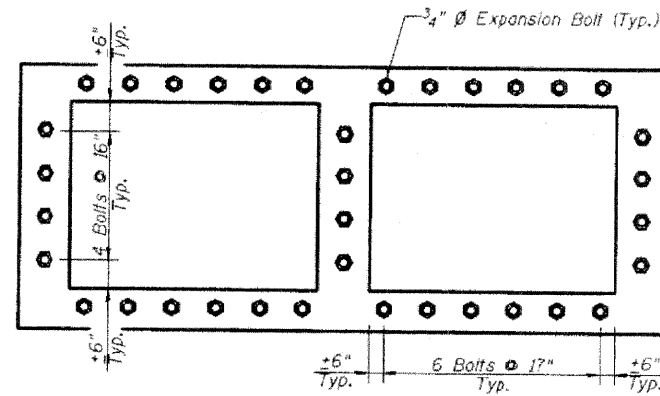


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL

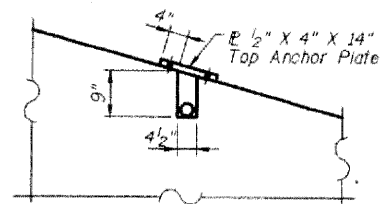
Item	Unit	Quantity
4" \varnothing Galv. Steel Pipe*	Each	4 @ 17'-9"
		6 @ 21'-3"
1/2x4x14" Galv. Anchor Plate*	Each	12
5/8" \varnothing x 10" Galv. Bolts*	Each	24
1/2" \varnothing Exp. Bolts*	Each	24
9" Sq. or Round 1/4" Galv. Plate*	Each	8
Galv. Steel Pipe Caps*	Each	12
Expansion Bolts 3/4" Inch	Each	36

* Quantities given are for information purposes only. Cost to be included in the bid item "Concrete Box Culvert".

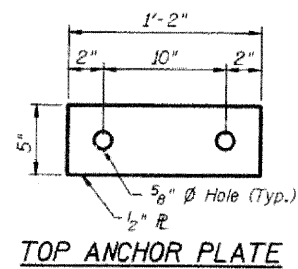


CONNECTION SECTION

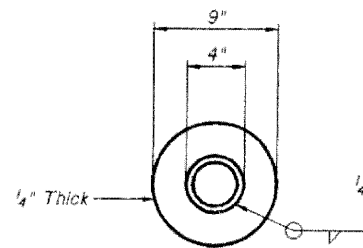
NOTE: Expansion bolts shall be 3/4" \varnothing Hooked Bolts. Hooked Bolts shall extend a minimum of 9" into new concrete.



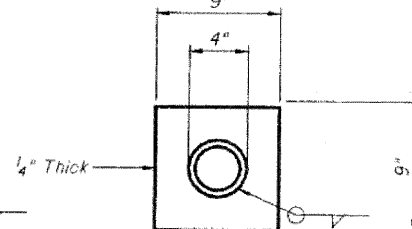
DETAIL 'A'



TOP ANCHOR PLATE

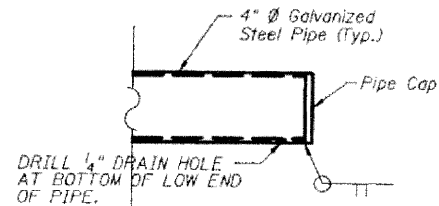


ALTERNATE 1



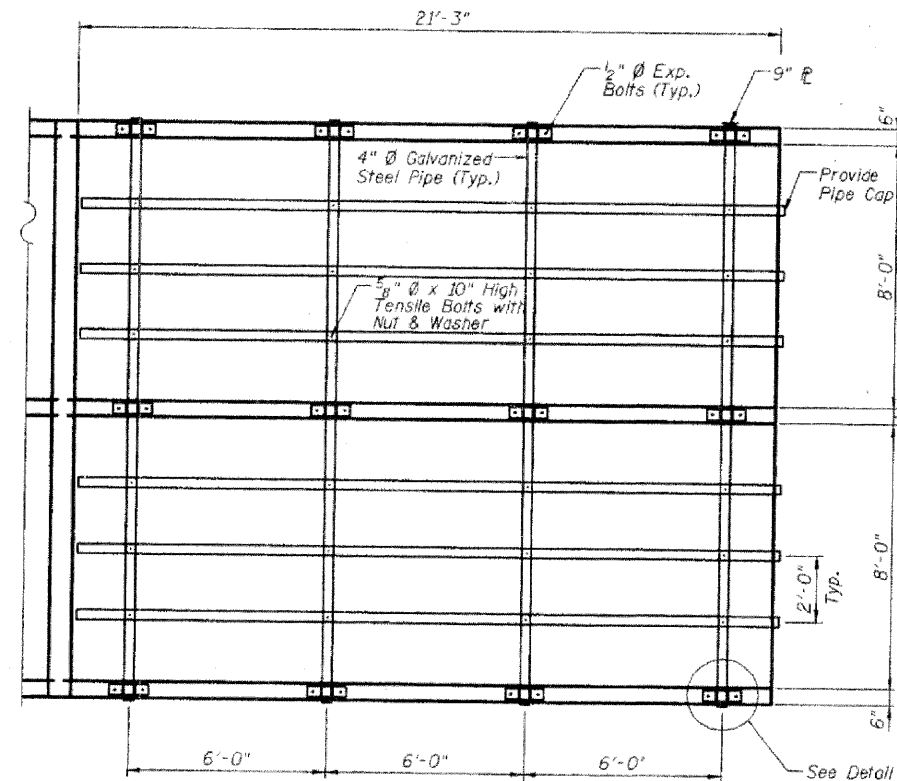
ALTERNATE 2

9" END PLATE



PIPE CAP DETAIL

Threaded pipe and cap acceptable alternative.



GRATE INLET PLAN

NOTES:
Steel Pipes Shall Conform to ASTM A53 (Type E or S) Grade B Schedule 120 Shall be galvanized conforming to ASTM A120.

Steel plates shall conform to AASHTO M-183 & shall be galvanized conforming to AASHTO M-111.

Bolts, nuts and washers shall be in accordance with Article 1006.08 of the standard specifications and shall be galvanized.

The Contract unit price for Cu. Yd. "Concrete Box Culvert" shall include the 1/2" \varnothing Expansion Bolts, galvanized pipes, bolts, nuts washers and steel plates.

**GRATING FOR CONCRETE BOX CULVERT
STRUCTURE NO. 071-1091**

DESIGNED	PRD
CHECKED	WAT
DRAWN	C.J.S.
CHECKED	PRD

DLZ DLZ Illinois, Inc.
85 W. Algonquin Rd. Ste. 220
Arlington Heights IL 60005

SHEET NO. 3	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS 4	412	(141-1) M-1	OGLE	82	37
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 64E60					