

Scope of Services Meeting Date: 11/14/2024

Municipal RR Bridge Inspection

Central Office, Office of Structural Engineering

Scope of Services

The CONSULTANT may be required to perform the following bridge inspection services on a task order type basis for railroad bridges originally built to carry locomotive traffic passing over municipal roadway facilities within the corporate limits. The intent of this project is to fulfill the bridge cursory and secondary safety inspection requirements in accordance with the Inspection Manual by identifying any potential structural deficiencies that may create safety hazards to the travelling public passing under the overhead RR bridges. All cursory safety inspections will be performed within the public ROW of the roadway. No bridge climbing is required, and no occupancy permits will be needed. The inspector may use binoculars and zoom cameras with extensions to visually assess the conditions of bridge components if needed. If authorized, the inspector may use ladders or bucket trucks launched from the public ROW below the bridge to assess suspected deficiencies. All field notes, sketches, photos, found plans, and other documentation files must be uploaded in the appropriate folder of ODOT's Inventory System (AssetWise). Consultants must be prequalified for Level 1 Bridge Inspection services, which may include but are not limited to the following:

Task 3 – AssetWise Tasks Structure Inventory and Review, Including New SNBI Fields:

- Task 3A – Field Measurements and Documentation, Notes and Sketches, & Photos
- Task 3B – SNBI Structure Inventory and Review and AssetWise Updates
- Task 3C – Bridge Files and Plans Research, If Authorized

Task 5 - Bridge Inspection Tasks:

- Task 5A – Initial Cursory Baseline Inspection
- Task 5B – Cursory Safety inspection
- Task 5C – Damage Inspection, if authorized
- Task 5D – In-Depth Inspection, if authorized

Services shall be conducted in accordance with the following references:

- ODOT Manual of Bridge Inspection, Latest Version (New Manual in 2024)
- ODOT Bridge and Inventory Coding Guide, Latest Version
- FHWA Specification for the National Bridge Inventory (SNBI), Published March 2022
- The Manual for Bridge Evaluation, Third Edition 2018 interim with latest revisions, AASHTO Publication
- Bridge Inspector's Reference Manual, FHWA NHI Publication Number: 12-049, Publication Year: 2012

The CONSULTANT shall maintain a project cost accounting system that will segregate costs for individual task orders. The invoicing progress reports shall be detailed enough to show the

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breakdown of each assigned structure indicating the status of all subtasks. Completion of all individual subtasks is necessary for reimbursement credits.

The duration of the agreement will be twenty-four (24) months from the authorization date of the agreement.

The Department will be performing an annual Quality Assurance Review (QAR) for the selected consultant in accordance with the Manual of Bridge Inspection to ensure accuracy and consistency of the inspection and documentation in AssetWise. This typically includes an office and field review.

The geographic areas of this project will include all of Ohio's municipalities, which may have RR crossings over municipal public streets. The location of those bridges has been identified and a new Asset Code has been established in AssetWise. There are **380** RR bridges currently added to ODOT's inventory system, the count per district is shown below. For planning purposes, assume there are **20** Municipal-RR-Orphan bridges scattered across Ohio. This agreement will include a total of **400** bridges to complete the inventory in SNBI and inspect each year for two years. The consultant is asked to keep in mind that those orphan bridges have not been identified yet. The Orphan bridge found during the agreement will need to be inventoried in AssetWise which includes cursory inspection. The estimated contract amount for the two-year agreement is **\$500,000** Max.

District	RR Bridge Count
1	14
2	24
3	19
4	42
5	5
6	68
7	38
8	67
9	3
10	5
11	20
12	75
Total	380

UNDERSTANDING

1. Inspections shall be completed by firm's full-time staff prequalified with ODOT for Level 1 bridge inspection according to the most recent Manual of Bridge Inspection. During this agreement, ODOT will establish a new list of bridge inspectors that must qualify for RR cursory bridge inspections. The main objective of this agreement to have the consultant visit each site of the RR overhead crossing to visually assess and identify obvious defects that

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may pose a safety hazard for the traveling public passing under the bridge. ODOT will establish a protocol through a communication plan between the bridge owners, ODOT, PUCO, and the municipality to establish a plan of action in the event a safety risk resulting from the bridge is found. The protocol will be provided by ODOT at a later date.

2. Task orders are intended for maintaining compliance with the FHWA requirements, Ohio Revised Code, and ODOT policy manuals. Deadlines set by the task orders shall be respected. The consultant shall keep the inventory and inspection records current in AssetWise. All open reports must be approved within 30-days from the inspection date.

3. All reports and records compiled under this agreement shall become the property of the City or Village and shall be housed in the City or Village. ODOT shall receive an electronic copy of plans, analysis files, reports and other items mentioned below. Additionally, all deliverable files shall be uploaded on AssetWise.

- a) CONSULTANT shall timely perform all applicable updates to ASSETWISE with new or revised information for structure inventory and appraisal data, inspections, scour, NSTM, underwater dive reports, field measurement sketches, and load ratings.
- b) CONSULTANT shall submit copies of all reports and calculations electronically, or in hard copies when requested, to the City or Village for inclusion in their bridge records.
- c) This includes, as applicable, a printed copy of the inspection report, Scour Plan-of-Action, Fracture Critical Plan, load rating report, gusset plate analysis, inspection procedures, and field measurement notes, digital pictures as well as a reproducible digital data file (.pdf, .doc, .xml, and .xls formats).

4. Copies of all transmittal letters and emails related to this Task Order shall be submitted to Central Office, Office of Structural Engineering. All bridge safety concerns must be sent to ODOT PM to determine the appropriate plan of action.

- a) When required, CONSULTANTS shall locate the original construction plans, as built, and shop drawings from archive locations specified by the municipality and upload them onto ASSETWISE.

Services to be furnished by CONSULTANT may include:

Task 3 – AssetWise Tasks Structure Inventory and Review, Including New SNBI Fields

The scope of this task includes a limited review of the currently partial structure inventory data in the ODOT ASSETWISE. The CONSULTANT shall verify this data and determine the missing data to complete the inventory error free in SNBI forms. Note that NBI is sunsetting by the end of 2027. Field measurements will be necessary to complete the inventory. This task shall be performed without interfering with train traffic, as it is possible to measure dimensions of decks and spans from the footprint of the bridge on the roadway below it. Vertical and horizontal clearances of the roadway shall be measured, and warning signs shall be documented. Missing vertical clearance signs shall be flagged for the municipalities to provide those signs will the proper call outs on them. Occasionally, it may be necessary to locate the plans or the bridge files of a specific location. In this case, the consultant shall follow the protocols of ODOT’s communication plan with the RR agencies. The following are the subtasks anticipated to be utilized:

- Task 3A – Field Measurements and Documentation, Notes and Sketches, & Photos
- Task 3B – SNBI Structure Inventory and Review and AssetWise Updates
- Task 3C – Bridge Files and Plans Research, If Authorized

Task 5 - Bridge Inspection Tasks

After completing the inventory task order and filling out the SNBI inventory in AssetWise of those bridges in the task order, the cursory inspections shall follow. Cursory inspections are visual in type which should be treated as routine with the intent in mind to detect any safety hazards related to the RR bridge on the public traveling below it. All cursory inspections shall be done yearly in accordance with the Inspection Manual to assign the condition ratings of the components of the bridges. No element level inspections will be tasked for the municipal RR bridges. The inspections shall be proactive to detect potential problems with the bridge to warn the municipality to take action to protect the roadway below it. ODOT is currently working to create a communication plan, and this plan will be published to provide to the consultant later once final. The initial cursory inspection will set the baseline for the following inspections to monitor and document bridge components degradation in the future. Damage inspections are usually unscheduled unique type ordered when the bridge suffers structural damage due to natural disasters, fire, earthquake, flood, vehicular hit, etc. Another type of inspection which may become necessary is the in-depth inspection, which is usually scheduled when a bridge reaches a poor 4 condition to determine severity of component degradation or section loss. The following are the subtasks anticipated to be utilized:

- Task 5A – Initial Cursory Baseline Inspection
- Task 5B – Cursory Safety inspection
- Task 5C – Damage Inspection, if authorized
- Task 5D – In-Depth Inspection, if authorized