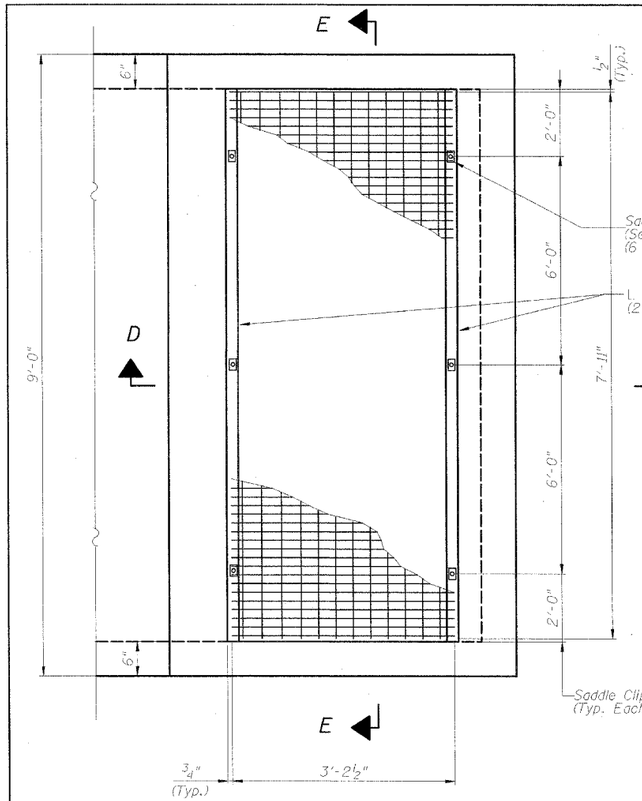
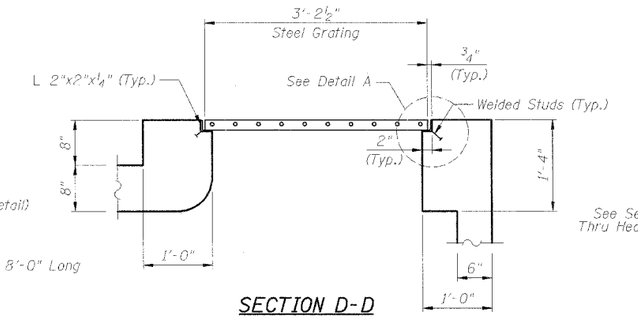
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	177
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

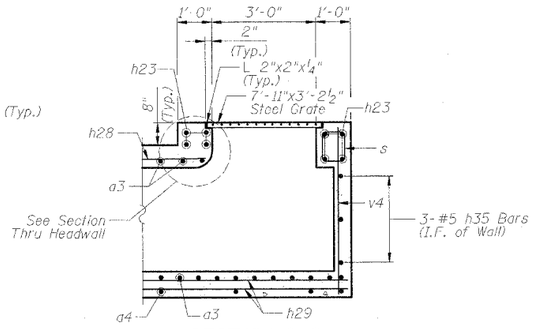
CONTRACT NO. 66294



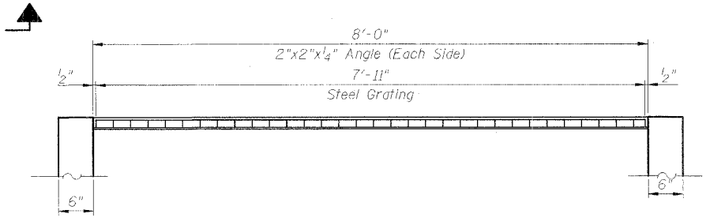
STEEL GRATING DETAIL



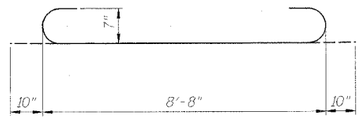
SECTION D-D



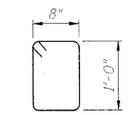
SECTION C-C



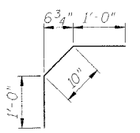
SECTION E-E



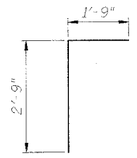
a3 BAR



s BAR



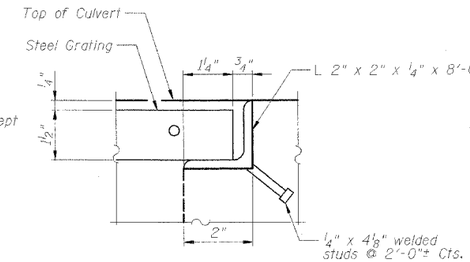
d4 BAR



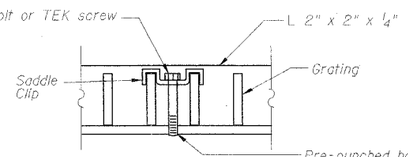
d BAR

BILL OF MATERIAL

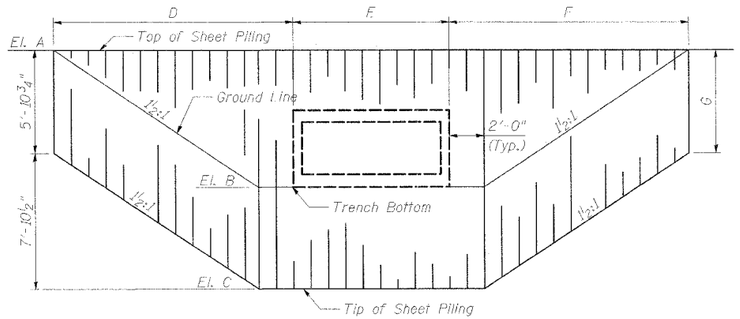
Bar	No.	Size	Length	Shape
a3	398	#7	10'-4"	
a4	58	#4	8'-3"	
d	18	#4	4'-6"	
d4	8	#5	2'-10"	
h23	8	#6	8'-8"	
h24	5	#4	8'-0"	
h25	5	#4	8'-1"	
h26	10	#6	26'-8"	
h27	20	#5	26'-8"	
h28	20	#6	17'-11"	
h29	40	#5	17'-9"	
h30	10	#6	23'-8"	
h31	20	#5	23'-8"	
h32	10	#6	20'-4"	
h33	20	#5	20'-4"	
h34	4	#5	4'-8"	
h35	3	#5	8'-8"	
s	8	#4	3'-8"	
v2	278	#4	4'-1"	
v3	12	#4	7'-0"	
v4	25	# 4	4'-9"	
Reinforcement Bars			Pound	13,750
Concrete Box Culverts			Cu. Yd.	63.1
Bar Splicers			Each	90



DETAIL A

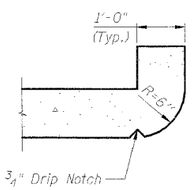


SADDLE CLIP DETAIL



SECTION B-B

Stage	El. A	El. B	El. C	D	E	F	G
Stage I W.	590.05	581.78	576.28	13'-10"	9'-0"	3'-10"	12'-6 3/8"
Stage I E.	590.39	582.12	576.62	13'-10"	9'-0"	13'-10"	5'-10 3/4"
Stage II	590.49	582.22	576.72	13'-10"	9'-0"	13'-10"	5'-10 3/4"
Stage III W.	590.36	582.09	576.59	13'-10"		13'-10"	5'-10 3/4"
Stage III E.	590.51	582.24	576.74	13'-10"		13'-10"	5'-10 3/4"



SECTION THRU HEADWALL

NOTES:

1. Work this Sheet with S-3 and S-4 for Adjacent Outlet Headwall and Wingwall Details of 11'x4' Box Culvert.
2. Tilt a3 hook bars if necessary for 1 1/2" minimum clearance.
3. A distance of half the length of the wingwall but not less than six-feet of the barrel shall be poured monolithically with the wingwalls.
4. Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.
5. Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
6. All construction joints shall be bonded.
7. All Structure Excavation and Embankment Fill costs shall be included with Concrete Box Culverts cost.
8. Steel Grating shall be 1 1/2" x 1/8" Type 19-W4 or equivalent.
9. Steel Plates and shapes shall conform to AASHTO M270, Grade 36.
10. All steel grating, anchoring devices, plates, and shapes shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.
11. Cost of steel grating, anchoring devices, plates, shapes, and welded studs shall be included with Concrete Box Culverts cost.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 2
8'x3' BOX CULVERT
PLAN & ELEVATION DETAILS II

SCALE: None DRAWN BY: M. Tryon
DATE: 2/10/06 CHECKED BY: A. Yargicoglu

PATRICK ENGINEERING INC.
LISLE, ILLINOIS

(w)PWGDetails-Struct1 02/07/2006 - 12:05:14 PM G:\2007\703\Activities\Drawings\STR-ST-01.dgn Rd: \\Chgs\Sta_Pgs\PWGStdsCons_PLT.ctb