



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

MEMORANDUM TO: Bridge Inspectors and Supervisors

FROM: G. R. Perfetti, P. E.
State Structures Engineer

DATE: November 15, 2013

SUBJECT: Inspection Criteria - Less Than Regular Intervals

In accordance with National Bridge Inspection Standards (NBIS) Regulations, criteria for the level of inspection and frequency less than regular interval requirements has been established for *Routine Inspections, Underwater Inspections* and *Damage, In-Depth and Special Inspections*. Effective immediately, the following shall be used when determining level of inspection and frequency for NBIS structures in North Carolina:

Routine Inspections

Routine Inspections occur on a 24 month cycle for all bridges.

Routine Inspections less than 24 months will be determined on a case by case basis when a condition rating of 3 or less exists for one of the following: Deck (58), Substructure (59), Superstructure (60) or Culvert (62). Consideration will be given to the presence of temporary repairs in the determination to decrease the inspection cycle.

Underwater Inspections

Underwater Inspections occur on a 48 month cycle for all bridges over water with structural members underwater that cannot be evaluated during a routine above water inspection.

Underwater Inspections less than 48 months will be determined on a case by case basis when one of the following criteria is met:

1. Condition rating of 3 or less for underwater substructure items, culverts or pipes.
2. Bridge with Item 113 is coded with a U and a POA Code of R, S or Z.

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Fracture Critical Member Inspections

Fracture Critical Member Inspections occur on a 24 month cycle.

Fracture Critical Member Inspections less than 24 months will be determined on a case by case basis when one of the following criteria is met:

1. Fracture critical member has a condition rating of 4 or less.
2. Fracture critical member type is nationally recognized to be problematic.
3. Trusses are made of wrought iron.
4. Bridge contains pins and straps.
5. Vertical clearance under or on the bridge is less than:
 - 16'-6" for interstates, freeways or arterials
 - 15'-0" for local roads, collector roads or streets
 - 23'-0" for bridges over railroads

Damage Inspection

Damage Inspection occurs immediately after traffic control measures are in place and access to the damaged area is provided. Damaged concrete structures are inspected by Above Water personnel and damaged steel structures are inspected by Special Inspections personnel. Findings are forwarded to the Preservation and Repair group for development of engineered repair details, if necessary. The frequency of follow-up inspections is determined on a case by case basis and is dependent upon ADT, ADTT or severity of damage.

In-Depth/Special Inspections

Movable Span and Machinery Inspections

Movable Span and Machinery Inspections occur on a 24 month cycle.

Movable Span and Machinery Inspections less than 24 months will be determined on a case by case basis. Consideration will be given to age of structure, significant increases in openings and critical importance factors such as detour length and evacuation route.

Other

Temporary Bridge Inspections

Once vehicular traffic is allowed on a temporary bridge utilizing modular panels, routine inspection by the manufacturer is required. The first inspection of the structure occurs 1 month after opening the temporary bridge to vehicular traffic. Subsequent inspections are performed every 6 months; however, when ADTT exceeds 2000, inspection of the temporary bridge occurs every 3 months. An inspection report provided by the Department is completed and submitted by the manufacturer within 3 days of each inspection. Any items documented in the report indicating safety or stability issues with the structure are reported immediately. All repairs are performed by the contractor and approved by the Department's engineer.

Cantilever Sign Inspections

For Cantilever Sign Inspections, vertical and horizontal clearances are measured on a 24 month cycle. A complete inspection with condition rating grades occurs on a 48 month cycle.

Overhead Span Type Sign Support Inspections

For Overhead Span Type Sign Support Inspections, vertical and horizontal clearances are measured on a 24 month cycle. A complete inspection with condition rating grades occurs on a 96 month cycle.

High Mast Lighting Structure Inspections

High Mast Lighting Structure Inspections occur on a 48 month cycle.

Deck Evaluations and Other Special Testing

Deck Evaluations and Other Special Testing are completed upon request. In general, the request is made by routine inspectors needing further investigation. Other requests may come from various agencies within and outside the DOT. Requests are scheduled based on priority.

Bridge Maintenance Supervisor Inspections

The Bridge Maintenance Supervisor Inspections occur on a 12 month cycle. Results of these inspections are reported to SI&A on Inspection Control sheets.

The Inspection Manual will be updated at a later date.

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GRP/BCH/KAW

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