3/31/2006

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	10-32HB-3,K	Champaign	352	162
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

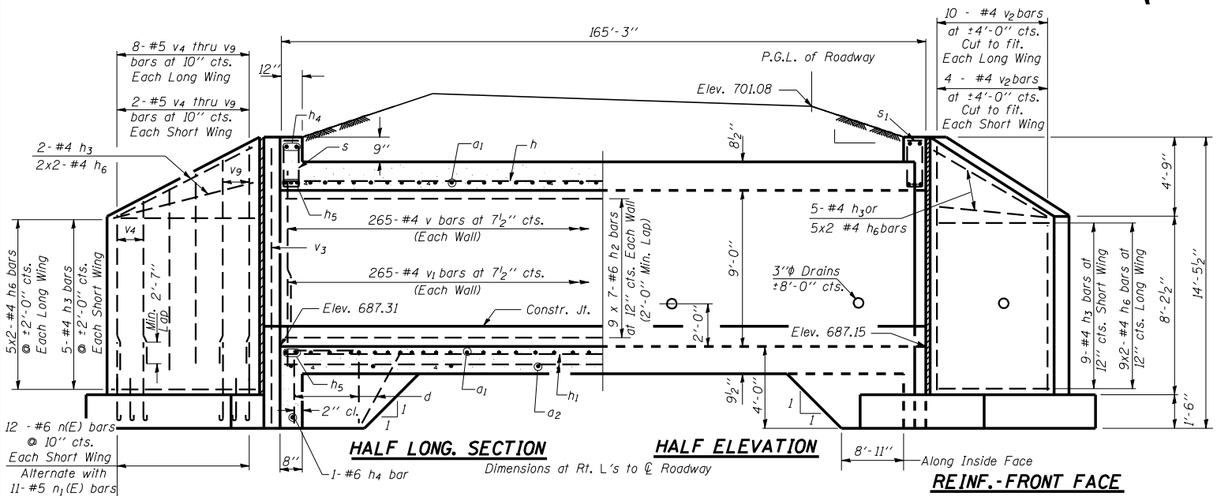
CONTRACT NO. 90758

PRECAST OPTION NOT ALLOWED

DETAIL OF CAST IN PLACE BOX CULVERT & END SECTION

A.R. BOX CULVERT 1 @ 11.0' X 9.0'

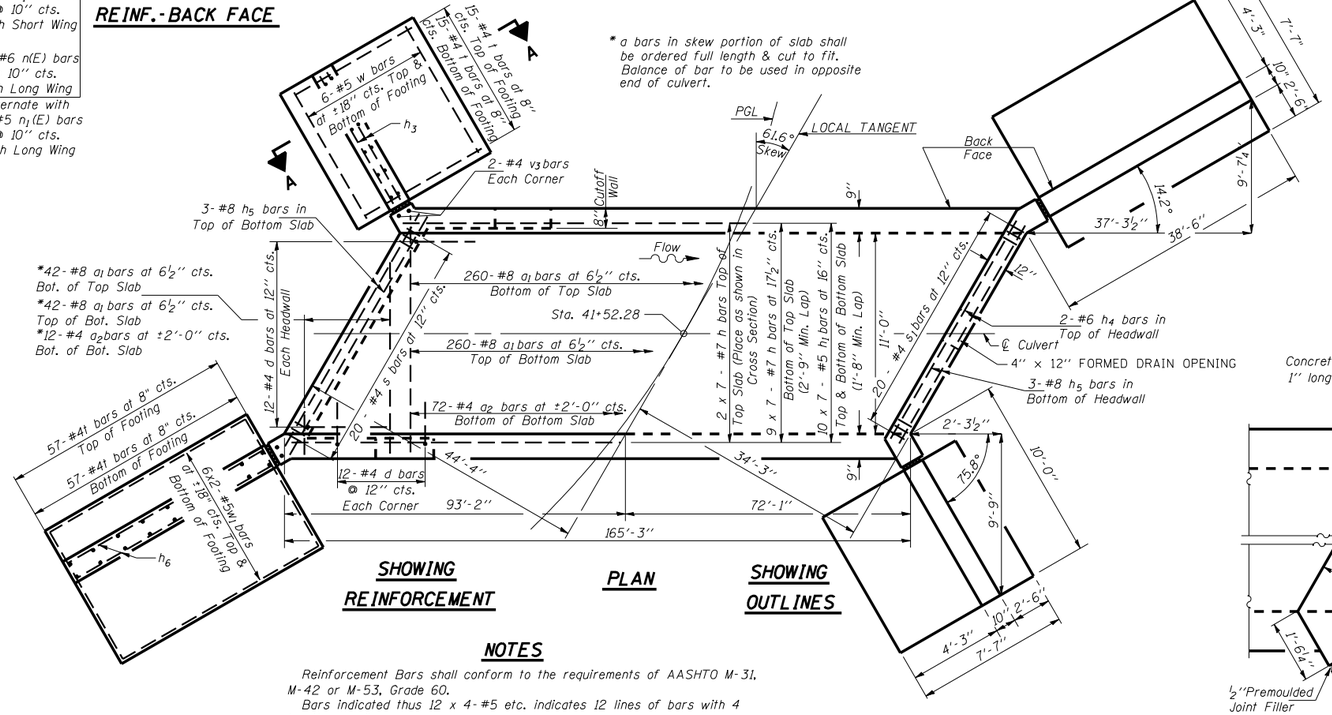
STA. 41+52.28 (CULVERT NO. 19)



HALF LONG. SECTION **HALF ELEVATION** **REINF.-FRONT FACE**

Dimensions at Rt. L's to ℄ Roadway

REINF.-BACK FACE



* a bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.

SHOWING REINFORCEMENT **PLAN** **SHOWING OUTLINES**

LOADING HS 20-44 & ALT.

NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

Reinforcement bars designated (E) shall be epoxy coated.

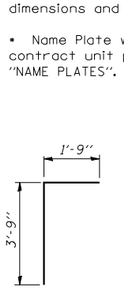
All construction joints shall be bonded.

Any excavation required for box culvert construction shall be included in the contract unit price for concrete, per Art. 502.15.

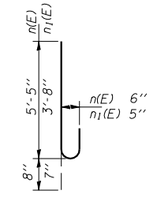
F.A.I. RT. 57
SEC. 10-32HB-3,K
LOADING HS 20-44 & ALT.
STR. NO. 010-2033

NAME PLATE

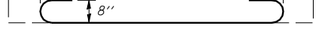
- See Highway Standard 515001-02 for dimensions and placement.
- Name Plate will be paid for at the contract unit price per "EACH" for "NAME PLATES".



BAR d



BARS n(E) and n1(E)

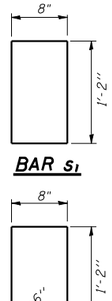


BAR a1

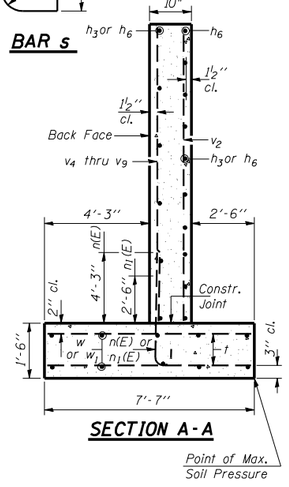
DESIGN STRESSES

fy = 60,000 psi
f'c = 3,500 psi

Max. Soil Pressure under footing = 2.912 psf

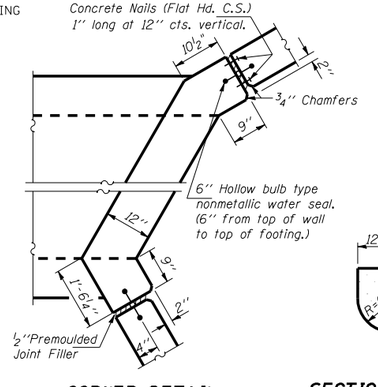


BAR s1

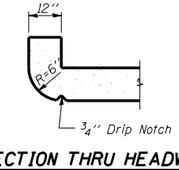


BAR s **SECTION A-A**

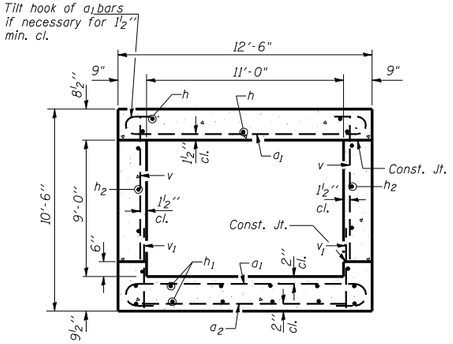
Point of Max. Soil Pressure



CORNER DETAIL



SECTION THRU HEADWALL
(Up Stream End Only)



SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	604	#8	14'-0"	
a_2	84	#4	12'-2"	
d	72	#4	5'-6"	
h	77	#7	25'-11"	
h_1	140	#5	25'-0"	
h_2	126	#6	25'-4"	
h_3	42	#4	9'-0"	
h_4	6	#6	20'-6"	
h_5	12	#8	20'-6"	
h_6	84	#4	19'-7"	
n(E)	116	#6	6'-1"	
n_1(E)	112	#5	4'-3"	
s	20	#4	3'-8"	
s_1	20	#4	3'-8"	
t	288	#4	7'-4"	
v	530	#4	9'-0"	
v_1	530	#4	2'-3"	
v_2	28	#4	12'-7"	
v_3	8	#4	14'-1"	
v_4	20	#5	6'-11"	
v_5	20	#5	7'-10"	
v_6	20	#5	8'-8"	
v_7	20	#5	9'-6"	
v_8	20	#5	10'-4"	
v_9	20	#5	11'-2"	
w	24	#5	9'-0"	
w_1	48	#5	19'-10"	
Concrete Box Culverts			Cu. Yd.	276
Reinforcement Bars, Epoxy Coated			Pound	1,556
Reinforcement Bars			Pound	46,110

BOX CULVERT & END SECTIONS (CAST IN PLACE)
1 @ 11.0' X 9.0'
STA. 41+52.28 61.6° SKEW

REINFORCED CONCRETE CULVERT DETAILS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS

SCALE: VERT.
HORIZ.
DATE 062805

DRAWN BY JDC
CHECKED BY JDE

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