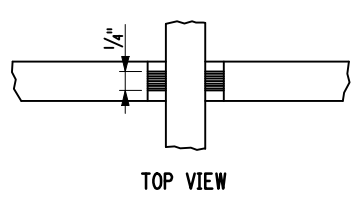
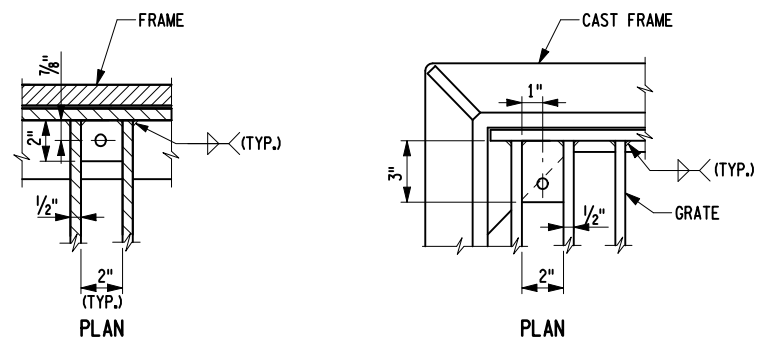
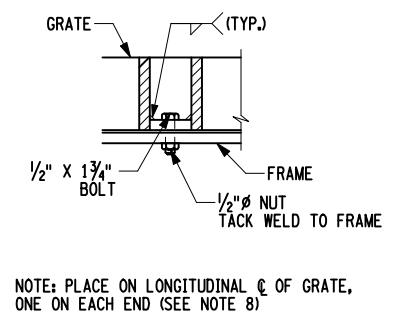
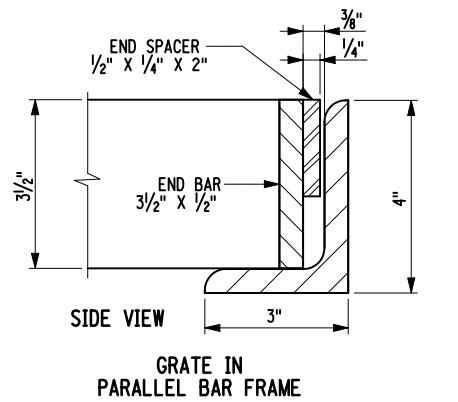


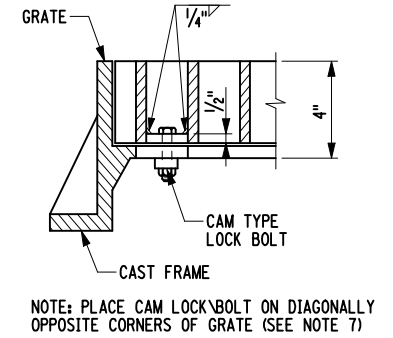
- NOTES:
1. WELDS ON INSIDE OF FRAME AND OUTSIDE OF GRATE SHALL BE GROUND SMOOTH.
  2. THE SIDES OF PARALLEL BAR FRAMES WHICH ARE DIRECTLY OVER A STRUCTURE WALL SHALL HAVE ONE STIRRUP OR STUD WELDED TO THE FRAME AT EACH END NEAR THE CORNERS, SIDES OF PARALLEL BAR FRAMES WHICH ARE NOT DIRECTLY OVER WALLS SHALL HAVE SHEAR STUD ANCHORS AS SHOWN.
  3. FRAMES AND GRATES SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SECTION 719-01 AFTER ALL CUTTING, WELDING, BONDING, AND CLEANING.
  4. GRATES ARE DESIGNED FOR 16 KIPS WHEEL LOAD (HS 20 LOADING).
  5. WHEN PARALLEL BAR GRATES WITH CROSS BARS ARE SPECIFIED ON THE CONTRACT PLANS, NO OTHER OPTIONS ARE PERMITTED EXCEPT AS SHOWN, TOP SURFACES OF BEARING BARS AND CROSS BARS SHALL BE FLUSH.
  6. END SPACERS SHALL NOT BE USED WITH CAST FRAMES.
  7. WHEN A PARALLEL BAR GRATE IS USED WITH THE CAST FRAME, SECURE WITH TWO CAM LOCKING DEVICES OR BOLTS ON DIAGONALLY OPPOSITE CORNERS OF THE GRATE.
  8. GRATE SHALL BE BOLTED TO PARALLEL BAR FRAME (SEE BOLT-DOWN DETAIL) WITH TWO BOLTS, ONE ON EACH END, BOLTS SHALL BE CORROSION RESISTANT, MONEL METAL OR TYPE 316 STAINLESS STEEL.
  9. LONGITUDINAL BARS FOR 10PCB, 11 PCB, AND 12PCB, GRATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A529 GRADE345.
  10. MAY LEAVE A GAP OF 1/2" ON BOTTOM TO PREVENT BLOWOUT DURING GALVANIZING.



DETAIL FOR CONNECTION CROSS BAR TO LONGITUDINAL BAR



NOTE: PLACE ON LONGITUDINAL C OF GRATE, ONE ON EACH END (SEE NOTE 8)




NOTE: PLACE CAM LOCK BOLT ON DIAGONALLY OPPOSITE CORNERS OF GRATE (SEE NOTE 7)

FRAME TABLE		
FRAME NUMBER	OUTSIDE WIDTH X LENGTH	OPENING WIDTH X LENGTH
F1	39 1/4" MIN. X 35 1/4" MIN.	25 1/2" X 28"
F2	39 1/4" MIN. X 45 1/4" MIN.	25 1/2" X 38"
F3	39 1/4" MIN. X 55 1/4" MIN.	25 1/2" X 48"
10PCB	25 3/8" X 38 1/2"	23 3/8" X 37 1/2"
11PCB	27 7/8" X 48 1/2"	26 3/8" X 47 1/2"
12PCB	35 3/8" X 43 1/2"	33 3/8" X 42 1/2"

GRATE TABLE						
GRATE NUMBER	OUTSIDE WIDTH X LENGTH	X	MAXIMUM Y	LONGITUDINAL BARS		APPROX. MASS LBS.
				NO.	SIZE	
6PCB	25" X 27 1/2"	1"	4"	10	4" X 1/2"	180
7PCB	25" X 37 1/2"	1"	4 1/4"	10	4" X 1/2"	240
8PCB	25" X 47 1/4"	1"	4"	10	4" X 1/2"	300
10PCB	23 1/2" X 36 3/4"	1/4"	4 1/4"	10	3 1/2" X 1/2"	200 (SEE NOTE 9)
11PCB	26" X 46 3/4"	1/4"	4"	11	3 1/2" X 1/2"	280 (SEE NOTE 9)
12PCB	33 1/2" X 41 3/4"	1/4"	4"	14	3 1/2" X 1/2"	320 (SEE NOTE 9)

EFFECTIVE DATE: 05/07/09

 <p>STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION</p>	
U.S. CUSTOMARY STANDARD SHEET	
<p>PARALLEL BAR FRAMES AND GRATES</p>	
APPROVED DECEMBER 19, 2008	ISSUED UNDER EB 08-049
/S/ DANIEL D'ANGELO, P.E. DEPUTY CHIEF ENGINEER (DESIGN)	655-02

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