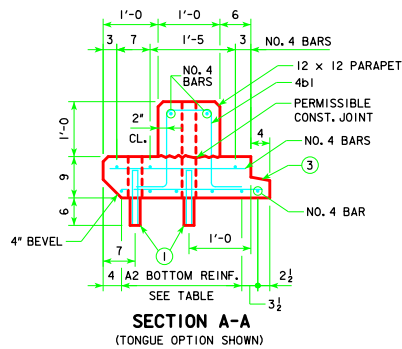
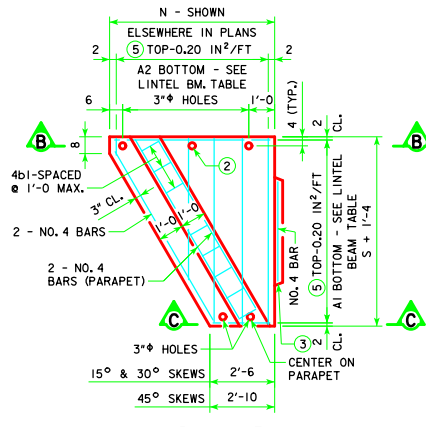


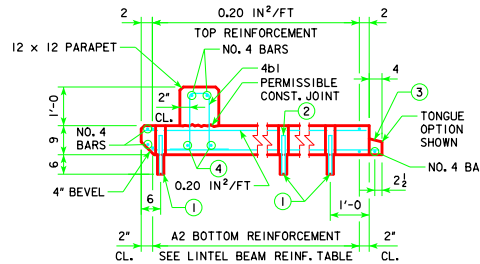
**PLAN OF SQUARE LINTEL BEAM**  
(TONGUE OPTION SHOWN)



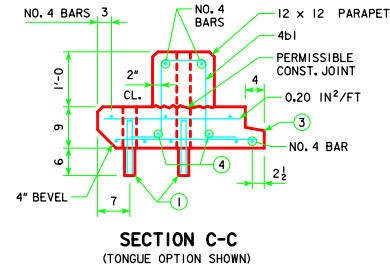
**0° SKEW LINTEL BEAM**  
(FOR SKEWS UP TO 7°30')



**PLAN VIEW**



**SKEWED LINTEL BEAM**  
(FOR SKEWS OF 7°30' TO 45°)

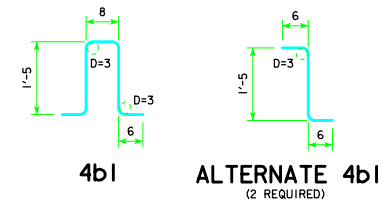


**SECTION C-C**  
(TONGUE OPTION SHOWN)

**NOTES:**

- PRECAST LINTEL BEAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PRECAST BARREL AND END SECTION DETAILS AND NOTES, EXCEPT AS MODIFIED BELOW.
- REINFORCING FOR PRECAST LINTELS AND PARAPETS SHALL BE EITHER WELDED WIRE REINFORCING (WWR) MEETING THE REQUIREMENTS OF AASHTO LRFD SECTION 5 OR REINFORCING BARS MEETING THE REQUIREMENTS OF ASTM A615 (60 KSI). WIRE SPACING FOR WWR SHALL NOT EXCEED 2 INCHES FOR PRIMARY STEEL AND 8 INCHES FOR DISTRIBUTION STEEL.
- 1 PLACE NO. 8 DOWEL, 1'-0" LONG INTO 2 INCH DIA. HOLE IN THE TOP OF THE WALL SECTION AND 3 INCH DIA. HOLE IN THE LINTEL BEAM. FILL HOLES WITH GROUT.
- 2 CAST ADDITIONAL 3 INCH HOLES TO MAINTAIN A 4 FOOT MAXIMUM HOLE SPACING
- 3 CHECK THE LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED. TONGUE AND GROOVE TO TERMINATE AT CULVERT RADIUS.
- 4 SEE SKEWED PARAPET REINFORCEMENT TABLE.
- 5 AREAS SHOWN ARE FOR WELDED WIRE FABRIC. IF REBAR IS USED, #4 AT A MAX. OF 11 INCH SPACING SHOULD BE USED.

**BENT BAR DETAILS**



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

**LINTEL BEAM REINFORCEMENT TABLE**

SPAN S (FT)	BOTTOM REINFORCEMENT			
	WWR OPTION		REBAR OPTION	
	A1 (IN <sup>2</sup> /FT)	A2 (IN <sup>2</sup> /FT)	A1	A2
6	0.13	0.26	#4 @ 12	3 - #4 @ 12
8	0.16	0.32	#4 @ 12	4 - #4 @ 8
10	0.20	0.40	#4 @ 12	3 - #5 @ 12
12	0.25	0.49	#5 @ 12	4 - #5 @ 8

**LINTEL BEAM REINFORCEMENT TABLE**

SPAN S (FT)	BOTTOM REINFORCEMENT			
	WWR OPTION		REBAR OPTION	
	A1 (IN <sup>2</sup> /FT)	A2 (IN <sup>2</sup> /FT)	A1	A2
6	0.25	0.50	#5 @ 12	#5 @ 6
8	0.36	0.72	#6 @ 12	#6 @ 6
10	0.49	0.98	#7 @ 12	#7 @ 6
12	0.65	1.30	#8 @ 12	#8 @ 6

**SKEWED PARAPET REINFORCEMENT TABLE**

SPAN S (FT)	SKEW		
	15° SKEW	30° SKEW	45° SKEW
6	3 - #4	2 - #5	2 - #6
8	2 - #6	2 - #6	2 - #7
10	2 - #7	2 - #7	3 - #7
12	2 - #7	2 - #8	3 - #8

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER



**Iowa Department of Transportation**  
Highway Division

STANDARD DESIGN

**SINGLE PRECAST REINFORCED CONCRETE BOX CULVERTS**

JANUARY, 2013

**TYPE 3 LINTEL BEAM DETAILS**  
FOR SKEWS 0° TO 45°

**PES 3-13-T3**