

# Memo

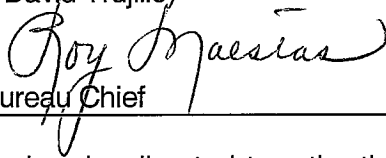
## New Mexico State Highway & Transportation Department

**SUBJECT:** Design Directive  
2-2003-Design (Standard Drawing for Temporary  
Concrete Wall Barrier)

**DATE:** 4-June-2003

**TO:** Internal Project Development Engineers-North  
(Ed Escudero, Sixto Martinez, Joe Garcia)  
Internal Project Development Engineers-South  
(Benny Martinez, David Trujillo)

**FROM:** Roy P. Maestas  
Internal Design Bureau Chief



**FILE REFERENCE:**  
PSESHARE:Design Directives

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Effective immediately, you are hereby directed to retire the use of the Traffic Detail for Precast Concrete Wall Barrier-Type II and incorporate the attached Standard Drawings 606-20-1/3 thru 606-20-3/3 for Temporary Pre-Cast Concrete Wall Barrier used for traffic control purposes. Any **newly manufactured** Temporary Concrete Wall Barrier shall conform to Standard Drawings 606-20-1/3 thru 606-20-3/3 as this design meets criteria established by NCHRP Report 350 .

When establishing Item Nos. 606600-Temporary Concrete Wall Barrier or 606610-Temporary Concrete Wall Barrier Retained by the Contractor, Standard Drawings 606-20-1/3 thru 606-20-3/3 shall be included in the listing of Standard Drawings required for the project.

It is anticipated that a 3 month transition period is required for manufacturing purposes. Consequently, it is critical to discuss this item during the design inspections. During this transition period, if available, State furnished Concrete Wall Barrier should be provided. Any existing stock of temporary Concrete Wall Barrier may be used until its useful life has expired.

It is noted that the old design of temporary concrete wall barrier may not be intermixed with the new design in any installation.

As a reminder, the Design Directives reside in the PSESHARE drive. General Office staff will utilize the \\htdvms\pseshare drive to access the Directive. District staff can access the Directive utilizing the appropriate District drive.

**Design Directive (2-2003-Design)**

**4-June-2003**

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**DISTRIBUTION LIST**

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Tim Chavez  
Richard Murray  
Robert Salazar  
Betty Helgeson  
Keun-Wook Yi

**Design Directive (2-2003-Design)**

**4-June-2003**

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Steve Reed

**ENVIRONMENTAL GEOLOGY SECTION**

Kathy Kretz

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Chris Vigil (Acting)

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- 1/Alvin Dominguez
- 2/Gary Shubert
- 3/Tom Raught
- 4/Severiano Sisneros
- 5/John McElroy
- 6/Larry Maynard

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- 1/Paul Gray/Paul Little
- 2/Virginia Lorenz/Paul Zagone
- 3/Mike Plese
- 4/Peter McDonald
- 5/James Gallegos/Miguel Gabaldon
- 6/Fernando Trujillo/Tom Kratochvil

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- 2/Ralph Meeks
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- 4/Ken Cordova
- 5/Phil Gallegos
- 6/Robert McCoy

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- 2/Bob Kurtz
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- 5/David Martinez
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- Dave Catanach
- Bob Meyers

**FHWA**

- Kathy Walker
- Will Dooley
- Ray Pederson
- Carl Lovato
- Doug MacDonald
- Liz Romero

**Design Directive (2-2003-Design)**

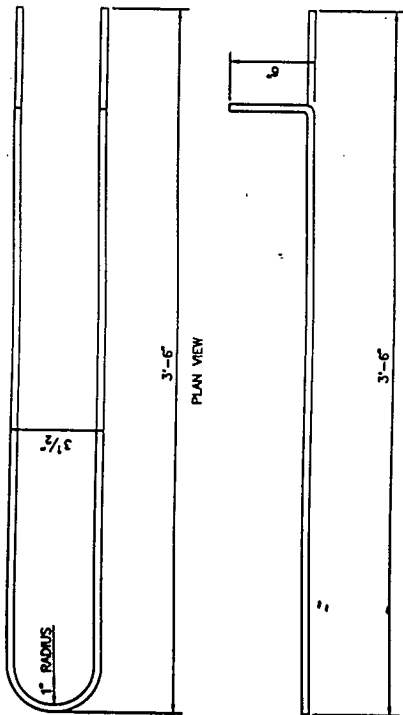
**4-June-2003**

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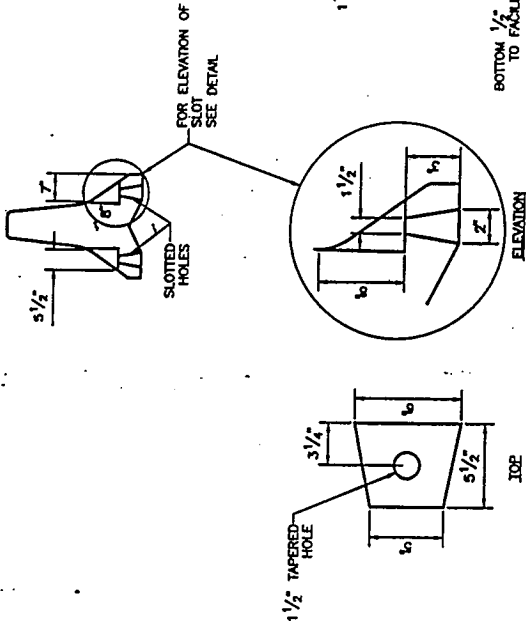
**ACTIVE CONSULTANTS**

Alan Soltani, Atkins-Benham  
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Paul Waters, BPLW  
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Joseph Chato, Red Mountain Engineers, Inc.  
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Tom Dick, Smith Engineering Co.  
(Roswell)  
Jim Smith, Souder Miller & Associates  
Kim Stelzer, Tampa Bay Engineering  
Jim Dolbear, The Larkin Group  
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Peter Hinckley, URS Greiner Woodward  
Clyde  
William Ventry, Ventry Engineering  
Scott Perkins, Wilson & Company

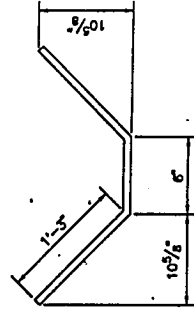




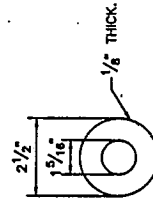
LOOP BAR 3/4" DIA. (GRADE 36)



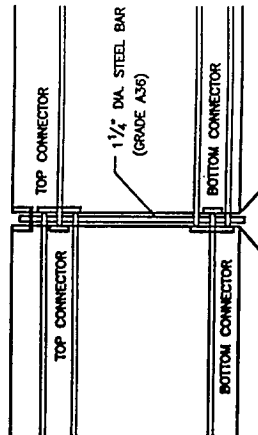
DETAIL OF SLOT



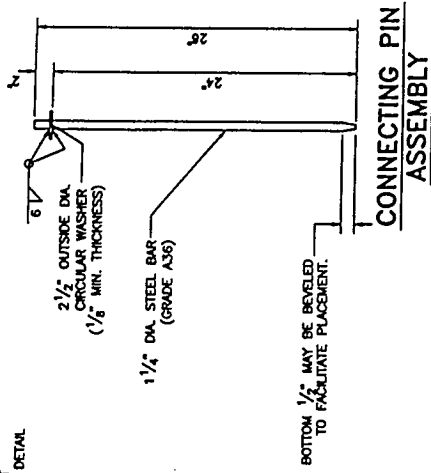
NO. 6 DEFORMED BAR ANCHOR SLOT DETAIL



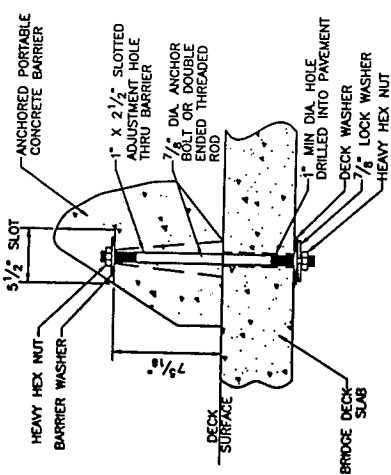
PLAIN GALVANIZED STEEL WASHER FOR 1 1/4" PIN



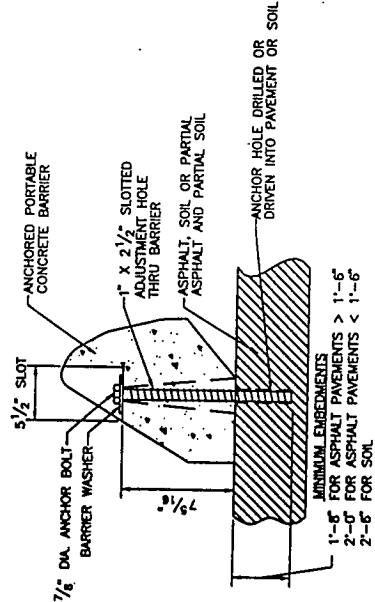
ELEVATION OF CONNECTION



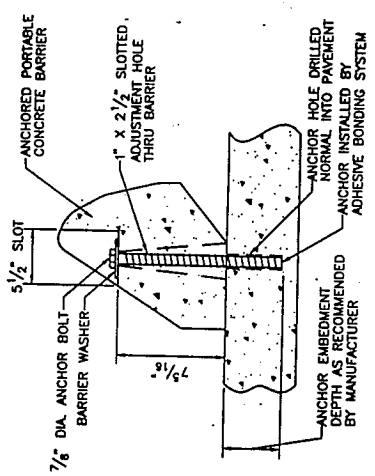
NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS (OR CHANGE NOTICES)
<p>NEW MEXICO STATE HIGHWAY &amp; TRANSPORTATION DEPARTMENT STANDARD DETAILS</p> <p>TEMPORARY PRE-CAST CONCRETE WALL BARRIER DETAILS</p> <p>APPROVED: <i>[Signature]</i> DESIGN ENGINEER DATE: 5/16/83</p> <p>DRAWN BY: _____ CHECKED BY: _____</p> <p>606-20-2/3 SHEET 2 OF 3</p>			



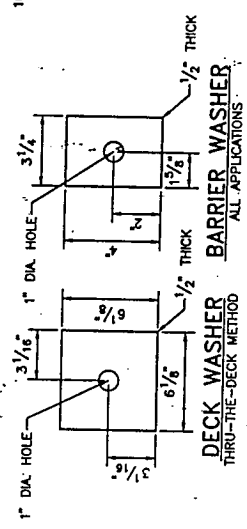
**THRU-DECK ANCHOR METHOD**  
BRIDGE DECKS  
NOTE: METHOD TO BE USED ON OLD BRIDGE DECKS ONLY AT TIMES WHEN SPECIFIED IN THE PLANS, OR WHEN DIRECTED BY THE ENGINEER.



**ANCHOR BOLT METHOD**  
BITUMINOUS PAVEMENTS & SOILS  
NOTE: THESE EMBEDMENTS DEPTHS ARE TYPICAL FOR MOST APPLICATIONS; HOWEVER, DUE TO VARYING SOIL AND ASPHALT CONDITIONS, THEY MAY NOT BE ADEQUATE FOR ALL CASES.



**ADHESIVE BONDING SYSTEM ANCHOR METHOD**  
BRIDGE DECKS AND PORTLAND CEMENT CONCRETE PAVEMENTS



**DECK WASHER**  
THRU-THE-DECK METHOD  
**BARrier WASHER**  
ALL APPLICATIONS

**NOTES:**

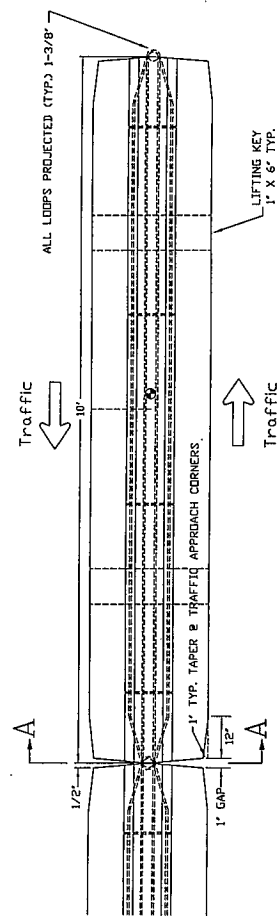
- ANCHORS SHALL ONLY BE USED WHEN SPECIFIED IN THE PLANS.
- EACH 10 FT. SECTION OF BARRIER REQUIRES 2 ANCHOR ASSEMBLIES WHEN INSTALLED ON CONCRETE, AND 4 ANCHOR ASSEMBLIES WHEN INSTALLED ON ASPHALT OR SOIL.
- EXPANSION ANCHORS WILL NOT BE PERMITTED FOR USE ON BRIDGE DECKS.
- DO NOT DRILL HOLES INTO PRESTRESSED CONCRETE BRIDGE DECK PANELS.
- USE ASTM A325 HIGH STRENGTH GALVANIZED ANCHOR BOLTS.
- DRILL ANCHOR HOLES IN CONCRETE WITH A PNEUMATIC DRILL.
- FOR BARRIER SECTIONS THAT EXTEND ACROSS CONCRETE JOINTS, DO NOT ANCHOR ON BOTH SIDES OF THE JOINT. OMIT THE ANCHOR CLOSEST TO THE JOINT.
- TIGHTEN ANCHORS 3/8 IN. TURN. TURN THREADED RODS AT LEAST 1 FULL TURN OF THREADS EXTENDING ABOVE THE NUT. DO NOT PROTRUDE THE TOP OF THE ANCHOR ABOVE THE SIDE OF THE BARRIER.
- COAT ANCHORS USED WITH THE ADHESIVE BONDING ANCHORING SYSTEM WITH A DEBONDING AGENT SO THE ANCHORS CAN BE EASILY REMOVED. DO NOT REDUCE THE STRENGTH OF ANCHOR SYSTEM WITH THE DEBONDING AGENT.
- ONCE REMOVED, COMPLETELY FILL ANCHOR HOLES WITH AN APPROVED, NON-SHRINK, NON-METALLIC GROUT, OR AS DIRECTED BY THE ENGINEER.

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT STANDARD DETAILS			
CONCRETE WALL BARRIER ANCHORING DETAILS			
APPROVED	DESIGN ENGINEER	DATE	
DESIGNED BY	DRAWN BY	CHECKED BY	
608-20-3/3			SHEET 3 OF 3

NEW MEXICO PROJECT NO.	SHEET NO.
AC-MIP-WA-984-(659)172	TSS-9

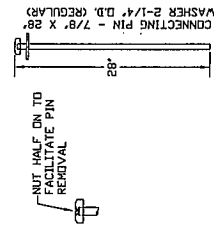
**NOTES:**

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT SPECIFICATIONS FOR HIGHWAY & BRIDGE CONSTRUCTION, CURRENT EDITION.
2. CONCRETE SHALL BE CLASS 'A' CONCRETE IN ACCORDANCE WITH SECTION 510 OF THE NMSHTD STANDARD SPECIFICATIONS FOR HIGHWAY & BRIDGE CONSTRUCTION, CURRENT EDITION.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL PRIOR TO FABRICATION.
4. NUTS, WASHERS, LIFTING HARDWARE, CONNECTING PINS, DRIFT PINS AND ANCHOR BOLTS SHALL BE GALVANIZED.
5. MANDATORY 1" x 12" LIFTING COIL WITH DOUBLE FLARED LOOPS. (SAFE WORKING LOAD, 8000 LBS.)
6. ALL EXPOSED LOOPS SHALL BE THOROUGHLY CLEANED AND PAINTED IN ACCORDANCE WITH SECTION 545 OF THE NMSHTD STANDARD SPECIFICATIONS FOR HIGHWAY & BRIDGE CONSTRUCTION, CURRENT EDITION.



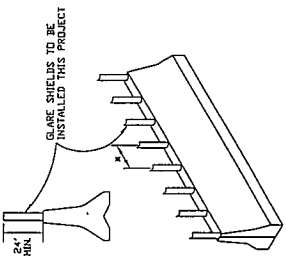
**PLAN**

**CONNECTING PIN**

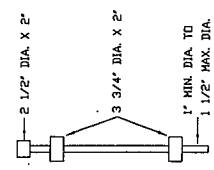


**CVB GLARE SHIELD DETAIL**

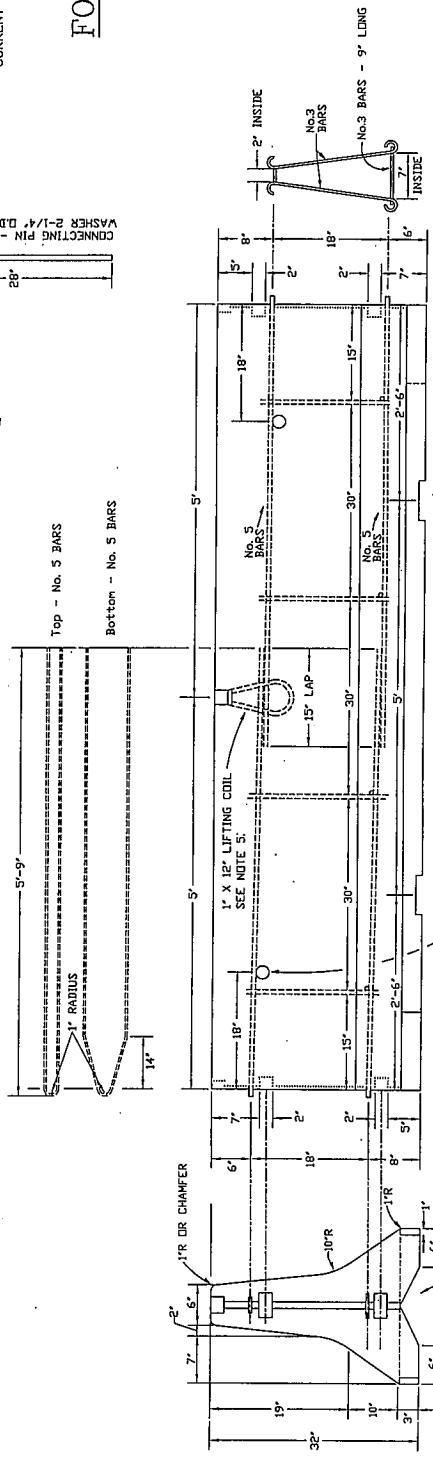
\* - SPACING AS PER MANUFACTURERS RECOMMENDATION  
 ITEM #630000 MULTIPLE GLARE SHIELD



**FORM DETAILS**



**BAR CAGE DETAILS**



**ELEVATION**

**SECTION A-A**

NO.	DESCRIPTION (OR CHANGE NOTICES)	DATE	BY
3			
2			
1			

NEW MEXICO STATE  
 HIGHWAY AND TRANSPORTATION  
 DEPARTMENT  
 US 84/285  
 SANTA FE OPERA  
 TO CUYAMUNGUE  
 COUNTY OF SANTA FE  
 PRECAST CONCRETE WALL  
 BARRIER-TYPE II

NEW PROJECT NO. AC-MIP-WA-984-(659)172 SHEET NO. TSS-9  
 OF 1005



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INTRA-DEPARTMENTAL CORRESPONDENCE

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SUBJECT: Standard Drawing for  
Temporary Concrete Wall Barrier

DATE: May 13, 2003

TO: Roy Maestas  
Internal Design Bureau Chief

FROM: Maria Hinojos *MH*  
Acting Traffic Technical Support Engineer

Traffic Technical Support has completed the design of temporary concrete wall barrier for use on New Mexico highways requiring an NCHRP 350 Test Level III approved device (highways with speed limits greater than 45 mph). This letter is to inform you of the requirements for manufacturing new temporary concrete wall barrier and the allowed usage of the old temporary concrete wall barrier.

As of October 2002, our old temporary concrete wall barrier design is not considered to be Test Level III approved. Existing stock of temporary concrete wall barrier may continue to be used on all New Mexico highways until its useful life has expired. No newly manufactured temporary concrete wall barrier may be purchased with the old design.

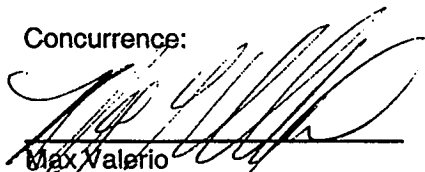
All newly manufactured wall barrier must conform to the new design, which has been approved by FHWA. The old temporary concrete wall barrier drawing should be removed from the standard drawings since it is meant for construction of new wall barrier. If it is necessary to keep the old drawing, a large note should be placed across the drawing stating that it is not to be used to manufacture new temporary concrete wall barrier. The new drawings should be implemented immediately for all new temporary concrete wall barrier.

It is also important to note that the old design of temporary concrete wall barrier may not be intermingled with the new design in any installations.

Attached is the draft of the temporary concrete wall barrier standard drawing along with a copy of the letter from FHWA approving our design under NCHRP 350.

Please contact Mr. Bert Baca with the PS&E Specifications Unit to verify the status of the final Standard Drawing. If you have specific questions regarding the design of the temporary concrete wall barrier or the NCHRP 350 requirements, please contact Ms. Dee Beingessner of Traffic Technical Support at 827-0192.

Concurrence:

  
\_\_\_\_\_  
Max Valerio  
Preliminary Design Bureau Chief

cc: Ruben Garcia  
Ernest Archuleta  
Alvin Dominguez  
Gary Shubert  
Tom Raught  
Severiano Sisnero

John McElroy  
Dennis Peralta  
Max Valerio  
Dee Beingessner  
Yolanda Roybal