34.1 General Discussion

The primary objective of the Federal Highway Bridge Program (HBP) is to enhance travel safety through replacement and rehabilitation of bridges, owned by cities and counties that are physically deteriorated and are structurally deficient or functionally obsolete. The HBP also funds systematic preventive maintenance activities for structures (23 U.S.C. 116(d)). Routine maintenance is not eligible for HBP funding.

This chapter describes the process for inspecting and selecting bridge projects to be funded using HBP funds.

34.2 Bridge Condition Inspection Program

A methodical Bridge Inspection Program is mandatory for agencies that want to qualify for HBP funds.

The Federal Highway Administration (FHWA) has set the national standards for the proper safety inspection and evaluation of bridges in a document called the National Bridge Inspection Standards (NBIS). These standards are located in the Code of Federal Regulations, 23 Highways Part 650, Subpart C. The December 14, 2004 electronic version of the NBIS can be found online at www.fhwa.dot.gov/bridge/. Information and guidance on bridge condition inspection in Washington State is located in the *Washington State Bridge Inspection Manual* (WSBIM). An electronic version of the WSBIM can be accessed at www.wsdot.wa.gov/TA/Operations/BRIDGE/BRIDGEHP.HTM. Reference these documents for additional information on the following subjects.

.21 Delegation of NBIS Responsibilities. Each State Transportation Department is required to have an Inspection Organization responsible to inspect all bridges that are owned by the state, county, and city. The H&LP Local Agency Bridge Engineer will function as the Program Manager for county and city bridge owners. WSDOT has the option of delegating some of this authority to qualified local agencies.

.22 Bridge Inspection Types and Frequencies. Each structure in the National Bridge Inventory (NBI) shall receive a routine inspection at 24-month intervals. Routine Inspections may require special access equipment to perform a hands-on inspection. Inspections that require special access or procedures are performed for county and city bridge owners by the State at no cost to the agency.

Inspections that require special equipment or procedures are:

1. Complex Bridges
2. Underwater Inspection
3. Bridges with fracture critical elements

Inspection requirements are outlined in the flow chart in Appendix 34.602 of this manual and detailed in the WSBIM.

.23 Qualification of Bridge Inspection Personnel. Federal regulations specify the requirements for two of the positions within a Bridge Inspection organization:

- Program Manager
- Team Leader

The **Program Manager** is the individual in charge of the program, that has been assigned or delegated the duties and responsibilities for bridge inspection, reporting, and inventory. The program manager provides overall leadership and is available to inspection team leaders to provide guidance.

Minimum Qualifications for Program Manager are:

- Registered Professional Engineer or 120 months of inspection experience
- And successful completion of FHWA approved Comprehensive Bridge Inspection Training Course.

The **Team Leader** is the individual in charge of an inspection team responsible for planning, preparing and performing field inspection of the bridge. The Team Leader is required to be onsite for all condition inspection activities, and is responsible for inspection and inventory coding.

Minimum Qualifications for Team Leader are:

- Qualified Program Manager
- Or, 60 months of bridge inspection experience and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course
- Or, Certified Level III or IV NICET bridge safety inspector and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course
- Or, BS degree in engineering, and successfully passed EIT, and 24 months Bridge Inspection experience, and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course
- Or, Associates degree in engineering, and 48 months bridge inspection experience, and successful completion of FHWA approved Comprehensive Bridge Inspection Training Course

The flow chart in Appendix 34.601 describes the required qualifications for the Program Manager and Team Leader positions. The time requirements listed for qualification are measured by the actual time spent performing the designated activity or related tasks.

All applications for Program Manager and Team Leader certification will be reviewed and approved by the WSDOT H&LP. Certification is issued to an individual that meets the qualifications, not the agency. Certifications will be in writing to the individual in question. This written Certification will become part of the "Staff Qualification" file that the agency must maintain and which will be checked during QA/QC reviews. Agencies must retain a minimum of one certified Team Leader to have inspection responsibilities delegated to them.

Agencies that elect to hire consultants for bridge inspections are required to use qualified persons. The WSDOT Bridge Preservation office maintains a list of qualified inspection service consultants which is available through H&LP.

.24 Continued Certification of Bridge Inspection Personnel. Bridge Inspectors certified by the State must participate in a continuing education program to maintain certification. This program includes attending a refresher course every three years and a field evaluation performed by WSDOT H&LP during QA/QC reviews (see 34.3). Visit the Website at www.wsdot.wa.gov/TA/T2Center/Training/Software/ for Bridge Training opportunities.

.25 Bridge Inspection Records and File Requirements. Bridge owners are required to maintain a complete and current official bridge file for each National Bridge Inventory (NBI) structure. This file is to be maintained throughout the life of the bridge. Chapters 1 and 6 of the WSBIM list information the official bridge file should contain and detailed guidance on what to include.

Agencies must identify bridges requiring special attention and keep these Master Lists with the official bridge files. Items such as, Fracture Critical Member Inspections, Load Posted Bridges, Underwater Inspections, Complex Bridge Inspections, and Scour Critical Bridges, should be noted on the Master Lists.

Additionally, each member of the Inspection staff is required to have a current file detailing their experience and training.

.26 Bridge Load Ratings. All bridges require load ratings which must be stamped and signed by the Professional Engineer performing the rating and placed in the official bridge file discussed in Section 34.25. Bridges must be posted or restricted when the maximum load carrying capacity drops below the maximum unrestricted legal load. Additional load rating requirements are available in Chapter 5 of the WSBIM.

.27 Bridge Scour Analysis. A scour evaluation is required for each bridge over water. Chapter 5 of the WSBIM provides information necessary to perform this evaluation. The scour analysis must yield the federal scour code as detailed in Chapter 2 of the WSBIM under the Washington State Bridge Inventory System (WSBIS) WB76-80 card. This evaluation becomes part of the official bridge file discussed in Section 34.25.

Note: Codes U, T, and 6 are temporary codes and must be replaced with one of the permanent codes as soon as possible.

Plans of action for monitoring as well as scour mitigation plans are required for bridges determined "scour critical."

.28 Critical Damage Bridge Repair Reports. A Critical Damage Bridge Repair Report must be completed whenever a bridge is identified as having significant structural damage causing emergency load restrictions, lane closure, bridge closure, or if a bridge has failed.

H&LP Local Agency Bridge Engineer must be notified by telephone or e-mail within one working day of identification of a problem. This notification starts a series of reports that are ultimately forwarded to FHWA. This series of reports allows the local agency, H&LP, and FHWA to track the status of critically damaged bridges until the bridge is returned to full service. See Chapter 7 of the WSBIM for contact information, timelines, forms, and procedures.

34.3 Quality Assurance and Quality Control Reviews

H&LP conducts Quality Assurance and Quality Control (QA/QC) reviews statewide to maintain compliance with the NBIS standards and verify local bridge inspection programs are functioning effectively. Agencies will be reviewed a minimum of once every three years. H&LP will work with agency personnel in evaluating the program's strengths and weaknesses and make suggestions for correction of any program deficiencies.

The QA/QC reviews will factor in to the recertification of Team Leaders along with results from refresher training and individual evaluations. Some important elements that will be checked during the QA/QC review include the following:

a. Staff qualifications;

b. Completeness and organization of bridge files;

c. Accurate and current Master Lists;

d. Accurate and properly documented bridge load ratings;

e. Accurate and complete scour evaluations including scour codes and plans of action for all scour critical bridges;

f. Thoroughness and completeness of inspections;

g. Inspection frequency as outlined by the NBIS, see Appendix 34.602.

The results of the review will be discussed with the agency followed by a formal letter summarizing the review.

.31 WSDOT High Cost Bridge Inspection Program. Inspections requiring special access such as provided by scaffolding or an Under Bridge Inspection Truck (UBIT), fracture critical inspections, complex bridge inspections, and underwater inspections are considered High Cost Bridge Inspections. WSDOT provides this inspection at no cost to the agency.

34.4 Small City Bridges

Washington Counties have accepted inspection responsibilities for bridges owned by small cities (populations less than 5,000 people) located within their boundaries under the High Cost Inspection Agreement. Counties will be reimbursed for the cost of load ratings and scour evaluations performed for Small City bridges.

34.5 Highway Bridge Program Call for Projects

Counties and cities submit bridge projects to WSDOT in response to the Highway Bridge Program Call for Projects. These bridge projects must meet the eligibility requirements in Section 34.51.

The application requirements will be outlined in the actual call for projects.

.51 Highway Bridge Program Eligibility. A bridge project must fulfill the following federal criteria to be eligible for HBP funding:

1. The bridge must be a minimum of 20 feet in length measured along the centerline.
2. It must be recorded in the Washington State Bridge Inventory System (WSBIS) maintained by the WSDOT Bridge Preservation Office.
3. For replacement and rehabilitation, the bridge must be structurally deficient (SD) or functionally obsolete (FO) with sufficiency ratings as follow:
   a. For Replacement: less than 50.
   b. For Rehabilitation: 80 or less.
4. Preventive Maintenance: Eligible activities may be funded for bridges regardless of sufficiency rating.
5. No replacement or rehabilitation projects can have been performed using HBP funds in the past 10 years. There is no moratorium following preventive maintenance projects.

The Federal Highway Administration (FHWA) has developed a formula that calculates sufficiency ratings and assigns SD or FO designations. This computation is performed by the WSBIS using inventory and inspection data submitted by state and local agency bridge inspectors. The sufficiency rating is based on four factors: structural adequacy and safety, serviceability and functional obsolescence, essentiality for public use, and special reductions.

Ratings can range from 0 (worst) to 100 (best). Chapter 5 of the *Washington State Bridge Inspection Manual* (WSBIM) further explains sufficiency ratings and outlines criteria for structural deficiency and functional obsolescence. An online version of this manual is available at www.wsdot.wa.gov/TA/Operations/Bridge/WSBIM.pdf . A sufficiency rating generator is included as part of the Laptop98 Bridge Inspection software available for download at www.wsdot.wa.gov/TA/Software/.

.52 Bridge Replacement Design Standards. Bridges shall be designed in accordance with Chapter 42 and the following criteria:

1. Live Load: HL 93, HS 25-44 or equivalent.
2. Vertical Clearances: Clearance over roadways is a minimum 16.5 feet. Clearance over railroads is a minimum 23.5 feet.
3. Section 43.21 for Design-year ADT. Bridges shall be designed based on the following criteria:
4. Bridge Length: The length of the replacement bridge can be affected by one or both of the following factors:
    a. The bottom of the superstructure will be 3 feet above the 100 year flood or as determined by field review.
    b. The abutment and pier locations(s) of a new bridge generally reduce the existing backwater elevation. In fish bearing waters, acceptable rise in the backwater elevation is 0.2 foot above the no-bridge conditions, as referenced in WAC 220-110-070(1)(h). For non-fish bearing waters, the acceptable rise in the backwater elevation is 1 foot above no-bridge conditions.
5. Bridge Type: The bridge type selected will be the most economical type for the span length needed, based on sound engineering judgment and/or economics.
6. Bridge Foundation Type: The type and depth of the foundation elements will depend on the results of the geotechnical and scour analyses.

.53 Bridge Rehabilitation Criteria. To qualify as a rehabilitation project, the total rehabilitation costs shall not exceed 70 percent of the replacement costs. Rehabilitation projects will be subject to the following requirements:

1. Structural deficiencies will be removed.
2. Structure will be brought up to current standards.
3. Completed bridge must load rate at or above an H-15 inventory rating.

.54 Preventive Maintenance Criteria. These funds are intended for systematic preventive maintenance projects with a minimum estimated cost of $30,000. Project eligibility and priority ranking is based on the Washington

State Bridge Management System (BMS) element data. See Chapter 4 of the WSBIM for BMS information. These items have been approved as state wide systematic cost effective maintenance programs.

- Systematic preventive maintenance:
  - Bridge Member Strengthening
  - Movable Bridge Electrical/Mechanical
  - Deck/Joint Repair
  - Steel Bridge Painting
  - Seismic Retrofit

.55 Eligible Bridge Costs. The following are eligible bridge costs:

1. Bridge Construction: All items typically detailed by bridge designers (concrete, re-bar, piling, barriers, expansion dams, etc.).
2. Bridge Aesthetics: Limited to the treatment required in the approved NEPA documents. Typically, paints or pigmented sealers and fractured fin finishes on concrete structures will not be approved.
3. Demolition of existing structures.
4. Detour. All work items required to accommodate the construction of the new bridge.
5. Traffic Control for the Work Zone: Prorated by costs of bridge vs. approach work.
6. Structural Excavation and Backfill for Bridge: Includes abutments, wing walls, footings, cofferdams, etc.
7. Riprap Protecting Bridge Structure Within the Right-of-Way: Riprap placed within the right-of-way to protect the structure can be considered a bridge item.
8. Approach Slab: The approach slab is a reinforced concrete element that protects the bridge and abutments from impacts and can be considered a bridge item.
9. Approach Guardrail Transition Section: Approach guardrail systems are installed in accordance with Standard Plans and are considered a bridge item provided site conditions do no require unusually long transitions.
10. Retaining Walls (up to 20 feet maximum distance from the abutment): Retaining walls are structural elements that serve the same functions as the standard bridge wing walls and are designed by bridge designers. Retaining walls beyond these limits would not be considered bridge items.
11. Bridge Drainage: Including components necessary to carry water from the structure.

12. Environmental Mitigation: Prorated for the bridge, demolition of existing structure, and/or detours.

13. Mobilization: Prorated by costs of bridge and approach work.

Approach costs will be limited to 15 percent of the above items.

.56 On-Site Field Review of Candidates. The on-site field review verifies the condition of the bridge, review site information and finalizes scope of work.

a. Field Review Team. The Field Review Team consists of the WSDOT H&LP Bridge Engineer (Review Team leader), a local agency bridge owner representative, the Region Local Programs Engineer, and FHWA Division Bridge Engineer whenever possible. On non-CA agency bridges, the Field Review Team will also have a representative from the agency providing CA services for the non-CA agency. The H&LP Bridge Engineer may add other representatives as deemed appropriate for specialized conditions.

b. Review Procedures.

    1. The Field Review Team conducts an on-site review of proposed bridge projects. The Field Review Team may use results of a previous review for a bridge submitted but not funded, provided the review was conducted within the past three years.

    2. The Bridge Inspection Report is reviewed at the site. The Field Review Team looks for inconsistencies between condition codes, load ratings, postings, and other factors. The WSDOT H&LP Bridge Engineer calculates an independent sufficiency rating based on codes agreed to by the review team. The final sufficiency rating may change again based on information requested by the team but not available during the field review.

    3. The items submitted with the application are reviewed at the site. The Field Review Team reviews the site in detail and decides on which of three funding program best fits the condition of the bridge.

        a. Replacement projects, the bridge is rated as a good, fair, or poor project for replacement.

        b. Rehabilitation projects.

        c. Systematic Preventive maintenance.

    4. A consensus is reached on the appropriate funding program and scope of work for the project.

    5. The project cost estimate submitted by the agency is discussed in detail and revised as appropriate.

.57 Bridge Selection. The Bridge Replacement Advisory Committee (BRAC) convenes after the on-site field reviews are completed. Bridge projects are presented to the Committee ranked by their sufficiency rating or other criteria by specific funding program. Results of the field review, Review Team recommendations, and other pertinent information are presented to the committee. The Committee reviews all of the projects and then recommends projects for funding.

The BRAC consists of seven voting members and two alternates, four county engineers/public works directors, and four city engineers/public works directors and H&LP Engineering Services Manager serves as Chair. Alternates initially serve one year as a non-voting member then for three more years as a voting member. Alternates for either city or county may participate in the event a voting member from their respective association is absent.

The Director of H&LP reviews the list of projects recommended by the BRAC, accepts or modifies their recommendations, and approves a final list of bridges to receive funding. Counties and cities will receive a funding notification letter informing them that their bridge project has been approved for funding. The letter will identify the anticipated federal funding level and asks the agency to submit their request for funds through their Region Local Programs Engineer. This letter will also identify the percentage for bridge approach cost participation and any other requirements specific to the project.

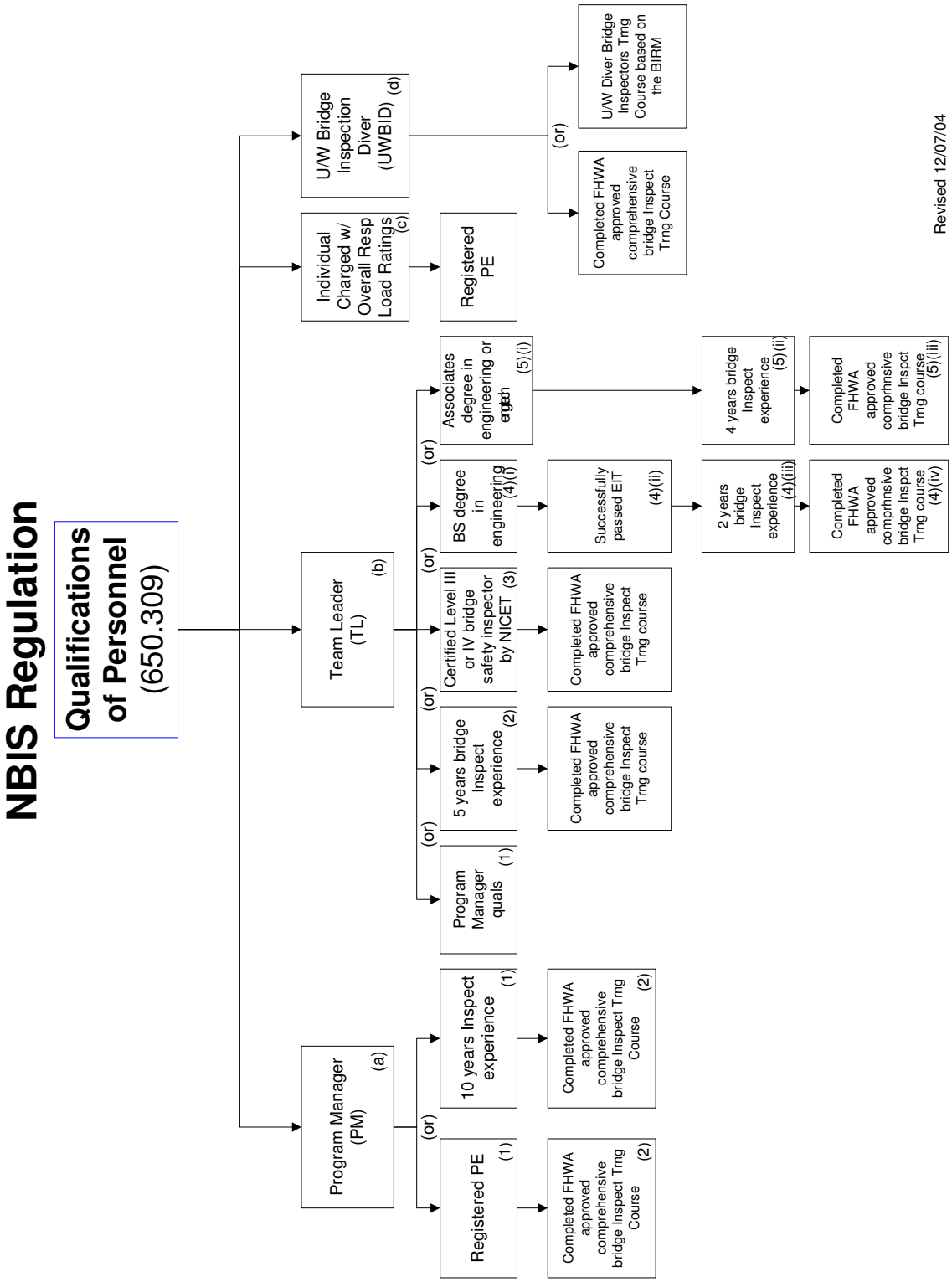
.58 Cost Increases. The level of federal project funding may be increased one time only. Request for increased funding should outline the reasons why additional funding is needed.

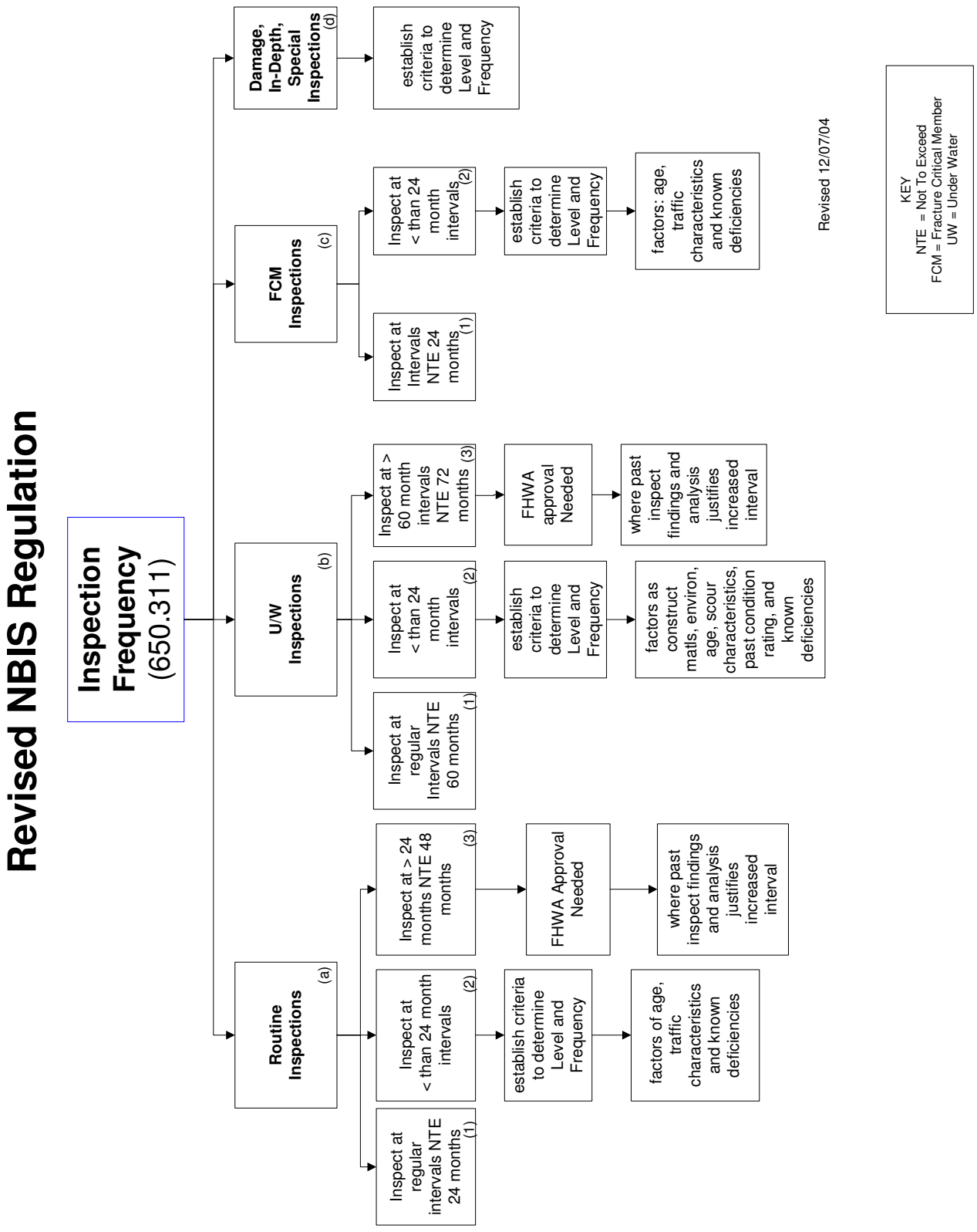
The local agency has the following options of bids are received that exceed the construction amount authorized in the funding notification letter:

- Request and receive approval from Highways & Local Program (H&LP) for the increase (provided no other funding increases have been granted).
- Award the project prior to receiving approval of H&LP and incur all costs above the authorized amount.
- With Concurrence from H&LP, reject all bids. (This is only required on projects that are funded at 100 percent.)

If additional funds are approved, H&LP will send a letter to the agency outlining the increase. The the local agency must then prepare, sign, and submit a Supplemental Agreement to the Region Local Programs Engineer for further processing.

34.6 Appendices


NBIS Regulation
Qualifications of Personnel (650.309)
Program Manager (PM) (a)
Registered PE (1)
Completed FHWA approved comprehensive bridge Inspect Trng Course (2)
(or)
10 years Inspect experience (1)
Completed FHWA approved comprehensive bridge Inspect Trng Course (2)
Team Leader (TL) (b)
Program Manager quals (1)
(or)
5 years bridge Inspect experience (2)
Completed FHWA approved comprehensive bridge Inspect Trng course
(or)
Certified Level III or IV bridge safety inspector by NICET (3)
Completed FHWA approved comprehensive bridge Inspect Trng course
(or)
BS degree in engineering (4)(i)
Successfully passed EIT (4)(ii)
2 years bridge Inspect experience (4)(iii)
Completed FHWA approved comprhnsive bridge Inspct Trng course (4)(iv)
(or)
Associates degree in engineering or engrg tech (5)(i)
4 years bridge Inspect experience (5)(ii)
Completed FHWA approved comprhnsive bridge Inspct Trng course (5)(iii)
Individual Charged w/ Overall Resp Load Ratings (c)
Registered PE
U/W Bridge Inspection Diver (UWBID) (d)
(or)
Completed FHWA approved comprehensive bridge Inspect Trng Course
U/W Diver Bridge Inspectors Trng Course based on the BIRM
Revised 12/07/04


Revised NBIS Regulation
Inspection Frequency (650.311)
Routine Inspections (a)
Inspect at regular intervals NTE 24 months (1)
Inspect at < than 24 month intervals (2)
establish criteria to determine Level and Frequency
factors of age, traffic characteristics and known deficiencies
Inspect at > 24 months NTE 48 months (3)
FHWA Approval Needed
where past inspect findings and analysis justifies increased interval
U/W Inspections (b)
Inspect at regular Intervals NTE 60 months (1)
Inspect at < than 24 month intervals (2)
establish criteria to determine Level and Frequency
factors as construct matls, environ, age, scour characteristics, past condition rating, and known deficiencies
Inspect at > 60 month intervals NTE 72 months (3)
FHWA approval Needed
where past inspect findings and analysis justifies increased interval
FCM Inspections (c)
Inspect at Intervals NTE 24 months (1)
Inspect at < than 24 month intervals (2)
establish criteria to determine Level and Frequency
factors: age, traffic characteristics and known deficiencies
Damage, In-Depth, Special Inspections (d)
establish criteria to determine Level and Frequency
Revised 12/07/04
KEY
NTE = Not To Exceed
FCM = Fracture Critical Member
UW = Under Water

Washington State Department of Transportation

Bridge Inspector Experience and Training Record

Team Leader Name	Date

Agency Name

Education

Institution	Major	Years	Degree

Professional Registration

State	Branch/Agency	Registration Number

Bridge Inspection Training

Course	Hours	Sponsor	Dates

Special Technical Course

Course	Hours	Sponsor	Dates

Bridge Inspection Experience

Agency/Firm	Bridge Duties	Years

To the best of my knowledge, the above information is true and accurate.

Team Leader's Signature _____ Date _____

Having reviewed the above information, I conclude that this individual meets the minimum qualifications for a bridge inspection team leader as specified in the current National Bridge Inspection Standards.

Team Leader's Supervisor's Signature _____ Date _____

Supervisor's Name (Print) _____ Title _____

DOT Form 234-100 EF
8/98

6.01 General

The on-site inspection of each bridge is important for gathering information about the bridge's structural condition and adequacy. This information must be stored as a permanent bridge record. Such a record provides a useful and accurate history. It also contains information on previous repairs and provides others with ready access to information.

Each agency is responsible for maintaining a bridge file for each bridge within its jurisdiction. A detailed list of information that should be in the bridge file is listed and described in Chapter 1. When inclusion of this information in the bridge file is not possible or impractical, reference to the location where it can be found will suffice.

In addition, agencies are required to maintain a record of other general information. This information may be requested during the quality assurance review of the bridge inspection program. The following general information should be on file:

- An experience and training record for each lead inspector.
- A master list of all bridges within the agency's jurisdiction. This list should identify bridges that have fracture critical members, require underwater inspection, and/or warrant special attention because of their design features, location, or strategic importance.

6.02 Individual Bridge Records

A permanent record on each bridge must be maintained. This record provides a history of the bridge's condition, maintenance, and inventory data. This information must be kept current. The National Bridge Inspection Standards (NBIS) require changes to the bridge record information to be reported quarterly.

A. Washington State Bridge Inventory System (WSBIS) Inventory Coding Form

   A copy of the completed WSBIS Inventory Coding Form must be in the bridge file as a ready source of the current bridge information. The procedures for establishing, maintaining, and updating the inventory information is described in detail in Chapter 2.

B. Bridge Inspection Reports

   Copies of all on-site inspection reports must be kept in the individual bridge file. The reports provide specific details about the bridge's condition, how conditions have changed over time, and any previous repairs or maintenance performed. This information is reviewed prior to each bridge on-site visit to prepare the inspector for the conditions or problems they may encounter. Procedures for completing bridge inspection reports are covered in Chapter 3.

C. Critical Damage Bridge Repair Report

A copy of the Critical Damage Bridge Repair Report must be kept in the bridge file. This report provides evidence that formal recommendations to correct major bridge damage were made and acted upon in a timely manner, ensuring the safety of the public. See Chapter 7 for more information.

D. Photographs

Labeled and dated copies of elevation and deck photographs of the bridge must be kept in the bridge file. The label should include the structure ID, bridge name, bridge number, inspector's initials, and a description including orientation. Whenever the bridge's condition changes, new photographs should be taken and added to the file. An agency may also keep on file photographs of problems or deficiencies discovered at the bridge (e.g., section loss in a deteriorating piling or significant spalling on a bridge deck). These photographs can provide documentation of existing or developing problems that could lead to repairs.

E. Plans

Most bridges will have detailed design plans used for the construction of the bridge. These plans should be kept in the bridge file. If these plans are not available, a detailed sketch of the bridge needs to be made showing bridge length, width, span length, clearances, and a typical section with bridge materials and dimensions.

F. Calculations

Bridge calculations necessary for inclusion in the bridge file are detailed in Chapter 5.

A copy of the stamped, signed and dated load rating must be kept in the bridge file. Include a note in the bridge file with location of any load rating that is too bulky to fit in the file itself.

Scour elevations must also be included in the bridge file. The scour evaluation must include the code entered in WB76 - 80 and an action plan for high water events for scour critical bridges.

G. Correspondence

All letters regarding the inspection, maintenance, or ownership of the bridge should be kept in the bridge file. This may include correspondence from FHWA, WSDOT, other agencies, and/or individuals.

H. Inspection Procedures

Each agency is required to develop and maintain procedures that address the special features of a bridge. Special features include fracture critical members, underwater elements, or any other feature requiring special attention due to location, strategic importance, or special design features.

The members that require an underwater inspection shall be identified and the inspection procedures specified. Waters deeper than 4 feet will normally require a diver that is trained in bridge inspections. Wading types of inspections can usually be performed by regular bridge inspection teams as part of the structural inspection. Detailed procedures for conducting these inspections are in Chapter 3.

I. Other Information

All other information gathered about the bridge should be kept on file. This includes details about maintenance work performed, special reports or studies, heat straightening, damage, and paint reports.

6.03 Master List

The purpose of a master list is to assist in the management of nonroutine inspections, bridges needing special attention and/or inspection equipment. Each agency is required to maintain a master list of:

- Bridges with fracture critical members
- Bridges requiring underwater diving inspections
- Bridges with special features (e.g., segmental bridges, etc.)

It is recommended that each agency maintain a master list of:

- Bridges that are scour critical
- Load posted bridges
- Bridges requiring an Under Bridge Inspection Truck to inspect limited access members
- Short span bridges
- Bridges needing repairs
- Bridges needing traffic control for routine inspections
- Fatigue cracked bridges
- Environmentally sensitive bridges
- Bridges needing deck replacement
- Bridges that are seismic vulnerable
- Bridges needing painting

This information can be used to plan, schedule, and monitor the special inspections. At a minimum, the following information must be included for each bridge:

- Bridge type and location
- Type and frequency of inspection required

- Location of particular members to be inspected
- Inspection procedures to be used
- Type of special equipment required
- Previous inspection dates
- Most recent inspection findings
- Any follow-up action taken as a result of the most recent inspection findings

Bridges are added to the master list when they are identified as needing an underwater, fracture critical, or special features inspections. As these inspections are performed, the master list is updated with the most current information. Bridges are kept on the master list throughout their service life, unless the bridge's category (e.g., fracture critical, special features, etc.) changes.

6.04 Short Span Bridges

Short span bridges (see Chapter 8) are bridges or multiple culverts having an opening of 20 feet or less. The short span bridges are generally not reported to the Federal Highway Administration. Washington State encourages the reporting of short span bridge information because of concerns about their condition and possible maintenance repairs required.

6.05 Inspector Qualifications

The NBIS outline the minimum training and experience required for the head of the bridge inspection organization and the lead bridge inspector. Each agency is required to maintain a record of qualifications for each of its bridge inspection personnel. The agency needs to include the names and qualifications of each individual performing bridge inspections.

The Bridge Inspector Experience and Training Record Form was developed for this purpose. The form is completed by the head of the bridge inspection organization who verifies that lead inspectors meet the qualifications. The completed form is sent to the Bridge Engineer for Local Agencies for review and the issuance of a bridge inspector identification number. This number is required on the inspection reports. A copy of the completed form is kept on file with the agency.

Each agency is responsible for keeping this information current. During the quality assurance review process, agencies may be asked to verify the qualifications of their inspectors.

Forms

Bridge Inspector Experience and Training Record

Bridge Program Files (Chapter 34)
Washington State Bridge Inspection Manual (WSBIM) Chapter 6

Individual Bridge Record

Bridge Name _____
Bridge Number _____ Structure I.D. _____

Date Initials	or N/A	
_____	_____	Current Washington State Bridge Inventory Coding Form (WSBIS)
_____	_____	Inspection date is current
_____	_____	Data is complete and correct (WSBIM Ch. 2)
_____	_____	Bridge Condition Inspection Report History
_____	_____	Reports signed and dated by qualified Team Leader
_____	_____	Team Leader qualification and training file up-to-date
_____	_____	History complete according to inspection frequency
_____	_____	Critical Finding (WSBIM Ch. 7)
_____	_____	Critical Damage Bridge Repair Report
_____	_____	Follow-up information (Inspection/Design/Repair)
_____	_____	Conclusion (Bridge reopened or permanently closed)
_____	_____	Photographs (deck and elevation at a minimum)
_____	_____	Date, description, orientation, inspector's initials
_____	_____	Location if not in individual bridge file
_____	_____	Bridge plans or detailed drawings
_____	_____	Plans do not exist
_____	_____	Location if not in individual bridge file
_____	_____	Scour Analysis (WSBIM Ch. 5)
_____	_____	Bridge is not over water
_____	_____	Analysis defines the WB76-80 Scour Code
_____	_____	If Scour Critical
_____	_____	Action plan
_____	_____	Bridge is included on Scour Critical Master List

_____ _____ Load Rating (WSBIM Ch. 5)

- _____ _____ Stamped, signed, and dated by Professional Engineer
- _____ _____ WB72-93 coded correctly per load rating
- _____ _____ Bridge is posted if necessary
- _____ _____ Bridge is included on master list of posted bridges
- _____ _____ WB76-60 coded correctly
- _____ _____ WB75-51 through WB77-55 correctly coded
- _____ _____ Location if not in individual bridge file

_____ _____ General Correspondence

_____ _____ Inspection Procedures (WSBIM Ch. 3)

- _____ _____ Bridge is Fracture Critical
- _____ _____ Bridge is on Fracture Critical Master List
- _____ _____ Fracture Critical procedures
- _____ _____ Bridge requires underwater inspection
- _____ _____ Bridge is on Under Water Inspection Master list
- _____ _____ Underwater Inspection procedures
- _____ _____ Bridge is Complex
- _____ _____ Bridge is Complex Bridge Master List
- _____ _____ Complex Bridge Inspection Procedures

_____ _____ Maintenance Records

- _____ _____ Maintenance recommendations on inspection report
- _____ _____ Maintenance initiation (signed, dated)
- _____ _____ Maintenance completed (signed, dated, description)

_____ _____ Other Information

- _____ _____ Special reports