



INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Services Committee
FROM: Jen Tetatzin, Public Works Director
BY: Adam Cox, Interim Traffic Engineer
CC: Mayor Thomas McLeod
DATE: July 25, 2025
SUBJECT: **Annual Bridge Inspections and Repairs Update**
Project No. 70010402
2024 Presentation on the State of the City's Bridges

ISSUE

Provide the Transportation and Infrastructure Services Committee with information about the status of the City's bridge inspection program and inventory, showing the overall condition of the City's bridges after completion of the 2024 inspections.

BACKGROUND

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) require regularly scheduled inspections of all the City's vehicle-carrying bridge structures. The City extends this effort to include its pedestrian bridges. This requirement allows for continuity in reporting nationally, a standardized method of risk assessment, as well as the opportunity to identify and potentially fund bridges in need of replacement and rehabilitation.

ANALYSIS

The City currently owns 24 bridges (16 traffic bearing and 8 pedestrians). Of those, two are jointly owned jurisdictional bridges with shared ownership between the City of Renton (Grady Way) and the City of Kent (S 196th/200). The discussion will focus on why the City inspects its bridges, where the City stands with respect to the state and the country, and recommendations for additional steps that can be taken to address known issues. There were no new key findings or major concerns observed during the 2024 inspections.

The following structures were inspected in 2024:

Bridge Number	Bridge Name	Date Inspected
Tukwila 05	Southcenter Blvd over the Green River	8/15/2024
Tukwila 14	42 nd Ave S Bridge	4/30/2024
Tukwila 15	Pacific Highway over the Duwamish River	8/22/2024
Tukwila 17	Foster Golf Trail	4/30/2024
Tukwila 18	Green River Trail	8/15/2024
Tukwila 20	Interurban Trail	9/19/2024
Tukwila 21	Starfire over the Green River	8/22/2024
Tukwila 22	Fort Dent Trail	9/19/2024
Tukwila 25	Green River Ped Trail	9/19/2024

The Federal Highway Administration (FHWA) has utilized the sufficiency rating (SR) for the National Bridge Inventory (NBI) to inventory the over 600,000 bridges in the United States since 1995. In 2024, the FHWA removed the SR for the inventory and switched to the Specifications for the National Bridge Inventory (SNBI). The new inventory method can track multiple elements of bridges and provide a more accurate evaluation of a bridge's overall assessment. This allows the FHWA to have a better understanding of the conditions of all bridges throughout the US.

FISCAL IMPACT

The cost encumbered for King County to perform the 2024 inspections was \$23,000.00.

RECOMMENDATION

None. Information only.

Attachment: 2024 Annual Bridge Inspection Report
2024 City of Tukwila Bridge Inspection Cover Letter
Map of Tukwila's Bridges
Annual Bridge Repair & Maintenance CIP page

Forward

The *Bridge Inspection Report* , dated July 2025, is published by the City of Tukwila Public Works Department, and the information contained herein is the best available at the time of publication. It is to be used as an information tool for planning and maintenance activities, and reflects the general condition of the City's bridges. The repairs indicated are summarized from the more details bridge inspection reports for brevity.

Background

The Federal Highway Administration(FHWA) issued the National Bridge Inspection Standards (NBIS) in 1971. These standards established a comprehensive inspection for all bridges in the federal highway system. Minimum qualifications were set forth for bridge inspectors. Specific types and frequencies of inspections for bridges were established, and the reporting of certain standard information about each bridge was required. In 1978, these requirements were extended to all public bridges carrying vehicular traffic.

A National Bridge Inspection Program has been in place ever since, and state and local agencies have performed bridge inspection in accordance with these guidelines. Inspections for the City of Tukwila's bridges are conducted every two years unless conditions warrant additional inspections or frequencies as dictated by the NBIS.

Bridge Quick Reference Data Summary

Bridge Number	Name	Year Built	Deck Overall	Superstructure Overall	Substructure Overall	WSDOT Bridge ID	ADT	Next ADT Reqd	Last Inspection	Next Inspection Date	UBIT Required	Last UBIT Inspection	Next UBIT Insp Reqd	Fracture Critical	Special Notes
Tukwila 01	Macadam Road	1997	6	6	7	08674200	3,600	2024	4/26/2023	2025	N	-	-	N	
Tukwila 02	Frank Zepp	1968	6	6	7	08561400	36,000	2022	4/26/2023	2025	Y	2021	2025	N	
Tukwila 03	Lois T Newton	1973	6	7	7	08544400	18,900	2021	4/6/2023	2025	Y	2023	2029	N	
Tukwila 05	South-center Blvd	1994	6	6	6	0014269D	10,616	2026	8/15/2024	2026	Y	2020	2026	N	
Tukwila 06	Foster 56th Ave	1985	7	7	6	08166200	2,850	2024	4/6/2023	2025	Y	2023	2029	N	Bridge Rail fixed on the north side
Tukwila 07	51st Ave South	1996	6	5	6	08634500	4,600	2024	4/26/2023	2025	N	-	-	N	
Tukwila 08	Grady Way	1986	7	6	7	08543600	26,000	2024	4/13/2023	2025	Y	2019	2025	N	Jointly owned with City of Renton
Tukwila 09	E Marginal Way	1989	6	7	7	08110200	13,000	2024	4/5/2023	2025	Y	2023	2029	N	
Tukwila 11	BAR Airport Way	1952	4	5	6	08001800	40,000	2024	4/11/2023	2025	N	-	-	N	
Tukwila 12	BAR BNSF	1945	5	5	6	08002500	40,000	2021	4/5/2023	2025	Y	2023	2027	N	
Tukwila 13	Beacon Ave S	1971	7	6	6	7996800	500	2020*	4/25/2023	2025	N	2017	2019	Y	
Tukwila 14	42nd Ave S	1949	5	5	4	08651500	10,300	2026	4/30/2024	2025	Y	2023	2025	Y	90% Plans and Estimate were reviewed in December 2024
Tukwila 15	Pacific Hwy	2000	6	7	6	08651500	22,406	2025	8/22/2024	2026	Y	2020	2026	N	
Tukwila 16	S 119th	1965	5	5	6	08104300	NA	NA	4/17/2023	2025	N	-	-	N	
Tukwila 17	Foster Golf Course	1987	7	7	7	08584100	NA	NA	4/30/2024	2029	N	-	-	N	

Bridge Quick Reference Data Summary															
Bridge Number	Name	Year Built	Deck Overall	Superstructure Overall	Substructure Overall	WSDOT Bridge ID	ADT	Next ADT Req'd	Last Inspection	Next Inspection Date	UBIT Required	Last UBIT Inspection	Next UBIT Insp Req'd	Fracture Critical	Special Notes
Tukwila 18	Green River Ped & Utility	1983	7	5	6	08584200	NA	NA	8/15/2024	2026	N	-	-	N	
Tukwila 19	Inter-urban Trail	2006	8	8	8	08742500	NA	NA	8/18/2022	2026	N	-	-	N	
Tukwila 20	180th Street Trail	2001	8	7	5	08742600	NA	NA	9/19/2024	2026	N			Y	
Tukwila 21	Fort Dent Road	1975	6	6	6	08328300	1,150	2025	8/22/2024	2026	Y	2024	2030	N	
Tukwila 22	Fort Dent Trail	2002	6	7	7	8718400	NA	NA	9/19/2024	2026	N	-	-	N	
Tukwila 24	Klickitat	2012	7	7	8	08853600	14,024	2023	4/13/2023	2025	N	-	-	N	
Tukwila 25	TUC Ped Bridge	2018	8	8	8	8919000	-	-	9/19/2024	2026	N	-	-	N	
Tukwila 26	Riverton Creek Ped	2021	8	8	8	8931100	NA	-	8/16/2022	2027	N	-	-	N	
4001	196-200th	1998	5	6	7	08712100	17,406	2023	4/7/2023	2025	Y	2021	2027	N	Jointly owned with City of Kent
NOTES: Deck Overall, Superstructure Overall, and Substructure Overall are based on a 1 - 9 scale that encompasses the condition and defences observed of the components during the regular scheduled inspection. The descriptions are: N - NOT APPLICABLE 9 - EXCELLENT CONDITION 8 - VERY GOOD CONDITION - no problems noted. 7 - GOOD CONDITION - some minor problems. 6 - SATISFACTORY CONDITION - structural elements show some minor deterioration. 5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour. 4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour. 3 - SERIOUS CONDITION - loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present. 2 - CRITICAL CONDITION - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken. 1 - "IMMINENT" FAILURE CONDITION - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service. 0 - FAILED CONDITION - out of service - beyond corrective action. UBIT - Under Bridge Inspection Truck. This indicates the bridge needs special equipment in order to reach portions of the structure for inspection. ADT - Average Daily Traffic															

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Executive Summary

The City currently has ownership of 24 bridges (16 traffic bearing and 8 pedestrian). Of those, two are jointly owned jurisdictional bridges with shared ownership between the City of Renton (Grady Way) and the City of Kent (S 196th/200). The different types of bridge configuration vary from steel truss, pre-cast concrete girders, cast-in-place concrete girders, steel girder, wood girder, and steel tied arch spans.

The City owned bridges follow the National Bridge Inspection Standards (NBIS). The collected information is maintained in the National Bridge Inventory (NBI) database which is maintained by the Federal Highway Administration (FHWA), which enables state-level and national-level analyses and reporting, supports Federal funding programs, and facilitates the identification of freight and defense-critical corridors and connectors. By having a complete and thorough inventory, an accurate report can be made to the Congress on the number, condition, and performance of the Nation's bridges.

WSDOT uses a state owned data collection system, BridgeWorks, where the City owned bridge inspection information is uploaded after each inspection. WSDOT processes the information and submits the bridge information to the FHWA for the entire state.

Bridges Recommended for Replacement or Rehabilitation			
Bridge Number	Bridge Name	Location	Reason
Tukwila 14	42nd Ave South*	Allentown (42nd Ave)	Deteriorating Structural Condition of the steel superstructure
Note: See individual bridge reports in Public Works for detailed repair work. * The City has been awarded three grants from PSRC, Move Ahead Washington, and the Local Bridge Program			

Bridges Recommended for Major Maintenance			
Bridge Number	Bridge Name	Location	Reason
Tukwila 12	Boeing Access Road over BNRR	Boeing Access Road	Replacing concrete deck as part of the BAR overlay
Tukwila 16	South 119th Pedestrian Bridge	119th St (Allentown)	Painting/Epoxy of entire structure with possible rot repair as encountered.
Tukwila 18	Green River Pedestrian and Utility	Interurban Trail near 180th	Rehabilitation of structure coating and timber rot repair and replacement

Posted Bridges			
Bridge Number	Bridge Name	Location	Reason
Tukwila 03	Lois T Newton (Strander Blvd)	Southcenter	Bridge is posted for reduced weight for single vehicle three axle ladder fire trucks.
Tukwila 14	42nd Ave South	Allentown	Bridge is posted for reduced truck speed and posted for reduced loading on AASHTO Type 3 trucks and 6 and 7 axle vehicles.
Note: See individual bridge reports in Public Works for detailed repair work.			

Bridges Recommended for Rail Retrofit			
Bridge Number	Bridge Name	Location	Reason
Tukwila 1	Macadam	Macadam Road	Provide Guardrail, terminal and transitions that meet current standards
Tukwila 2	Frank Zepp	180th Street	Provide bridge rail that meet current standards
Tukwila 3	Lois T Newton	Stander Boulevard	Provide bridge rail, guardrail, terminal and transitions that meet current standards
Tukwila 6	Foster 56th Ave South	56th Avenue South	Provide bridge rail, guardrail, terminal and transitions that meet current standards
Tukwila 8	Grady Way	Grady Way	Provide Guardrail, terminal and transitions that meet current standards
Tukwila 9	East Marginal Way	East Marginal Way	Provide bridge rail, guardrail, terminal and transitions that meet current standards
Tukwila 11	Boeing Access Road - Airport Way	Boeing Access Road	Provide bridge rail, guardrail, terminal and transitions that meet current standards
Tukwila 13	Beacon Ave South	Victor Street	Provide bridge rail, guardrail, terminal and transitions that meet current standards
Tukwila 14	42nd Avenue South	42nd Avenue South	Provide Guardrail, terminal and transitions that meet current standards
Note: See individual bridge reports in Public Works for detailed repair work.			

Bridge Average Daily Traffic (ADT)					
Bridge Number	Name	Year Built	Structure ID	ADT	Next ADT Reqd (5 yr Cycle)
Tukwila 01	Macadam Road	1997	08674200	3,600	2026
Tukwila 02	Frank Zepp	1968	08561400	36,000	2027
Tukwila 03	Lois T Newton	1973	08544400	18,900	2027
Tukwila 05	South-center Blvd	1994	0014269D	10,616	2026
Tukwila 06	Foster 56th Ave	1985	08166200	2,850	2026
Tukwila 07	51st Ave South	1996	08634500	4,600	2026
Tukwila 08	Grady Way	1986	08543600	26,000	2026
Tukwila 09	E Marginal Way	1989	08110200	13,000	2026
Tukwila 11	BAR Airport Way	1952	08001800	40,000	2026
Tukwila 12	BAR BNSF	1945	08002500	40,000	2027
Tukwila 13	Beacon Ave S	1971	7996800	550	2027
Tukwila 14	42nd Ave S	1949	08651500	10,300	2026
Tukwila 15	Pacific Hwy	2000	08651500	22,406	2027
Tukwila 21	Fort Dent Road	1975	08328300	1,150	2025
Tukwila 24	Klickitat	2012	08853600	14,024	2026
4001	196-200th	1998	08712100	17,406	2024

Bridge Repair Recommendations					
PRIORITY CODE 'A'	Highest Priority - Structural integrity and safety involved.				
PRIORITY CODE 'B'	Regular Priority - General bridge structural repair work not requiring immediate response.				
PRIORITY CODE 'C'	Low Priority - General minor maintenance or other work to be accomplished as time and funding allow.				
PRIORITY CODE 'M'	Monitor - The repair or item described needs to be monitored at the rate indicated in the Repair Recommendations.				
Note: See individual bridge reports in Public Works for detailed repair work.					
Bridge Number	Bridge Name	Location	Repair Recommendations	Priority	Inspection Date
Tukwila 1	Macadam	Macadam	1. No repairs recommended at this time.	NA	4/26/2023
Tukwila 2	Frank Zepp	180th Street	1. No repairs recommended at this time.	NA	4/26/2023
Tukwila 3	Lois Newton	Strander Blvd	1. Post height clearance for Green River Trail	C	4/6/2023
Tukwila 5	South center Blvd	SC Blvd	1. Replace missing block spacer on guardrail post 2. Fix broken light above pile 2c 3. Trim the trees on the north side of the bridge.	C B B	8/15/2024
Tukwila 6	Foster 56th Ave S	56th Ave S	1. Fill scour void under SE wingwall 2. Replace expansion joint material 3. Repair damaged guardrail terminal end 4. Replace delineator sign on NE corner	B B B C	4/6/2023
Tukwila 7	51st Ave S	51st Ave S	1. Apply deck sealer to prevent ponding water to leak in to the box girders 2. Repair spalls at north expansion joint 3. Investigate waterline in box girder 4. Repair northwest rail terminal 5. Remove trees at Pier 2	B B A B B	4/26/2023
Tukwila 8 (Renton-Tukwila Joint Ownership)	Grady Way	Grady Way	1. Repair vertical sliding surfaces on columns 2. Repair damage bridge rail (spalling and delamination's) 3. Clean plugged Drains at NW approach 4. Repair pedestrian fencing 5. Clear out material between bearings at Abutment 1 6. Repair metal bridge rail at NW approach 7. Remove vegetation on retaining wall 8. Clear sidewalk debris	B B B B B B C C	4/13/2023
Tukwila 9	E Marginal Way	E Marginal Way	1. Replace compression seals at expansion joints 2. Develop scour plan 3. Secure access hatch at south side 4. Empty box girder	B C A B	4/5/2023
Tukwila 11	BAR Airport Way	Boeing Access Road	1. Repair bridge rail damage 2. Roughen approach slabs 3. Replace delineator sign	B C B	4/11/2023
Tukwila 12	BAR BNSF	Boeing access road	1. Repair the southeast approach rail. 2. Clean bridge deck and sidewalk 3. Repair failed overlay 4. Tighten loose anchor bolts 5. Monitor spalling on girder	B C B B B	4/5/2023
Tukwila 13	Beacon Ave South	At Victor Street	1. Repair interior lighting.	B	4/25/2023
Tukwila 14	42nd Ave S	42nd Ave S	1. Clean out open joints over floor beams thoroughly and fill with a flexible sealant, priority 1 due to corrosion at top flanges of floor beams from leaking joints. 2. Rework the sliding plate expansion joint so it is smooth with sidewalk and patch spalls near panel points, seal open cracks. 3. Replace missing guard rail and terminal at SW corner, replace damaged rail at SE corner, reset NW rail and posts to bring rail up to standard height. 4. Thoroughly pressure wash clean truss of all dirt/algae/guano, prepare surface, paint bridge to encapsulate pack rust and protect truss members. Add bird deterrent at all panel points, upper and lower chords. 5. Replace steel sliding plate expansion joints with either a strip seal with steel header or modular joint to eliminate water intrusion onto steel bearings. 6. Recommend design seismic retrofit steel collar and construct around bearing columns, anchored to cap, then fill tight with epoxy. 7. FRP wrap columns 4 A-C. Reinforce west wingwall. Add quarry spall along abutment 4 and under span 3 to retain fill and discourage transient activity. 8. Replace missing riprap along banks and in front of piers. 9. Recommend raising portals and sways due to the high volume of truck traffic and existing damage to sway members. 10. Replace sliding plates with elastomeric dynamic isolation bearings. 11. Chip any delaminated concrete from exposed rebar, clean and seal exposed bar and patch spalls. Sack honeycombed areas throughout soffit. Shotblast deck surface, patch spalled areas and apply epoxy overlay. 12. Replace broken gas pipe couplers. 13. Unclog deck drains	B B B B B B B B B B C C	4/30/2024
Tukwila 15	Pacific Hwy	Pacific/TIB at Duwamish	1. Repair scour along Green River Trail 2. Arrest channel erosion along the south bank 3. Repair the approach guardrails at the southwest, southeast, and northeast ends 4. Apply epoxy overlay on the bridge deck 5. Spot paint at slice locations to extend paint life 6. Trim brush growing along Ped trail	A A B C B B	8/22/2024
Tukwila 16	S 119th Pedestrian	S 119th Street	1. Repair warped and twisted deck planks, deck has non-skid coating but timber is still weathered 2. Major rehabilitation or replacement in near future 3. Special inspection requested to inspect the underside of the superstructure 4. Replace areas of top boards 5. Replace bearings at 1A 4A	B A A A B	4/17/2023
Tukwila 17	Foster Golf Course	Foster GC	1. Monitor bearing movement at Abutment 1 at 2029 inspection 2. Remove blackberry bushes under the bridge 3. Repair leaky irrigation line	M C B	4/30/2024
Tukwila 18	Green River	Interurban trail near 180th	1. Straighten utility pipe alignment 2. Repair chord patching material debonding 3. Repair and replace rotting timber pedestrian rail 4. Paint entire superstructure 5. Perform in-depth inspection	C B B B B	8/15/2024
Tukwila 19	Interurban Trail	Interurban Trail	1. No repairs noted	NA	8/18/2022
Tukwila 20	180th Ped	Interurban trail at 180th	1. Monitor leaching cracks in abutment and retaining walls at the 2026 inspection 2. Remove debris from bearing seat 3. Repair approach settlement 4. Repair broken conduit splices	M C B B	9/19/2024
Tukwila 21	Fort Dent Road	Fort Dent Road	1. Trim vegetation overhanging along sidewalk 2. Repair/replace wire cover plate at the NE approach 3. Post clearance at trail undercrossing under Span 3 4. Apply epoxy overlay to deck surface	C C C B	8/22/2024
Tukwila 22	Fort Dent Trail	Interurban trail	1. Trim overgrowing vegetation at approaches 2. Replace missing safety chains at corners of bridge 3. Replace popped bolts at diagonal bracing 4. Smooth out approach pathway at approach header 5. Rope access inspection	C C B B B	9/19/2024
Tukwila 24	Klickitat Drive	Klickitat Drive	1. No repairs noted	NA	4/13/2023
Tukwila 25	Tuk Urban Ped Bridge	Green River Trail	1. Align Ped rail in Span 3	B	9/19/2024
Tukwila 26	Riverton Creek Ped	Green River Trail	1. No repairs noted	NA	8/16/2022
4001 (Kent-Tukwila Joint Ownership)	196-200th	196th Street	1. Repair joints and seals 2. Clean deck drains	B B	4/7/2023

2010 - 2024 Bridges Maintenance and Repair History				
Bridge Number	Bridge Name	Year	Amount	Repair/Maintenance
Tukwila 2	Frank Zepp	2015	\$2.6M	Paint steel, deck overlay, replace deck joint, seismic protection
Tukwila 6	Foster 56th Ave S	2023	\$52k	Bridge rail repair
Tukwila 6	Foster 56th Ave S	2022	\$4.5K	Scour report and plan of action performed
Tukwila 8	Grady Way	2015	\$350K	Seismic protection
Tukwila 11	Boeing Access Road - Airport Way	2021	\$1.6M	Siesmic Retro Fit
Tukwila 12	Boeing Access Road BNRR	2019	\$10M	Siesmic Retrofit and deck repair
Tukwila 13	Beacon Ave South	2015	\$1.1M	Replace bridge deck and paint steel
Tukwila 14	42nd Avenue South	1994	*	Paint Truss
Tukwila 14	42nd Avenue South	2017	\$17K	42nd Ave S Bridge Structural Assessment
Tukwila 14	42nd Avenue South	2020	\$39K	In-depth inspection beyond the King County inspections
Tukwila 16	S 119th St	2015	\$100K	Paint and timber repair
Tukwila 18	Green River	2007	\$100K	Paint and timber repair
Tukwila 18	Green River	2008	\$126K	Paint and timber repair
4001	196th/200th	2019	\$500K	Approach Slab repair
4001	196th/200th	2023	\$5k	Replace center crash barrier

* Unable to verify cost as project cost data is typical kept for 6 years and project was performed before the City's current project tracking system



King County

Road Services Division

Department of Local Services
201 South Jackson Street
KSC-TR-0313
Seattle, WA 98104-3856
kingcounty.gov/en/dept/local-services/

January 14, 2025

Adam Cox
Transportation Project Manager
City of Tukwila
6300 Southcenter Blvd
Tukwila, WA 98188

RE: 2024 Inspection of City of Tukwila Bridges

Dear Mr. Cox:

King County bridge engineers inspect the bridges owned by the City of Tukwila in accordance with agreements between the City of Tukwila and King County Department of Local Services. The bridge inspections for calendar year 2024 were conducted as follows:

Routine Inspections:

April 30, 2024	Foster Golf Course Pedestrian Bridge No. TUKxPx17
August 15, 2024	SC Blvd. Green River Bridge No. TUKxNx05 Tukwila International Blvd. Bridge No. TUKxNx15 Fort Dent Park Bridge No. TUKxNx21 Green River Ped & Utility Bridge No. TUKxPx18
August 22, 2024	180 th Pedestrian Bridge No. TUKxPx20 Fort Dent Trail Bridge No. TUKxPx22 Tukwila Urban Center Pedestrian Bridge No. TUKxPx25

Under Bridge Inspection Truck (UBIT) Inspections:

August 20, 2024	Tukwila International Blvd Bridge No. TUKxNx15 Fort Dent Park Bridge No. TUKxNx21
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Interim Inspections:

April 30, 2024	42 nd Avenue South Bridge No. TUKxNx14
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Enclosed are the reports from the bridge inspection and the actions recommended to maintain these structures. We submit the data in the report to Washington State Department of Transportation (WSDOT), in accordance with state and federal laws to inform them of the bridge condition and to assure the bridge has been inspected on a timely basis. This information is incorporated into state and federal databases. Bridge inspection reports are divided into three primary sections: Condition/Appraisal Ratings, BMS Elements, and Notes/Repairs/Resources; these sections are briefly explained below:

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1. The first section “Condition/Appraisal Ratings” consists of collections of fields that depict ratings for a variety of bridge related components, including the bridge as a whole. Generally, these ratings depict the current or inherent overall condition of each of these components from 8 (best) to 0 (worst); however, several fields have different or adjusted rating scales. Explanations of these codes and ratings are found in the Washington State Bridge Inspection Manual (WSBIM) [Available online at: <https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/bridge-inspection-manual>].
2. The second section of the report, Bridge Management System (BMS) Elements, quantifies each of the primary bridge elements and rates them, breaking down the condition of each component into categories that indicate how widespread a component is deteriorated. Generally, Condition State CS1 is best and CS4 is worst.
3. The third section consists of three parts: Notes, Repairs, and Inspection Resources Required. The Notes section is comprised of information that provides details of the numbered fields in the first two sections. The Repairs section includes recommended actions identified from the bridge inspection, prioritized between 1 - High priority, and 3 - Low priority. The Resources Required section indicates any special equipment or tools used to inspect the bridge.

You may notice that the bridge inspection reports appear slightly different than that of previous years, particularly in Section 1. As you may be aware, the Specifications for the National Bridge Inventory (SNBI) was adopted in 2022 and brings significant changes in bridge inspection reporting requirements. In total, there are 174 changes including 54 new fields, 100 modified fields, and 20 existing fields to be discontinued. These reporting metrics will be fully in effect in 2026. In order to make these changes across all assets, we are incorporating the 4-year plan suggested by FHWA and adopted by WSDOT. King County has been implementing the changes according to this plan since the start of 2023; however, there are upcoming changes that require input / action from the asset owner and is unable to be done solely by our inspection team.

Here’s what we’ll be needing from your agency to effectively fill out a complete inspection report:

1. Historical Significance (*SNBI Item ID B.CL.04*):
 - a. If applicable:
 - i. Year structure entered historical register.
 - ii. Which registers the bridges are on.
 - b. Any bridges in consideration to be placed on a register.
2. Seismic Vulnerability (*SNBI Item ID B.AP.05*):
 - a. Cities should have their own policies for determining whether a bridge has been designed or retrofitted for seismic countermeasures. We can send examples of what qualifies as a seismic countermeasure under King County design, if you wish to adopt our policy. Alternatively, you can refer to the FHWA Seismic Retrofitting Manual for assessment guidance.
3. Scour Vulnerability (*SNBI Item ID B.AP.03*):
 - a. Scour evaluations are required for all bridges over water, regardless of scour condition code.
4. Scour POAs (*SNBI Item ID B.AP.04*)
 - a. A Scour Plan of Action needs to be developed for all scour critical bridges. This form can be completed without the need for a scour engineer.
5. Overtopping Likelihood (*SNBI Item ID B.AP.02*):
 - a. If the City can provide overtopping likelihood or historical information, it would greatly assist in filling out this field accurately. Our inspection team can produce a rating, but it will take significantly more work (research, historical data, etc.).

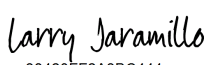
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6. AADT/AADTT counts (*SNBI Item IDs B.H.09 / B.H.10 / B.H.11*):
 - a. All roadway bridges report AADT and AADTT every 4 years – it would be optimal to get updated counts scheduled prior to the next inspection cycle so they can be reported when the routines inspections are due.
7. Roadside hardware crash test documentation (*SNBI Item IDs B.RH.01 / B.RH.02*)
 - a. If the City is using roadside hardware that is non-standard or proprietary, we need crash test documentation for it. This applies to both the bridge rails and transition rail.
8. Bypass detour length (*SNBI Item ID B.H.17*)
 - a. Since our team is not always familiar with city road and traffic restrictions, it is not always feasible for us to accurately calculate the detour length. If it becomes necessary for the city to close a bridge, a detour plan should be available.
 - i. The detour length is defined as the total distance for a vehicle to return to the original route.
 - ii. The detour route cannot have weight restrictions lower than the applicable bridge or any vertical clearance limits under 14'-3" or lower than the applicable bridge (whichever is lower).
9. Load Rating
 - a. Anytime the City updates a load rating for a bridge, it is required for us to update the bridge file with the new rating and to keep a copy in the bridge records.
 - b. Load ratings may need to be revisited if condition ratings change.
 - c. WA-105 Load Rating Update: New WSDOT guidance has updated load rating requirements with a new state legal truck. The State has provided a preliminary review of the existing load ratings of local agency structures and provided a list of structures that may require an updated load rating by 2026. Both the design memorandum and preliminary review list with your agency's affected structures are attached.

Attached is a form fillable excel file with the applicable options for each field and a collection of excerpts from the WSBIM for reference for how these topics need to be coded on the inspection reports. While this information is not due until 2027, if we are able to obtain this information sooner, we are able to update these reports along with their scheduled routine inspections. We know that this is a lot of information and some of it can be quite complicated – if it would be helpful, our team would be happy to schedule some time to discuss specifics with you directly.

I hope this letter helps you in reviewing these inspection reports. We recommend the City of Tukwila bridges continue to be routinely inspected on a 24-month schedule. Our next scheduled bridge inspection in the City of Tukwila will be in the spring of 2025. Please call Henry Jin at 206-263-7988 if you need any additional information. We appreciate assisting your city with bridge engineering and inspection services.

Sincerely,

DocuSigned by:

38420FF2A3BC444...

Larry Jaramillo, P.E.
Managing Engineer
Bridge and Structural Design Unit

Adam Cox
January 14, 2025
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Enclosures:

1. Form Fillable SNBI Input Spreadsheet: SNBI_FourYearDataPlan – CITY.xlsx
2. Selected Excerpt from WSBIM 2024: SNBI Pages from WSBIMCoding.pdf
3. City of Tukwila Recommended Actions Matrix: 2024 REPAIRS TUKWILA.pdf
4. WSDOT Design Memorandum 2024-05: 2024-05-BDM-Memo.pdf
5. Preliminary Review to Load rate for WA-105 List: Preliminary Review WA-105 – Tukwila.pdf
6. City of Tukwila 2024 Bridge Inspection Reports – OneDrive Link

cc: Rey Sugui, Program Analyst, Road Services Division (RSD), Department of Local Services (DLS)
Jessy Jose, Supervising Engineer, Bridge and Structural Design Unit, RSD, DLS
Henry Jin, Engineer III, Bridge and Structural Design Unit, RSD, DLS
Justin Chan, Engineer III, Bridge and Structural Design Unit, RSD, DLS



City of Tukwila

Bridges



Not to Scale

NEIS Vehicle Bridges

- 01 Macadam Road
- 02 Frank Zapp Bridge (S 180th St)
- 03 Lois T. Newton Bridge (Strander Blvd)
- 05 Southcenter Blvd
- 06 Foster 50th Ave S
- 07 S 151st Ave S
- 09 East Marginal Way
- 11 Boeing Access Road Bridge over Airport Way
- 12 Boeing Access Road Bridge over BNSF
- 13 Beacon Ave S
- 14 42nd Ave S
- 15 Pacific Highway/TIB
- 21 Fort Dent Park Bridge
- 24 Kluckat Bridge

Jointly Owned NEIS Vehicle Bridges

- 08 Grady Way (Renton)
- 26 S 160th St S 200th St (Kent)

Pedestrian Bridges

- 16 S 178th Pedestrian Bridge
- 17 Foster Golf Course Bridge
- 18 Green River Pedestrian and Utility Bridge
- 19 Interurban Trail Bridge
- 20 S 180th St Pedestrian Bridge (Trail)
- 22 Fort Dent Trail Bridge
- 25 TUC Pedestrian Bridge
- 27 Renton Creek Pedestrian Bridge

Vicinity Map



Disclaimer:
The location of features and boundaries are approximate and are intended for reference only. Data is based on best information available.



CITY OF TUKWILA CAPITAL PROJECT SUMMARY 2025 to 2030

PROJECT:	Annual Bridge Inspections and Repairs						Project #	70010402
Project Manager	Adam Cox				Department	Arterial Streets		
DESCRIPTION:	Ongoing program of bi-annual inspections, repairs, painting and rehabilitation of the 26 City vehicle and pedestrian bridges.							
JUSTIFICATION:	Federally required program identifies safety or repair needs in the early stages to minimize hazards and costs. The number of bridge inspections necessary each year can vary year to year. Inspection frequencies vary from bridge to bridge and King County has provided some inspection services.							
STATUS:	Construction projects will be determined from inspection reports and noted deficiencies/problems.							
MAINTENANCE IMPACT:	N/A							
COMMENT:	Ongoing project, only one year actuals are shown in the first column.							
FINANCIAL (in thousands)	2025	2026	2027	2028	2029	2030	Beyond	TOTAL
Project Costs								
Project Mgmt (Staff Time/Cost)	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 14
Construction	\$ 100	\$ 220	\$ 230	\$ 235	\$ 240	\$ 240	\$ 240	\$ 1,505
Total Project Costs	\$ 102	\$ 222	\$ 232	\$ 237	\$ 242	\$ 242	\$ 242	\$ 1,519
Project Funding								
Fund Balance	\$ 102	\$ 222	\$ 232	\$ 237	\$ 242	\$ 242	\$ -	\$ 1,277
Total Project Funding	\$ 102	\$ 222	\$ 232	\$ 237	\$ 242	\$ 242	\$ -	\$ 1,277