



Washington State
Department of Transportation
WSBS Inventory Report

| Structure Identifier | Bridge Number | Owner Code | County Number | City Number | Update |
|----------------------|---------------|------------|---------------|-------------|--------|
| 08530200 | BRG-131M | 04 | 171 | 140 | 6 |

| Bridge Name | Location | Section | Township | Range | Latitude | Longitude |
|-----------------------------------|--------------------|---------|----------|-------|----------|-----------|
| W S F R E E W A Y M A I N S P A N | 1200 SW Spokane St | 1824 | 04E | 473 | 41.6001 | 222.1000 |

| Feature Intersected | Facilities Carried | Region | FIPS Race Code | Legis District (1) | Legis District (2) | Toll | Custodian | Median | Historical | Program Year |
|---------------------------------------|-----------------------|--------|----------------|--------------------|--------------------|------|-----------|--------|------------|--------------|
| D U W A M I S H R I V E R W A T E R W | S W S P O K A N E S T | NW | 6300037 | 0304N | 64A | | | | | |

| Year Built | Year Rebuilt | Bridge Length | Maximum Span Length | Clearance Under Deck | Clearance Over Deck | Min Vertical Clearance Under Bridge | Min Vertical Clearance Right | Min Vertical Clearance Left | Navigation Vertical Clearance | Navigation Horizontal Clearance | Vertical Clearance | Approach Roadway Width | Skew Angle | Traverse |
|------------|--------------|---------------|---------------------|----------------------|---------------------|-------------------------------------|------------------------------|-----------------------------|-------------------------------|---------------------------------|--------------------|------------------------|------------|----------|
| 1983 | 0 | 1340 | 590 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.25 | 1.06 | 99 | 9 | 9 |

| Route Number | Mile Post | ADT on Inventory | Truck ADT | ADT Year | Future ADT | Future ADT Year | Linear Referencing System Route | LRS Sub Route | Fed Aid Route | Fed Aid Class | Horizontal Clearance Route Dir | Horizontal Clearance Reverse Dir | Max Vertical Clearance Route Dir | Detour Length |
|----------------------|------------------|------------------|------------|------------|------------|-----------------|---------------------------------|---------------------|---------------------|---------------|--------------------------------|----------------------------------|----------------------------------|---------------|
| 15101140131.30148620 | 82.0092230002029 | 82009 | 2230002029 | 2230002029 | | | | 144001016N250005000 | 144001016N250005000 | 250005000 | 5000 | 5000 | 5000 | 5 |

| Main Span Material | Appr Design | Number of Spans | Number of Piers | Design Exception Date | Federal Aid Project | Border State Code | Border State Identifier |
|--------------------|-------------|-----------------|-----------------|-----------------------|---------------------|-------------------|-----------------------------------|
| 205102 | 3 | 2915 | 11005 | 64F39 | | | Border State Structure Identifier |

| Frequency | Last Inspection Date | Hours On Site | Inspector | Inspection Identification No | Co-Inspector | Frequency | Last Inspection Date | Hours On Site | Inspector | Inspection Identification No | Co-Inspector |
|-----------|----------------------|---------------|-----------|------------------------------|--------------|-----------|----------------------|---------------|-----------|------------------------------|--------------|
| 7 | 2408072012 | 1.5 | HWT | G0506GK | 789588871N | 0 | 88799991889189991N | | | | |

| Frequency | Last Inspection Date | Hours On Site | Inspector | Inspection Identification No | Co-Inspector | Frequency | Last Inspection Date | Hours On Site | Inspector | Inspection Identification No | Co-Inspector |
|-----------|----------------------|---------------|-----------|------------------------------|--------------|-----------|------------------------|---------------|-----------|------------------------------|--------------|
| 7 | 2405172011 | 3.0 | HWT | G0506DADA | 6011072007 | 6.0 | MPHG0611HWT52408072012 | 2.0 | HWT | G0506GK | |

| Work Type | Structure Improve | Roadway Width | Lanes On | Lanes Under | Total Costs in Thousands | Structure Cost in Thousands | Roadway Cost in Thousands | Estimate Year | Code | Number | Main Biennium | Approach Biennium | Main Biennium | Approach Biennium |
|-----------|-------------------|---------------|----------|-------------|--------------------------|-----------------------------|---------------------------|---------------|------|--------|---------------|-------------------|---------------|-------------------|
| B | AN | 54 | NG | N2 | 0000 | 0 | 0 | 0 | N | | | | | |

BRIDGE INSPECTION REPORT

Status: Pending

Ver Date: 07/05/2013

Agency: SEATTLE

Printed On: 07/10/20

Program Mgr: Roman G. Peralta

Bridge No. BRG-131M

Page: 1/4

Structure Type

Bridge Name WS FREEWAY MAINSPAN

Route 01140

Location 1200 SW Spokane St

Structure ID 08530200

MilePost 131.30

Intersecting DUWAMISH RIVER W WATERWY

Inspector's Signature

HWT

IDent# G0506

Co-Inspector's Signature

JPB

7-10-13

J. Howell 02025 7/10/2013

| | | | | Inspections Performed | | | |
|--------------------|----|-----|------------|-----------------------|------|--|--|
| IT | NT | HRS | Date | Rep | Type | | |
| Y | 24 | 1.5 | 06/28/2013 | Routine | | | |
| | | | | Fract Crit | | | |
| D | 60 | 6.0 | 07/10/2012 | Underwater | | | |
| Y | 24 | 2.0 | 06/19/2013 | Special | | | |
| | | | | Interim | | | |
| Y | 24 | 2.5 | 05/15/2013 | Equipment | | | |
| | | | | Damage | | | |
| | | | | Safety | | | |
| | | | | Short Span | | | |
| Total: 6.0 | | | | | | | |
| Suff Rating: 80.00 | | | | 80.00 | | | |

| BMS Elements | | | | | | | |
|--------------|-------------------------------------|-------|-------|---------|---------|---------|---------|
| Element | Element Description | Total | Units | State 1 | State 2 | State 3 | State 4 |
| 12 | Concrete Deck | 0 | SF | 0 | 0 | 0 | 0 |
| 105 | Concrete Box Girder | 0 | LF | 0 | 0 | 0 | 0 |
| 205 | Concrete Pile/Column | 0 | EA | 0 | 0 | 0 | 0 |
| 234 | Concrete Pier Cap / Crossbeam | 0 | LF | 0 | 0 | 0 | 0 |
| 314 | Pot Bearing | 0 | EA | 0 | 0 | 0 | 0 |
| 331 | Concrete Bridge Railing | 0 | LF | 0 | 0 | 0 | 0 |
| 414 | Bolt Down - Sliding Plate w/springs | 0 | LF | 0 | 0 | 0 | 0 |

Notes

0 Orientation
 05/15/2013, Annual Routine Inspection with UBIT, HWT & AM, 10:30 A.M., Partly Cloudy, 55°F +/-
 06/19/2013, Special Inspection of the interior of the box girder, HWT & AM, Partly Cloudy, 58°F +/-
 06/28/2013 Routine Walk-through Inspection, HWT & JPB, 10:00 A.M., Clear, 70°F +/-
 There are 35 segments in the main span, including the pier tables.
 At Pier 16 the fence around the pier is damaged from truck trailers. Continue to observe.
 At Pier 15 the fence around the pier is damaged from truck trailers. Continue to observe.

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Structure Type

Bridge Name WS FREEWAY MAINSPAN

Route 01140

Location 1200 SW Spokane St

Structure ID 08530200

MilePost 131.30

Intersecting DUWAMISH RIVER W WATERWY

1 Special Inspection Notes

Bridge Name: WSF High Level Bridge **File No.:** 131M

Inspector: Hal Turner

Co-Inspector: Ainalem Molla

Equip. Used: Flashlight

Hours on Site: 2.0

Weather: Partly Cloudy

Date: 06/19/2013

Scope of Inspection: An inspection of the segmentally cast in place, post tensioned, box girder.

Findings, Location of Defects, and Recommendations

General - This inspection was scheduled to check if the transverse cracks in the outside of the bottom of the main span at the 11th and 12th panels East of Pier 16 and the 11th panel West of Pier 17 are reflected in the interior. They are not. Access was provided through the manhole located in the westbound center lane shoulder at Pier 16. Non-Permit Required, Confined Space procedures were used. Fall Protection procedures were used for entry.

All six sections of the box girder have shear cracking in the soffit of the deck at the ends of each section. Continue to observe.

The fire suppression system supply pipe has vertical hangers and horizontal brace rods with turnbuckles. Typical in all box sections: The vertical hangers do not appear to be vertical. The horizontal braces are mostly bent and there is at least one that is broken. See Work Order #160505.

South Box, West End

1. Pier 16, west diaphragm, there are four longitudinal cracks with efflorescence visible in the top deck soffit. **Continue to Observe (CTO)**
2. Pier 15, end diaphragm, the earthquake restrainers indicated approximately 3 ½ inch of movement between anchor rod and restrainer plate. This is visible by looking at the rods for evidence of movement. **(CTO)**
3. Minor Transverse Leaching Cracks in box top soffit, located approx. 40 feet east of the end diaphragm.
4. Nine longitudinal cracks approximately 80 feet east of the west end diaphragm. Each crack is approx. 3 feet long. They are located in the box top deck soffit and within a closure pour. **(CTO)**
5. Typical throughout, small cold joint crack like openings occurred during construction and were filled by epoxy injection. These areas did not show any signs of recent cracking. **(CTO)**

South Box, Main Span

6. Typical, there is an intermittent crack or cold fissure located in the re-entrant corner between the box web and box top deck. It appears to be construction related. **(CTO)**

South Box, East Span

7. The lights are out in this section. See Work Order #160510.
8. Typical, minor Transverse Leaching Cracks located in the box top deck soffit. **(CTO)**

North Box, East Span

9. Typical, minor Transverse Leaching Cracks located in the box top deck soffit. **(CTO)**

North Box, Main Span

10. Typical, minor Transverse Leaching Cracks located in the box top deck soffit. **(CTO)**

North Box, West Span

11. Typical, minor Transverse Leaching Cracks located in the box top deck soffit. **(CTO)**

- 9 Underwater Dive Inspection, Dan Stromberg/Matt Donahue, Collins Engineers, Inc.
7/10/2012, 2:30PM.
7/12/2012, 12:10PM.

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| | | |
|--|------------------------|--|
| Bridge No. BRG-131M | Page: 3/4 | Structure Type |
| Bridge Name WS FREEWAY MAINSPAN | Route 01140 | Location 1200 SW Spokane St |
| Structure ID 08530200 | MilePost 131.30 | Intersecting DUWAMISH RIVER W WATERWY |

| | |
|-----|---|
| 12 | <p>Concrete Deck Between Pier 16 and Pier 17 the deck soffit between the box girders has longitudinal cracks with efflorescence. The number of cracks varies depending upon the box segment being observed but number between zero and eight. Continue to observe. Between Pier 16 and Pier 17, on the North soffit, there are two deep scrapes from a high-load hit. Continue to observe.</p> |
| 105 | <p>Concrete Box Girder At Pier 15 the lateral restrainers have extruded the PTFE sliding surface. Continue to observe. Between Pier 15 and Pier 16, between the third and fourth box sections from the West the joint has cracked about 1/16 of one inch. The cracks start about three or four feet from the bottom of the box and run vertically up and bend diagonally about one foot below the top flange of the box. These cracks are typical throughout the box section. See Work Order #182935. Between Pier 15 and Pier 16, on the fourth, fifth, and sixth sections from the West there are diagonal hairline cracks on the South face of the South box. Similar cracks also appear on the North face of the South box. The cracks measure 0.2 mm wide. Continue to observe. Between Pier 15 and Pier 16, more severe close to Pier 16, longitudinal and diagonal cracks on the bottom of the box, typical throughout. Continue to observe. At the 11th and 12th panels East of Pier 16 there are transverse cracks on the bottom of the South box. See Work Order #208983. Between Pier 16 and Pier 17, about mid-span between the two piers, on the soffit of the North box, there is poorly consolidated concrete with many cracks. Continue to observe. Between Pier 16 and Pier 17, on the North side of the North box, there is minor damage due to a high-load hit. Continue to observe. Between Pier 16 and Pier 17, diagonal hairline cracks on the South face of the South. The number of cracks varies from two to eight. Continue to observe. Between Pier 16 and Pier 17, the cracks at the joint are limited to the center part of each joint. The cracks are vertical along the joint and are about four feet long. The cracks are between 1/32 and 1/64 of an inch wide. See Work Order #182935. At the 11th panel West of Pier 17 there are transverse cracks on the bottom of the North and South boxes. See Work Order #208984. At the 3rd segment West of Pier 17, on the South face of the South box, there is an area of delamination. Continue to observe. Just West of Pier 17, in the North face of the North box, there is a crack in the box. There was bondo applied on 06/09/98. On 08/23/06 it was noted that it has re-cracked. Continue to observe. Between Pier 17 and Pier 18, there are one or two hairline cracks on the soffit of the box. Continue to observe. Between Pier 17 and Pier 18, at the 9th joint between box sections West from Pier 18, the joint is open about 1/8" at the deck-box interface. The opening is about 2' long and 1/2" deep. Continue to observe. Between Pier 17 and Pier 18, at the 10th joint between box sections West from Pier 18, the joint is open about 3/16" at the deck-box interface. The opening is about 2' long and 1/2" deep. Continue to observe. At Pier 18 the lateral restrainers have extruded the PTFE sliding surface. Continue to observe.</p> |
| 205 | <p>Concrete Column / Pile</p> |
| 234 | <p>Concrete Pier Cap / Crossbeam At Pier 15, at the Northwest corner at the top of the pier cap there is a spall with exposed rebar, 3" x 3" x 1/2". See WO #6112.</p> |
| 314 | <p>Pot Bearing At Pier 15 The pot bearings for the box girders have oil stains. Continue to observe. At Pier 15, where the P.C. girders are framed in, the steel bearing plates are corroded. See WO #8530. At Pier 18, where the P.C. girders are framed in, the steel bearing plates are corroded. See WO #8530. At Pier 18 the South pot bearing for the box girder is leaking oil. Continue to observe.</p> |
| 331 | <p>Concrete Bridge Railing On the inside of the North barrier there is corroded rebar due to insufficient cover. This is typical. Continue to observe.</p> |
| 414 | <p>Bolt Down Panel - Metal At Pier 15 water leaks through the joint. The bearing seat area is wet. Continue to observe.</p> |

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Bridge No. BRG-131M

Page: 4/4

Structure Type

Bridge Name WS FREEWAY MAINSPAN

Route 01140

Location 1200 SW Spokane St

Structure ID 08530200

MilePost 131.30

Intersecting DUWAMISH RIVER W WATERWY

Repairs

| Repair No | Pr | R | Repair Description | Noted | Maint | Verified |
|-----------|----|---|--------------------|-------|-------|----------|
| | | | | | | |

Inspections Performed and Resources Required

| <u>Report Type</u> | <u>Date</u> | <u>IT</u> | <u>Frg</u> | <u>Hrs</u> | <u>Insp</u> | <u>CertNo</u> | <u>Coinsp</u> | <u>Note</u> |
|--------------------|-------------|-----------|-----------------|------------|-------------|---------------|---------------|---|
| Routine | 06/28/13 | | 24 | 1.5 | HWT | G0506 | JPB | 06/28/2013 Routine Walk-through Inspection, HWT & JPB, 10:00 A.M., Clear, 70°F +/-. |
| Resources | | | Use Hour | Min | Req | Max | | Notes |
| Underwater | 07/10/12 | D | 60 | 6.0 | MJD | G0610 | | Underwater Dive Inspection, 7/10/2012, Dan Stromberg/Matt Donahue, Collins Engineers, Inc. |
| Resources | | | Use Hour | Min | Req | Max | | Notes |
| Special | 06/19/13 | 5 | 24 | 2.0 | HWT | G0506 | AM | 06/19/2013, Special Inspection of the interior of the box girder, HWT & AM, 10:00 A.M., Partly Cloudy, 58°F +/- |
| Resources | | | Use Hour | Min | Req | Max | | Notes |
| Equipment | 05/15/13 | | 24 | 2.5 | HWT | G0506 | AM | 05/15/2013, Annual Routine Inspection with UBIT, HWT & AM, 10:30 A.M., Partly Cloudy, 58°F +/- |
| Resources | | | Use Hour | Min | Req | Max | | Notes |
| UBIT | | | | | ANY | ANY | | |