

CITY OF TUKWILA



ANNUAL BRIDGE INSPECTION REPORT

July 2024



Tukwila Urban Center Pedestrian Bridge

City of Tukwila



Public Works Department

6300 Southcenter Blvd

Tukwila, WA 98188

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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.

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	
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	-	-	9/192024	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 conditition and defecnces 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 - <u>U</u> nder <u>B</u> ridge <u>I</u> nspection <u>T</u> ruck. This indicates the bridge needs special equipment in order to reach portions of the structure for inspection. ADT - <u>A</u> verage <u>D</u> aily <u>T</u> raffic															

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
<p>Note: See individual bridge reports in Public Works for detailed repair work.</p> <p>* The City has been awarded three grants from PSRC, Move Ahead Washington, and the Local Bridge Program</p>			

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
<p>Note: See individual bridge reports in Public Works for detailed repair work.</p>			

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	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 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 comer, 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 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

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

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