Substructure Bridge Preservation Activities

Section A. Eligibility and Federal Requirements – These items address whether FHWA will compensate NCDOT for these activities.

1. Is the bridge candidate on/over the Interstate System?
   The bridge must be on or over the interstate.

2. Is the proposed activity for the bridge candidate part of another program? (TIP, etc.)
   A Federal requirement is the bridge cannot be programmed elsewhere. Avoid "like activities." For example, a bridge programmed for a deck replacement would not be eligible for an overlay, but painting steel beam ends could be an appropriate activity.
   Verify with the STIP:
   http://www.ncdot.gov/planning/development/TIP/TIP/

3. Is ASR present in structural members?
   If ASR (Alkaline Silica Reactivity) is present in structural members (beams, caps, columns) the bridge should be programmed for replacement not preservation.
   Review the Bridge Inspection Report notes and photos.

4. Is bridge coded structurally deficient or functionally obsolete?
   Structurally deficient or functionally obsolete bridges with a sufficiency rating below 50 are likely to be programmed for replacement in the not too distant future.
   Review the Bridge Inspection Report.

Section B. General Requirements – These items address program needs, and considers potential impacts of not preserving structures.

1. Is bridge candidate one of a planned corridor of bridges?
   Preference is for projects that are part of an overall preservation strategy by coordinating work on multiple structures in a corridor. A corridor of painting projects or joint replacement projects is preferred over bridges in spot locations.

2. Number of verified citizen/ city/ county complaints.
   Verified (written) complaints are located in the Local Bridge File or Internal Division Files.

3. Traffic control as % of project cost.
   In order to maximize preservation work accomplished, preference is given to projects with lesser traffic control costs.

4. Stream sensitivity issues.

The goal is keeping bridges in service longer to minimize environmental impacts and potentially much longer and more expensive replacements.
Major stream impacts for construction– major
Minor stream impacts for construction – minor
Grade crossing impacts for construction – none

5. Improvements needed to detour as % of project cost.
   Preference is to minimize amount of improvement needed on detour route.
   Assume greater than 10% for offsite detour onto secondary road.
   Assume less than 10% for offsite detour onto primary route.
   0% if known no improvements needed.

6. Detour length.
   Preference is to preserve bridges that would result in longer detour routes should replacement be necessary.
   Review the Bridge Map.

7. Estimated Remaining Life Extension (after preservation activity).
   The life extension is the anticipated improvement to the remaining life of the component, measured in years.

Section C. Substructure Preservation – Considered only in conjunction with other preservation activities.

1. Bent/End Bent sealing (in conjunction with other preservation activities). Substructure Condition
   Preference is to address substructures with higher condition ratings. Bent/End Bent sealing should only be done while in conjunction with another preservation activity, i.e., overlay.

2. Bent/End Bent repairs (in conjunction with other preservation activities). Substructure Condition.
   Bent/End Bent repairs should only be done while in conjunction with another preservation activity, i.e., overlay. May seal after repair

3. Bent/End Bent cleaning - Debris accumulation.
   Preference is given to bridges with greater debris accumulation