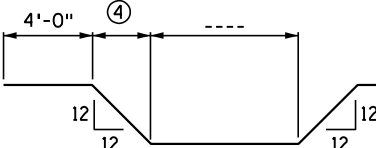
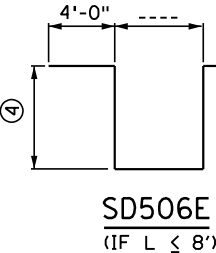


DISTANCE "L" ALONG $\phi$ OF DIAPHRAGM	BARS REQUIRED			
	STRAIGHT		BENT	
	NO.	SIZE	NO.	SIZE
UP TO 8'	2	6E	1	5E
OVER 8' TO 11'	2	7E	1	6E
OVER 11' TO 13'	2	8E	1	8E
OVER 13' TO 15'	2	9E	1	10E
OVER 15' TO 18'	2	11E	1	11E

**DESIGNER NOTE**  
 (REMOVE DESIGNER NOTE PRIOR TO PLOTTING FINAL PLAN):  
 • VERIFY THAT 4'-0" TAIL LENGTH ON BARS SD506E AND SD...05E IS CORRECT OVER FASCIA BEAMS.  
 • ADD SD507E AND SD508E IF DIMENSION ② EXCEEDS 1'-8". SEE NOTE ⑤ BELOW.

BAR	NO.	LENGTH	SHAPE	LOCATION
SD401E				VERTICAL TIE
SD702E		5'-0"		LONG. THRU BEAM
SD403E				LONG. TOP
SD...04E				LONG. BOTTOM
SD...05E				LONGITUDINAL
SD506E				LONGITUDINAL
SD507E				LONGITUDINAL
SD508E				VERTICAL TIE

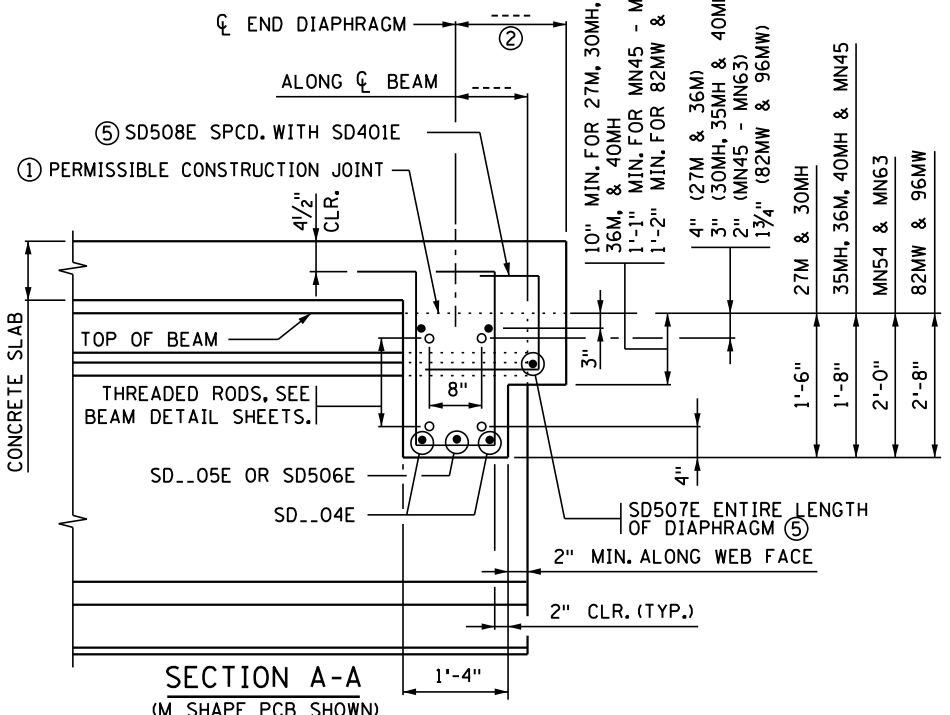
SD401E



SD508E ⑤

**NOTES:**

- CONCRETE FOR END DIAPHRAGMS SHALL BE THE SAME MIX AS USED IN DECK.
- QUANTITIES FOR END DIAPHRAGM CONCRETE AND REINFORCEMENT SHOWN ON THIS DETAIL SHALL BE LISTED IN SUPERSTRUCTURE QUANTITIES.
- THREADED RODS ARE INCIDENTAL TO PRESTRESSED CONCRETE BEAMS.
- ① USE OF CONSTRUCTION JOINT REQUIRES CLEARANCE FOR EXPANSION DEVICE. WHEN CONSTRUCTION JOINT IS USED AT THIS LOCATION, DIAPHRAGM FALSEWORK SHALL REMAIN INPLACE UNTIL COMPLETION OF SLAB CURING PERIOD.
- ② PERPENDICULAR TO CENTERLINE OF DIAPHRAGM.
- ③ 1'-11" (27M & 30MH); 2'-1" (35MH, 36M, 40MH AND MN45); 2'-5" (MN54 AND MN63); 3'-1" (82MW AND 96MW). BASED ON 3" STOOL AND 9" DECK.
- ④ 1'-10" (27M, 30MH); 2'-0" (36M, 35MH, 40MH AND MN45); 2'-4" (MN54 AND MN63); 3'-0" (82MW AND 96MW). BASED ON NOTE ③.
- ⑤ ADD SD507E AND SD508E ONLY IF NO. OF BARS AND LENGTHS ARE INCLUDED IN BILL OF REINFORCEMENT. SPACE SD508E AT 1'-6" MAX. FOR ENTIRE LENGTH OF DIAPHRAGM. REFER TO "PART TRANSVERSE SECTION" ABOVE.



APPROVED: SEPTEMBER 22, 2011  
*Nancy Dubenberger*  
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE END DIAPHRAGM**  
 (27M, 30MH, 35MH, 36M, 40MH, MN45 - MN63, 82MW & 96MW PRESTRESSED CONCRETE BEAMS) (PARAPET ABUTMENT)

REVISED  
 04-17-2013  
 11-06-2013  
 12-20-2018

DETAIL NO.  
**B814**