



INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Services Committee
 FROM: Hari Ponnekanti, Public Works Director/City Engineer
 BY: Adam Cox, Transportation Project Manager
 CC: Mayor Allan Ekberg
 DATE: May 21, 2021
 SUBJECT: Annual Bridge Inspections and Repairs Update
 Project No. 91610402
 2020 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 program and inventory, showing the overall condition of the City’s bridges after completion of the 2020 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, as well as the opportunity to identify and potentially fund bridges in need of replacement and rehabilitation.

ANALYSIS

The City currently owns 23 bridges (16 traffic bearing and 7 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 bridge structure types vary from steel through truss, pre-cast concrete girders, cast-in-place concrete girders, steel girder, wood girder, and steel tied arch spans. 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 2020 inspections.

The following structures were inspected in 2020:

Bridge Number	Bridge Name	Inspection Date
Tukwila 05	Southcenter Blvd Bridge	August 19, 2020
Tukwila 14	42 nd Ave S Bridge	March 02, 2020
Tukwila 15	Tukwila International Blvd Bridge	August 04, 2020
Tukwila 18	Green River Ped Bridge	August 19, 2020
Tukwila 20	180 th Ped Bridge	August 19, 2020
Tukwila 21	Fort Dent Park Bridge	August 19, 2020
Tukwila 22	Fort Dent Trail Bridge	August 19, 2020
Tukwila 25	Tukwila Urban Center Ped Bridge	October 27, 2020

The following Tukwila Bridges are scheduled to receive inspections in 2021:

Bridge Number	Bridge Name
Tukwila 01	Macadam Road Bridge
Tukwila 02	42 nd Ave S Frank Zepp
Tukwila 03	Lois T Newton Bridge
Tukwila 06	Foster 56 Ave S Bridge

Bridge Number Cont.	Bridge Name Cont.
Tukwila 07	51 st Ave S Bridge
Tukwila 08	Grady Way Bridge
Tukwila 09	East Marginal Way Bridge
Tukwila 11	Boeing Access Road over BNRR Bridge
Tukwila 12	Boeing Access Road over Airport Way Bridge
Tukwila 13	Beacon Ave S Bridge
Tukwila 14	42 nd Ave S Bridge
Tukwila 16	S 119 th Street Bridge
Tukwila 24	Klickitat Bridge
4001	196 th /200 th Street Bridge

The City of Tukwila maintained its compliance with the FHWA-mandated inspections and record keeping in 2017 and 2019 through federal funding awards. The City continues to maintain its compliance with the FHWA and has applied for federal funding through the Local Bridge Program (formally known as BRAC) for the 42nd Ave S Bridge Replacement Project. Currently, results for the Local Bridge Program selection is expected in fall 2021.

FISCAL IMPACT

The cost for King County to perform the 2020 inspections was \$20,525.00, and the estimated cost to perform the 2021 inspections is \$28,010.00.

The following dollar amounts have been spent on the City's Annual Bridge Repair and Maintenance program since 2010:

Year	Expense
2010	\$3,608.03
2011	\$1,035,710.24
2012	\$1,252,873.11
2013	\$149,332.33
2014	\$1,327,246.74
2015	\$1,717,474.71
2016	\$1,417,963.55
2017	\$886,821.68
2018	\$1,222,643.12
2019	\$1,595,164.27
2020	\$501,198.98
Total	\$11,110,036.76

RECOMMENDATION

Discussion only.

Attachment: Annual Bridge Inspection Report
 2020 City of Tukwila Bridge Inspection Cover Letter
 Map of Tukwila's Bridges
 Annual Bridge Repair & Maintenance CIP page

CITY OF TUKWILA



ANNUAL BRIDGE INSPECTION REPORT

May 2021



Tukwila Urban Center Pedestrian Bridge

City of Tukwila



Annual Bridge Inspection Report May 2021

Hari Ponnekanti, P.E., PW Director/City Engineer

**Public Works Department
6300 Southcenter Blvd
Tukwila, WA 98188**

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Executive Summary

The City currently has ownership of 23 bridges (16 traffic bearing and 7 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 through truss, pre-cast concrete girders, cast-in-place concrete girders, steel girder, wood girder, and steel tied arch spans.

Currently the City has a total of five (5) bridges that have a sufficiency rating between 80 to 100; six (6) bridges that have a sufficiency rating between 60 to 79; two (2) bridges that have a sufficiency rating between 40 to 59; and three (3) bridges that have a sufficiency rating of 39 or less. Note, pedestrian bridges do not receive a sufficiency rating. Please refer to the Quick Bridge Reference sheet for the break down of city owned bridges and the assigned sufficiency rating.

The sufficiency rating formula provides a method of evaluating highway bridge data by calculating four (4) separate factors to obtain a numeric value which is indicative of bridge sufficiency to remain in service. The result of this method is a percentage in which 100 percent would represent an entirely sufficient bridge and zero (0) percent would represent an entirely insufficient or deficient bridge. The formula considers the structural adequacy, functional obsolescence, level of service and essentiality for public use.

Forward

The *City Engineer's Bridge Inspection Report*, dated April 2021, 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 for brevity from actual bridge inspection reports.

Background

The FHWA (Federal Highway Administration) issued the NBIS (National Bridge Inspection Standards) in 1971. These standards established a comprehensive inspection for all federal highway system bridges. 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 Check Informational Sheet

Bridge Number	Name	Year Built	Suff. Rating	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	80.58	08674200	3,600	2024	4/18/2019	2021	N	-	-	N	
Tukwila 02	Frank Zepp	1968	75.37 FO	08561400	36,000	2022	4/18/2019	2021	Y	2017	2021	N	
Tukwila 03	Lois T Newton	1973	75.36	08544400	18,900	2021	4/18/2019	2021	Y	2017	2023	N	
Tukwila 05	South-center Blvd	1994	96.98	0014269D	10,616	2023	8/4/2020	2022	Y	2020	2026	N	
Tukwila 06	Foster 56th Ave	1985	58.05	08166200	2,850	2024	4/11/2019	2021	Y	2017	2023	N	
Tukwila 07	51st Ave South	1996	69.09	08634500	4,600	2024	4/16/2019	2021	N	-	-	N	
Tukwila 08	Grady Way	1986	64.93	08543600	25,500	2024	4/16/2019	2021	Y	2018	2023	N	Jointly owned with City of Renton
Tukwila 09	E Marginal Way	1989	89.83	08110200	13,000	2024	4/11/2019	2021	Y	2017	2023	N	
Tukwila 11	BAR Airport Way	1952	39.80 SD	08001800	40,000	2024	4/25/2019	2021	N	-	-	N	*See note below
Tukwila 12	BAR BNSF	1945	37.19 SD	08002500	38,800	2021	4/25/2019	2021	Y	2017	2021	N	*See note below
Tukwila 13	Beacon Ave S	1971	78.36	7996800	500	2020	4/9/2019	2021	N	2017	2019	Y	
Tukwila 14	42nd Ave S	1949	7.56 SD	08651500	10,300	2023	4/2/2020	2021	Y	2019	2021	Y	Applied for replacement funding in Feb 2021
Tukwila 15	Pacific Hwy	2000	86.36	08651500	30,300	2021	8/4/2020	2022	Y	2020	2026	N	
Tukwila 16	S 119th	1965	--	08104300	NA	NA	4/25/2019	2024	N	-	-	N	
Tukwila 17	Foster Golf Course	1987	--	08584100	NA	NA	4/11/2019	2024	N	-	-	N	
Tukwila 18	Green River Ped & Utility	1983	--	08584200	NA	NA	8/18/2020	2026	N	-	-	N	
Tukwila 19	Inter-urban Trail	2006	--	08742500	NA	NA	9/11/2018	2023	N	-	-	N	
Tukwila 20	180th Street Trail	2001	--	08742600	NA	NA	8/19/2020	2026	Y	2016	2022	Y	
Tukwila 21	Fort Dent Road	1975	63.00	08328300	1,115	2023	8/19/2020	2022	Y	2014	2020*	N	*Unable to perform UBIT inspection in 2020 due to COVID availability, will reschedule
Tukwila 22	Fort Dent Trail	2002	--	8718400	NA	NA	8/19/2020	2026	N	-	-	N	
Tukwila 24	Klickitat	2012	93.93 FO	08853600	14,024	2023	4/25/2019	2021	N	-	-	N	
Tukwila 25	TUC Ped Bridge	2018	-	8919000	-	-	2020	2025	Y	2019	2024	Y	
4001	196-200th	1998	59 SD	08712100	17,406	2023	4/18/2019	2021	Y	2015	2021	N	Jointly owned with City of Kent

NOTES:
 Bridge Rating is out of 100.
 SD - Indicates the bridge structure is "Structural Deficient" as defined by the WSDOT (Washington State Department of Transportation) bridge inspection program. The structure is still safe for use by the public and the condition is being monitored.
 FO - Indicates the bridge structure is "Functionally Obsolete" as defined by the WSDOT (Washington State Department of Transportation) bridge inspection program. This designation only indicates the roadway geometrics do not meet current standards for bridge design.
 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
 NA - Sufficiency ratings are not given on pedestrian facilities since they are not a part of the NBI system so a Suff. Rating of NA is given in that location.
 All pedestrian bridges do not have a calculated sufficiency rating - they are not traffic loaded bridges and the rating numbers are not calculated per Federal Requirements

*Boeing Access Road over BNR and Boeing Access Road over Airport Way SR will increase with the 2021 Bridge inspections as both bridges received a seismic upgrade.

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
Tukwila 12	Boeing Access Road over Airport Way**	Boeing Access Road	Substructure Seismic Rehabilitation

Note: See individual bridge reports in Public Works for detailed repair work.

* Application is currently under review by the Washington State Department of Transportation Local Bridge Program (formally known as the Bridge replacement Advisory Committee (BRAC)). Application results will likely be announced in September/October 2019.

** The seismic retrofit is currently under construction with funding from the Local Bridge Program. Construction completion is estimated for June 2021.

Bridges Recommended for Major Maintenance

Bridge Number	Bridge Name	Location	Reason
Tukwila 16	South 119th Pedestrian Bridge	119th Str (Allentown)	Painting 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 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.

Bridges Repair Recommendations

Bridge Number	Bridge Name	Location	Repair Recommendations	Priority	Inspection Date
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 money permit.					
PRIORITY CODE 'M' Monitor - The repair or item described needs to be monitored at the rate indicated.					
Note: See individual bridge reports in Public Works for detailed repair work.					
Tukwila 1	Macadam	Macadam	1. Replace rotting guardrail posts 2. Replace missing guardrail hardware 3. Upgrade guardrail to current standards 4. Replace missing pedestrian rail bar at the SW corner.	B B B	18-Apr-19
Tukwila 2	Frank Zepp	180th Street	1. Remove dirt, debris, and concrete debris from around bearings at both abutments. Clean and repaint bearings. 2. Epoxy inject crack at the interface between new and old concrete at Pier 3. 3. Saw cut and remove all delaminated concrete from the northeast corner of the deck and patch it with high strength non-shrink grout. 4. Correct the vertical height difference between the steel finger joints	B B B	18-Apr-19
Tukwila 3	Lois Newton	Strander Blvd	1. No repairs recommended at this time.	NA	18-Apr-19
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	4-Aug-20
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	B B B	11-Apr-19
Tukwila 7	51st Ave S	51st Ave S	1. Apply deck sealer to prevent ponding water to leak in to the cox girders 2. Remove waste and transient debris beneath bridge 3. Repair spalls at expansion joint 4. Repair northwest rail terminal	B M B B	16-Apr-19
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) 4. Repair pedestrian fencing 5. Monitor homeless encampment and makeshift facilities under structure 6. Clear out material between bearings at Abutment 1 6. Remove vegetation on retaining wall	B B B M B C	16-Apr-19
Tukwila 9	E Marginal Way	E Marginal Way	1. Replace compression seals at expansion joints	B	11-Apr-19
Tukwila 11	BAR Airport Way	Boeing Access Road	1. Repair column delamination 2. Repair bridge rail damage	A B	25-Apr-19
Tukwila 12	BAR BNSF	Boeing access road	1. Repair the southeast approach rail.	B	25-Apr-19
Tukwila 13	Beacon Ave South	At Victor Street	1. Repair interior lighting.	B	9-Apr-19
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	B S B B B B B B B B B	2-Mar-20
Tukwila 15	Pacific Hwy	Pacific/TIB at Duwamish	1. Repair leaky pipe inside the west girder 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	A A B C B	4-Aug-20
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	B A A	25-Apr-19
Tukwila 17	Foster Golf Course	Foster GC	1. Monitor bearing movement at Abutment 1 2. Remove blackberry bushes under the bridge	M C	11-Apr-19
Tukwila 18	Green River	Interurban trail near 180th	1. Monitor 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	M B B B M	19-Aug-20
Tukwila 19	Interurban Trail	Interurban Trail	No repairs noted	-	11-Sep-18
Tukwila 20	180th Ped	Interurban trail at 180th	1. Monitor leaching cracks in abutment and retaining walls 2. Remove debris from bearing seat 3. repair approach settlement 4. Repair broken conduit splices 5. Replace and repair approach bollards	M C B B B	19-Aug-20
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	C C C	19-Aug-20
Tukwila 22	Fort Dent Trail	Interurban trail	1. Trim overgrowing vegetation at approaches 2. Remove debris on chords of bridge girders 3. Replace missing safety chains at corners of bridge 4. Replace popped bolts at diagonal bracing 5. Smooth out approach pathway at approach header	C M B B B	19-Aug-20
Tukwila 24	Klickitat Drive	Klickitat Drive	No repairs noted	NA	25-Apr-19
Tukwila 25			No repairs noted	NA	
4001 (Kent-Tukwila Joint Ownership)	196-200th	196th Street	1. Repair west approach settlement (Scheduled for Fall/Winter 2019) 2. repair guardrail at bridge approaches and replace damaged W Beam 3. Repair joints and seals 4. Clean deck drains	A B B B	18-Apr-19

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	2024
Tukwila 02	Frank Zepp	1968	08561400	36,000	2022
Tukwila 03	Lois T Newton	1973	08544400	18,900	2021
Tukwila 05	South-center Blvd	1994	0014269D	10,616	2023
Tukwila 06	Foster 56th Ave	1985	08166200	2,850	2024
Tukwila 07	51st Ave South	1996	08634500	4,600	2024
Tukwila 08	Grady Way	1986	08543600	25,500	2024
Tukwila 09	E Marginal Way	1989	08110200	13,000	2024
Tukwila 11	BAR Airport Way	1952	08001800	40,000	2024
Tukwila 12	BAR BNSF	1945	08002500	38,800	2021
Tukwila 13	Beacon Ave S	1971	7996800	550	2024
Tukwila 14	42nd Ave S	1949	08651500	10,300	2023
Tukwila 15	Pacific Hwy	2000	08651500	30,300	2021
Tukwila 21	Fort Dent Road	1975	08328300	1,115	2023
Tukwila 24	Klickitat	2012	08853600	14,024	2023
4001	196-200th	1998	08712100	17,406	2023

2010 - 2020 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 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

* 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

Annual Bridge Maintenance and Repair In-house Labor Hours

Year	Hours
2011	45
2012	35
2013	167
2014	108
2015	131
2016	283
2017	121
2018	126
2019	151
2020	62
Annual Average	122.9
Total	1229



King County

Road Services Division

Department of Local Services
201 South Jackson Street
KSC-LS-0315
Seattle, WA 98104-3856
www.metrokc.gov/roads

March 2, 2021

Adam Cox, P.E.
Transportation Project Manager
6300 Southcenter Blvd., Suite 100
Tukwila, WA 98188-2544

RE: Inspection of City of Tukwila Bridges

Dear Mr. Hash:

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 were conducted as follows:

Interim Inspection

March 02, 2020 No. TUKxNx14, 42nd Ave South Bridge

UBIT Inspections

August 04, 2020 No. TUKxNx05, SC Blvd. Green River Bridge
No. TUKxNx15, Tukwila International Boulevard

Routine Inspections

August 19, 2020
No. TUKxNx18, Green River Ped & Utility Bridge
No. TUKxPx20, 180th Pedestrian Bridge
No. TUKxNx21, Fort Dent Park Bridge
No. TUKxPx22, Fort Dent Trail Bridge

Inventory Inspection

October 27, 2020 No. TUKxPx25, Tukwila Urban Center Ped Bridge

Enclosed are the reports from the bridge inspections and the actions we recommend you take to maintain the bridges. 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

Adam Cox, P.E.

March 2, 2021

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bridge's condition and to assure them the bridge has been inspected on a timely basis. The information is incorporated into state and federal databases.

The bridge inspection report is divided into three main sections. The first section consists of three parts: the National Bridge Inspection Standards (NBIS) elements, Load Capacity Information, and Inspections Performed. The NBIS fields, which are numbered 1657 to 1687 are used for rating the components of the bridge. In general, the codes rate the components from eight (best) to one (worst); however, other rating scales apply to some of the fields in this first section. Explanations of these codes are found in the Washington State Bridge Inspection Manual (<http://www.wsdot.wa.gov/TA/Operations/BRIDGE/BIC.html>).

The second section of the report, Bridge Management System (BMS) Elements, lists quantities and rates them, breaking down the condition of each component into categories that indicate how widespread a component is deteriorated. State 1 is best; State 4 is worst.

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. Please note that any deficiencies listed in the "Repairs" section are prioritized between 1 - High priority, and 3 - Low priority. The Resources Required section indicates any special equipment or tools used to inspect the bridge.

I hope this letter helps you in reviewing these inspection reports. We recommend that the City of Tukwila bridges continue to be inspected on a 24-month schedule. Our next scheduled inspections of the City of Tukwila Bridges will be in spring 2021. Please call Margaret Germeaux at 206-477-3539 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

LJ:MH:

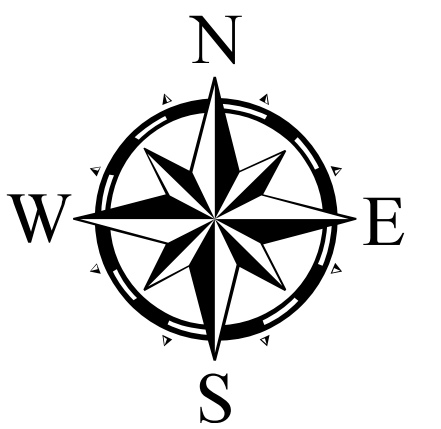
Enclosures

cc: Rey Sugui, Program Analyst, Road Services Division (RSD), Department of Local Services (DLS)
Margaret Germeaux, Engineer III, Bridge and Construction Unit,
RSD, DLS
(w/ enclosures)



City of Tukwila

Bridges



Not to Scale

NBIS Vehicle Bridges

- 1) Macadam Road
- 2) Frank Zapp Bridge (S 180th St)
- 3) Louis T. Newton Bridge (Strander Blvd)
- 4) Southcenter Green River Bridge
- 5) Foster 56th Ave S
- 6) 51st Ave S
- 7) East Marginal Way
- 8) Boeing Access Road Bridge over Airport Way
- 9) Boeing Access Road Bridge over BNSF
- 10) Beacon Ave S
- 11) 42nd Ave S
- 12) Pacific Highway/TIB
- 13) Fort Dent Park Bridge
- 14) Klickitat Drive

Jointly Owned NBIS Vehicle Bridges

- 15) Grady Way (Renton)
- 16) S 196th St/S 200th St (Kent)

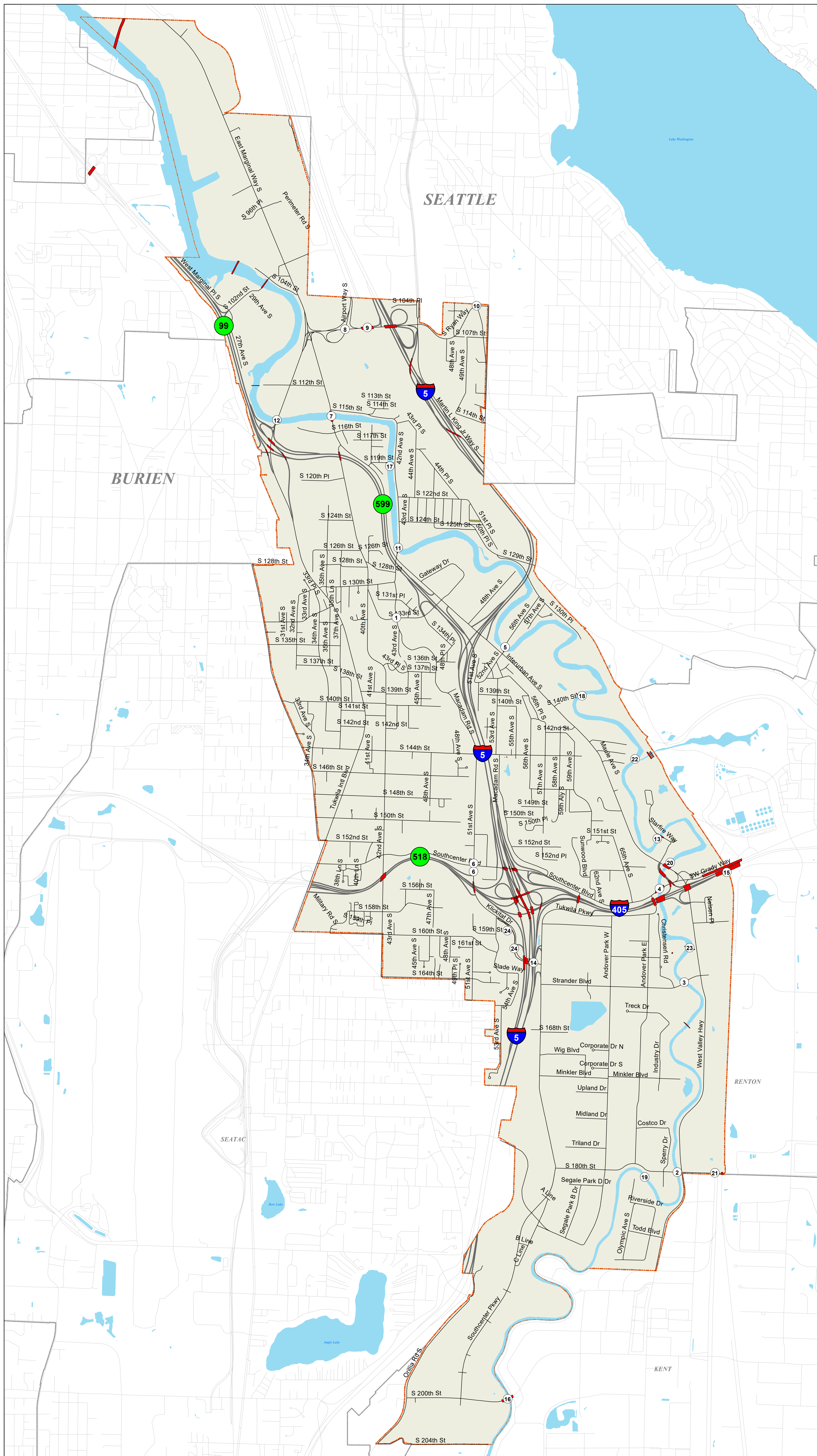
Pedestrian Bridges

- 17) S 119th Pedestrian Bridge
- 18) Foster Golf Course Bridge
- 19) Green River Pedestrian and Utility Bridge
- 20) Interurban Trail Bridge
- 21) S 180th Pedestrian Bridge
- 22) Fort Dent Trail Bridge
- 23) TUC Pedestrian Bridge
- 24) Klickitat Elevated Walkway

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

2021 to 2026

PROJECT: Annual Bridge Inspections and Repairs Project No. 9XX10402

DESCRIPTION: Ongoing program of bi-annual inspections, repairs, painting and rehabilitation of the 22 City 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.

MAINT. IMPACT: Reduces maintenance costs.

COMMENT: Ongoing project, only one year actuals are shown in the first column.

FINANCIAL (in \$000's)	Through Estimated									
	2019	2020	2021	2022	2023	2024	2025	2026	BEYOND	TOTAL
EXPENSES										
Inspections	111	45	75	75	110	115	120	125	130	906
Land (R/W)										0
Const. Mgmt.	43	40			15	15	15	15	15	158
Construction	314	250			75	70	65	60	55	889
TOTAL EXPENSES	468	335	75	75	200	200	200	200	200	1,953
FUND SOURCES										
Awarded Grant										
Proposed Grant										0
Mitigation Actual										0
Mitigation Expected										0
City Oper. Revenue	468	335	75	75	200	200	200	200	200	1,953
TOTAL SOURCES	468	335	75	75	200	200	200	200	200	1,953

