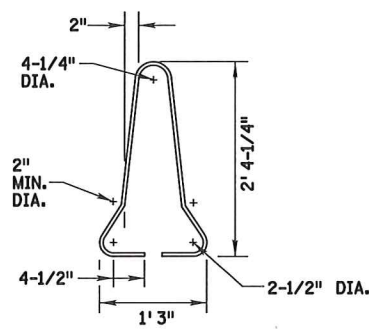
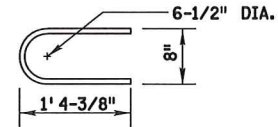


**LOOP BAR ASSEMBLY ①**  
BARS 6D1, 6D2, 6D3

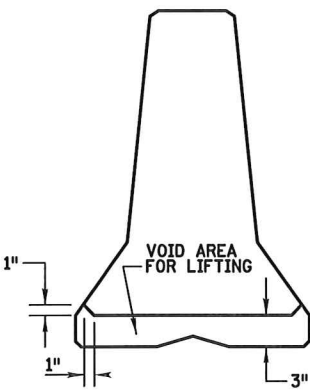


**VERTICAL STIRRUP BAR 4A1**

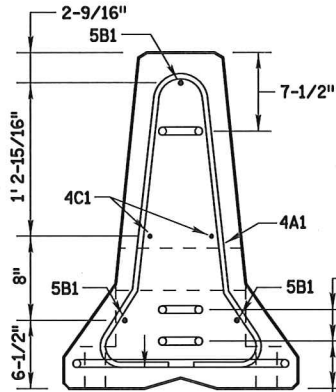
12'-6" BARRIER SECTION					
BILL OF REINFORCING MATERIALS ②					
BAR	BAR SIZE	SHAPE	NO. OF BARS	LENGTH FT.	WEIGHT LBS.
4A1	4		12	6' 0"	48.1
6A2	6		6	2' 11"	26.3
5B1	5		3	12' 2"	38.1
4C1	4		2	12' 2"	16.3
BILL OF LOOP ASSEMBLY MATERIALS ③					
6D1	6		2	8' 5"	25.3
6D2	6		2	7' 7"	22.8
6D3	6		2	8' 6"	25.5



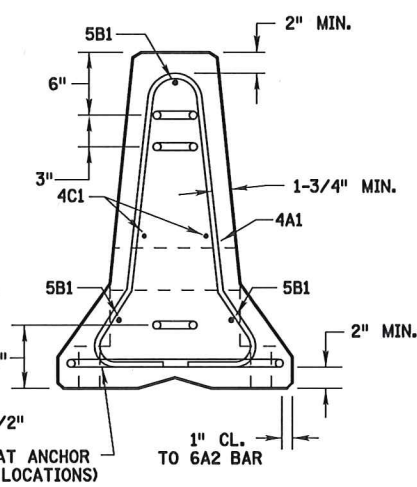
**BAR 6A2**



**SECTION A-A**  
LIFTING SLOT DETAIL



**SECTION B-B**  
TYPICAL SECTION



**SECTION C-C**  
TYPICAL SECTION

**NOTES:**

DIMENSIONS ARE OUT-TO-OUT OF BARS UNLESS OTHERWISE NOTED.

CONCRETE SHALL DEVELOP A MINIMUM OF 28-DAY CONCRETE COMPRESSIVE STRENGTH OF NOT LESS THAN 5 KSI. THE CONCRETE SHALL USE A PORTLAND CEMENT SPECIFIED IN AASHTO M 85 FOR TYPE I OR II CEMENT.

SECTION: THE SECTION FURNISHED MUST GENERALLY COMPLY WITH DIMENSIONS SHOWN. REQUESTS FOR MINOR VARIATIONS IN SECTION GEOMETRY AND ATTACHMENTS MAY BE SUBMITTED TO THE STATE MATERIALS ENGINEER FOR APPROVAL.

LIFTING SLOTS: LIFTING SLOTS SHALL BE CONSTRUCTED WHERE SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION ON THE ROADWAY.

- ① MARKED END SHOWN. INVERT FOR OTHER END.
- ② REINFORCING STEEL SHALL BE GRADE 60 AND SHALL CONFORM TO EITHER OF THE FOLLOWING:
  - EPOXY-COATED DEFORMED BARS AS SPECIFIED IN SPEC. 3301
  - SPEC. 3301 DEFORMED AND PLAIN BILLET STEEL REINFORCING BARS FOR USE WITH CALCIUM NITRITE CORROSION INHIBITOR (30% CALCIUM NITRITE SOLUTION, AASHTO M 194, TYPE C)
- ③ LOOP BARS SHALL BE 0.75" DIA. SMOOTH STEEL BARS, ASTM A709 GRADE 70W OR ASTM A706 GRADE 60. ALTERNATIVE STEEL CHEMISTRY MAY BE USED AS LONG AS THE ALTERNATIVE MATERIAL PROVIDES A MINIMUM YIELD OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 78 KSI, A MINIMUM 14% ELONGATION IN 8", AND PASSING A 180° BEND TEST USING A 3.5D PIN BEND DIAMETER. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSIONS.

APPROVED APRIL 11, 2011

STATE DESIGN ENGINEER

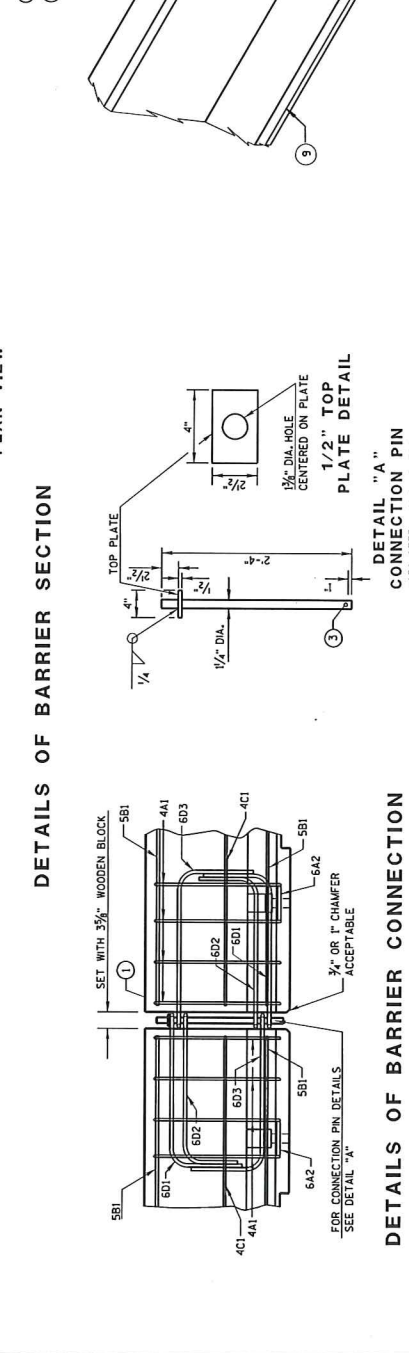
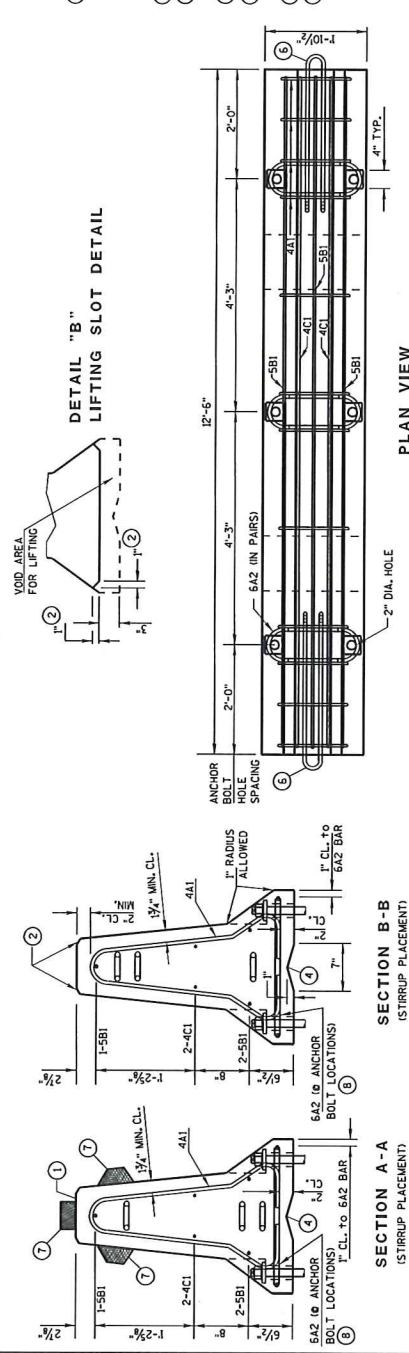
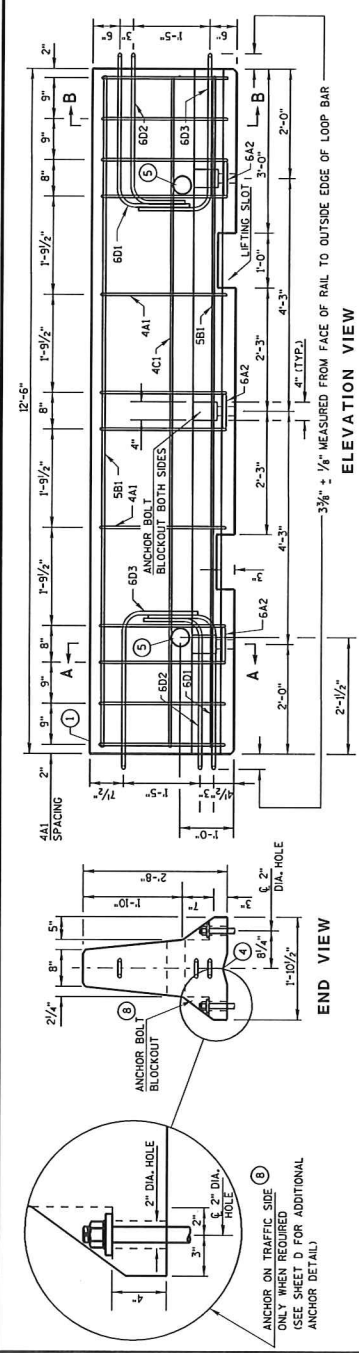
STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY PORTABLE PRECAST  
CONCRETE BARRIER**  
TYPE "F"

SPECIFICATION  
REFERENCE  
2533 3306  
3301

REVISED  
10-29-2013 M.J.E.

STANDARD  
PLATE  
NO.  
**8337C**  
2 OF 3

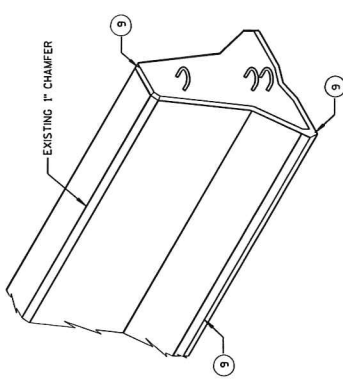
# 14B7 sheet a: Concrete Barrier Temporary Precast



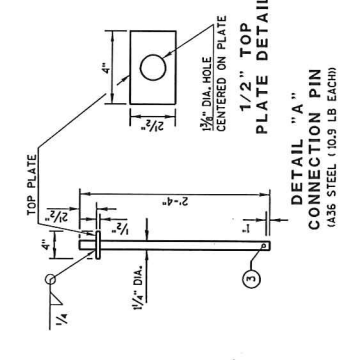
## GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-H(a) THRU 14B7-H(d).  
 DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CETP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.  
 USE ASTM A-665, GRADE 60, DEFORMED STEEL BARS FOR BARS #41, 6A2, 5B1 AND 4C1 IN THE UPPER PORTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.  
 LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSLA TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH. THE BARS SHALL BE WELDED TOGETHER WITH A MINIMUM OF 6 INCHES, AND PASSING A 180 DEGREE BEND TEST USING A 3/4" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/4" OF THE PLAN DIMENSION.  
 CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.  
 PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.  
 INSTALL MECHANICAL OR EPXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

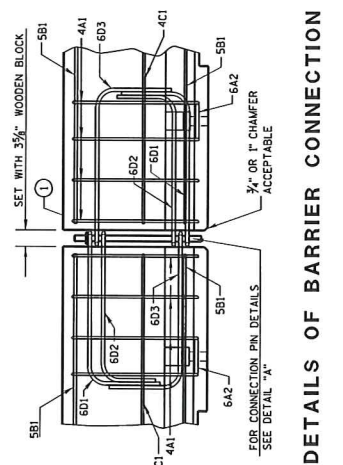
- 1 MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:  
 a. TYPE: W/CBTP  
 b. MANUFACTURER  
 c. DATE MANUFACTURED (MONTH AND YEAR)
- 2 1" CHAMFER TO PREVENT SPALLING.
- 3 A 3/4" HOLE IN THE CONNECTION PIN AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED.
- 4 "V" NOTCH IS OPTIONAL.
- 5 THE 4" DIAMETER, II GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING IS OPTIONAL.
- 6 NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- 7 USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. TO MANUFACTURER'S INSTRUCTIONS. SHIP AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURER'S INSTRUCTIONS. DELINEATORS SHALL BE LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- 8 SEE SHEET D FOR ANCHORING CRITERIA.
- 9 1" CHAMFER OPTIONAL.



## DETAILS OF BARRIER SECTION

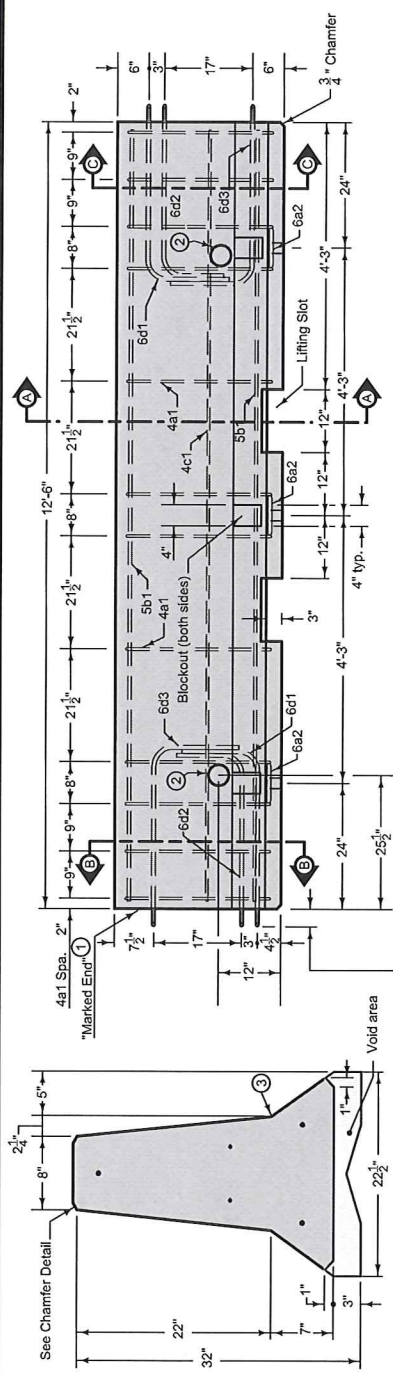


## DETAILS OF BARRIER CONNECTION

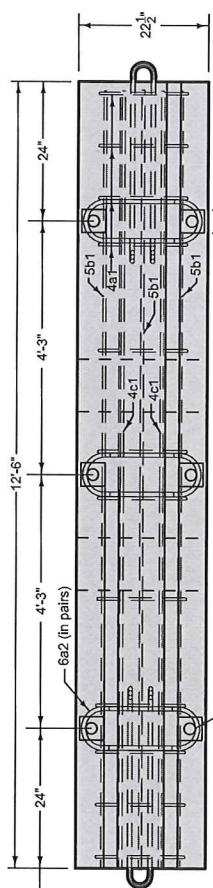


CONCRETE BARRIER  
 TEMPORARY PRECAST - 12'-6"  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

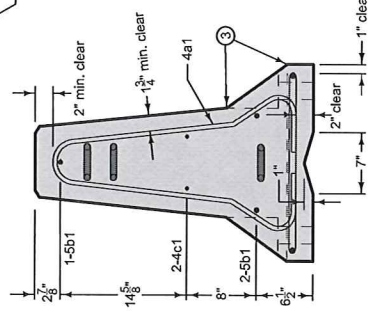




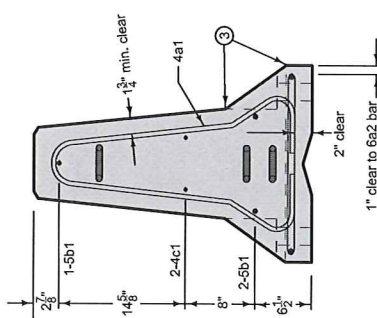
**ELEVATION**



**PLAN**



**SECTION C-C**  
Stirrup Placement



**SECTION B-B**  
Stirrup Placement

For loop bars 6d1, 6d2, and 6d3, use  $\frac{3}{8}$ " smooth steel bars with a minimum yield strength of 60 ksi, a tensile strength of not less than 1.25 times the yield strength but a minimum of 80 ksi, a minimum 14% elongation in 8 inches, and passing a 180 degree bend test using a  $\frac{3}{8}$ " pin bend diameter. Install loops within  $\frac{1}{8}$ " of the plan dimensions.

Use Grade 60, ASTM A615 for all other reinforcements. Do not lift or move using loop bars 6d1, 6d2 or 6d3.

Provide for an approved monitoring schedule with a person on call and available 24 hours a day, each day of the week, to realign barrier which has been struck. Initiate service within one hour of notification of need.

Unless stated otherwise in the plans, the barrier rail sections shall be the property of the Contractor. Remove from the site upon completion of work.

Following removal of anchorage, fill all holes with an approved non-shrink grout.

Tapered end section is not designed for use within 30 feet of traffic on facilities with speed limits 55 mph or greater, nor within 10 feet of traffic on facilities with speed limits 40 mph to 50 mph.

Estimated quantity of concrete for one taper section is 0.6 cubic yards.

Include the cost of anchorage, when required in the price bid for "Temporary Barrier Rail, Concrete".

① Permanently mark one end of each rail section with manufacturing information. The "marked end" is that end of the barrier having one loop bar at the top and two loop bars at the bottom. Include the following information in the marking:

- Manufacturer Identification
- Date Manufactured (Month and Year)
- BA-401 Type A

② Lifting hole, 4-inch diameter PVC Pipe.

③ 1 inch radius allowed.

Possible Contract Item:  
Temporary Barrier Rail, Concrete

Possible Tabulation:  
108-33

	REVISION	1	04-16-13
	<b>STANDARD ROAD PLAN</b> <b>BA-401</b> SHEET 1 of 4		
<i>Deane M. Miller</i> APPROVED BY DESIGN METHOD ENGINEER			
<b>TEMPORARY BARRIER RAIL</b> <b>(PRECAST CONCRETE)</b>			