



2020 Bridge Deck Maintenance Contract

MAINTAINING
WASHINGTON COUNTY'S
CONCRETE BRIDGE DECKS

1/14/2021

Land Use & Transportation

co.washington.or.us



Why concrete bridge decks need maintenance

What is a bridge deck?

- Transfers vehicle loading to the beams
- Subject to bending and shear stress
- May act as the wearing surface of the bridge



Why concrete bridge decks need maintenance

What triggers the need for maintenance?

- Cracks in the surface
- Rutting
- Delamination
- Damage from traffic or road maintenance equipment



Why concrete bridge decks need maintenance

Examples of maintenance recommendations and inspection observations.

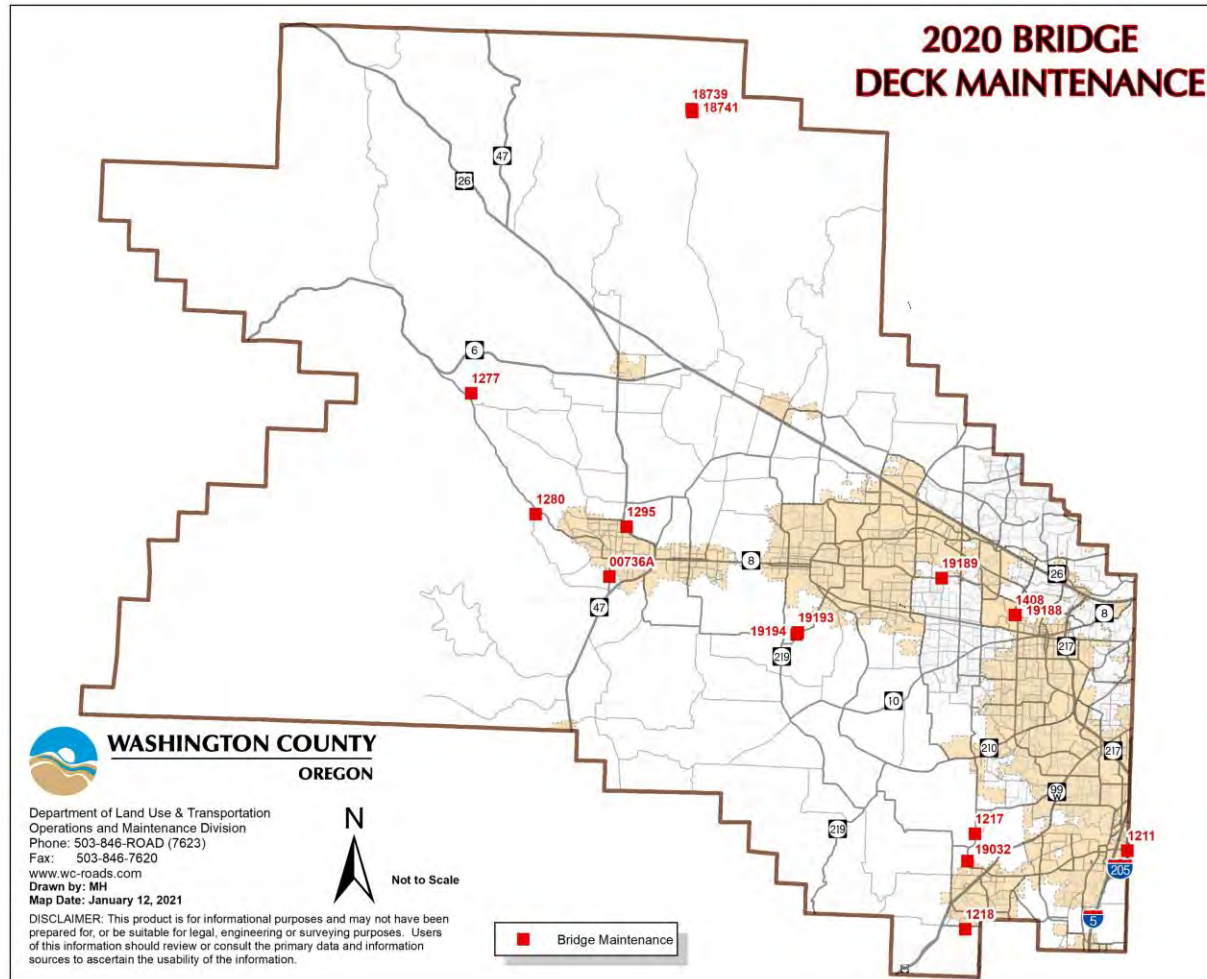
The image displays several overlapping screenshots of a bridge inspection report. The most prominent screenshot shows the following details:

- Remarks**
- 12-Re Concrete Deck**
- 1120-Efflorescence/Rust Staining**
Efflorescence exists at cracks on soffit between girders 8 to 12 and other scattered locations.
- 1130-Cracking (RC and Other)**
Long transverse cracks present on top of deck along downstream side curb lane; consistent intervals with efflorescence cracks on underside of deck. 1/8 wide cracks on downstream side at Bent 1. Longitudinal cracks exist in the westbound lanes.
- 1131-Soffit Cracking (RC, PSC)**
Transverse cracks exist on the soffit at approx. 5' intervals.
- 522-Coated Rebar**
- 08/17/2010**
- 07/25/2016**

Other visible text includes "12-Re Concrete Deck", "1120-Efflorescence/Rust Staining", "Diagonal Bent 3 at", "1130-Cracking Transverse", "38-A", "1131-Soffit Cracking Map cracking", "Assigned (Steel) Other 2", and "*Completed items not included on default search".



What bridges did we work on?





What was done?

Various methods of deck maintenance were deployed

- Polymer Membrane and Asphalt Concrete Overlay
- Multi-Layered Polymer Concrete Overlay
- Premixed Polymer Concrete Overlay
- Rapid Set Low Permeability Concrete



What was done?

Polymer Membrane and Asphalt Concrete Overlay





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Polymer Membrane and Asphalt Concrete Overlay





What was done?

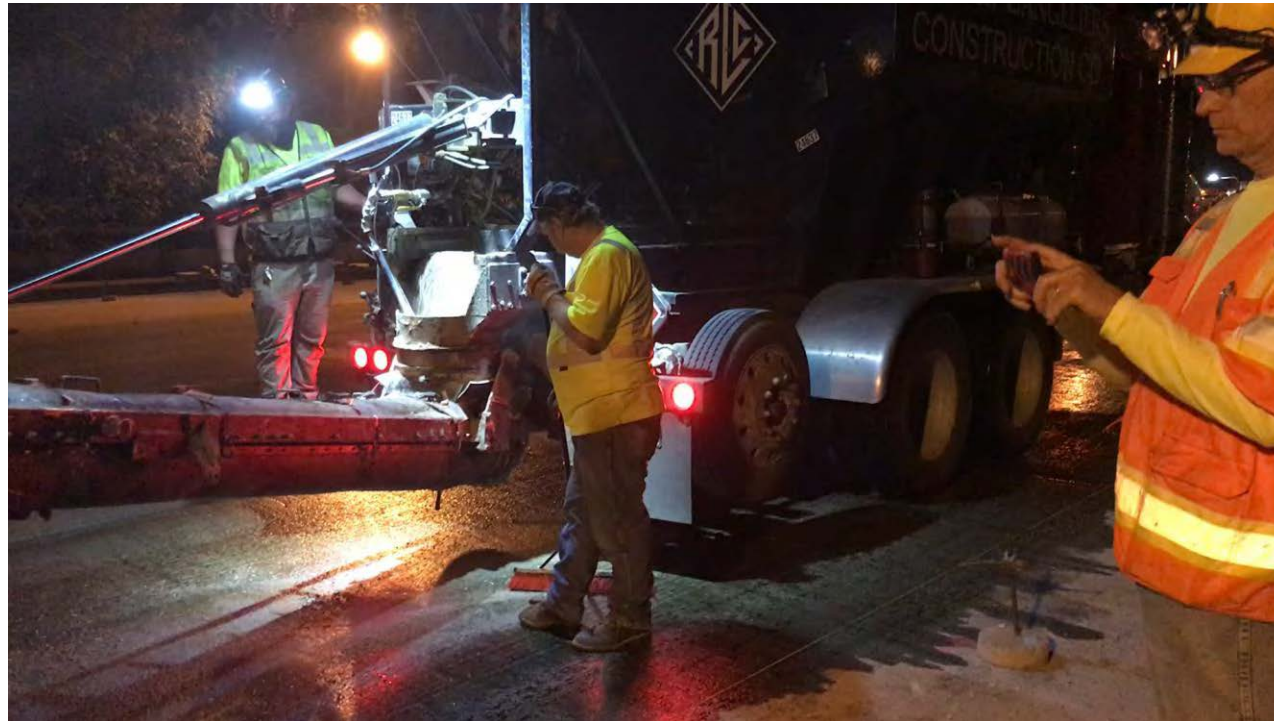
Multi-Layered Polymer Concrete Overlay





What was done?

Premixed Polymer Concrete Overlay





What was done?

Rapid Set Low Permeability Concrete





What was done?

Chain Drag





How much did it cost?

Road Name	Bridge Number	Maintenance Treatment	Cost
65 th Ave	1211	PPC Overlay	\$405,422
B Street	00736A	MPCO	\$17,356
Baseline Rd	19189	PPC Overlay	\$209,321
Beal Rd	1295	Polymer Membrane	\$26,123
Fern Flat Rd	18739	Polymer Membrane	\$22,767
Fern Flat Rd	18741	Polymer Membrane	\$28,955
Minter Bridge Rd	19193	MPCO	\$40,056
Minter Bridge Rd	19194	MPCO	\$48,620
Murray Blvd	1408	Rapid Set Low Permeability	\$517,139
Murray Blvd	19188	PPC Overlay	\$242,726
Oberst Rd	1218	Polymer Membrane	\$23,255
Parson Rd	1277	MPCO	\$34,905
Roy Rogers Rd	1217	PPC Overlay	\$201,265
Roy Rogers Rd	19032	PPC Overlay	\$105,132
Stringtown Rd	1280	MPCO	\$47,546
Mobilization			\$170,000
Traffic Control			\$100,000
		Total	\$2,240,593