

CHAPTER 10 SUPPLEMENTAL INFORMATION

10.1 INTRODUCTION

This chapter shall be a collection of Supplemental Memorandums expanding topics that require further explanation. Each supplement shall be contained in a subsequent section starting in section 10.2 and shall contain the title of the supplement and the date of issuance.

For example, 10.X Supplement on XYZ Topic/Item dated month/day/year. The issuer of the supplement memorandum shall always be the Bridge Inspection Engineer or the State Bridge Engineer. The supplement may also be in the form of an email sent to all individuals participating in the Bridge Inspection Program. All supplements shall be summarized in the table below and shall be continually updated in the table as well as in the succeeding sections.


Supplemental Memorandum Log Index		
Section Number	Supplemental Item	Date of Issue
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Section 10.3	Team Member Initials on Inspection reports	11/01/2009
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Section 10.5	Shielding Reporting and Coding	02/16/2011
Section 10.6	Coding Clarification for Parapets and Bridge Railing	11/12/2013
Section 10.7	Inspect What You Can...When It Is Due!	11/17/2014

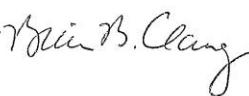
Chart 10-1: Supplemental Memorandum Log Index

10.2 CODING FOR MULTIBEAM BRIDGES ISSUED 5/1/09

**THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., Director of Bridges and Structures 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: May 1, 2009

RE: Coding for Multi Beam Bridges

There has been a bit of inconsistency with the inspection reporting for multi beam or multi girder bridges. I have noticed that inspectors will use either Item 59.1 Stringers or Item 59.4 Girders or Beams on their reports for these types of structures. This memo is an attempt to standardize our approach to coding these elements.

I recommend that longitudinal elements that span from superstructure to superstructure should be called Stringers (Item 59.1), whereas longitudinal elements that span from substructure to substructure should be called either Beams or Girders (Item 59.4).

In some cases how you define the supporting elements can get a little complicated. How should we define cross girders or bents? Should they be defined as superstructure or substructure? The key for me is the presence of bearings. Cross girders that are supported by bearings should be considered superstructure elements. The element that supports the bearings would be the substructure for that system. Bents should be considered to be substructure units.

The classic case for the use of stringer coding will be in a stringer/floorbeam structural system such as on trusses. The floorbeams are obviously considered to be superstructure elements. For Beam/Girder descriptions I offer the following clarification. If the beam/girder element is a rolled beam shape, then it should be referred to as "beam". If the beam/girder element is made of built-up components/shapes (welded, riveted, or bolted), then it should be referred to as "girder". A pre-stressed AASHTO type IV beam should be coded as a "beam". A larger pre-stressed shape like a New England Bulb Tee should be coded as a "girder".


There are probably structural systems that do not fit the above descriptions. For such cases use your best judgment based upon the guidelines offered above.


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10.3 TEAM MEMBER INITIALS ON INSPECTION REPORTS ISSUED 11/1/09

**THE COMMONWEALTH OF MASSACHUSETTS
MASSDOT, HIGHWAY DIVISION
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., Director of Bridges and Structures 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: November 1, 2009

RE: Team Member initials on Inspection Reports

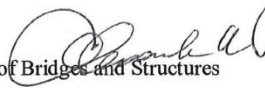
Effective this date all inspection reports completed shall be initialed by each Team Member who assisted the Team Leader with the inspection. By initialing the report the Team Member confirms that he/she participated during the inspection and that the individual has read the final inspection report.


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**10.4 SUPERSTRUCTURE CODING FOR NE BULB TEE PRE-STRESSED GIRDER
BRIDGES ISSUED 1/15/10**

**THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TRANSPORTATION – HIGHWAY DIVISION
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., Director of Bridges and Structures 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: January 15, 2010

RE: Superstructure Coding for NE Bulb Tee Pre-stressed Girder Bridges

There has been a bit of confusion about the correct coding for Pre-stressed concrete New England Bulb Tee girder superstructures. I have been advised that inspectors have questions on the correct coding for Item 43 – Structure Type. This memo will clarify our position.

Item 43 is a three digit entry. The first digit (material) is straight forward: either 5 - Pre-stressed concrete, or 6 - Continuous pre-stressed concrete. The confusion is in the second and third digit (design type). Inspectors have considered using either 02 – Girder, or 04 - Tee beam. The interest in calling it a tee beam bridge may lie in the name of the beam shape: bulb tee.

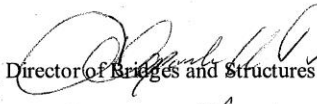
Please be advised that the correct coding for a New England Bulb Tee design type is "Girder". The proper coding for Item 43 would be either 502 or 602.

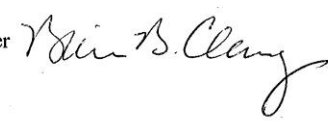
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10.5 SHIELDING REPORTING AND CODING ISSUED 2/16/11

**THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TRANSPORTATION – HIGHWAY DIVISION
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., Director of Bridges and Structures 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: February 16, 2011

RE: Shielding Reporting and Coding

It has become more common for District Bridge Maintenance to install shielding on the underside of bridges over roadways where there is potential for spalling concrete falling onto traveled ways below. I feel that the shielding should be identified on our inspection reports: type, location and overall condition.

For the time being please create a new Deck sub element no. **58.14 - Shielding** on page 1 of your reports. Indicate a numerical condition rating and deficiency coding on page 1 as appropriate and provide a written description in the text portion of the report (even if the condition is better than fair). The written description should at a minimum indicate the type of shielding used (material) and the limits. The main shielding materials in use are as follows:

Timber
Expanded Metal
Fabric Wrap

It is hoped that consistent reporting will allow accurate searches for shielded bridges when necessary. Please be sure to use one of the underlined words when describing the shielding material, allowing us to search for the key words. If other materials are in use indicate the materials as appropriate. Shortly we hope to have sub element 58.14 added into the 4D reports.

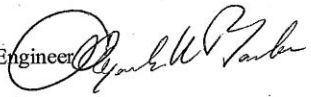
Thank you for your cooperation.

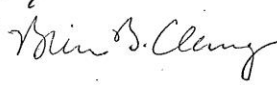
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**10.6 CODING CLARIFICATION FOR PARAPETS AND BRIDGE RAILING ISSUED
11/12/13**

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., State Bridge Engineer 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: November 12, 2013

RE: Coding Clarification for Parapets and Bridge Railing

There has been a bit of inconsistency with inspection reporting for parapets and bridge railing. The confusion may exist because popular bridge inspection references have historically used the terms interchangeably. For instance the FHWA's Bridge Inspector's Training Manual 90, under Section 7.7.1 Bridge Barriers list examples of bridge railings that include solid concrete parapets and steel and aluminum railings. It also presents Figure 7-15 which shows a pigeonhole parapet as an example of a bridge railing.

A general rule of thumb is offered for determining if any given bridge barrier is a parapet or a railing: "If you can pass your arm through the barrier system than it is a railing. If you cannot, then it is a parapet." For example, the S3-TL4 (three rails with or without pickets) railing is obviously a railing and a CF-PL2 (solid concrete "Jersey" barrier) is a parapet. The CT-TL2 (concrete "Texas" rail) would be a railing because of the openings.

There are many situations where we do have both parapets and railings, such as a single steel rail mounted on a low concrete parapet. Another example would be when a railing is mounted on a concrete base. In such cases we would prefer that the rail be coded as a railing and the base be coded as a parapet.

Attached is a series of sketches of some of the more typical bridge rail systems in use in Massachusetts with our recommended coding of components.

There are definitely bridge rail systems that do not fit the above descriptions. For such cases use your best judgment based upon the guidelines offered in the attachment.

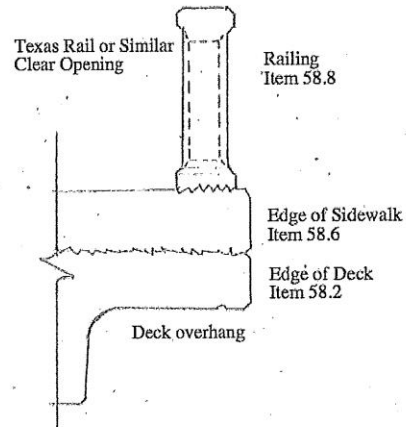
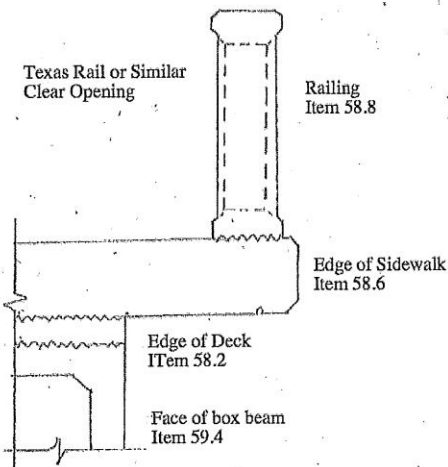
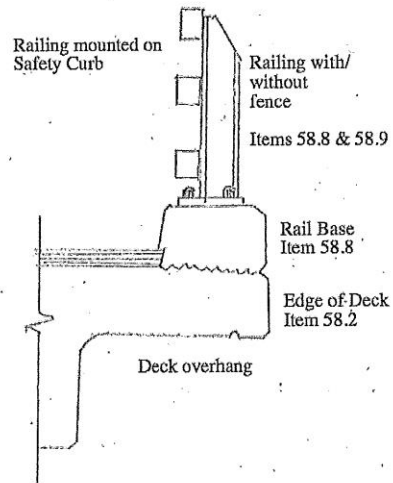
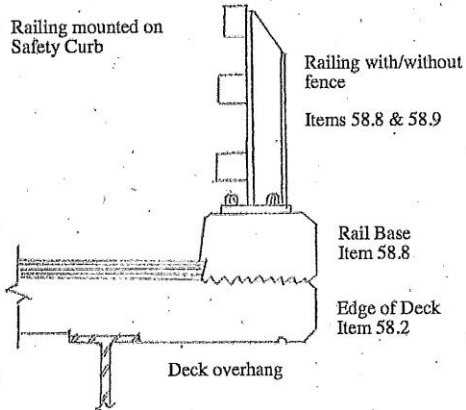
Thank you for working with me to standardize our NBIS coding.

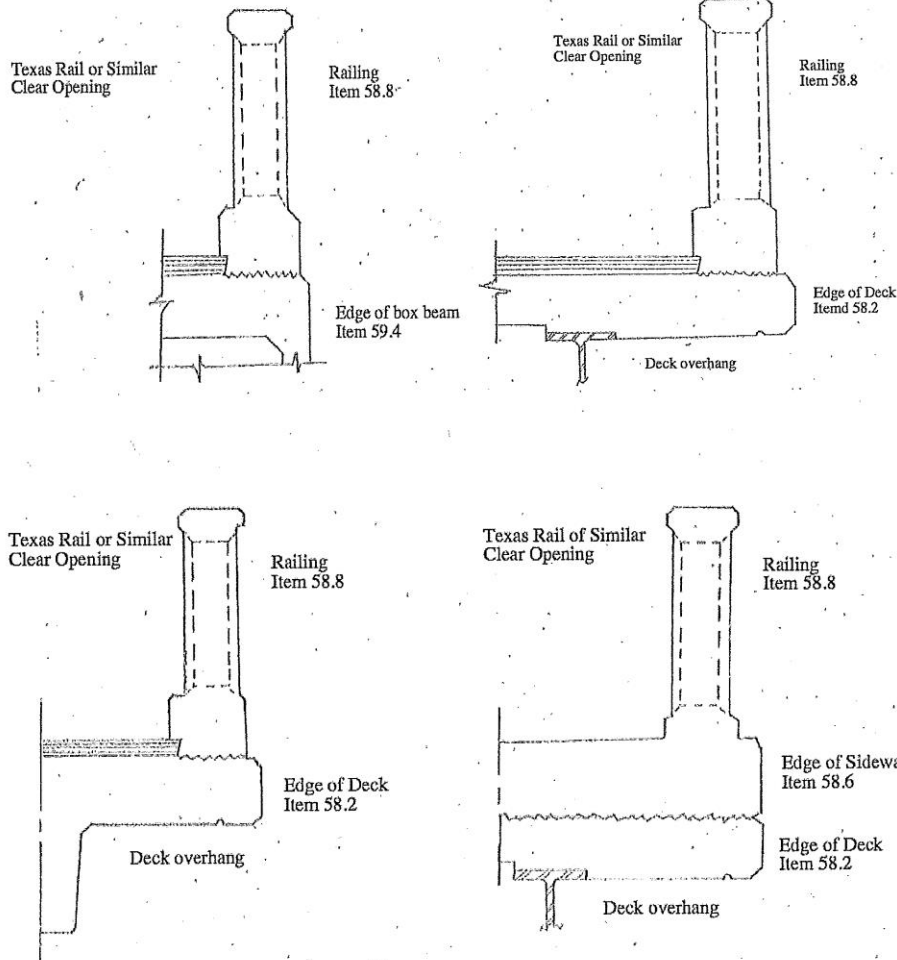
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Attachment



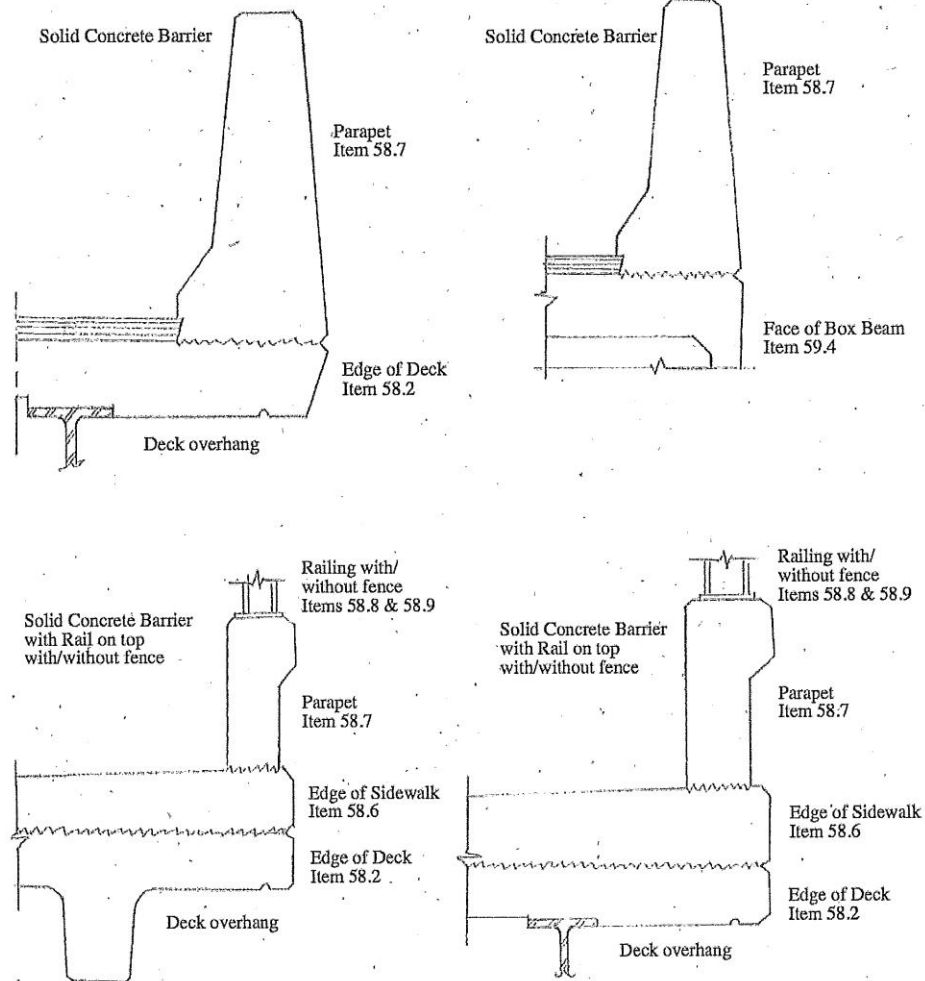
BRIDGE INSPECTION HANDBOOK

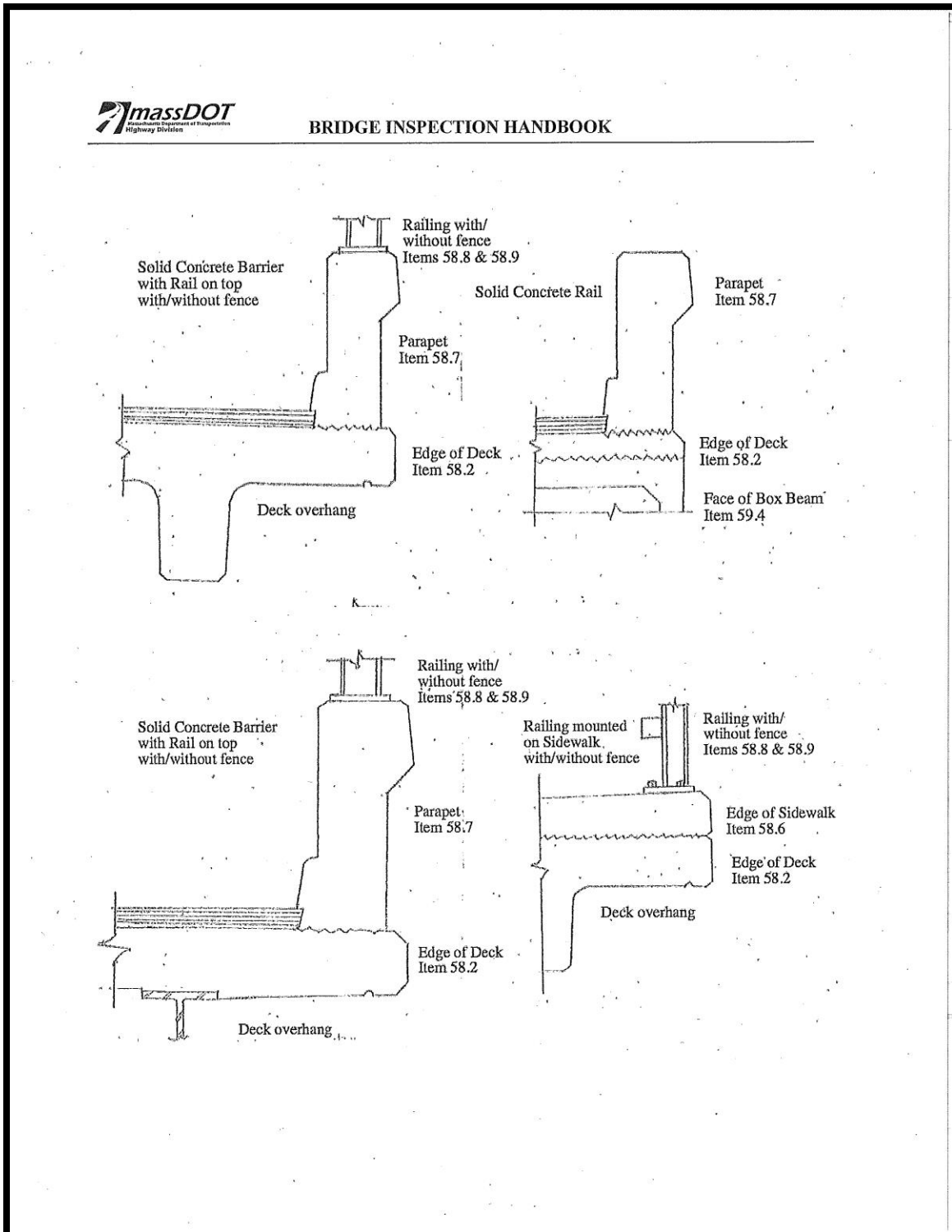






BRIDGE INSPECTION HANDBOOK

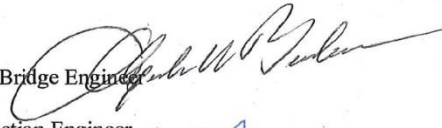





10.7 INSPECT WHAT YOU CAN ...WHEN IT IS DUE ISSUED 11/17/14

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
INTEROFFICE MEMORANDUM**

TO: Bridge Inspection Staff

THRU: Alexander K. Bardow, P.E., State Bridge Engineer 

FROM: Brian B. Clang, P.E., Bridge Inspection Engineer 

DATE: November 17, 2014

RE: Inspect What You Can... When It Is Due!

Often access to bridges for our safety inspections is delayed or interrupted. Typical examples include Railroad right-of-way access permit delays and active construction operations/phasing. Other reasons could include high water flows or heavy snow accumulation. I would like to remind all that our safety inspections should be completed when they are due as per NBIS and MassDOT criteria.

If any portion of the structure can still be accessed during the month that the NBIS inspection is due then proceed with the inspection. Whatever cannot be inspected during that month will have to be put off until access is possible or is granted. An inspection report should be prepared for the elements inspected. A comment should be included in the general comments section of the report describing the areas of the bridge that were not inspected at this time and the reason for the delay. The inspection report should carry the first date that the field inspection was started.

If the follow up inspection is within the next month then the inspectors should hold off completing the report until all of the condition information is obtained. The completed inspection report should carry the first date that the field inspection was started, not the follow up date.

If the follow up inspection is expected to be later than the next month then the TL should complete the inspection report as is. Items 58, 59, 60 and 62 should be coded for the conditions noted during the first inspection. The Team Leader should return to the bridge when access is available and complete an "Other" inspection report for the areas of the bridge not accessed previously. When assigning condition ratings for Items 58, 59, 60 or 62 as applicable at the completion of the Other Inspection the team should consider the entire bridge, not just the areas inspected during the follow-up inspection.

Thank you for working with me to ensure timely safety inspections and compliance with NBIS and MassDOT inspection frequency criteria.