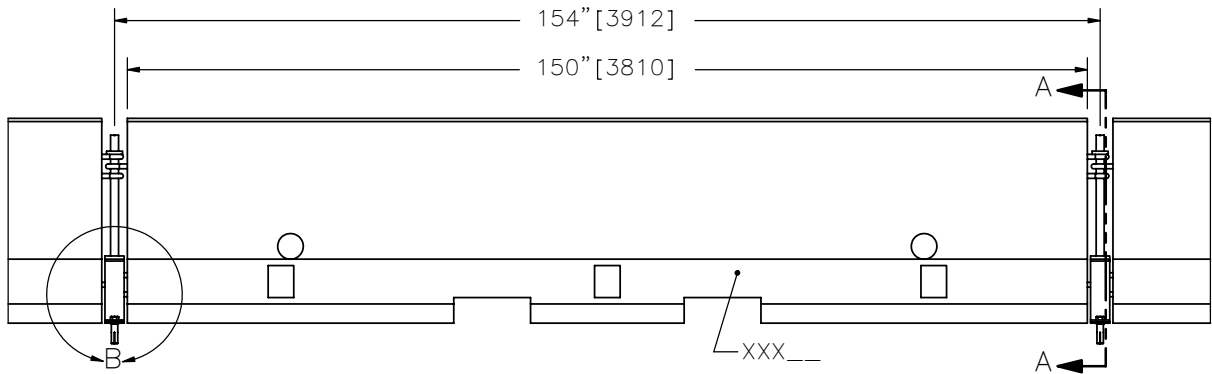
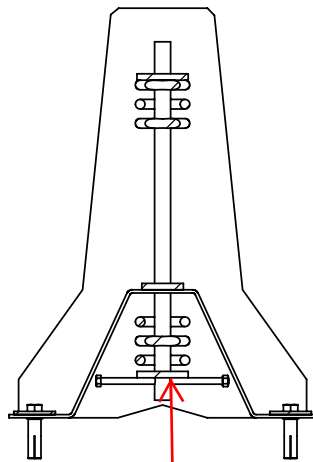


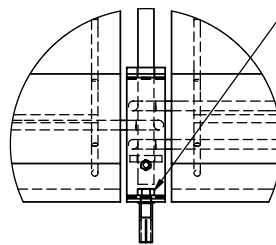
PLAN



ELEVATION



SECTION A-A  
SCALE 1 : 15



DETAIL B  
SCALE 1 : 15

3/4" [19] RED HEAD  
DROP-IN ANCHOR WITH  
3/4" [19] x 1 3/4" [45]  
LONG CLASS 8.8 BOLT

Do we need this  
plate? How is this  
plate installed?

## TIE-DOWN STRAP SYSTEM FOR F-SHAPE CONCRETE BARRIER



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## INTENDED USE

Tie-Down Strap System for Temporary F-Shape Concrete Barriers (\_\_\_\_\_) are to be used as a work-zone barrier to protect traffic and workers. Tie-Down Strap System for Temporary F-Shape Concrete Barriers should be used in locations where a dynamic deflection of 33 1/2" [850] or less is acceptable and where a working width of 57 1/2" [1460] is provided. The Tie-Down Strap System for Temporary F-Shape Concrete Barriers may be used with a minimum gap of 6" [150] between the backside of the barrier and the edge of the bridge deck. The Tie-Down system was designed for use in concrete and should not be placed in asphalt. The Tie-Down Strap is only intended for use with the tested F-Shape Temporary Concrete Barrier (\_\_\_\_\_).

## COMPONENTS

Unit Length = 154" [3912]

DESIGNATOR	COMPONENT	SYSTEM	NUMBER
XXX__	Temporary Barrier		1
FWM03	Temporary Barrier Connector Pin		1
FBX12a	Hex Head Bolt & Nut		1
_____	Red Head Drop-in Anchors		2

## APPROVAL

FHWA Approval Letter B-112, March 14 2003.

## REFERENCES

Bielenberg, B.W., Faller, R.K., Reid, J.D., Holloway, J.C., Rohde, J.R., and Sicking, D.L., *Development of a Tie-Down System for Temporary Concrete Barriers*, Final Report to the Midwest State's Regional Pooled Fund Program, Transportation Research Report No. TRP-03-115-02, Project No. SPR-3(017)-Year 9, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, August 16, 2002.

Bielenberg, B.W., Faller, R.K., Reid, J.D., Rohde, J.R., and Sicking, D.L., *Design and Testing of Tie-Down Systems for Temporary Barriers*, Paper No. 03-3146, Transportation Research Record No. 1851, Transportation Research Board, National Research Council, Washington, D.C., January 2003. pp. 83-94.

## CONTACT INFORMATION

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## TIE-DOWN STRAP SYSTEM FOR F-SHAPE CONCRETE BARRIER

# ITD01

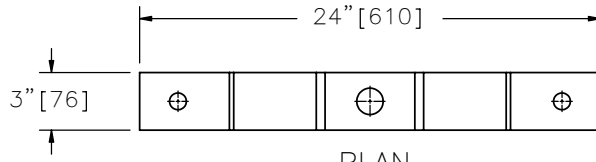
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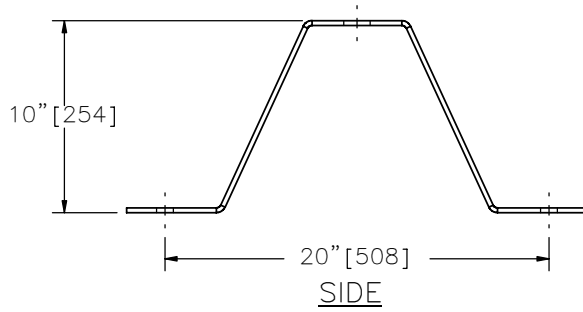
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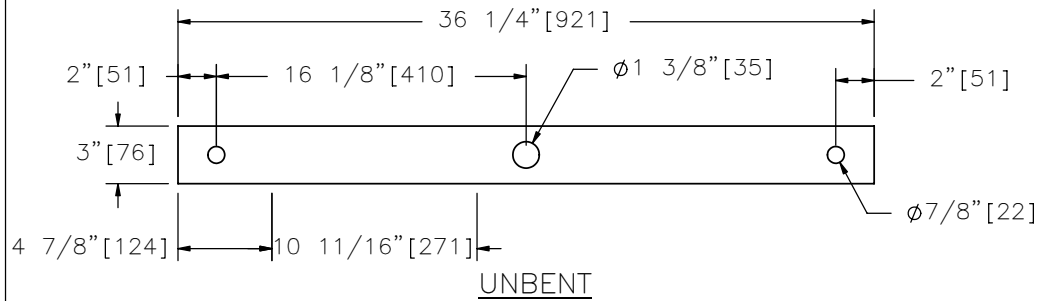
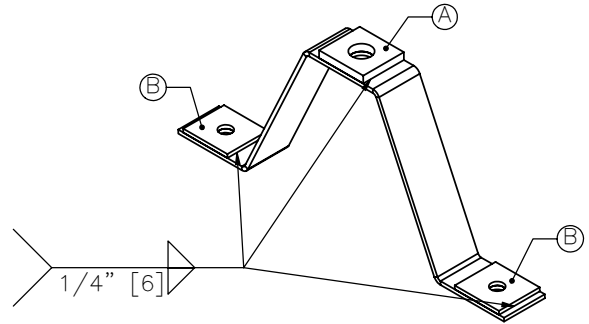




PLAN



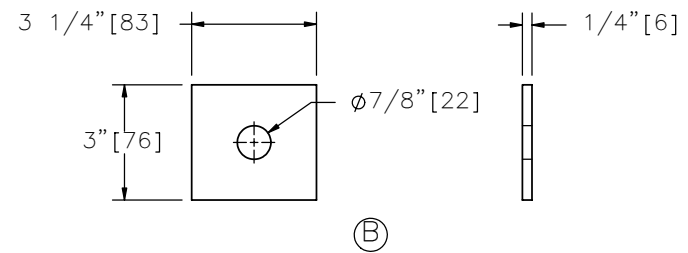
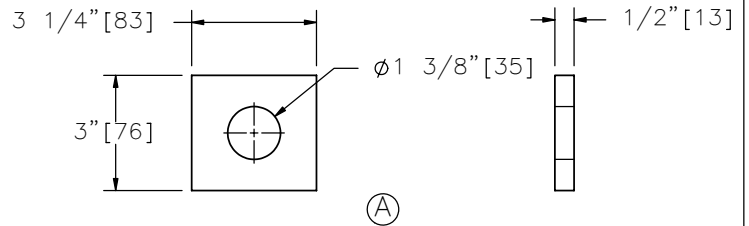
SIDE



UNBENT

DOWN 65.2249° R 1/4"

UP 65.2249° R 1/4"



2 REQ'D

NOTE: All components are ASTM A36/A36MI

## TIE-DOWN STRAP SYSTEM FOR F-SHAPE CONCRETE BARRIER



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