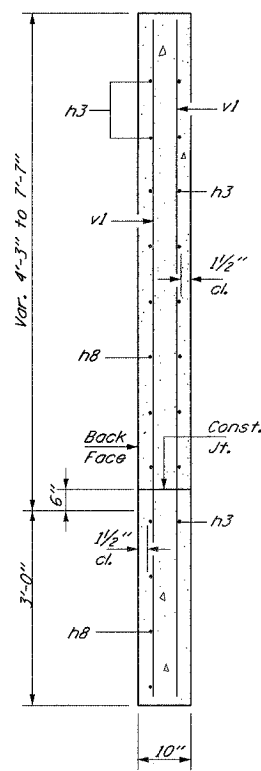
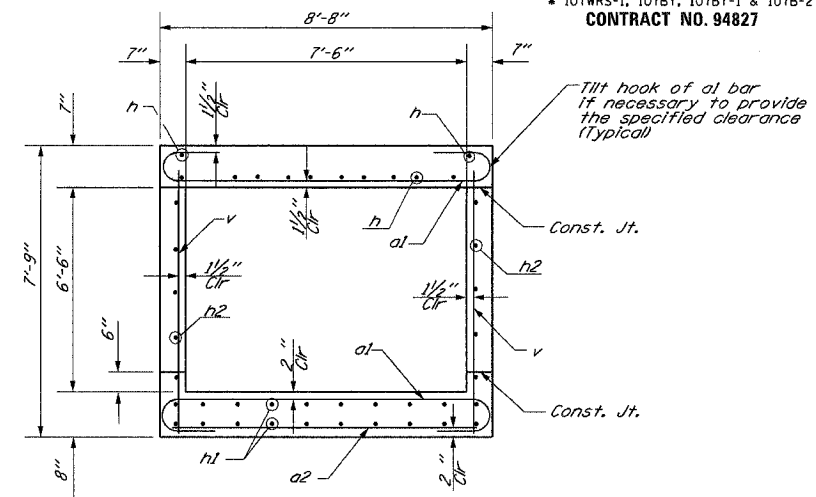


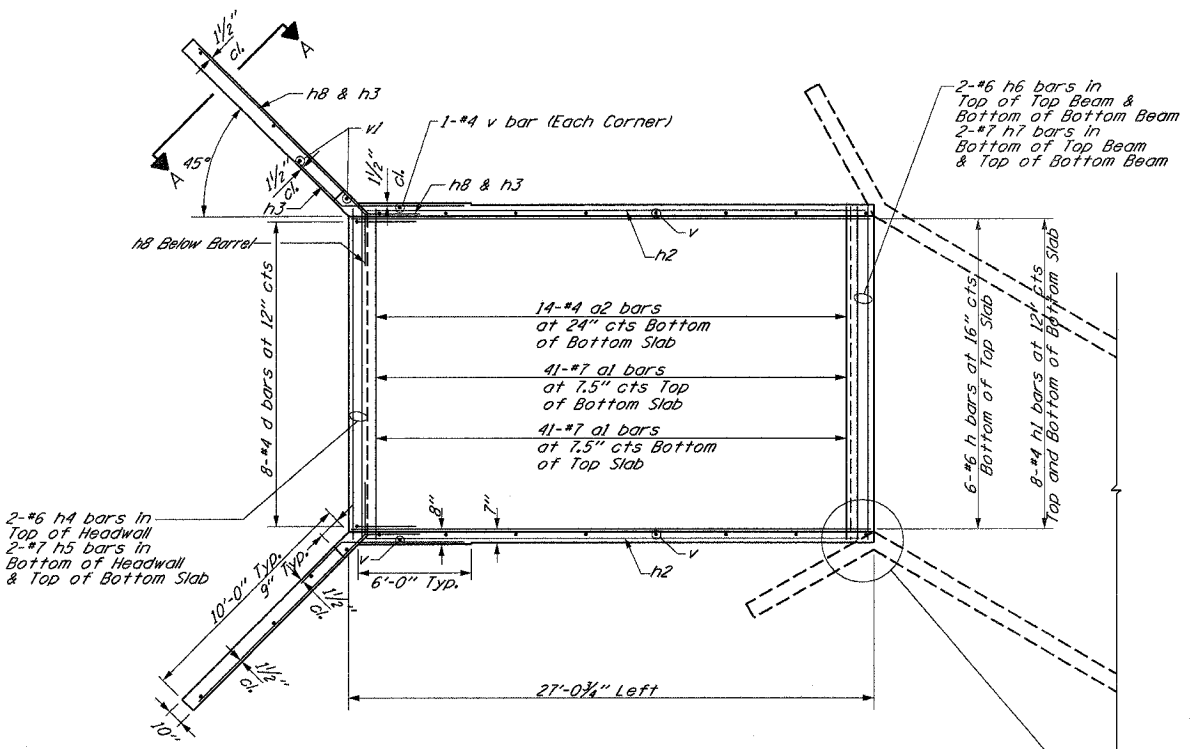
HALF LONG SECTION
Dimensions at Rt L to & Roadway



SECTION A-A



SECTION THRU BARREL



PLAN SHOWING REINFORCEMENT

NOTES:

- Design fill height \angle 2'
- Exposed edges shall be chamfered $\frac{1}{4}$ ".
- Class SI Concrete shall be used throughout.
- Reinforcement Bars shall conform to the requirements of AASHTO M-31 or M-53, Grade 60.
- Bars Indicated thus 12x4-#5 etc. indicates 12 lines of #5 bars with 4 lengths per line.
- Nonmetallic water seal used in the wingwall joints shall extend from the top of the footing to within 6" of the top of the headwall.
- For Backfilling and Embankment, see Standard Specifications.
- Hooked Expansion Bolts shall consist of self-drilling expansion shields and hooked bolts. Hooked Bolts shall extend a minimum of 9" into new concrete.
- 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.
- All construction joints shall be banded.

Remove Existing Wingwall as Required to Construct Extension or as Directed by Engineer. Cost of Removal Included in cost of Concrete Structure. Typical.

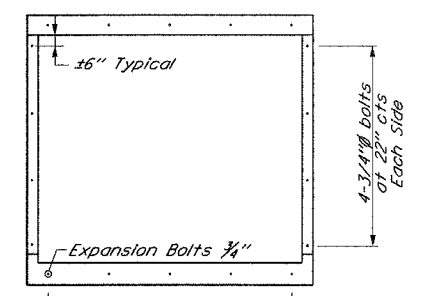
SPECIFICATION

1996 AASHTO with 1997, 1998, 1999, 2000 and 2002 Interims

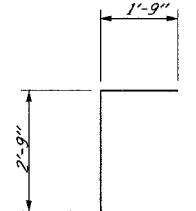
DESIGN STRESSES

$f_y = 60,000$ psi
 $f'_c = 3,500$ psi

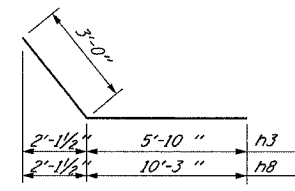
LOADING HS 20-44



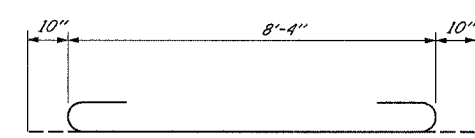
EXPANSION BOLT PLACEMENT DETAIL



BAR d



BARS h3 & h8



BAR a1

BILL OF MATERIAL

Bar	No.	Size	Length
a1	82	#7	10'-0"
a2	15	#4	7'-9"
d	8	#4	4'-6"
h	8	#6	26'-8"
h1	16	#4	26'-8"
h2	14	#6	26'-8"
h3	24	#7	8'-10"
h4	2	#6	7'-8"
h5	4	#7	8'-4"
h6	4	#6	8'-4"
h7	4	#7	8'-4"
h8	18	#7	13'-3"
v	68	#4	7'-5"
v1	8	#4	10'-3"
Concrete Structures	Cu Yd	25	
Reinforcement Bars	Pound	4970	
Expansion Bolts $\frac{3}{4}$ "	Each	18	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CAST-IN-PLACE BOX CULVERT EXTENSION DETAILS
@ STA. 901+00.49 LT.
SHEET 1 OF 2
DRAWN BY ASB
CHECKED BY SJK
DATE 8/02