To: New York State Department of Transportation

ENGINEERING INSTRUCTION

EI 06-006

Title: HBRRP FUNDING OF PREVENTIVE BRIDGE MAINTENANCE ACTIVITIES

Distribution:
- Manufacturers (18)
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Approved:
/s/ Paul T. Wells 3/26/2006
Paul Wells, P.E., Chief Engineer

ADMINISTRATIVE INFORMATION:
- Effective Date: This Engineering Instruction (EI) is effective upon signature.
- Superseded Issuances: None.
- HDM Chapter 21, PS&E transmittal memo shell will be revised based on this guidance, see “Coding”, 2nd bullet.
- The guidance in this EI is intended to stand alone outside of any other document.

PURPOSE: The purpose of this EI is to institute the use of Highway Bridge Replacement and Rehabilitation Program (HBRRP) monies as an option for funding Preventive Maintenance (PM) activities on bridges and to provide guidance on its applicability and use.

TECHNICAL INFORMATION:
- Eligible Bridges: SAFETEA-LU extends the use of HBRRP funds for Preventive Maintenance activities to all highway bridges including local bridges, regardless of the bridges’ status relative to the Federal Selection List. However, a State DOT needs to have a “systematic process” that is approved by the FHWA for identifying work strategies. The following guidelines should be followed in programming PM activities on bridges:
  - All appropriate bridges should be addressed with cyclical treatments in accordance with the Maintenance and Operations First (MOF) Guidelines, and the Department’s “Fundamentals of Bridge Maintenance and Inspection” (FBMI) manual. Both documents are available electronically from the IntraDOT under the Site Index.
  - It is recommended that “other” Element-Specific bridge work be directed to bridges that are in generally good condition with localized deficiencies. The discussion that follows regarding the distinction between a group of Element-Specific activities and a general rehabilitation serves to direct this program toward these “good” bridges.
  - Bridges complying with the requirements for the “Vertical Down” and “Joints” initiatives in the MOF guidelines also qualify for this program.
  - Bridges that receive the work actions approved for this program need not be deficient by Federal standards and will not be subject to the “10-year rule.”

- Eligible Work: All “Element-Specific Cyclical Bridge Work” and “Element-Specific Bridge Work” described in Table BSD-3, Appendix B of the Department’s Design Procedure Manual [Future Appendix 7 of the Project Development Manual (PDM)] is eligible for this funding option.
**Applicability:** A variety of the noted “Element-Specific Cyclical Bridge Work” activities, singly or in combinations, can be performed on an individual bridge in the appropriate cycle in accordance with the Department’s MOF Guidelines, and FBMI manual. However, certain multiple and simultaneous Element-Specific Bridge Work activities on a given bridge may constitute a scope of work whereby the project should be advanced under the Department’s conventional Project Development Process. Refer to the “Element-Specific vs. General Rehabilitation” flowchart attached to this EI for programming guidance.

- **Preventive Maintenance vs. Rehabilitation:** For the purposes of this program, the following characteristics indicate that a combination of Element-Specific Activities should be advanced as a General Bridge Rehabilitation in accordance with the Department’s Project Development Manual:
  - Any combination of work elements performed on a bridge that has a rating of less than 5 for its National Bridge Inventory (NBI) Superstructure Item.
  - Deck work, either a monolithic overlay or repair to 30% or more of the bridge’s deck area, performed on bridges whose NBI Substructure Item is rated less than 5. (Please see the attached flowchart.)

- **Coding:** Following is a list of actions that must be followed to allow identification of projects funded under this program:
  - Funds allocated to preventive maintenance contracts programmed in accordance with this initiative must be coded as “14” in the Federal Highway Administration’s Fiscal Management Information System (FMIS).
  - In the PS&E transmittal memo under Item # 3, describe the project type as bridge preventive maintenance funded with HBRRP funds.
  - PSS “Work Type” must be coded as “Corrective Highway Maintenance” or “Cyclical Highway Maintenance.” The PSS “Sub Work Type” must be “Bridge 5 to 7 Repairs,” “Bridge General Repairs,” “Bridge Minor Maintenance,” “Bridge Cleaning,” “Deck Treatment,” “Bridge Painting,” “Bridge Deck Overlay” or “Bridge Deck Sealing.”

**Example:** Mono deck overlays can be accomplished as a part of a bridge rehabilitation project or a corrective maintenance project. If the bridge to receive the overlay “passes” the flowchart in this instruction, and is hence to be advanced as a part of the Preventive Maintenance Program, its “Work Type” should be “Corrective Highway Maintenance” and its “Sub Work Type” should be “Deck Treatment.”

- **Annual Status Report:** A report of the number of bridges and the dollars programmed for these activities will be included in the “Annual Report of Bridge Management and Inspection Programs” prepared pursuant to Section (2) of Chapter 781 of the Laws of 1988 (Graber Law). Also, an Executive Summary will be sent to the FHWA relating the effectiveness of the program in improving the condition of the bridge network, along with findings and recommendations for the future.

**TRANSMITTED MATERIAL:** Element-Specific vs. General Rehabilitation Flowchart
BACKGROUND: NYSDOT requested and received FHWA’s approval to use HBRRP Funds to finance preventive maintenance activities on bridges. As part of the approval, FHWA stipulated that the Department conform to the following:

- Assign code “14” in the Federal Highway Administration’s FMIS to projects utilizing HBRRP funds for PM activities.
- Develop prescriptive guidance to define the point at which a multitude of PM activities on any one bridge represents a bridge rehabilitation project that is better advanced under NYSDOT’s conventional project development process.
- Monitor the usage of HBRRP funds expended toward PM activities and to prepare an annual report representing the status of the program and condition of the structures.

This EI institutes the use of HBRRP monies as an option for funding Preventive Bridge Maintenance activities and provides the necessary guidelines to effectively implement the program while conforming to the FHWA’s requirements.

This funding flexibility will better enable the Department’s bridge managers in programming the right work on the right bridges at the right time. It will help the Department continue its proactive approach in effectively extending the service life of its bridge infrastructure.

In the past 15 to 20 years, the Department has made steady and measurable progress toward improving the overall condition profile of the bridge infrastructure. Severely deficient bridges have been systematically eliminated and now a large percentage of our bridge population resides in condition ranges bordering the deficient level; some slightly above and some slightly below. A strong preventive maintenance program of cyclical actions coupled with strategic corrective actions best serve our attempt to keep this large population of functional bridges in good physical condition. The opportunity to fund this work with HBRRP monies enhances our abilities to preserve our system in conformance with the Department’s Maintenance and Operations First (MOF) initiative.

CONTACT: For general questions about this EI, please contact Keith McCarty of the Structures Division at KMccarty@dot.state.ny.us phone 518-485-8550 or Peter Weykamp of the Transportation Maintenance Division at PWeykamp@dot.state.ny.us phone 518-457-8485. For questions about the element-specific list, please contact Farhan Haddad of the Design Quality Assurance Bureau at FHaddad@dot.state.ny.us phone 518-457-7282.
Element-Specific vs. General Rehabilitation Flowchart

Is NBI\textsuperscript{1} Item 59 - Superstructure Rated <5?  

\begin{itemize}
\item YES: An NBI\textsuperscript{1} Superstructure condition rating below 5 raises a legitimate question of whether other alternatives should be looked at using HBRR Funds. General Rehab or Replacement should be investigated.
\item NO: 
\end{itemize}

Are we proposing a Mono Deck Treatment or Deck Repairs to more than 30%\textsuperscript{2} of the Bridge Deck Area?  

\begin{itemize}
\item YES: Is NBI\textsuperscript{1} Item 60 - Substructure Rated <5?  
\item NO: Combinations of Element-Specific Work Items can be programmed using HBRR Funds.
\end{itemize}

Process under Rehabilitation/Replacement Guidelines (consider other alternatives).

Footnotes

1. The NBI ratings can be viewed on the “Load Ratings” tab in Winbolts.
2. Major deck treatment, mono deck treatment, or repair to more than 30% of the deck area remain subject to the terms of the Bridge Deck Evaluation Manual.