

## 1-1 General

The National Bridge Inspection Standards (NBIS) are published in the Code of Federal Regulations, 23 CFR 650, Subpart C. The NBIS sets the national standard for the proper safety inspection and evaluation of bridges and it applies to all structures defined as reportable structures located on all public roads, on and off Federal-aid highways, including tribally and federally owned tunnels.

The National Tunnel Inspection Standards (NTIS) are published in the Code of Federal Regulations, 23 CFR 650, Subpart E. The NTIS sets the national standard for the proper safety inspection and evaluation of all highway tunnels on all public roads, on and off Federal-aid highways, including tribally and federally owned tunnels.

Washington State's bridge inspection organization is required to meet the NBIS, NTIS, and functions under the authority of the Federal Highway Administration (FHWA) and state law. Washington State's bridge inspection organization, however, is only responsible for state and local agency-owned bridges and tunnels. Federally-owned bridges are inventoried and managed by federal agencies. Privately-owned highway bridges are not included in this requirement unless it is connected to a public road on both ends of the bridge. WSDOT encourages private bridge owners to inspect and maintain their bridges in conformance with the NBIS, NTIS, and this manual. There is an open invitation for private bridge owners to submit bridge records to the Washington State Bridge Inventory System (WSBIS).

### 1-1.1 Definitions

**BEIS** – Bridge Engineering Information System. The WSDOT internal website that holds electronic bridge files.

**Bridge** – All reportable structures that include bridges, culverts, and tunnels. See also definition of Reportable Structure below.

**BridgeWorks** – The software application that is used to record, process and report bridge inspections and which updates data in the inventory databases.

**Bridge Condition Inspection Training (BCIT)** – A comprehensive ten day training course offered by WSDOT based on the 2012 FHWA “*Bridge Inspectors Reference Manual (BIRM)*”. The BCIT is an FHWA accepted equivalent to the course offered by the National Highway Institute (NHI), entitled “Safety Inspection of In-Service Bridges” with a course code of FHWA-NHI-130055.

**Bridge File** – A file containing historic and current information about a bridge, and meeting the intent of Chapter 2 of the AASHTO *Manual for Bridge Evaluation*.

**Bridge Inspection** – The act to assess the structural condition and collect pertinent data while on site of in-service bridges.

**Bridge Inspection Certification** – A process by which a Program manager, Team Leader and Underwater Bridge Inspection Diver is certified in the state of Washington to perform bridge inspections. See [Section 1-5](#).

**Bridge Inspection Committee (BIC)** – A committee of state and local agency representatives that provides overall advisory input to the bridge inspection manual content and organization within the state of Washington. The current list of committee members is located within the Foreword of this manual.

**Bridge Inspection Organization** – See [Section 1-2](#)

**Bridge Inspection Program** – An organizational unit that functions as part of the Bridge Inspection Organization and that meets the requirements of 23 CFR 650.307, 23 CFR 650.507, and this manual. Agencies involved with the Bridge Inspection Program are led by delegated program managers, who work in coordination with the Statewide Program Manager.

**Critical Finding** – See [Section 6-2](#)

**Culvert** – A structure comprised of one or more barrels, beneath an embankment and designed structurally to account for soil-structure interaction. These structures are hydraulically and structurally designed to convey water, sediment, debris, and, in many cases, aquatic and terrestrial organisms through roadway embankments. Culvert barrels have many sizes and shapes and have inverts that are either integral or open, i.e. supported by spread or pile-supported footings. Many culverts take advantage of headwater submergence of the inlet to increase hydraulic efficiency and economy.

**Delegated Program Manager (DPM)** – See [Section 1-4.2](#)

**Element Level Bridge inspection Data** – Quantitative condition assessment data, collected during bridge inspections, that indicates the severity and extent of defects in bridge elements.

**Hands-on inspection** – Inspection within arm’s length of the member. Inspection uses visual techniques that may be supplemented by nondestructive evaluation techniques.

**Highway Lid** – A structure built with green space which interconnects neighborhoods otherwise cut off or impacted by freeways, with or without local roads. If carrying local roads, the structure must have a deck area at least twice the area of the roads it carries. Highway lids shall be inventoried as tunnels under the NTIS.

**Inventory Record** – Data which has been coded according to this manual for each structure carrying public road traffic and/or for each inventory route which goes under a structure.

**Inventory Route** – The route for which the applicable inventory data is to be recorded. The inventory route may be on the structure or under the structure. Generally, inventories along a route are made from west to east and south to north.

**Local Agency** – Generally refers to city or county bridge owners but also includes all bridge owners other than state and federal.

**National Bridge Inspection Standards (NBIS)** – Title 23 Code of Federal Regulations 650 Subpart C defines the NBIS regulations, and establishes requirements for inspection procedures, inspection intervals, qualifications of personnel, inspection reports, and preparation and maintenance of a state bridge inventory. The NBIS apply to all structures defined as bridges located on all public roads.

**National Bridge Inventory (NBI)** – The aggregation of structure inventory and appraisal data collected nationally to fulfill the requirements of the National Bridge Inspection Standards. The state of Washington shall prepare and maintain an inventory of all bridges subject to the NBIS.

**National Tunnel Inspection Standards (NTIS)** – Title 23 Code of Federal Regulations 650 Subpart E defines the NTIS regulations, and establishes requirements for inspection procedures, inspection intervals, qualifications of personnel, inspection reports, and preparation and maintenance of a state tunnel inventory. The NTIS apply to all structures defined as highway tunnels located on all public roads.

**National Tunnel Inventory (NTI)** – The aggregation of structure inventory and appraisal data collected nationally to fulfill the requirements of the National Tunnel Inspection Standards. The state of Washington shall prepare and maintain an inventory of all tunnels subject to the NTIS.

**Nationally Certified Bridge Inspector** – An individual meeting the team leader requirements of [Section 1-4.3](#).

**Nonredundant Steel Tension Member (NSTM)** – A primary steel member fully or partially in tension, and without load path redundancy, system redundancy or internal redundancy, whose failure may cause a portion of or the entire bridge to collapse. These elements were formerly referred to as Fracture Critical Members (FCM).

**Public Road** – Any road under the jurisdiction of and maintained by a public authority and open to public travel.

**Rehabilitation** – The major work required to restore the structural integrity of a bridge as well as work necessary to correct major safety defects.

**Reportable Structure** – The NBIS gives the following definition: “A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.” Reportable structures also include tunnels reported to the NTI.

**The State** – The Washington State Department of Transportation (WSDOT).

**Statewide Program Manager (SPM)** – See [Section 1-4.1](#)

**Super User** – Bridgeworks/WSBIS account that has permissions that allows user to approve changes (release) in the application that other users do not have sufficient permissions to perform. Examples of these types of data changes are changes of Program Manager, changes to the owner, and obsoleting of structures.

**Tunnel** – The term “tunnel” means an enclosed roadway for motor vehicle traffic with vehicle access limited to portals, regardless of type of structure or method of construction, that requires, based on the owner’s determination, special design considerations that may include lighting, ventilation, fire protection systems, and emergency egress capacity. The term “tunnel” does not include bridges or culverts inspected under the National Bridge Inspection Standards (Title 23 Code of Federal Regulations 650 Subpart C). The state of Washington shall prepare and maintain an inventory of all tunnels subject to the NTIS.

**Washington State Bridge Inventory System (WSBIS)** – The aggregation of structure inventory, and appraisal data collected and used to fulfill the requirements of the NBIS/NTIS and additional data used to manage the state and local bridge inventories.

## 1-2 Description of Bridge Inspection Organization

In Washington State, the bridge inspection organization is structured as a collaborative effort between the Washington State Department of Transportation (WSDOT) Bridge Preservation Office (BPO), WSDOT Local Programs Office (LP), and local agency bridge owners with the Federal Highway Administration (FHWA) as a primary stakeholder. Collectively, all state and local agency owned bridges subject to the NBIS and NTIS are managed under this organization. The inspection organization is led by the State Bridge Preservation Engineer (who serves as the Statewide Program Manager) and is advised by the Bridge Inspection Committee.

The bridge inspection organization has the following responsibilities:

- Establishing an organizational structure within the state that clearly defines the roles and responsibilities of those agencies required to participate.
- Maintaining a registry of nationally certified bridge and tunnel inspectors that includes, at a minimum, a method to positively identify each inspector, inspector’s qualification records, inspector’s current contact information, and detailed information about any adverse action that may affect the good standing of the inspector.
- Maintaining a certification program for program managers, team leaders, load raters and underwater bridge inspection divers.
- Performing regularly scheduled in-service bridge inspections. This includes, but is not limited to, routine (low/high risk), underwater (low/high risk) and nonredundant steel tension member inspections.
- Performing regularly scheduled in-service tunnel inspections.
- Establishing state specific load rating procedures and maintaining load ratings based on current conditions of all NBI and NTI reportable structures.
- Following MBE criteria for load posting/restricting bridges.
- Establishing and specifying written inspection procedures for:
  - Nonredundant Steel Tension Members
  - Underwater Bridge Elements
  - Complex Bridge Features
  - Tunnels

- Performing scour appraisals for all bridges over water.
- Maintaining scour Plan of Action (POA) documents for all bridges documented to be vulnerable to scour.
- Establishing quality control and quality assurance procedures to maintain a high degree of accuracy and consistency within the inspection program.
- Responding to and reporting of critical findings to the FHWA Washington Division Bridge Engineer.
- Maintain a separate inventory of bridges and tunnels for the entire state.
- Maintaining a bridge/tunnel file (electronic and/or physical) for every bridge/tunnel in the inventory.
- Maintaining National Bridge Inventory (NBI) data that follows the Federal Coding Guide criteria or can be translated into that system during the annual submittal of data. Washington State is currently transitioning to the Specifications for the National Bridge Inventory with full transition scheduled to be complete by March of 2028.
- Maintaining National Tunnel Inventory (NTI) data that follows the Specifications for the National Tunnel Inventory criteria for the annual submittal of data.
- Maintaining Bridge Management System data that follows the National Bridge Element (NBE) condition assessment criteria or can be translated into that system during the annual submittal of data.
- Submitting required Washington bridge inventory data to FHWA for incorporation into the National Bridge Inventory (NBI).
- Submitting required Washington tunnel inventory data to FHWA for incorporation into the National Tunnel Inventory (NTI).

The bridge inspection organization's activities also include the following which although are not explicitly required by the NBIS or NTIS, but are either strongly implied or required by other FHWA policies:

- Responding to FHWA Technical Advisories, FHWA Action Memoranda, and other policy or information requirements provided by the FHWA Washington Division Bridge Engineer.

The bridge inspection organization is also responsible for the following activities which are clearly part of managing bridges but not required by the NBIS.

- Bridge repair management.
- Managing non-NBIS structures.

## 1-3 Bridge Inspection Programs

The composition and size of each bridge inspection program varies widely, generally depending on the number of bridges/tunnels managed by each agency. Two state offices play key roles in the organization:

- **Bridge Preservation Office (BPO)** – This office is dedicated to running the bridge inspection program for all state owned bridges and tunnels. This includes bridges and tunnels managed by State Parks, Department of Enterprise Services, and other state agencies with bridges/tunnels subject to the NBIS/NTIS. BPO also co-manages bridges on the border with Oregon and Idaho. The BPO is led by the Bridge Preservation Engineer who also functions as the Statewide Program Manager.
- **Local Programs (LP)** – This office provides support and services to local agency bridge inspection programs. LP provides training, manages the inspector certification program, and many aspects of the local agency bridge and tunnel inventory data. The WSDOT Local Programs Bridge Engineer (LPBE) functions as a delegated program manager for all local agency bridges and tunnels.

Local agencies have a wide variety of bridge/tunnel inspection programs, which generally fall into the following categories:

- Local agencies with a delegated program manager and bridge/tunnel inspection staff working directly for them.
- Local agencies with a delegated program manager and agency contracts out to other agencies or consultants for completion of bridge/tunnel inspection work.
- Local agencies without a delegated program manager but with bridge/tunnel inspection staff.
- Local agencies without a bridge/tunnel inspection program. These agencies have agreements with other agencies or consultants to inspect and manage their bridges/tunnels.

## 1-4 Bridge Inspection Organization Roles and Responsibilities

The bridge inspection organization, and the various programs within it, are staffed by individuals who have defined roles and responsibilities described as follows.

### 1-4.1 *Statewide Program Manager (SPM)*

The Statewide Program Manager is the individual in Washington State who leads the bridge inspection organization. This position is held by the Bridge Preservation Engineer, who must ensure that the organization fulfills its NBIS and NTIS responsibilities, see Appendix 1-C. To qualify as the SPM, WSDOT requires this individual to have a current Professional Engineering license and qualify as a certified team leader. The SPM must also be recertified on a regular basis by attending a refresher training class according to state policy. The certification process is described in detail in [Section 1-5](#).

### 1-4.2 **Delegated Program Manager (DPM)**

A delegated program manager assumes duties of the program manager for the selected subset of bridges and tunnels under their direct control, See [Appendix 1-D](#). To qualify as a delegated program manager, the individual must meet, at a minimum, the program manager requirements as described in the NBIS and NTIS. Delegated program managers must be recertified on a regular basis by attending a refresher training class according to state policy. The certification process is described in detail in [Section 1-5](#).

**Note:** Although delegated program managers perform duties for the bridge inspection organization, overall responsibility for NBIS and NTIS compliance still resides with the Statewide Program Manager as defined by the NBIS and NTIS.

### 1-4.3 **Team Leader (TL)**

A team leader is in charge of an inspection team and responsible for planning, preparing, and performing the field inspection of bridges and/or tunnels. The team leader also makes repair recommendations and is responsible for initiating the critical damage procedures including full bridge or tunnel closure if deemed necessary. To qualify as a team leader, the individual must meet, at a minimum, the team leader requirements as described in the NBIS and NTIS. Team leaders must be recertified on a regular basis by attending a refresher training class according to state policy. The certification process is described in detail in [Section 1-5](#).

### 1-4.4 **Assistant Inspector**

An assistant inspector (Co-Inspector) may accompany the team leader during field bridge/tunnel inspections. Typical duties include helping to organize bridge/tunnel inspection trips, taking measurements, compiling notes, and taking photographs. When assistant inspectors also fully participate in the inspection process and prepare inspection reports under the direct supervision of a team leader, this work provides qualifying experience towards certification as a team leader.

**Note:** The NBIS/NTIS does not set specific training or educational requirements for assistant inspectors. However, bridge/tunnel inspector training is recommended and available to all assistant bridge/tunnel inspectors to serve as a good foundation for beginning inspectors as well as being a requirement for advancement to team leader.

### 1-4.5 **Load Rating Engineer (LRE)**

A load rating engineer manages all aspects of maintaining current and accurate load ratings for bridges/tunnels they are responsible for in their inventory. Responsibilities include reviewing inspection reports for changed conditions that warrant revisions to the load ratings on file, revising load ratings as needed, creating new load ratings for new bridges/tunnels, and ensuring that the findings from load ratings are implemented. In particular, the load rating engineer must track bridges/tunnels that require posting and ensure that the bridge/tunnel inventory has current data from the load ratings.

**Note:** To qualify as a load rating engineer in the BPO, the individual must have 4 years of bridge design or load rating experience and a current Professional Engineering license.

## 1-4.6 Underwater Bridge Inspection Diver (UBID)

To qualify as an underwater bridge inspection diver, the individual must meet, at a minimum, the underwater bridge inspection diver requirements as described in the NBIS. The certification process is described in detail in [Section 1-5](#).

**Note:** The BPO has a Dive Safety Manual that regulates the diving activities for the BPO UBID's.

## 1-4.7 FHWA Division Bridge Engineer (DBE)

The Washington Division Office of the FHWA has assigned a Division Bridge Engineer to work collaboratively with the bridge inspection organization. The DBE works directly with the SPM and LPBE on resolving issues of compliance and is an active member of the BIC. The DBE has federal authority to approve the policy and procedures of this manual as noted in the [Foreword](#) of this manual.

## 1-5 Bridge/Tunnel Inspection Certification

Certification for bridge/tunnel inspection work within the state of Washington is a two-fold process that consists of the initial certification and subsequent certification renewals for the SPM, DPM's, TL's, and UBID's. For the purposes of simplifying the explanation of this procedure, the general term program manager (PM) will be used in place of SPM and DPM. The following requirements will pertain to both positions unless otherwise noted.

### 1-5.1 Initial Certification

The minimum qualifications for prospective individuals are described within Sections 309 and 509 of 23 CFR 650, Subpart C and E of the NBIS and NTIS respectively. To ensure that these requirements are met, the following steps outline the process for those individuals seeking initial certification.

- Fill out the WSDOT Bridge/Tunnel Inspector Experience and Training Record form, see [Appendix 1-A](#).
- Submit an electronic copy of the completed form along with the following applicable documents to the WSDOT Local Programs Bridge Engineer (LPBE) for review:
  - Higher education degree(s).
  - Registered professional engineering license(s).
  - Certificate of successful completion of an FHWA approved comprehensive bridge inspection course such as the WSDOT *Bridge Condition Inspection Training (BCIT)* course (10 day), *NHI Safety Inspection of In-Service Bridges* course (10day), or *NHI Safety Inspection of In-Service Bridge for Professional Engineers* course (5 day) and score 70% or greater on an end-of-course assessment.
  - Certificate of completion of an FHWA approved comprehensive tunnel inspection training course and a score 70% or greater on an end-of-course assessment if the team leader is expected to perform tunnel inspections.
  - Certificate of completion of an FHWA-approved NSTM bridge inspection training course and a score of 70% or greater on an end-of-course assessment if the team leader is expected to perform NSTM inspections.



- Certificate of completion of an FHWA-approved underwater bridge inspection training course and a score of 70% or greater on an end-of-course assessment if the team leader is expected to perform underwater inspections.
- Certificates of completion for any special technical courses related to in-service bridge and/or tunnel condition inspection.
- Any additional information documenting the bridge and/or tunnel inspection experience of the applicant.
- Approved applicants are issued a WSDOT Inspection Identification Number that is acknowledged through an email response from the LPBE. The Inspector ID number is stored within the BridgeWorks application and is used to identify certified team leaders and the applicable inspection types that they are permitted to perform, see Table BIE01a - Report Types and Subtypes, within Appendix C.
- In addition to the minimum qualifications, the SPM, TL's within the BPO, and the LPBE, are all required to be registered professional engineers in Washington State.

## 1-5.2 Certification Renewal

Certification renewal ensures that the PM's, TL's, and UBID's in any agency maintain a minimum level of training in the latest practices and technology in the area of bridge or tunnel inspections. The training may consist of inspection related courses, conferences, seminars and other sources of education deemed qualified by the SPM and LPBE. A list of approved courses is located in [Appendix 1-B](#). This process within the State of Washington consists of a fixed 60 month period established for each individual PM, TL and UBID. Within this 60 month period, the following course credit hours are required for continuing education training.

- State PM and TL's and UBID's are required to have 80 hours.
- Local Agency PM's and TL's and UBID's are required to have 40 hours.

60 month certification period

- The 60 month certification period is to be managed between the individual and the designated PM.
- Depending on the individual's need, the *NHI Bridge Inspection Refresher Training (BIRT) course or other State, local or other federally developed and approved instruction* course must be taken at least once during each 60 month certification period.
- The hours for these two particular courses can only be counted once as credit during each 60 month certification period.
- The hours from BIRT course count toward completion of the designated hours of continuing education training required to maintain certification.
- For purposes of ensuring enrollment in a BIRT course, the BIRT can be taken within six months either side of the established certification expiration date of the current 60 month period for each employee to extend certification for the next 60 month period. The employee should be placed under probation and a plan of corrective action created if the expiration date is exceeded by going beyond the 60 month period. See [Section 1-6](#).
- Complete a cumulative total of 18 hours of FHWA approved tunnel inspection refresher training over each 60-month period.

### 1-5.3 Certification Roles and Responsibilities

1. Employee Responsibilities:
  - a. The PM, TL and UBID are responsible for maintaining an individual accounting of the approved training courses they have taken in the established 60 month re-certification period.
  - b. The PM, TL and UBID are responsible to attend training when scheduled and to seek out attendance when needed.
  - c. Continuing education courses, seminars or conferences pertaining to bridge inspection work, that are not pre-approved as qualifying classes are to be submitted to the SPM or LPBE for consideration. The following information is needed when submitting a class to the SPM or LPBE for approval.
    1. Course/Conference title
    2. Course/Conference description
    3. Course/Conference duration
    4. Course/Conference date
    5. Explanation of how the course/conference provides the latest practices and/or technology in the area of bridge inspections.Upon PM approval, the class will be added to the pre-approved class list.
2. Supervisor Responsibilities:
  - a. Meet annually during the employee's annual evaluation to discuss training completed and overall status for re-certification.
  - b. Ensure the employees have opportunity to attend training that qualifies for recertification.

### 1-6 Bridge Inspection Certification Probation, Suspension, Decertification and Reinstatement

To couple the process of certification above in [Section 1-5](#), a process for decertification has been established to ensure that all PM's, TL's, UBID's are following the proper conduct of their respective positions.

Key Terms:

- **Appointing Authority** – The designated authority that oversees the sanctions of probation, suspension or decertification of a PM, TL and UBID.
- **Probationary Period** – A PM, TL or UBID is allowed to continue their duties for a prescribed timeframe in order to complete an approved Plan of Corrective Action.
- **Plan of Corrective Action** – A personalized plan approved by the Appointing Authority that identifies criteria the PM, TL, or UBID must complete within an established timeframe for inspection re-certification.
- **Suspension** – Temporary removal of inspection certification as PM, TL or UBID.
- **Decertification** – Permanent removal of inspection certification as PM, TL or UBID until a formal Plan of Corrective Action is administered by the Appointing Authority and fulfilled by the PM, TL or UBID.

Three examples in which a certified PM, TL or UBID may be placed on probation or suspended are listed below. Decertification can result immediately upon knowledge of conduct presented below or if the PM, TL or UBID does not meet the terms agreed upon in the plan of corrective action:

1. If a PM, TL or UBID does not fulfill the requirements for recertification ([Section 1-5](#)).
2. If a PM, TL or UBID is found to be using poor inspection practices or producing inadequate inspection documents as assessed by the QC/QA process.
3. If a PM, TL or UBID is found to be falsifying bridge inspection records, misrepresenting bridge hours on site or otherwise failing to meet general ethical standards.

Reinstatement of certification from suspension or completing probation requirements will require a formal plan of corrective action. This may be a simple process or more complex based on the nature of the situation.

This formal plan of corrective action consists of the following:

- The suspended PM, TL, or UBID will be notified in writing by the appointing authority that a plan of corrective action is needed.
- A plan of corrective action developed by the employee is to be approved by the appointing authority.
- Based on the circumstances in examples 1 and 2 above, the PM, TL, or UBID may be required to attend additional Bridge Inspector training classes beyond the continuing education requirements of [Section 1-5](#) as specified by the appointing authority involved in the formal review. The PM, TL or UBID may also be required to receive additional field instruction by the direct supervisor.
- For the circumstance in example 3 above, the PM, TL or UBID may be subjected to more strict consequences as determined by the appointing authority.

A PM, TL or UBID who successfully completes the plan of corrective action will be considered to be in good standing. A PM, TL or UBID who does not satisfactorily complete the plan of corrective action may be decertified.

The DPM will notify the SPM when a PM, TL or UBID in a Local Agency is placed on probation or is suspended, as well as the resulting reinstatement or decertification.

## 1-7 Appendices

- [Appendix 1-A](#) WSDOT Bridge/Tunnel Inspector Experience and Training Record form
- [Appendix 1-B](#) Continuing Education Course List
- [Appendix 1-C](#) SPM delegation letter
- [Appendix 1-D](#) DPM delegation letters

# WSDOT Bridge/Tunnel Inspector Experience and Training Record Form



## WSDOT Bridge/Tunnel Inspector Experience and Training Record

Team Leader Name		Date
Agency Name		Phone
Address		Email
<b>NBIS Qualification</b> - select one. See detailed list on page 2. All require completion of comprehensive bridge inspection training from WSDOT or NHI or equivalent. <input type="checkbox"/> 1a - PE + Experience <input type="checkbox"/> 1b - Experience (10 years) <input type="checkbox"/> 2 - Experience (5 years) <input type="checkbox"/> 3 - Bachelor's + EIT + Experience <input type="checkbox"/> 4 - Associate's + Experience		

### Inspection Type Qualifications

For each type, include course details below and attach course certificate

<input type="checkbox"/>	Completed comprehensive bridge inspector training (NHI or equivalent)
<input type="checkbox"/>	Completed NSTM training course (NHI or equivalent)
<input type="checkbox"/>	Completed comprehensive tunnel inspector training (NHI or equivalent)
<input type="checkbox"/>	Completed Underwater Bridge Inspection Diver training (NHI or equivalent)

### Education

Institution (ABET accredited program)	Major	Years	Degree

### Professional Registration (WA preferred, otherwise list any one active licensure location)

State	Branch/Agency	Registration Number

### Bridge Inspection Training

Course	Sponsor	Hours	Dates

### Special Technical Course

Course	Sponsor	Hours	Dates

### Bridge Inspection Experience

Agency/Firm	Bridge Duties	Years

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

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Applicant's Signature \_\_\_\_\_ Date \_\_\_\_\_

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

Team Leader's Signature	Date
Team Leader's Name (Print)	Title

Supplemental Training/Experience Information			
Bridge Inspection Training			
Course	Sponsor	Hours	Dates
Special Technical Course			
Course	Sponsor	Hours	Dates
Bridge Inspection Experience			
Agency/Firm	Bridge Duties	Years	

National Bridge Inspection Standards Qualifications of Bridge Inspection Personnel (23 CFR §650.309) Team Leader (summarized)				
1a	Registered PE <i>and</i>	BCIT or equivalent*** <i>and</i>	6 months of bridge experience	
1b	10 years bridge inspection experience <i>and</i>	BCIT or equivalent***		
2	Five years of bridge inspection experience <i>and</i>	BCIT or equivalent*		
3	Bachelor's degree in engineering from and accredited program <i>and</i>	EIT** and	Two years of bridge inspection experience and	BCIT or equivalent*
4	Associate's degree in engineering or engineering technology from an accredited program <i>and</i>	Four years of bridge inspection experience and	BCIT or equivalent*	

\*BCIT or equivalent requires successful completion of a Federal Highway Administration (FHWA) approved comprehensive bridge inspection training course  
 \*\*EIT requires successfully passed the NCEES Fundamentals of Engineering Exam  
 \*\*\*Same as Program Manager  
 DOT Form 234-100  
 Revised 12/2022

## **Appendix 1-B Continuing Education Course List**

For the purpose of continued certification as the SPM, TL, or UBID within the Bridge Preservation Office, the following list of courses are examples of qualifying courses for bridge inspection with estimated hours to acquire the necessary continuing education hours in an established 60 month period for each individual employee.

WSDOT/LTAP – Bridge Condition Inspection Fundamentals (BCIF)	24 hours
WSDOT/LTAP – Bridge Condition Inspection Training (BCIT)	72 hours
WSDOT/LTAP – Bridge Condition Inspection Update (BCIU)	16 hours
WSDOT/LTAP – Bridge Inventory Coding	18 hours
NHI Safety Inspection of In Service Bridges	74 hours
NHI Bridge Inspection Refresher Training	18 - 20 hours
NHI Stream Stability and Scour at Highway Bridges for Bridge Inspectors	8 hours
NHI Stream Stability and Scour at Highway Bridges	24 hours
NHI Underwater Bridge Inspection	24 hours
NHI Fracture Critical Inspection Techniques for Steel Bridges	25 hours
NHI Tunnel Safety Inspection	31 hours
NHI Tunnel Safety Inspection Refresher WBT Prerequisite	4 hours
NHI Tunnel Safety Inspection Refresher ILT	17 hours
NDT – Dye Penetrant Testing	12 hours
NDT – Magnetic Particle Testing	20 hours
NDT – Ultrasonic Testing	32 hours
PNW Bridge Maintenance Conference	Credit as appropriate
Bridge & Tunnel Inspectors’ Conference	Credit as appropriate
Annual Inspection Process Change Meeting	Credit as appropriate
Western Bridge Engineers Seminar	Credit as appropriate

Additional courses, seminars or conferences of similar content can be considered for approval by the SPM or LBPE.

Documents available as reference and training material include but are not limited to the following:

- *Washington State Bridge Inspection Manual (WSBIM)*
- *Bridge Inspection Reference Manual (BIRM)*
- *The Manual for Bridge Evaluation (MBE)*
- *Timber Bridges Manual (USDA)*
- *Specifications for the National Tunnel Inventory (SNTI)*
- *Tunnel Operations, Maintenance, Inspection, and Evaluation (TOMIE) Manual*
- *WSDOT Transportation Structures Preservation Manual*

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# Appendix 1-C      SPM Delegation Letter



## Memorandum

November 16, 2023

TO: Roman Peralta, Bridge Preservation Engineer  
Bridge and Structures Office, Development Division

THRU: Mark Gaines,  
Development Division Director and State Design Engineer

FROM: R. Marshall Elizer, Jr., P.E., PTOE *RMC*  
Assistant Secretary for Multimodal Development Delivery

SUBJECT: Delegation of NBIS Program Manager for Statewide Bridge Inspection Program

This is to advise you that as the incumbent Bridge Preservation Engineer of the Bridge and Structures Office, you are hereby delegated authority as Program Manager for the statewide bridge inspection program, as defined in the National Bridge Inspection Standards (NBIS) 23 CFR §650.307(g), §650.307(e) (1) through (11), and the National Tunnel Inspection Standards (NTIS) 23 CFR §650.507(g), §650.507(e) (1), §650.507(e) (2), §650.507(e) (3) effective beginning on November 16, 2023.

These duties may be further delegated to individuals meeting the qualifications of 23 CFR §650.309(a) and §650.507(a). However, the responsibility must remain with you as the Program Manager in accordance with 23 CFR §650.307(f) and §650.507(f).

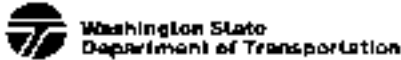
RME:tms

cc: Mark Gaines, Development Division Director, State Design Engineer  
Evan Grimm, State Bridge & Structures Engineer  
Loren Wilson, FHWA Washington Division Bridge Engineer

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# Appendix 1-D DPM Delegation Letters



## Memorandum

November 20, 2023

TO: Tom Castor, P.E.  
Marine Project Engineer  
MS: TB-32

FROM: Roman G. Peralta, P.E. *RGP*  
Bridge Preservation Engineer  
MS: 47340

SUBJECT: Sub-delegation of Bridge Inspection Program Manager  
for Local Agencies

By authority granted to me as the Bridge Preservation Engineer and Statewide Bridge Program Manager, I am sub-delegating to you as the Washington State Ferry's Marine Project Engineer, Program Manager Duties for the federally reportable bridge inventory of the Washington Ferries. These duties are defined in the National Bridge Inspection Standards (NBIS) 23 CFR§650.307(g), §650.307(e) (3) through (11) for all the agency bridge inspection programs.

You may further sub-delegate these duties; however, I do not expect that you will have a need to do so.

Please note, that the overall bridge inspection program responsibility must remain with the Bridge Preservation Engineer as the Statewide Program Manager in accordance with 23 CFR§650.307(d).

RGP:tms

Cc (email): Mark Gaines, Development Division Director and State Design Engineer  
Evan Grimm, State Bridge and Structures Engineer  
George Comstock, Coding & Appraisal Engineer  
Loren Wilson, FHWA Washington Division Bridge Engineer  
David Sowers, Director of Terminal Engineering  
Bryant Bullamore, Construction Engineering Manager

DOT Form 700-008 EF  
Revised 5/99



Washington State  
Department of Transportation

## Memorandum

November 20, 2023

TO: Sonia Lowry, P.E.  
Local Programs Bridge Engineer  
MS: 47390

FROM: Roman G. Peralta, P.E. *RGP*  
Bridge Preservation Engineer  
MS: 47340

SUBJECT: Sub-delegation of Bridge Inspection Program Manager  
for Local Agencies

By authority granted to me as the Bridge Preservation Engineer and Statewide Bridge Program Manager, I am sub-delegating to you as the Local Programs Bridge Engineer, Program Manager Duties for the federally reportable inventory of Local Agency bridges and tunnels, as defined in the National Bridge Inspection Standards (NBIS) 23 CFR§650.307(g), §650.307(e) (3) through (11), and the National Tunnel Inspection Standards (NTIS) 23 CFR§650.507(g), §650.507(e) (1), §650.507(e) (2), §650.507(e) (3) for all the local agency bridge inspection programs.

These duties can be further sub-delegated by you to any local agency representative who meets the qualifications stated in §650.309(a) or §650.509(a) as appropriate. This action must be done in writing.

Please note that the overall bridge inspection program responsibility must remain with the Bridge Preservation Engineer as the Statewide Program Manager in accordance with 23 CFR§650.307(f), and/or §650.507(f).

These qualifications need to be renewed as defined in WSBIM section 1-5.2 to maintain certification as program manager.

RGP:tms

Cc (email): Mark Gaines, State Design Engineer  
Evan Grimm, State Bridge and Structures Engineer  
George Comstock, Coding & Appraisal Engineer  
Loren Wilson, FHWA Washington Division Bridge Engineer  
Michelle Britton, Assistant State Local Programs Engineer  
Kyle McKeon, Engineering Services Manager  
Jay Drye, Director Local Programs

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