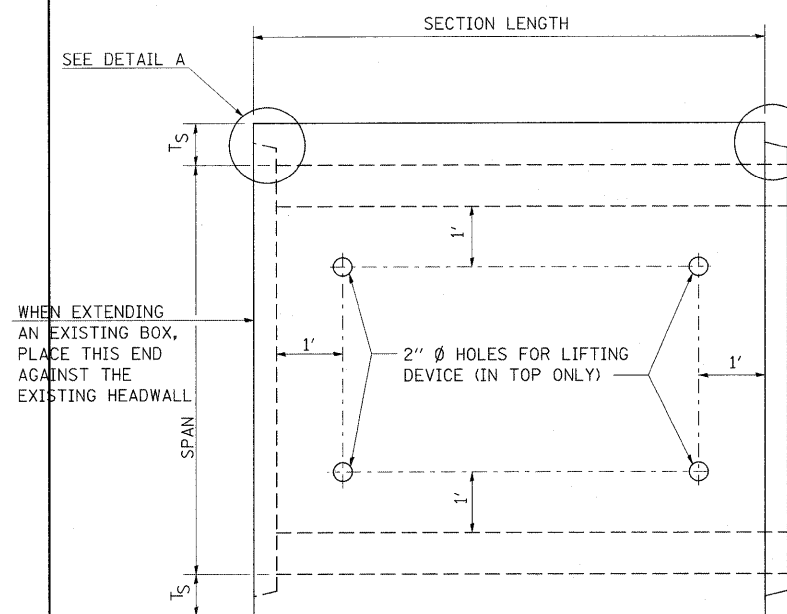


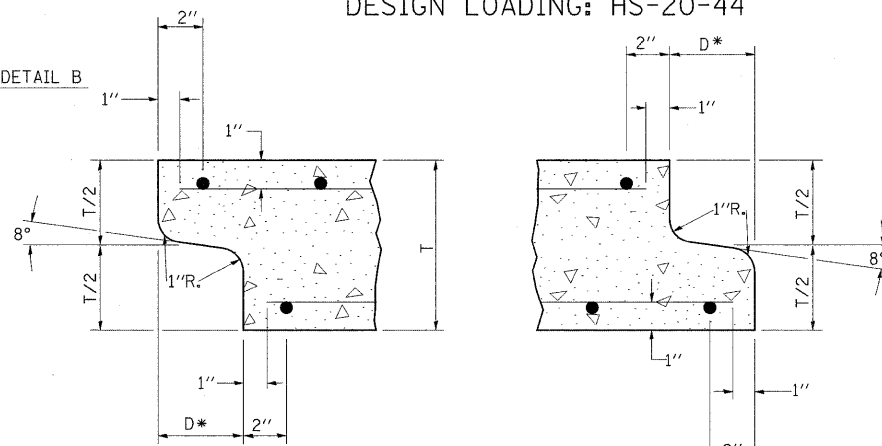
# DETAIL OF PRECAST CONCRETE BOX CULVERT SECTION

(WITH LESS THAN 2 FEET OF COVER  
AASHTO DESIGNATION M273)  
DESIGN LOADING: HS-20-44



**PLAN**

LOCATION OF LIFTING HOLES MAY BE VARIED  
AS NEEDED TO CLEAR REINFORCEMENT.



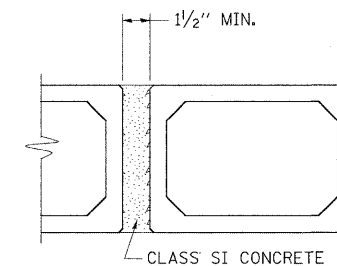
**DETAIL A**

(TYP. INLET END)

**DETAIL B**

(TYP. OUTLET END)

NOTE: INLET AND OUTLET ENDS SHALL BE COMPATIBLE.  
\* THE D DIMENSION SHALL CONFORM TO THE  
MANUFACTURER'S STANDARDS.



**MULTIPLE UNIT PLACEMENT**

## GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE BOX SECTIONS ARE IN PLACE.

THE TERMS AS1, AS2, ETC. DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M273.

REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO ASTM SPECIFICATIONS A 185 OR A 497. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS CONFORMING TO AASHTO M-31, M-42, GRADE 60.

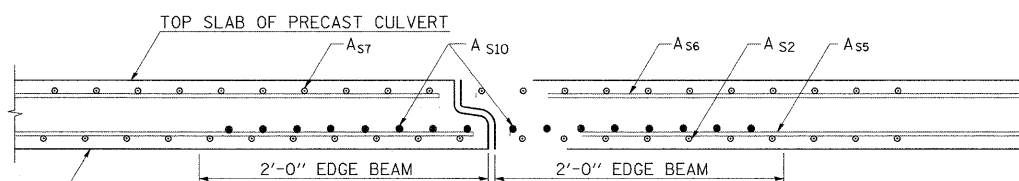
DRAINAGE OPENINGS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 503.11 OF THE STANDARD SPECIFICATIONS. LOCATION AND SPACING OF THE OPENINGS SHALL BE SHOWN ON THE SHOP DRAWINGS.

## DIMENSIONS & EDGE BEAM REINFORCEMENT

SPAN X RISE	DIMENSIONS (INCHES)			EDGE BEAM REINF. AREA (IN. <sup>2</sup> /FT.) A <sub>S10</sub>
	T <sub>T</sub>	T <sub>B</sub>	T <sub>S</sub>	
3' X 2'	7	6	4	0.42
3' X 3'	7	6	4	0.42
4' X 2'	7 1/2	6	5	0.59
4' X 3'	7 1/2	6	5	0.59
4' X 4'	7 1/2	6	5	0.59
5' X 3'	8	7	6	0.59
5' X 4'	8	7	6	0.59
5' X 5'	8	7	6	0.59
6' X 3'	8	7	7	0.73
6' X 4'	8	7	7	0.73
6' X 5'	8	7	7	0.73
6' X 6'	8	7	7	0.73
7' X 4'	8	8	8	0.85
7' X 5'	8	8	8	0.85
7' X 6'	8	8	8	0.85
7' X 7'	8	8	8	0.85
8' X 4'	8	8	8	1.00
8' X 5'	8	8	8	1.00
8' X 6'	8	8	8	1.00
8' X 7'	8	8	8	1.00
8' X 8'	8	8	8	1.00

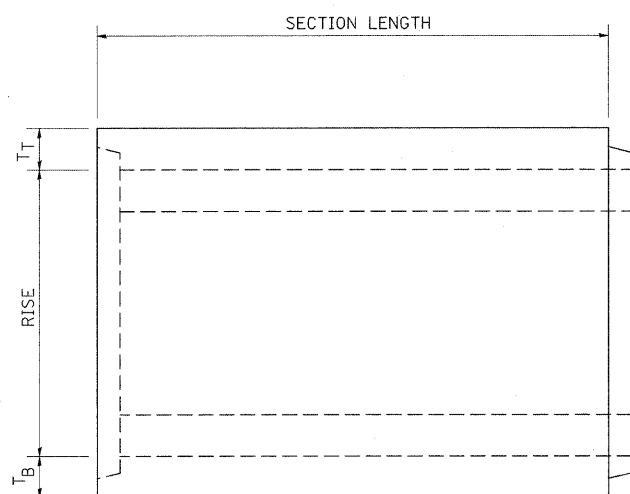
SPAN X RISE	DIMENSIONS (INCHES)			EDGE BEAM REINF. AREA (IN. <sup>2</sup> /FT.) A <sub>S10</sub>
	T <sub>T</sub>	T <sub>B</sub>	T <sub>S</sub>	
9' X 5'	9	9	9	1.00
9' X 6'	9	9	9	1.00
9' X 7'	9	9	9	1.00
9' X 8'	9	9	9	1.00
9' X 9'	9	9	9	1.00
* 10' X 4'	10	10	10	0.89
* 10' X 5'	10	10	10	0.89
* 10' X 6'	10	10	10	0.89
* 10' X 7'	10	10	10	0.89
* 10' X 8'	10	10	10	0.89
* 10' X 9'	10	10	10	0.89
* 10' X 10'	10	10	10	0.89
11' X 4'	11	11	11	0.89
11' X 6'	11	11	11	0.89
11' X 8'	11	11	11	0.89
11' X 10'	11	11	11	0.89
11' X 11'	11	11	11	0.89
12' X 4'	12	12	12	0.89
12' X 6'	12	12	12	0.89
12' X 8'	12	12	12	0.89
12' X 10'	12	12	12	0.89
12' X 12'	12	12	12	0.89

\* NOT PART OF AASHTO DESIGNATION M273 NEEDS MANUFACTURED DESIGN

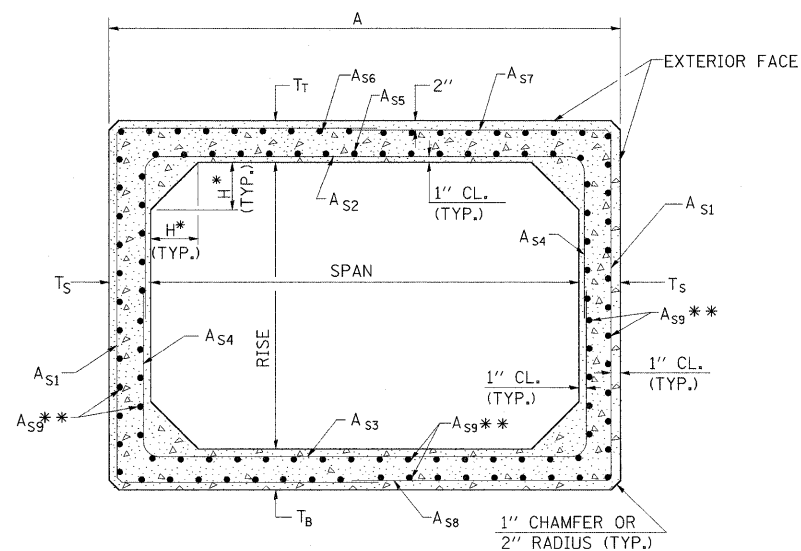


**DETAIL OF EDGE BEAM**

NOTE: THE A<sub>S10</sub> REINFORCEMENT SHALL BE  
THE SAME LENGTH AS THE A<sub>S2</sub>.



**ELEVATION**



**CROSS SECTION**

\* THE HAUNCH DIMENSION, H, IS EQUAL TO THE  
WALL THICKNESS, T<sub>S</sub>.  
\*\* THE AREA OF A<sub>S9</sub> REINFORCEMENT SHALL BE  
A MINIMUM OF 0.12 SQ. IN./FT.

MODIFIED STD. 9-49  
REVISIONS

DRAWN	9-8-89	REVISED	12-17-01
REVISED	3-27-90	REVISED	01-10-07
REVISED	3-11-92	REVISED	
REVISED	8-16-94	REVISED	