SUPERSEDED BY EI 06-030 EFFECTIVE 5/3/07		*New York State Department of Transportation* **ENGINEERING INSTRUCTION**	**EI** **98-010**

Title: **GUIDE RAIL TRANSITIONS AND CABLE GUIDE RAIL**

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Approved:

P. J. Clark, Deputy Chief Engineer
Design Division

03/25/98
Date

Effective Date: *This Engineering Instruction will be effective with the letting date of 07/23/98.*

Purpose: The purpose of this Engineering Instruction (EI) is to issue a new detail for transitioning between box beam guide rail and heavy post blocked-out corrugated beam guide rail (both English and Metric). This detail was not available before. Also, the anchor stud in the English sheet of "Cable Guide Railing" has been corrected to reflect the ones currently used in similar anchors for other guide rails.

Transmittals: This Engineering Instruction transmits the following:

1. Two *new* Standard Sheets - "GUIDE RAIL TRANSITION FOR BOX BEAM GUIDE RAIL TO HEAVY POST BLOCKED-OUT CORRUGATED BEAM GUIDE RAIL" (606-14 and M606-14).
2. *Revision* to Standard Sheet - "GUIDE RAIL TRANSITIONS FOR BOX BEAM GUIDE RAIL TO WEAK POST CORRUGATED BEAM GUIDE RAIL" (M606-15R1).
3. *Proposal inserts* titled "CABLE GUIDE RAIL" and "GUIDE RAIL TRANSITIONS".

Guidelines for use: The **transition** between box beam and heavy post blocked-out corrugated beam guide rail, shown in Standard Sheets 606-14 and M606-14, **may be used in both one-way and two-way traffic situations**. This detail is a new design and is based on Table 10-3 - "Barrier Deflections For Standard Impacts" - published in the NYSDOT Highway Design Manual. (This table has been developed by analyzing the results of crash tests when a 2000P test vehicle traveling at 100 km/h impacts a barrier at a 25° angle.) The transition area has the same "Standard Deflection" as the heavy post blocked-out guide rail, which in turn is slightly stiffer than the box beam guide rail system. FHWA has reviewed and is in agreement with this design.

In Standard Sheet M606-15R1, the cable anchor detail has been changed. This new anchor is currently used in guide rail transitions from box beam to cable and is less expensive. Since the anchor will be placed behind box beam guide rails, the special type of anchor that was previously specified (used for cable guide rail, M606-2) is not necessary for this transition.

The proposal insert "CABLE GUIDE RAIL" modifies the "Anchor Stud" detail on Standard Sheet 606-2R2 - "CABLE GUIDE RAILING". This new anchor rod requires only the top 4 inches to be threaded and is the same used for CORRUGATED BEAM GUIDE RAILING and MEDIAN BARRIER. Please attach this insert to your copy of Standard Sheet 606-2R2 for future reference. For ongoing Contracts, guidelines permitting this change may be found in the Contract Administration Manual (CAM) §104-03 I.4.

Contact Persons: Questions regarding this EI should be directed to Pratip Lahiri of DQAB (518-457-4090).

GUIDE RAIL TRANSITIONS

Make the following ***changes*** to the Standard Specifications of January 2, 1990:

Page 6-26, under **606-5 BASIS OF PAYMENT**, ***insert*** the following ***above*** the line starting with 606.90:

"606.89	Guide Rail Transition Box Beam to Heavy Post Blocked-Out Corrugated Beam	Each
606.8950	Guide Rail Transition Box Beam to Heavy Post Blocked-Out Corrugated Beam (Rustic)	Each"

Make the following ***changes*** to the Standard Specifications of January 2, 1995:

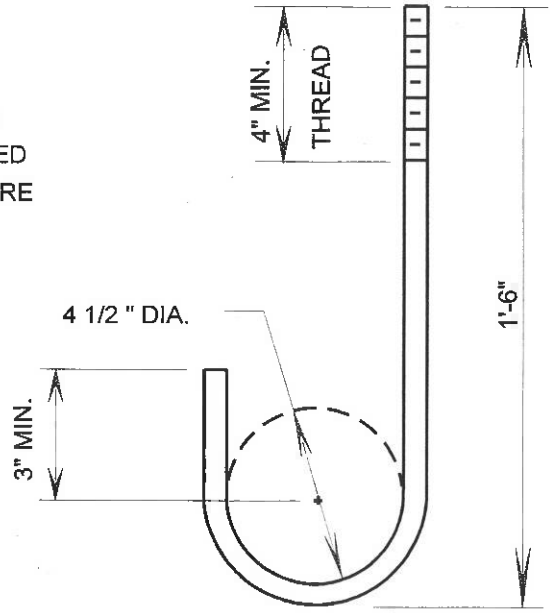
Page 6-38, under **606-5 BASIS OF PAYMENT**, ***insert*** the following ***above*** the line starting with 606.9401 M:

"606.89 M	Guide Rail Transition Box Beam to Heavy Post Blocked-Out Corrugated Beam	Each
606.8950 M	Guide Rail Transition Box Beam to Heavy Post Blocked-Out Corrugated Beam (Rustic)	Each"

CABLE GUIDE RAIL

ON STANDARD SHEET 606-2R2 - "CABLE GUIDE RAILING " ***DELETE***
THE DETAIL TITLED "GALVANIZED ANCHOR STUD" AND ***SUBSTITUTE***
THE FOLLOWING:

NOTE:
A MINIMUM OF 4" AT THE TOP OF THE ROD SHALL BE THREADED. RODS THREADED FOR THE ENTIRE LENGTH ARE ACCEPTABLE.



3/4 " Ø GALVANIZED ANCHOR STUD

ASTM A307 GRADE C