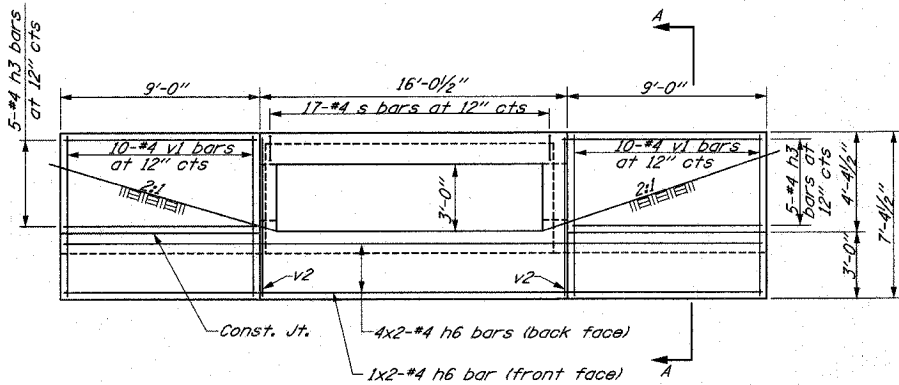
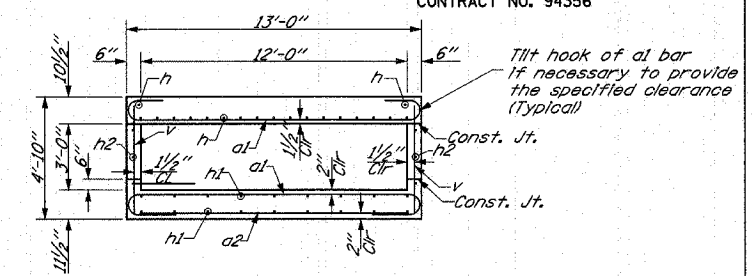


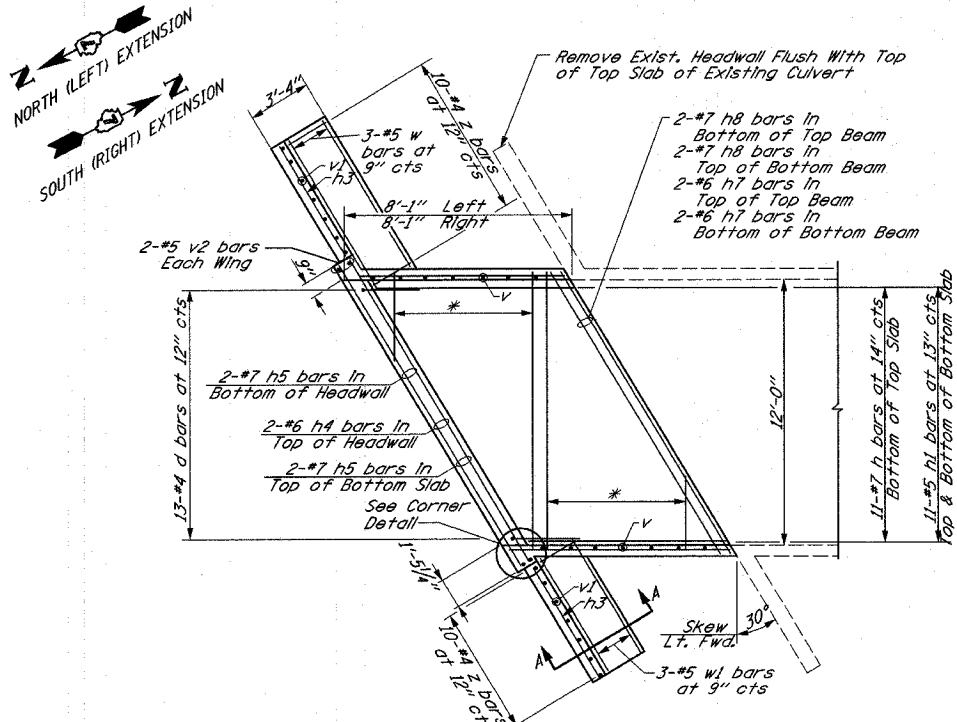
HALF LONG SECTION
Dimensions at Rt L to Roadway



END ELEVATION
Dimensions Parallel to Centerline of Roadway



SECTION THRU BARRELS



PLAN SHOWING REINFORCEMENT

* Cut bars in field to fit skew and use the remainder of bars at other end of slab.
12-#9 a1 bars at 1 1/2" cts., Top of Bottom Slab
4-#4 a2 bars at 2'-0" cts., Bottom of Bottom Slab
12-#9 a1 bars at 1 1/2" cts., Bottom of Top Slab

NOTES:

- Bench Mark: IL Route 33 @ Culvert (Sta. 544+21.63), Elev. 583.71.
- Design Fill Height 2' Lt & Rt.
- Exposed edges shall be chamfered 3/4".
- Class SI Concrete shall be used throughout.
- Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.
- Bars Indicated thus 12x4-#5 etc. indicates 12 lines of 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.
- Expansion Bolts shall consist of self-drilling expansion shields and hooked bolts. Hooked Bolts shall extend a minimum of 9" into new concrete.

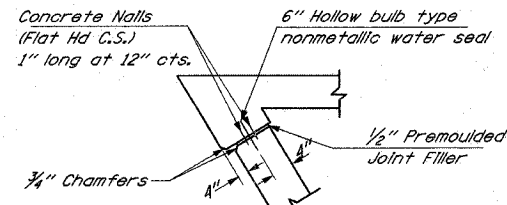
SPECIFICATION

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

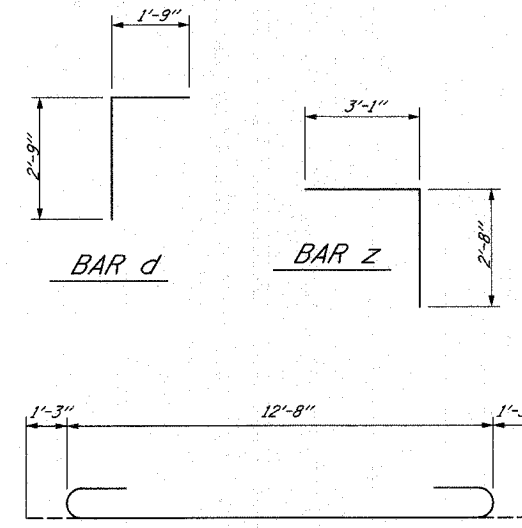
DESIGN STRESSES

fy = 60,000 psi
fc = 3,500 psi

LOADING HS 20-44



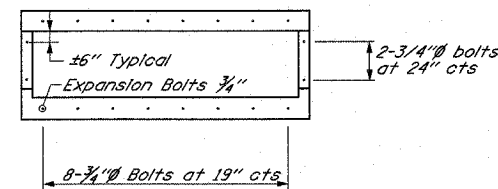
CORNER DETAIL



BAR d

BAR z

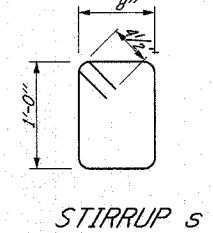
BAR a1



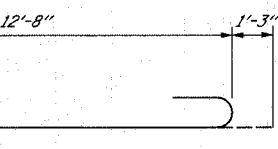
EXPANSION BOLT PLACEMENT DETAIL

BILL OF MATERIAL
(For Two Extensions, 1 Lt. & 1 Rt.)

Bar	No.	Size	Length
a1	36	#9	15'-2"
a2	8	#4	12'-3"
d	26	#4	4'-6"
h	26	#7	7'-9"
h1	44	#5	7'-9"
h2	12	#5	7'-9"
h3	20	#4	8'-8"
h4	4	#6	15'-8"
h5	8	#7	15'-8"
h6	20	#4	18'-6"
h7	8	#6	14'-8"
h8	8	#7	14'-8"
s	98	#4	4'-1"
v	40	#4	4'-6"
v1	40	#4	7'-0"
v2	8	#5	7'-0"
w	6	#5	11'-0"
w1	6	#5	9'-0"
z	44	#4	5'-9"
Concrete Box Culverts	Cu Yd		29.8
Reinforcement Bars	Pound		9838
Expansion Bolts 3/4"	Each		40



STIRRUP s



Concrete Box Culverts
Reinforcement Bars

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CULVERT EXTENSION DETAILS
@ STA. 544+21.63
SHEET 5 OF 5
DRAWN BY BDM
CHECKED BY SJK
DATE 9/01

Rev. 6-4-07