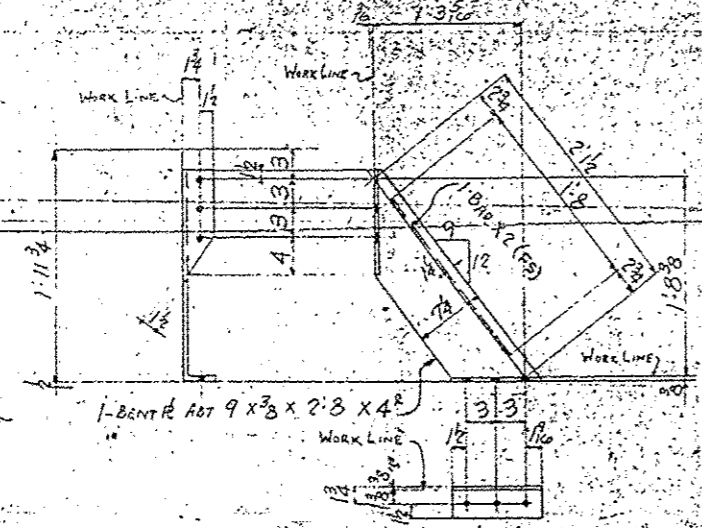
1	
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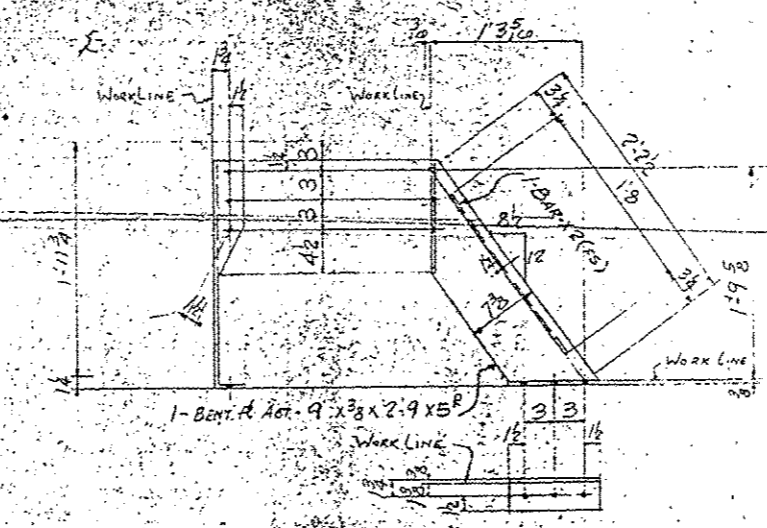
22 - KNEE BRACES - 330A^R
22 - KNEE BRACES - 330A^L



5 - KNEE BRACES - 330C^R
5 - KNEE BRACES - 330C^L



40 - KNEE BRACES - 330B^R
40 - KNEE BRACES - 330B^L



18 - KNEE BRACES - 330D^R
18 - KNEE BRACES - 330D^L

FOR
INFORMATION
ONLY

Open Holes are for High Strength
Structural Bolts Unless Noted A.
NO PAINT, within 3" of Holes for
High Strength Structural Bolts

MODIFIED BY: E. MASTERS

APPROVED

ISSUE	DATE	BY
ORIGINAL	3-26-11	ENG
REV. #1		
REV. #2		

FAB PLANT
CLINTON

OPEN HOLE: 1 5/8" (SEE G.N.I.)

DRIVEN & BOLTS: NONE (SEE G.N.I.)

DRAWN BY: PS DATE: 3-1-12 CHECKED BY: ENG DATE: 2-8-12

REVISIONS	△	△	△	△
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NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL
1					
2					
3	22 KNEE BRACES - 330A ^R				
4	22 KNEE BRACES - 330A ^L				
5					
6	44 BENT 9 x 1 1/2 x 2 1/2 x 1 1/2				
7	44 BARS - 3 x 3/8 x 1.8 x 2				
8					
9	44 W.L.O. 1/2 x 3/4				
10					
11					
12					
13					
14					
15	40 KNEE BRACES - 330B ^R				
16	40 KNEE BRACES - 330B ^L				
17					
18	80 BENT 9 x 1 1/2 x 2 1/2 x 1 1/2				
19	80 BARS - 3 x 3/8 x 1.8 x 2				
20					
21	80 W.L.O. 1/2 x 3/4				
22					
23					
24					
25					
26					
27	5 KNEE BRACES - 330C ^R				
28	5 KNEE BRACES - 330C ^L				
29					
30	10 BENT 9 x 1 1/2 x 2 1/2 x 1 1/2				
31	10 BARS - 3 x 3/8 x 1.8 x 2				
32					
33	10 W.L.O. 1/2 x 3/4				
34					
35					
36					
37					
38	18 KNEE BRACES - 330D ^R				
39	18 KNEE BRACES - 330D ^L				
40					
41	36 BENT 9 x 1 1/2 x 2 1/2 x 1 1/2				
42	36 BARS - 3 x 3/8 x 1.8 x 2				
43					
44	36 W.L.O. 1/2 x 3/4				
45					
46					
47					
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ALLIED STRUCTURAL STEEL COMPANIES
CLINTON BRIDGE CO. - BRIDGE STRUCTURAL STEEL CO. - MIDLAND STRUCTURAL STEEL CO.
ENGINEERS - FABRICATORS - ERECTORS OF BUILDINGS AND BRIDGES
20 NORTH WACKER DRIVE CHICAGO 5, ILLINOIS

DETAILS OF: KNEE BRACE
STRUCTURE: PROJ. I-80-9(31)710 MISSISSIPPI RIVER BRIDGE
LOCATION: LE CLAIRE, IOWA
OWNER: STATE OF IOWA STATE HIGHWAY DEPT.
CUSTOMER: _____

CONTRACT 3100 (FABCOE 194) SHEET 330
WAS 3097

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
4"	3"	2 1/2" Min.

INSTALLATION NOTES

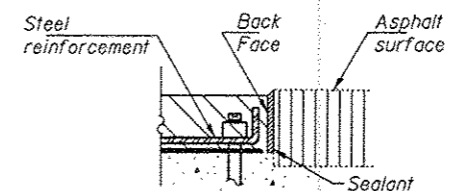
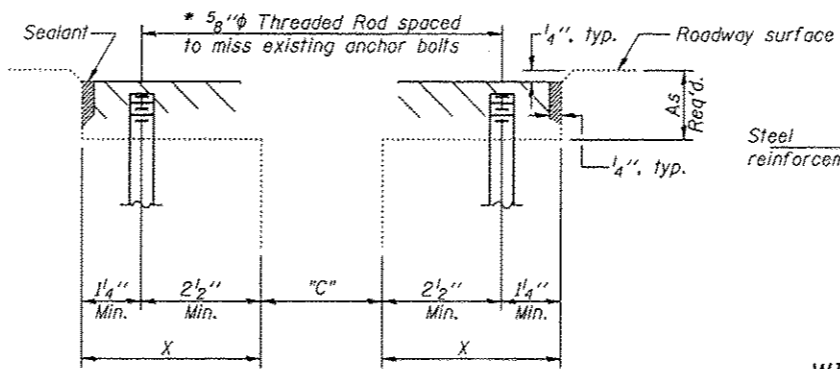
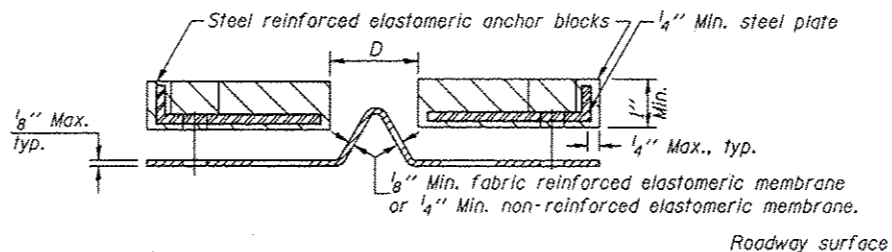
1. Install continuous seal in roadway, parapet, curb, and sidewalk.
2. Install anchor blocks as indicated.

Note A:
Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

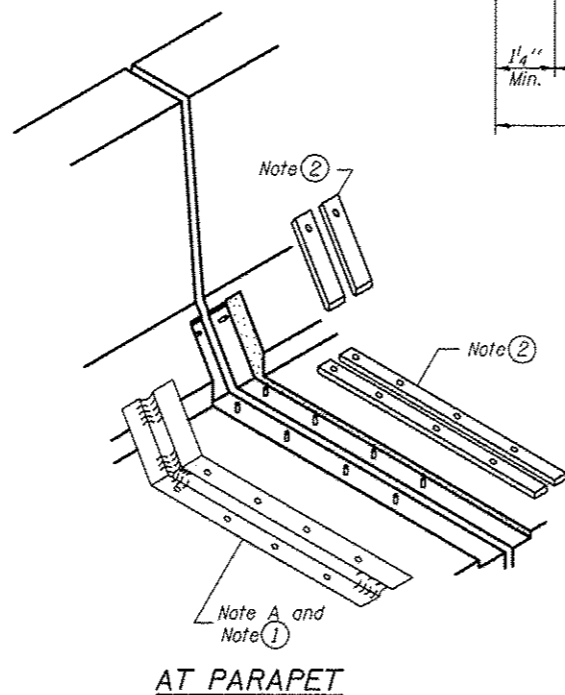
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

* Existing anchor bolts to be cut flush. 5/8"φ Threaded rod to be epoxy grouted in 7/8"φ x 6" min hole. Cost included with Neoprene Expansion Joint.

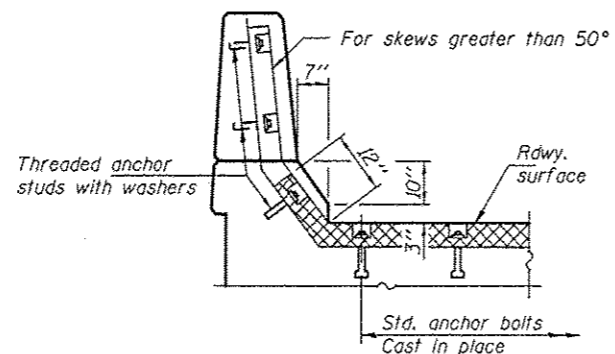


ANCHOR BLOCK WITH ASPHALT SURFACE

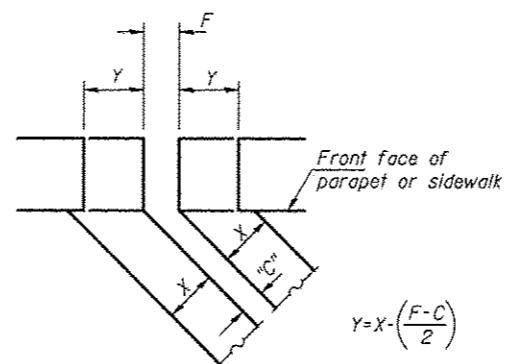
CROSS SECTION



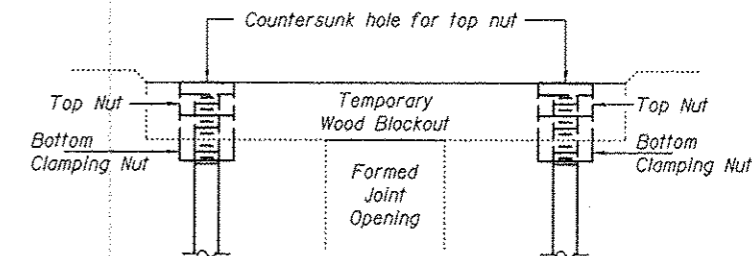
AT PARAPET



AT PARAPET



FORMING BLOCKOUT SKETCH



RECOMMENDED BLOCKOUT DETAIL

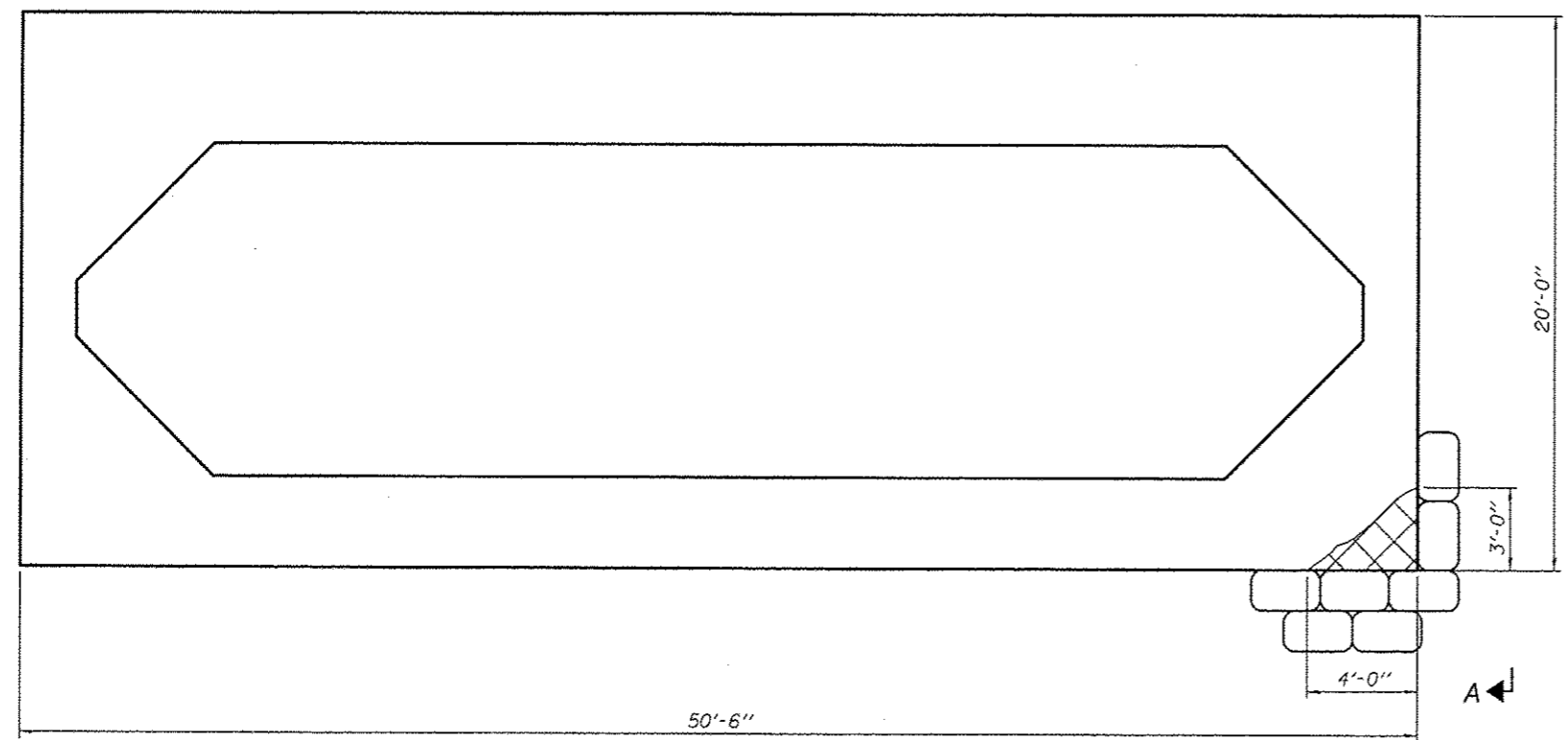
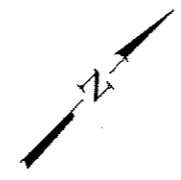
GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its original position upon joint closure. The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed. Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F. The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

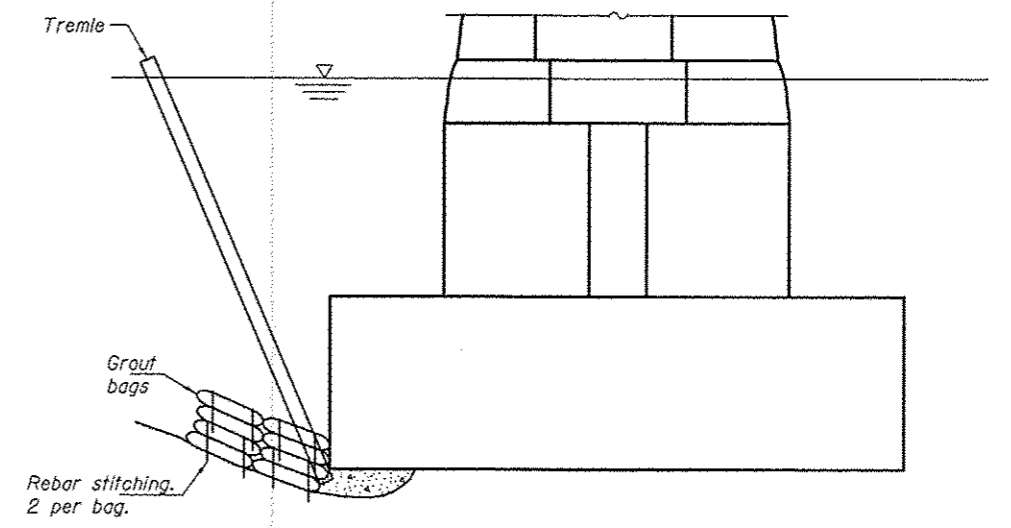
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Neoprene Expansion Joint, 2"	Foot	66
Neoprene Expansion Joint, 4"	Foot	66

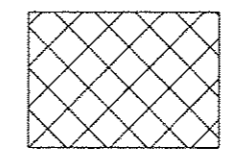
Notes:
 Remove unstable material along bottom of undermined area prior to bag placement and filling with grout.
 Stack grout bags along face of pier in front of undermined area. Bags stacked in successive rows and tiers shall be staggered.
 Once vent/fill pipes have been installed and bags are filled, pump grout into the undermined area until material appears in the top of adjacent vent pipes. Cut or remove the vent/fill pipes flush with the top of the bags after pumping operation is complete.
 Adequate venting of water to be displaced in the undermined area is important. The water must be able to escape when displaced by grout pumped into the cavity. A max. 4ft spacing of vent/fill pipes is recommended.
 Keep nozzle buried in the grout during pumping to reduce the amount of mixing of the grout and water to be displaced.
 All bags shall be 1ft max. thick, 3ft max. wide and 4ft max. long.



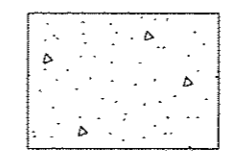
PLAN PIER 16



VIEW A-A



Undermined area



Tremie Concrete

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Substructure Repairs (Grout Bags)	L.S.	1

DESIGNED VHV	EXAMINED <i>Timothy A. Angh</i>	DATE - SEPTEMBER 19, 2012
CHECKED DAB	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN baliva	PASSED <i>Carl King</i>	
CHECKED VHV DAB	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER 16 SCOUR COUNTERMEASURES
 SN 081-0011

SHEET NO. 6 OF 6 SHEETS

F.A. R.T.E. BO	SECTION (61-1B1M-3)	COUNTY ROCK ISLAND	TOTAL SHEETS 9	SHEET NO. 9
CONTRACT NO. 64E33			ILLINOIS FED. AID PROJECT	