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TO: WisDOT Certified Bridge Inspectors and Program Managers

FROM: Richard Marz, P.E.
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SUBJECT: Technical Memorandum
Underwater Inspection Policy

IMPLEMENTATION: This memorandum applies to all bridges in the State and is effective immediately.
(This policy clarifies but does not replace the Wisconsin Structures Inspection Manual requirements)

GUIDELINES:

This memorandum describes the requirements for underwater inspections for bridge structures.

Underwater Dive Inspections – Per the Wisconsin Structures Inspection Manual (WISM) (Part 1), an underwater dive inspection is required if water conditions exist at the structure that prohibit access to all portions of an element by visual or tactical means. Bridges meeting this requirement shall have this inspection performed at an interval not to exceed 60 months. If the structure is defined as scour critical, the frequency shall be no greater than 24 months.

During the dive inspection, the inspectors shall make note of what substructure units are dry, which ones can be accessed by wading, and which units require diving. This information shall be recorded in the Highway Structures Information System (HSI). All units shall be assessed during the dive inspection. Dry units can be documented as “dry” without additional detail need for evaluation. Units that can be probed shall be and notes shall be taken on the condition of the streambed and substructure unit. And units that require diving shall be inspected according to guidelines in the WSIM.

Underwater Visual Probe Activity –

Bridges not meeting the above dive inspection requirements shall have each substructure unit in water probed for undermining at an interval not to exceed the required frequency of the Routine Inspection. It is preferred that this assessment occur during the Routine Inspection, but if stream conditions (high water, ice, etc.), safety concerns, or scheduling prohibit it, then a UW-Probe shall be scheduled separately to ensure the proper frequency isn't exceeded. If a substructure unit is dry, the inspector should indicate that on the inspection form for the unit in question. For culverts ends, a probe is also required to assess potential scour.

If a bridge meets the underwater dive inspection criteria above, yet there is a substructure unit that can be accessed safely during the Routine inspection, then the inspector shall probe that unit during the routine inspection and record the results in HSI.

QUESTIONS:

For information on the technical contents of this memorandum, please contact David Genson at (608)-266-3722 or Rick Marz at (608)-266-8195.