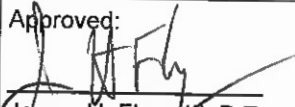
 <p>NEW YORK STATE OF OPPORTUNITY.</p>	<p>Department of Transportation</p>	<p>ENGINEERING INSTRUCTION</p>	<p>EI 19-021</p>
<p>Title: NYSDOT GUIDANCE FOR MASH IMPLEMENTATION FOR RAILING, BARRIER, AND TRANSITION SYSTEMS ON BRIDGES</p>			
<p>SUPERSEDED BY EB 23-024 EFFECTIVE 8/3/23</p>	<p>Approved:  James H. Flynn III, P.E. Deputy Chief Engineer (Structures)</p>		<p>10-18-19 Date</p>

ADMINISTRATIVE INFORMATION:

- Effective Date: This Engineering Instruction (EI) is effective beginning with projects submitted for the lettings after April 1, 2020.
- Where this EI and 2019 Bridge Manual Chapter 6 guidance differ, this EI shall prevail.
- Disposition of Materials: Final guidance will be incorporated into the NYSDOT Bridge Manual Chapter 6.

PURPOSE:

The purpose of this EI is to announce the bridge railing, barrier, and transition systems that are available for permanent use on NYSDOT projects let after April 1, 2020.

TECHNICAL INFORMATION:

The standard NYSDOT Steel Bridge Railings and Concrete Bridge Barriers in the table on the next page are considered as crashworthy for NYSDOT projects.

BACKGROUND:

Per the 2016 "AASHTO/FHWA Joint Implementation Agreement for the AASHTO Manual for Assessing Safety Hardware (MASH)" after December 31, 2019, only bridge railings, barriers, and transitions (and other hardware) evaluated using the 2016 Edition of MASH (MASH-16) criteria will be allowed for new permanent installations on the National Highway System (NHS).

Due to a severe delay at available testing facilities, the standard NYSDOT bridge railings, barriers, and transitions will not be tested in time to meet the current deadline. FHWA has delegated to the State DOTs the authority to approve bridge railing, barrier, and transition systems that the State DOT deems crashworthy for use on the NHS. NYSDOT has determined that the steel railing and concrete barrier systems, identified in the following table, are sufficient in strength and configuration to meet the intent of the MASH-16 requirements for crashworthiness until the full-scale validation crash tests can be run.

NYS DOT Bridge Railing, Barrier, or Transition	Test Level (TL)	NHS	Non-NHS
42" Single Slope Concrete Barrier (CIP)	TL-5	X	X
42" Vertical Concrete Parapet	TL-4	X	X
Steel Bridge Railing – 4 Rail on Sidewalk – 42" High	TL-4	X	X
Steel Bridge Railing – 4 Rail Curbless – 42" High	TL-4		X
Steel Bridge Railing – 3 Rail on Curb – 42" High	TL-4	X	X
Texas Aesthetic Concrete Barrier – 42" High	TL-2		X
Timber Bridge Railing	TL-2		X
Box Beam Guiderail Transition Concrete Single Slope Barrier	TL-3	X	X
Box Beam Guiderail Transition to Vertical Faced Concrete Parapet (Transition Rails Mounted to Front Face of Parapet)	TL-3	X	X
Box Beam Guiderail Transition to Vertical Faced Concrete Parapet (Transition Rails Mounted to End of Parapet)	TL-2		X
Box Beam Guiderail Flared Transition to Vertical Faced Concrete Parapet (Transition Rails Mounted to Front Face of Parapet)	TL-3	X	X
Box Beam Guiderail Flared Transition to Vertical Faced Concrete Parapet (Transition Rails Mounted to End of Parapet)	TL-2		X
Steel Bridge Railing to Box Beam Guide Rail Transition	TL-3	X	X
Steel Bridge Railing Flared Transition to Highway Box Beam	TL-3	X	X
Concrete Bridge Barrier Thrie Beam Transition to Corrugated Beam Railing	TL-3	X	X
Thrie Beam Transition to Timber Bridge Rail	TL-2		X

Note 1: A bridge railing, barrier, or transition system may be used for all Test Levels up to and including the Test Level indicated.

Note 2: Bridge railing and barrier Test Level is based on criteria specific to bridges. Transition Test Level is based on criteria specific to highway railings and barriers. Transitions must meet or exceed the Test Level for the adjacent highway railing, and the bridge railing must meet or exceed the Test Level for the transition.

COST IMPLICATIONS:

There is no significant change in cost since these systems are all currently in use.

IMPLEMENTATION:

Designers are strongly encouraged to adhere to these provisions for contracts let after January 1, 2020 for all structural design projects in New York State and are required to adhere to these provisions for contracts let after April 1, 2020.

TRANSMITTED MATERIALS: None.

CONTACT: Questions regarding this EI may be submitted to Eric Lantzzy, PE, in the Office of Structures - Standards and Policies Unit via e-mail at Eric.Lantzzy@dot.ny.gov or by calling (518) 485-5270