



# Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
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JOSÉ ABREU  
SECRETARY

April 5, 2004

**THIS MEMO HAS EXPIRED**

**MEMORANDUM NO. 04-04**

(FA 4/07/04)

**TO: DISTRICT CONSTRUCTION ENGINEERS**

**FROM:** Brian Blanchard, State Roadway Design Engineer  
Ananth Prasad, Director, Office of Construction

**COPIES:** Jim Mills, Andy Keel, Duane Brautigam, Karen Byram, Owen Denman, Barrier Systems Inc., Matthew Schindler, Cloverleaf Corporation  
Gary Price

**SUBJECT: TAU-II CRASH CUSION SYSTEM  
FDOT QPL S544-0026 VENDOR DRAWING  
REQUIRED ADJUSTMENTS TO EXISTING TEMPORARY  
INSTALLATIONS**

As a result of a recent temporary installation of the TAU II system that was questioned by FDOT CEI personnel, it has come to our attention the subject drawings do not address the proper installation of the TAU II system using the Compact Backstop with an Asphalt Backstop Assembly on an asphalt foundation to shield the end of a temporary barrier wall. Under this scenario, there is an approximate 12" gap between the TAU II end panel and the approach end of the temporary barrier wall being shielded. The position of the Asphalt Backstop Assembly prevents the end of the temporary barrier wall from being installed any closer to the crash cushion system.

To address this, Barrier Systems, Inc. has provided two drawings that are attached to this memo. Drawing No. B040316-FL shows a relatively simple field adjustment that can be made on existing installations subject to unidirectional traffic on one side only. The adjustment consists of shifting the end of the temporary barrier wall away from the traffic side a minimum 12" from the traffic side edge of the Asphalt Backstop Assembly plate. This shift is necessary to provide adequate shielding of the barrier wall end for side impacts immediately upstream of the barrier wall end. Drawing No. B040316 is approved for use on projects currently under construction

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subject to the following conditions:

1. The installation must be an existing temporary TAU II system using a Compact Backstop with the Asphalt Backstop Assembly on an asphalt foundation, installed prior to the date of this memo.
2. The installation is subject to unidirectional traffic on one side only.
3. There must be sufficient space to shift the barrier the required distance.

Drawing No. B040316 is not to be used for units installed after the date of this memo. Temporary Tau II units using a Compact Backstop with the Asphalt Backstop Assembly on an asphalt foundation installed after the date of this memo shall use only Drawing No. B040301 described below or subsequent approved drawings on the QPL.

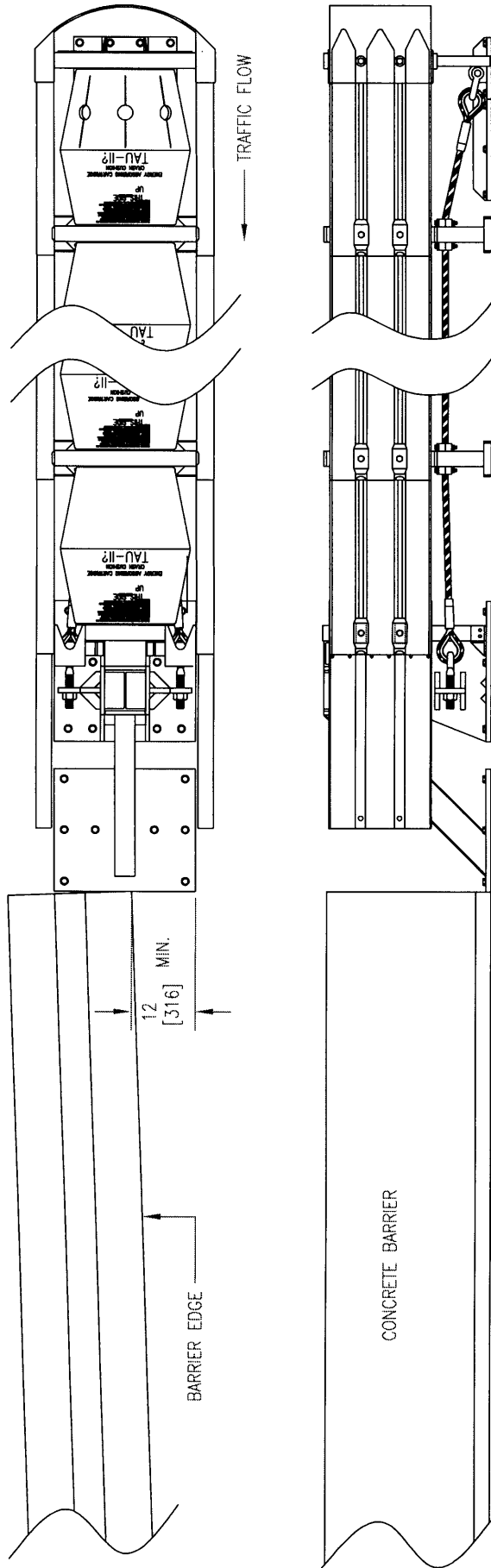
Drawing No. B040301 shows details for installing the TAU II system using the Compact Backstop with the Asphalt Backstop Assembly on an asphalt foundation to shield the end of a barrier wall. This drawing provides for thrie-beam extensions on the TAU II system that are connected to the barrier wall end unit being shielded. The details address unidirectional conditions as well as details for transition requirements for bi-direction or reverse direction hits. This drawing is approved for use when using the Compact Backstop with the Asphalt Backstop Assembly on an asphalt foundation. Existing installations using the Compact Backstop with the Asphalt Backstop Assembly on an asphalt foundation subject to traffic on both sides and/or reverse direction hits must be retrofitted in accordance with the details in this drawing. This drawing will soon be added to the QPL web site. Alternatively, the system can be reinstalled on an asphalt foundation using the PCB Backstop in accordance with QPL Drawing Number B020413 instead of using the Compact Backstop. Barrier Systems, Inc has submitted additional options for installation that are currently under review. These will be posted on the QPL web site when approved.

We are forwarding the attached drawings to you for distribution to field construction engineering and inspection personnel to follow up on any existing improper installations. Corrections of improper installations as described above are to be made immediately and without cost to the Department. Barrier Systems, Inc. has agreed to work with contractors currently under contract with the Department as necessary to make these corrections.

Please contact Andy Keel, 850-414-4334, Suncom 994-4334, if you have any questions.

BB/AP/ww  
Attachments

ROADSIDE - NO TRAFFIC FLOW



TAU-II WITH COMPACT BACKSTOP - ASPHALT ANCHORING PACKAGE

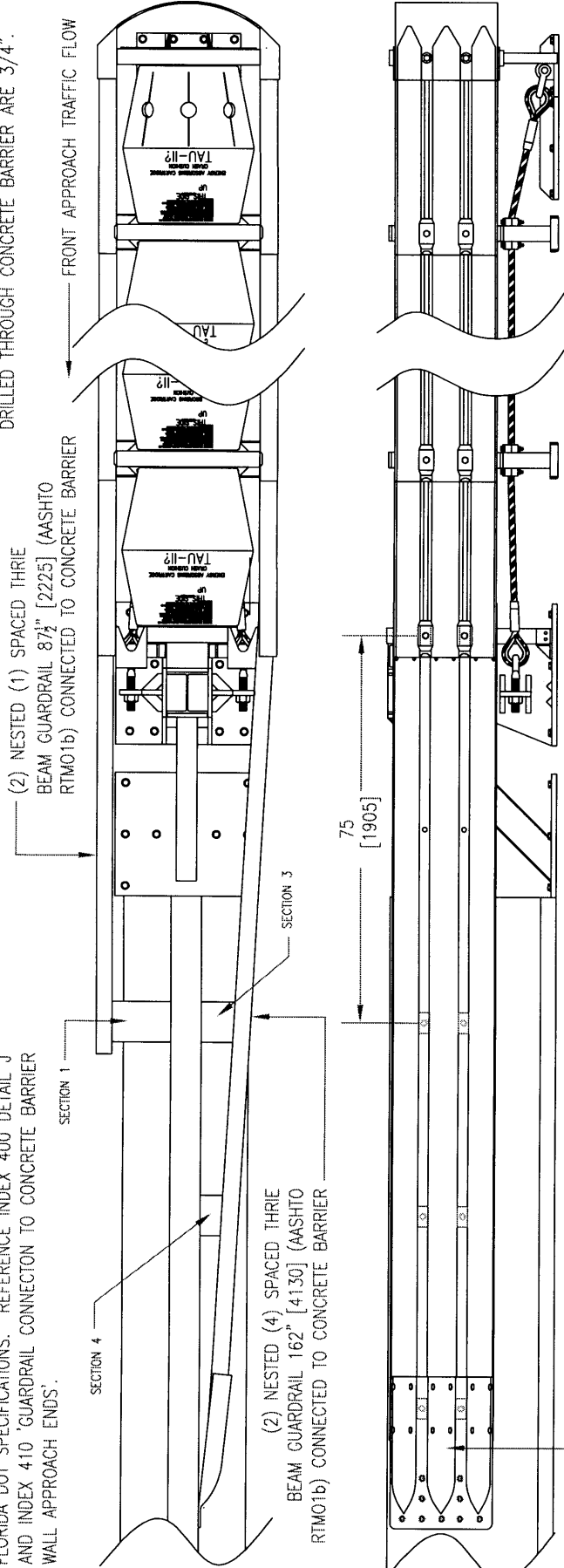
NOTES:

- 1.) THIS APPLICATION IS FOR ROADSIDE CONCRETE BARRIER. THE TAU-II WITH COMPACT BACKSTOP AND ASPHALT ANCHORING PACKAGE IS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.

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DRAWN BY: 03/17/04 GAO		DATE: 03/17/04		INIT: GAO	
APPROVED BY: 03/17/04 GSD		DATE: 03/17/04		INIT: GSD	
REV. A		DATE: 3/15/04 GAO		TITLE: TAU-II WITH COMPACT BACKSTOP, ASPHALT FOUNDATION, PCB OFFSET	
FLORIDA DOT	CHANGES	REQ'D	NEXT ASSY.	ITEM	MODEL
					B040316-FL
					DRAWING NUMBER
					REV. A

NOTES:

- 1.) CONCRETE MEDIAN BARRIER TO BE IN ACCORDANCE WITH FLORIDA DOT INDEX 410 OR 415. IF THE MEDIAN BARRIER IS TEMPORARY IT MUST BE ANCHORED IN ACCORDANCE WITH BSI SPECIFICATION A040206--FL, A040113--FL, B020413--FL, AND B020411--FL.
- 2.) USE HARDWARE AND BLOCKOUTS IN ACCORDANCE WITH FLORIDA DOT SPECIFICATIONS. REFERENCE INDEX 400 DETAIL J AND INDEX 410 GUARDRAIL CONNECTION TO CONCRETE BARRIER WALL APPROACH ENDS.
- 3.) STANDARD TIMBER OR PLASTIC OFFSET BLOCKS FIELD TRIMMED FOR USE AT SECTIONS 1, 3 AND 4. REFERENCE BSI DRAWING B031222--FL FOR BLOCKOUT DETAILS. BLOCKOUTS SHALL MEET REQUIREMENTS OF FLORIDA DOT INDEX 400, 410, AND FLORIDA DOT SPECIFICATIONS.
- 4.) USE 5/8" DIA BUTTON HEAD BOLT WITH BEAM WASHER AND NUT WITH WASHER AND BEAM WASHER ON ALL SECTIONS. BOLT LENGTH DETERMINED BY SECTION WIDTH: 1&3-24", AND 4-14". LENGTHS MAY VARY WITH DIFFERENT BARRIER SHAPES. A 12"x12" BACK-UP PLATE WITH 3/4" HOLES IS REQUIRED ON SECTION 4. HOLES DRILLED THROUGH CONCRETE BARRIER ARE 3/4".



THREE BEAM BRIDGE SHOE PER AASHTO HARDWARE SPECIFICATION RTE01b

- 5.) THREE BEAM GUARDRAIL AND TERMINAL CONNECTOR TO BE GALVANIZED IN ACCORDANCE WITH FLORIDA DOT SPECIFICATION 967.
- 6.) WHERE REAMING IS NECESSARY TO FIT NESTED BEAMS AND TERMINAL CONNECTORS THE REAMED SURFACES SHALL BE METALIZED IN ACCORDANCE WITH FLORIDA DOT INDEX 400.
- 7.) ALL HARDWARE AND FASTENERS TO BE GALVANIZED IN ACCORDANCE WITH FLORIDA DOT SPECIFICATION 967.
- 8.) TRANSITION SHOWN IS FOR BI-DIRECTIONAL TRAFFIC. FOR UNI-DIRECTIONAL TRAFFIC CONDITIONS TERMINATE THE TRANSITION PANELS AT THE FIRST BLOCKOUT AS SHOWN ON FRONT APPROACH TRAFFIC SIDE.
- 9.) FOR ROADSIDE CONDITIONS WHEN THERE IS NO TRAFFIC FLOW ON ONE SIDE, NO TRANSITION IS NEEDED ON THAT SIDE.

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A		DRAWN BY		Fractional ± 1/16		B040301-FL		A	
FLORIDA DOT		03/17/04		Dec .XX± ± .010		TITLE: TRANSITION, TAU-II WITH COMPACT BACKSTOP, ASPHALT FOUNDATION			
CHANGES		APPROV BY		Dec .XX± ± .030					
REV.		DATE							
A		3/15/04							
BY		REQ'D		NEXT ASSY.		ITEM			
DATE		BY		DATE		ITEM			
3/15/04		GEO							