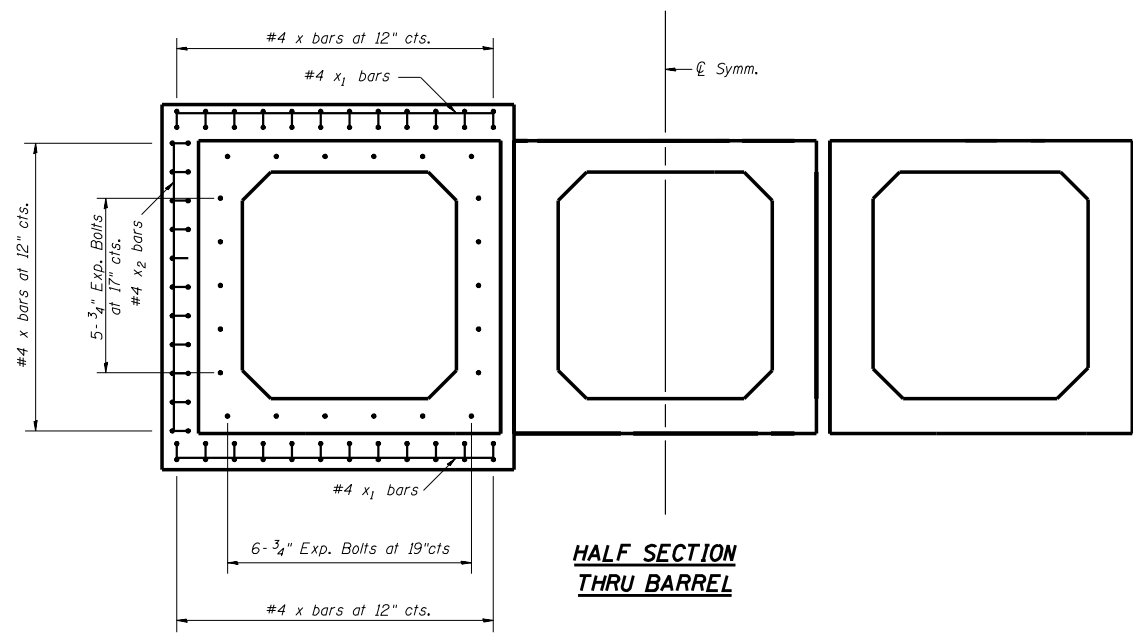
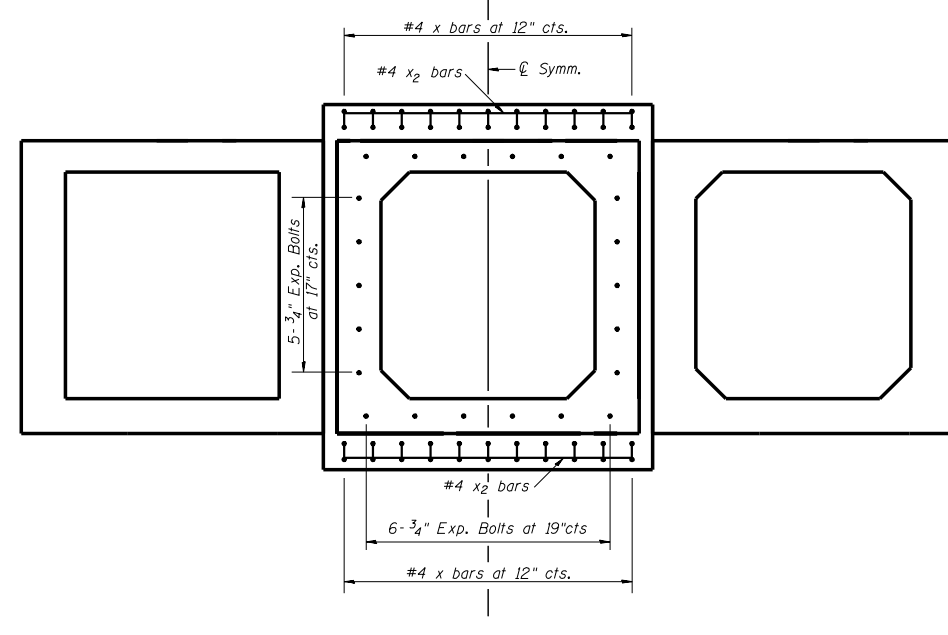


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	(115BR)BR	VERMILION	43	19
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

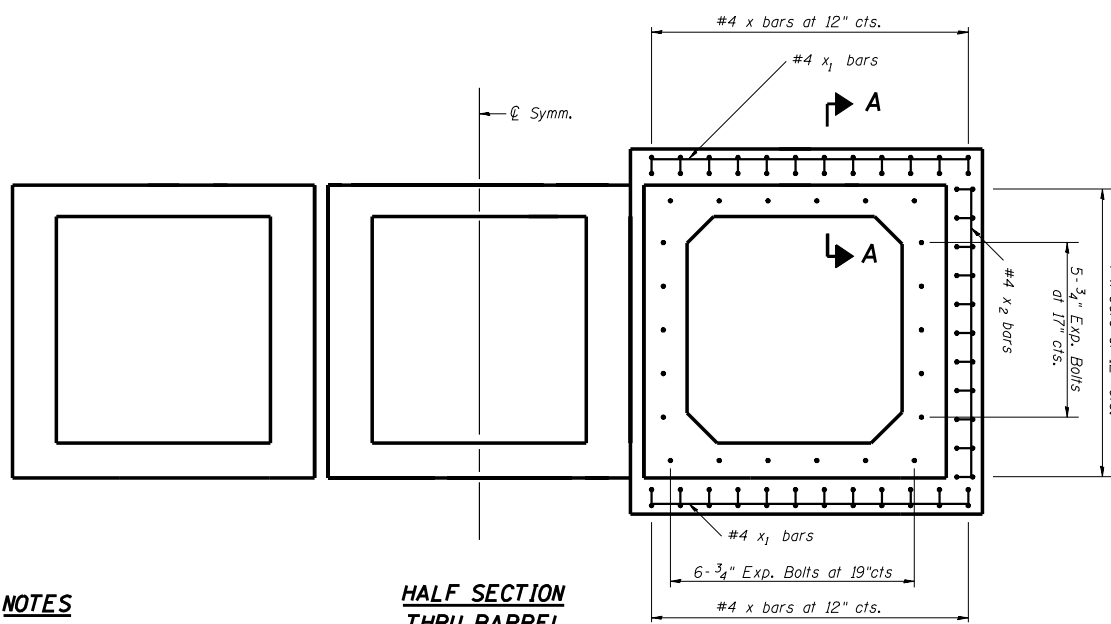
DETAIL OF BOX CULVERT END SECTION



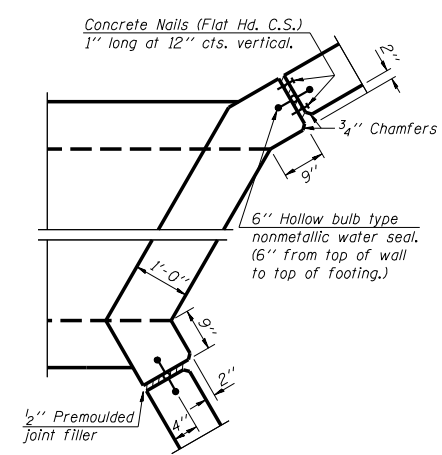
HALF SECTION THRU BARREL



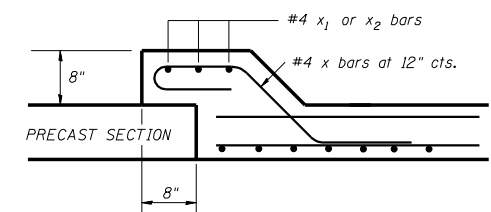
HALF SECTION THRU BARREL



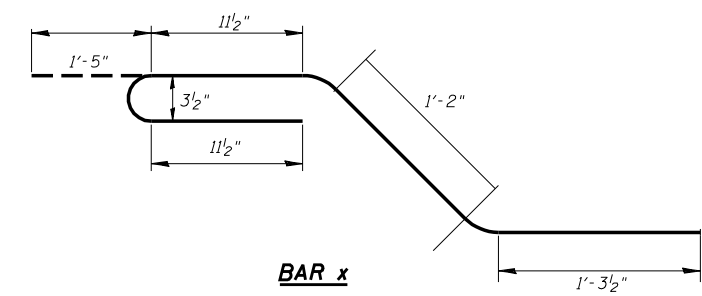
HALF SECTION THRU BARREL



CORNER DETAIL



SECTION A-A



BAR x

BILL OF MATERIAL PER END SECTION

Bar No.	Size	Length	Shape	Bar No.	Size	Length	Shape	
a1	102	#8	11'-10"	h1	2	#7	9'-11 1/2"	
a2	15	#4	9'-3"	h2	3	#7	11'-0 3/4"	
a3	1	#4	38'-10 1/2"	h3	3	#7	13'-8 1/4"	
d	55	#4	5'-3"	h4	2	#7	16'-3 3/4"	
v	112	#5	8'-1"	h5	2	#7	2'-6"	
v1	112	#5	2'-4"	h6	3	#7	3'-7 1/8"	
v2	1	#5	7'-10 1/4"	h7	3	#7	6'-2 5/8"	
v3	1	#5	8'-7 3/4"	h8	2	#7	8'-10 1/8"	
v4	1	#5	9'-7 1/2"	h9	2	#7	5'-0 1/4"	
v5	1	#5	10'-6"	h10	3	#7	6'-1 3/8"	
v6	1	#5	11'-4 5/8"	h11	3	#7	8'-9"	
v7	3	#5	5'-5 1/8"	h12	2	#7	11'-4 1/2"	
v8	3	#5	5'-10"	h13	6	#5	10'-2 3/4"	
v9	3	#5	6'-4"	h14	6	#5	12'-6"	
v10	3	#5	6'-10"	h15	6	#5	14'-9 3/8"	
v11	3	#5	7'-4"	h16	6	#5	2'-9"	
v12	3	#5	7'-9 1/8"	h17	6	#5	5'-0 3/8"	
v13	3	#5	8'-3 3/8"	h18	6	#5	7'-3 5/8"	
v14	3	#5	8'-9 1/8"	h19	6	#5	5'-3 3/8"	
v15	2	#5	9'-3 3/4"	h20	6	#5	7'-6 5/8"	
v16	2	#5	7'-6 1/4"	h21	6	#5	9'-10"	
v17	2	#5	8'-5 1/2"	h22	8	#6	10'-2 1/8"	
v18	2	#5	9'-4 1/4"	h23	8	#6	16'-11 3/4"	
v19	2	#5	10'-3"	h24	8	#6	2'-8 1/4"	
v20	2	#5	11'-1 1/8"	h25	8	#6	9'-6 1/4"	
v21	6	#5	5'-3 3/8"	h26	8	#6	5'-2 1/2"	
v22	6	#5	5'-9 3/4"	h27	8	#6	10'-9 3/4"	
v23	6	#5	6'-3 3/8"	h28	12	#4	19'-0"	
v24	6	#5	6'-9 1/8"	h29	1	#4	16'-1 1/4"	
v25	6	#5	7'-3 3/8"	h30	1	#4	11'-6 1/8"	
v26	6	#5	7'-10"	h31	1	#4	7'-0 1/2"	
v27	6	#5	8'-4"	h32	1	#4	2'-6 1/8"	
v28	6	#5	8'-10 1/8"	h33	1	#4	12'-9 5/8"	
v29	3	#5	9'-4 1/8"	h34	1	#4	3'-9"	
v30	4	#5	13'-1 1/2"	h35	12	#4	37'-7 1/4"	
x	92	#4	5'-3 3/8"	h36	1	#4	31'-9 5/8"	
x1	12	#4	10'-11"	h37	1	#4	22'-10 3/8"	
x2	12	#4	10'-3"	h38	1	#4	13'-11 3/4"	
w	10	#5	37'-7 3/8"	h39	1	#4	5'-0 1/8"	
w1	10	#5	19'-0"	h40	1	#4	25'-3 3/8"	
t	172	#4	7'-0"	h41	1	#4	7'-5 3/4"	
n(E)	77	#6	6'-4"	h42	2	#4	37'-10"	
n1(E)	75	#5	4'-3"	h43	2	#4	19'-5 3/8"	
Concrete Box Culverts							78.1	Cu. Yd.
Reinforcement Bars, Epoxy Coated							1065.0	Pound
Reinforcement Bars							10108.0	Pound

ITEM	UNIT	QUANTITY
Box Culvert End Section	EACH	1.0
Expansion Bolts, 3/4"	EACH	66.0

NOTES

- All bars should be rounded and shall conform to the requirements of Art. 1006.10 of Standard Specs.
- Reinforcement bars designated (E) shall be epoxy coated.
- Concrete and Rebar quantities and lengths calculated for the cast-in-place End Sections will vary based on the precast box culverts supplied.
- All construction joints shall be bonded.
- Class SI Concrete shall be used throughout.
- All dimensions are in FEET (')-INCHES (") unless otherwise noted.
- Drain holes shall be provided in accordance with Art. 503.12.
- Drawings not to scale.
- End Sections will be paid for at the contract unit price each for BOX CULVERT END SECTION, as outlined in Art. 540.08, which prices shall include all concrete, rebar, and all other items necessary to complete the proposed work.

PLOT DATE = 10/24/2005
 FILE NAME = c:\projects\4595702 (v8)\detail.dgn
 PLOT SCALE = 4.23525 / IN.
 USER NAME = stults,j