

## NOTES

**GENERAL:** This barrier may be manufactured with reinforcing steel or with welded wire fabric as shown in the ELEVATION and SECTION A-A details. See CMS 622 for additional information. The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499.

**PORTABLE CONCRETE BARRIER (PCB):** Do not use the PCB detailed here on bridge deck edges, or similar dropoffs. PCB, Bridge Mounted, shall be used at those locations in accordance with Structural Engineering's Standard Drawing PCB-91.

**HINGE AND REINFORCING BARS:** Use ASTM A 36 for the 3/4" [19] hinge bars. Use rebars meeting the requirements of CMS 509 (ASTM A 615 Grade 60). Wire mesh shall meet CMS 709.10. Black steel is permitted.

**CONNECTING HARDWARE:** Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 711.02 and meet the requirements of CMS 711.09 except that the Rotational Capacity test specified in ASTM A 325 shall be waived.

**ALTERNATE BARRIER:** In lieu of the pin and loop connections detailed on this SCD, barrier sections with "J-J Hooks" end connections may be utilized.

Connect runs of J-J Hooks barriers to other permitted barrier type by use a Transition barrier section with pin and loop connections on one end and "J-J Hooks" on the other. The heights of the transition sections shall be the same as the barrier runs being connected.

"J-J Hooks" is a trademark of East-Set Industries, P.O. Box 300, Midland, VA 22728, (540) 439-8911 or (800) 547-4045.

**HANDLING DEVICES:** Such devices may be used in lieu of the lifting slot for moving the barrier. They may be of any design sufficient to safely handle the weight of the section being lifted. No handling devices shall protrude from the surface of the barrier when in place.

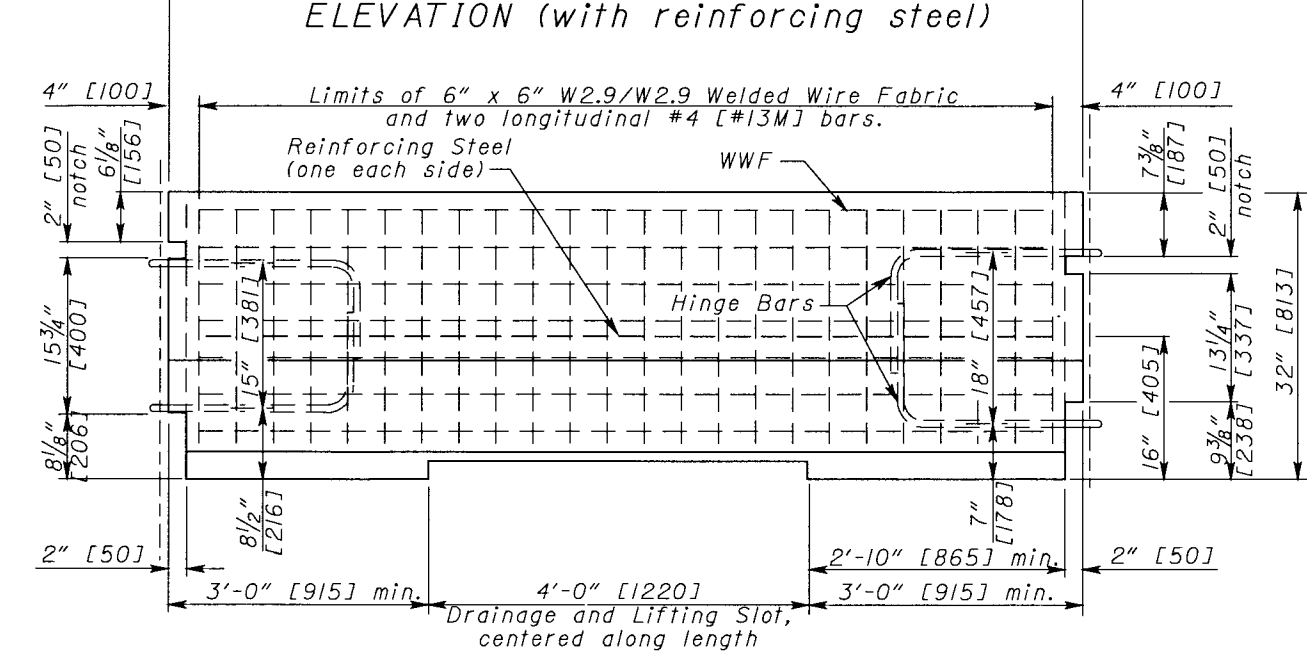
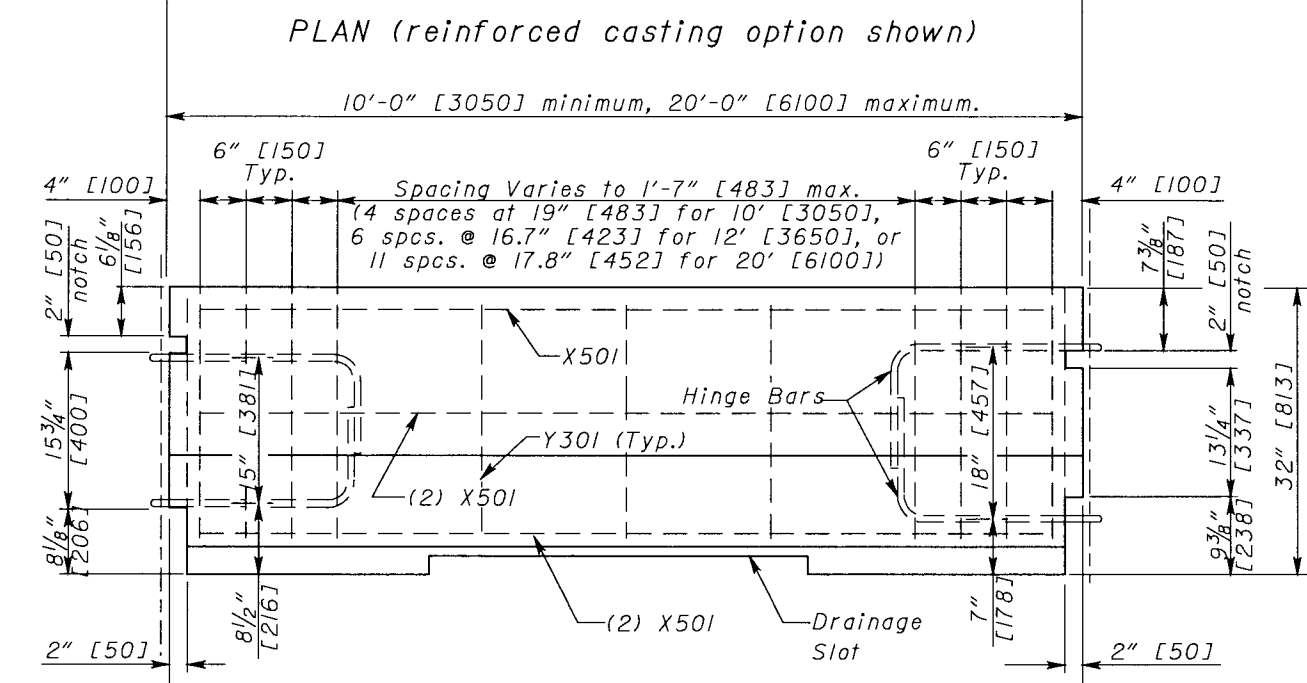
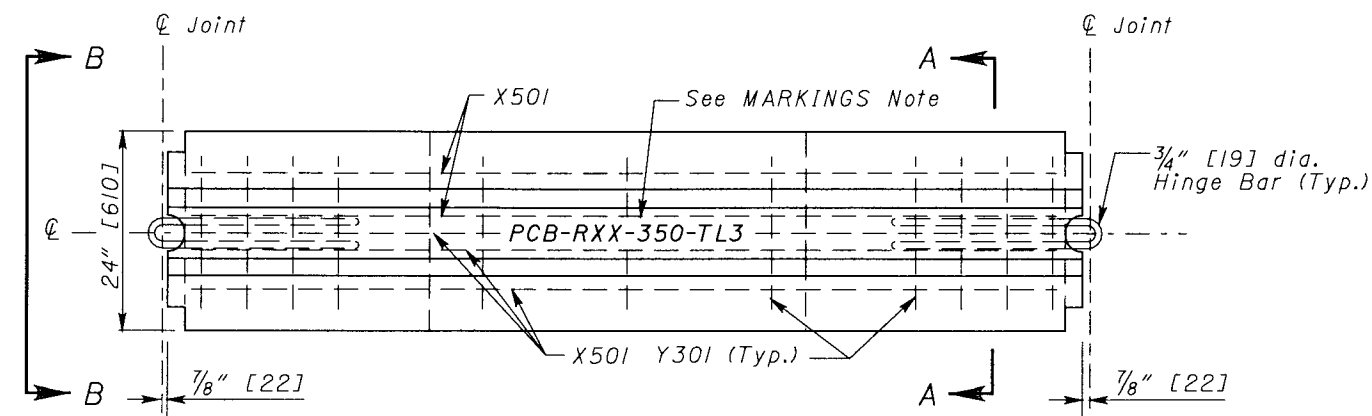
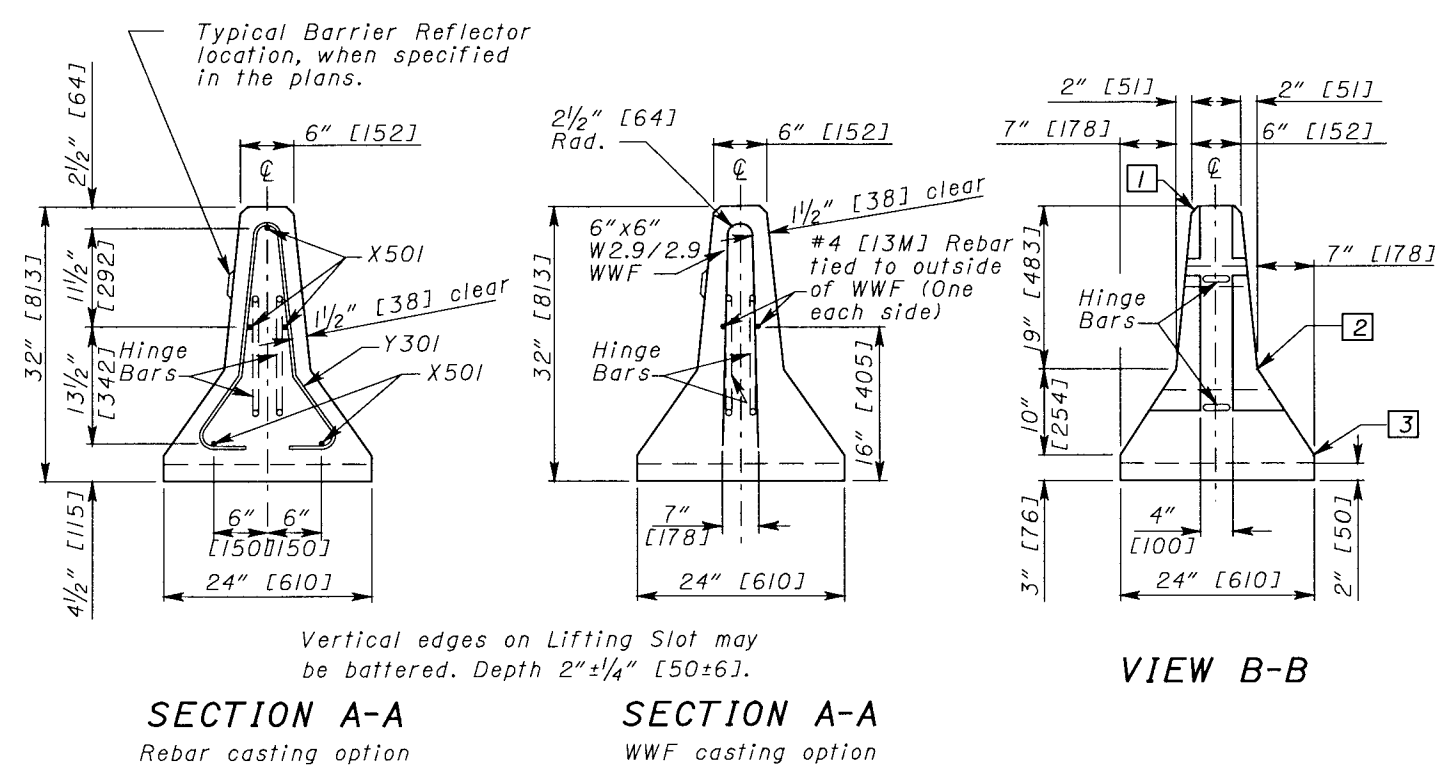
**MARKINGS:** All barrier segments are to be marked on the top, as shown, where XX indicates the year the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the end of the notation. Permanently impressed these markings in the barrier using a minimum of 2" [50] high lettering. The tapered end section is not required to be marked.

On the top of each barrier segment, including tapered end sections, permanently mark a unique identification as to its manufacturer. And somewhere on the barrier, permanently mark the day and month the barrier was manufactured.

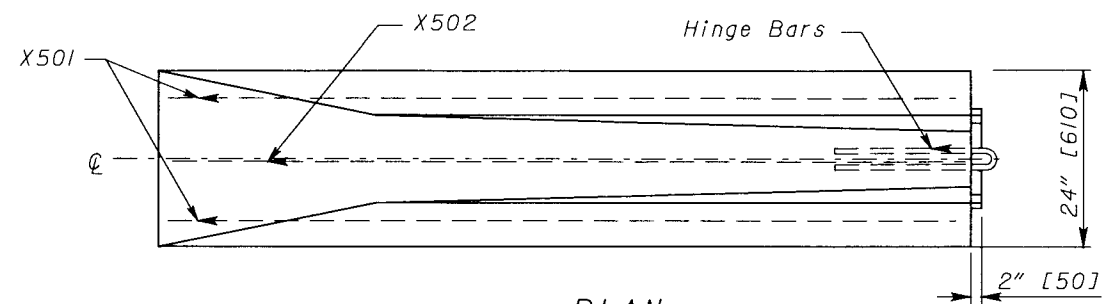
**REFLECTORIZATION:** Install barrier reflectors in accordance with Traffic Engineering Standard Drawing MT-101.70, when specified in the plans.

## LEGEND

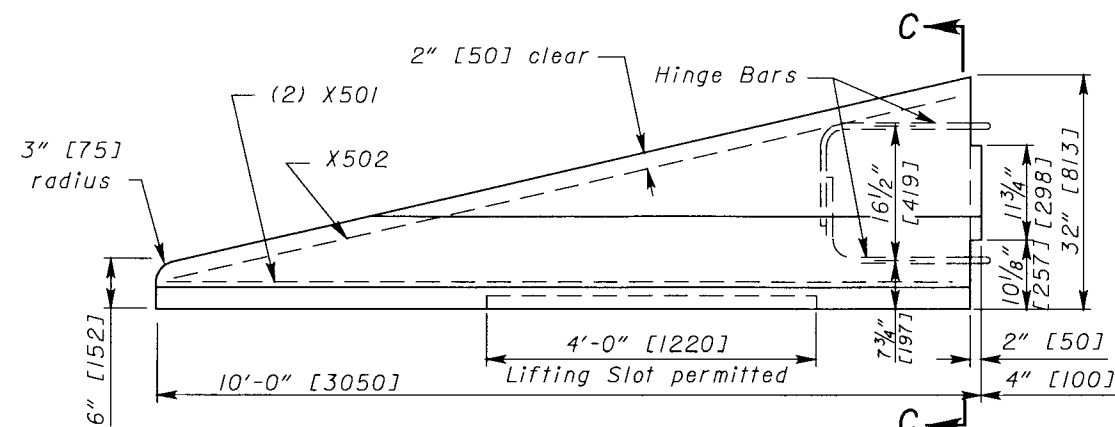
- 1 1" [25] radius or 3/4" [19] chamfer, all top and end corners.
- 2 Permissible 10" [250] radius.
- 3 Permissible 1" [25] radius.



**32" [813] BARRIER SECTION**

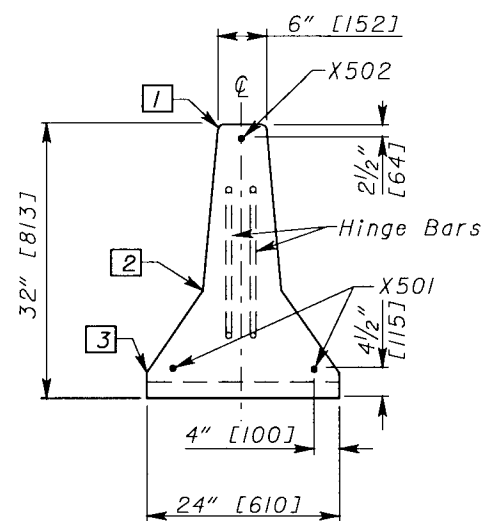


PLAN



ELEVATION  
32" [813] TAPERED END

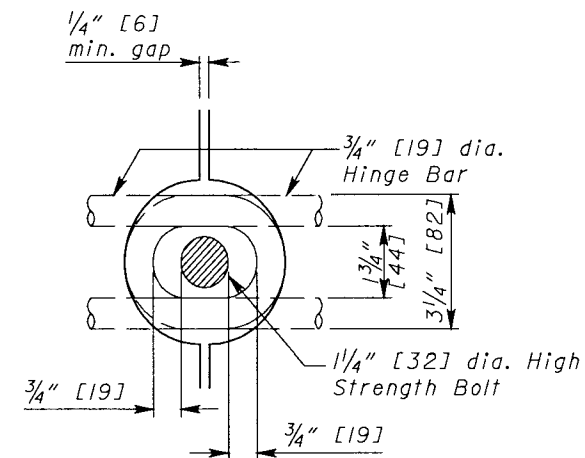
The Tapered End section is not a crashworthy terminal and should not be used on the approach end of temporary barrier unless it is fully located beyond the clear zone.



SECTION C-C

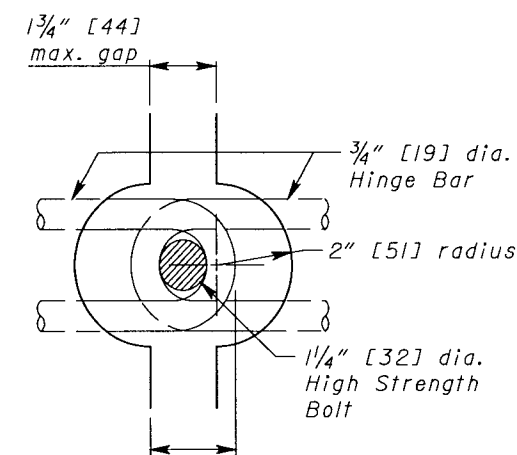
CLOSED JOINT

Barriers shall initially be placed close together so that Bolts can be easily inserted through Hinge Bar loop.

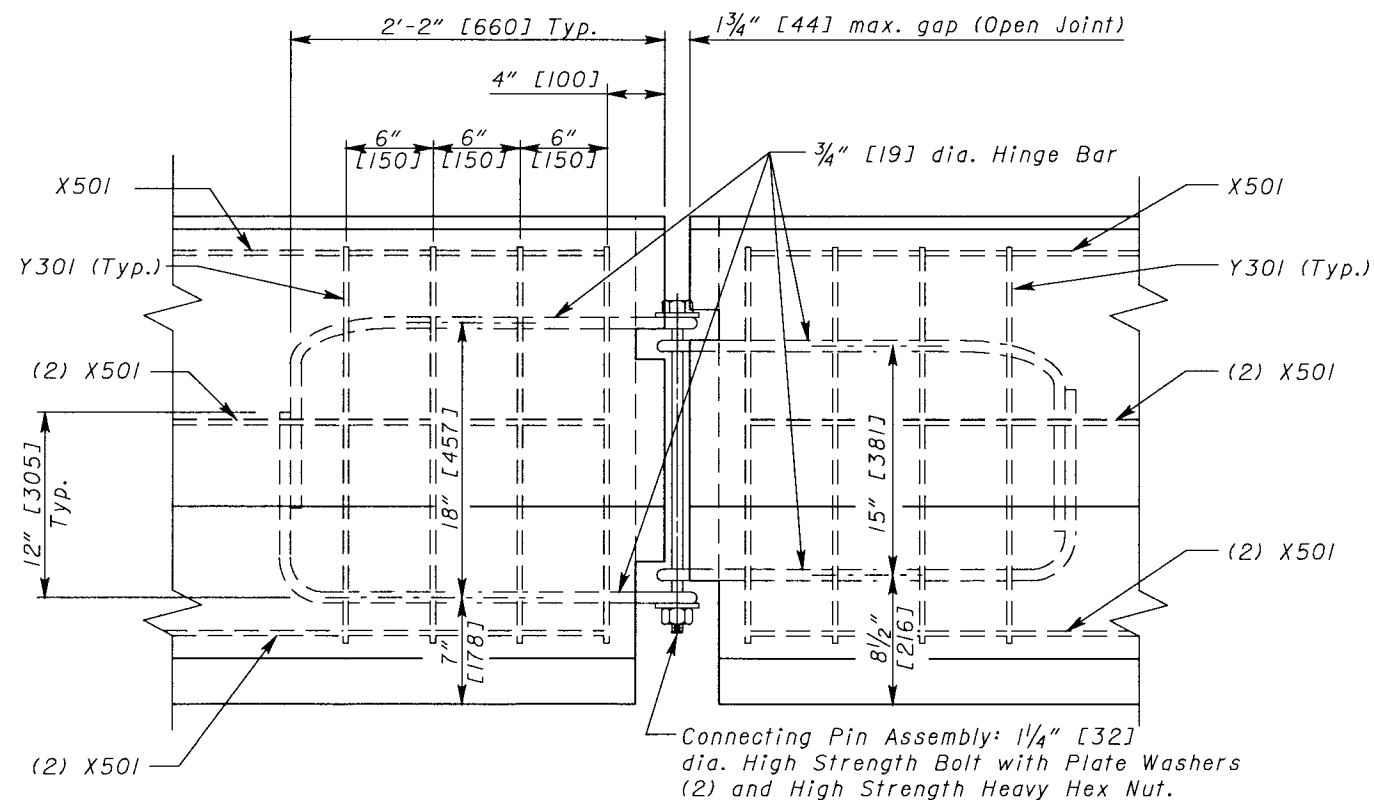


OPEN JOINT

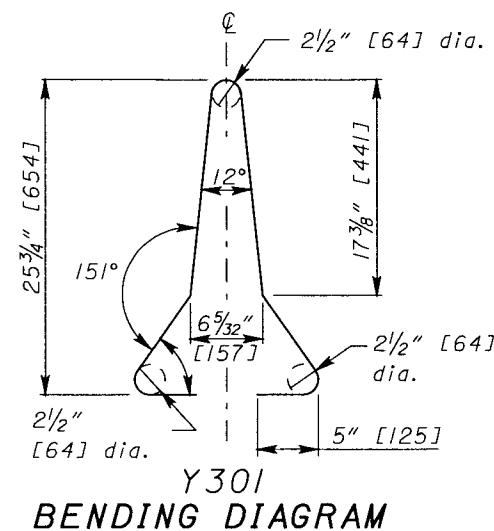
Barrier joints shall be fully open before the Nut is tightened onto Bolt.



JOINT CONNECTION DETAILS



DETAIL AT HINGED CONNECTION  
Shown with reinforcing.



Y301  
BENDING DIAGRAM

		REINFORCING BAR LIST				
Mark	Bar	Bar Length	Shape	Quantity per typ. length		
				10' [3050]	12' [3660]	20' [6100]
BARRIER SECTION (reinforced)	X501 [#16M]	9'-4" [2850]	Str.	5	---	---
		11'-4" [3450]	Str.	---	5	---
		19'-4" [5890]	Str.	---	---	5
	Y301 [#10M]	5'-5" [1650]	Bent	11	13	18
TAPERED END	X501 [#16M]	9'-6" [2900]	Str.	2	---	---
	X502 [#16M]	9'-8" [2950]	Str.	1	---	---

THIS DRAWING REPLACES RM-4.2 DATED 4-18-03.