

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

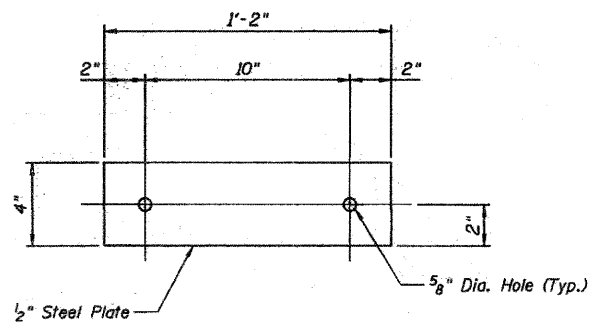
\* STEEL PIPE GRATING  
BILL OF MATERIAL

DESCRIPTION	UNIT	QTY
5/8" X 10" Galv. Steel Bolts	Each	16
3 1/2" Galv. Steel Pipe	Ø8	7'-8"
3 1/2" Galv. Steel Pipe	Ø4	18'-3"
3 1/2" Galv. Pipe Caps	Each	24
1/2" X 4" X 14" Galv. Plate	Each	16
1/4" Galv. Steel Plate (9" Nominal)	Each	16

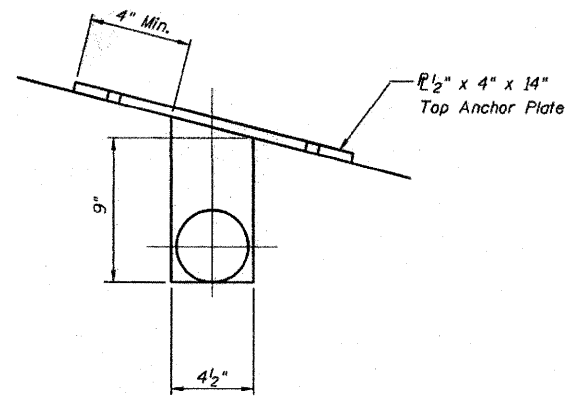
\*\* CONNECTION COLLAR  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
x	48	4	1'-9"	—
x1	8	4	5'-2"	—
x2	8	4	17'-11"	—
x3	8	4	4'-4"	—
Concrete Structures	Cu. Yd.		2.4	
Reinforcement Bars	Pound		200	

\*\* For informational purposes only. Cost to be included in the bid item "PRECAST CONCRETE BOX CULVERT 3'X6".

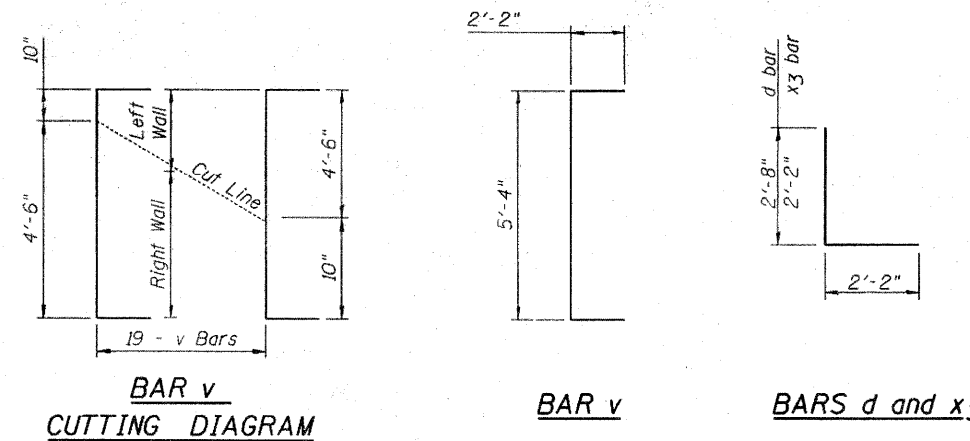


TOP ANCHOR PLATE  
(16 TOTAL)



DETAIL 'A'

\* For informational purposes only.



BAR v  
CUTTING DIAGRAM

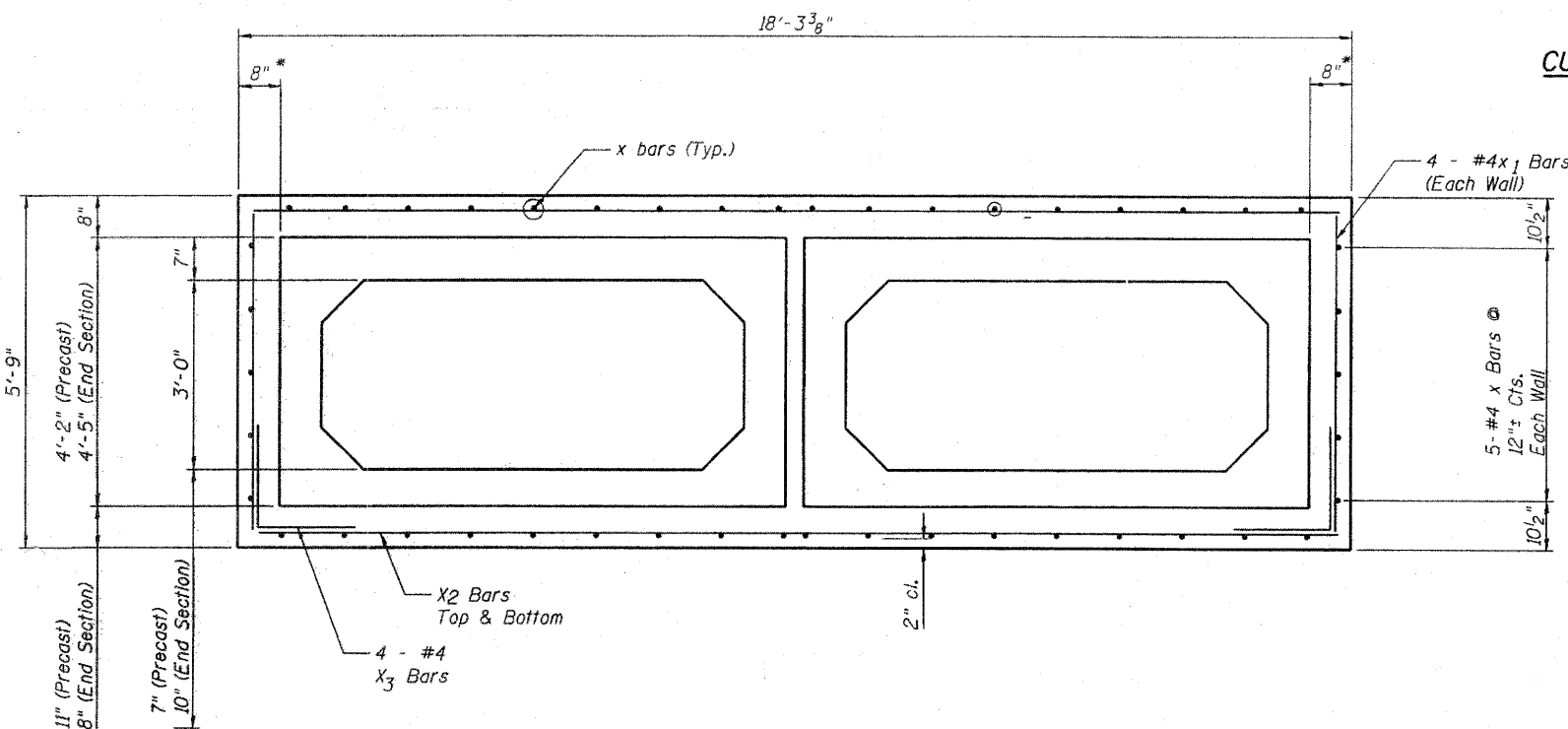
BAR v

BARS d and x3

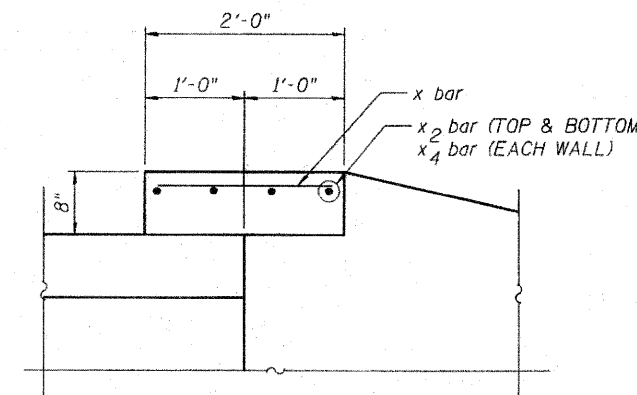
\*\*\* BOX CULVERT END SECTION NO. 3  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	76	5	8'-0"	—
d	16	4	4'-10"	—
h	32	5	18'-3"	—
h1	4	5	15'-0"	—
h2	4	5	10'-6"	—
h3	4	5	6'-0"	—
h4	4	5	1'-0"	—
h5	12	5	3'-10"	—
h6	4	5	2'-1"	—
h7	6	6	8'-0"	—
v	38	5	9'-8"	—
Concrete Structures	Cu. Yd.		14.7	
Reinforcement Bars	Pound		1940	

\*\*\* For informational purposes only.



CONNECTION COLLAR SECTION



COLLAR DETAIL

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A707 GR. 60 (IL Modified), see Special Provisions.

Steel pipes shall conform to A.S.T.M. A-53 (TYPE E OR S) Grade B, Schedule 40, and shall be galvanized to A.S.T.M. A-120.

Steel plates shall conform to AASHTO M-183 and 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 "EACH" for Grated End Section No. 3 shall include the Expansion Bolts, Galvanized Pipes, Class SI Concrete, Bolts, Nuts, Reinforcement, Washers, and Steel Plates.

Contractor shall field verify galvanized pipe length.

GRATED END SECTION NO. 3  
STATION 1283+39.10  
DETAILS

DESIGNED	JLA
CHECKED	SB
DRAWN	AJP
CHECKED	JLA

400 South Green Street - Suite 304  
Chicago, Illinois 60607  
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Fax (630)969-3122

CIVIL ENGINEERING - PLANNING - DESIGN - LAND SURVEY - CONSTRUCTION MANAGEMENT



Jennifer L. Anderson 01/08  
JENNIFER L. ANDERSON, S.E., P.E.  
LICENSE NO. 081-005858  
EXPIRES: 11/2008

SHEET NO. 8 10 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	316	2T	OGLE	48	30
	D-92-003-03		CONTRACT NO. 64851		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		