



WBPP AGENDA

**Western Bridge
Preservation
Partnership**

**Date: November
6th, 2019
Time: 11:00 –
Noon (PST)
Connection Info
Below**

Time	Topic	Presented By
11:00	Welcome / Introductions / Approval of Meeting Minutes	Herb McDowell
11:05	Working Group: Local Agency Outreach	Gregg Freeman
11:10	Working Group: Chloride Testing	Travis Kinney
11:15	Technical Topic: Rapid Deck Rehab	Travis Kinney
11:45	Administrative items / New Business / Current Budget/Travel	All
12:00	Adjourn	

GoTo Meeting Link:

1. Please join my meeting.

<https://www3.gotomeeting.com/join/305841766>

2. Use your microphone and speakers (VoIP) - a headset is recommended. Or, call in using your telephone.

Dial +1 (213) 493-0603

Access Code: 305-841-766

Audio PIN: Shown after joining the meeting

Meeting ID: 305-841-766

Next Meeting: December 4th, 2019 11:00 AM PST

Technical Topic Background

Hydro-demolition rapid deck rehabilitation

Contact Info: Travis Kinney, Email: Travis.J.Kinney@ODOT.State.OR.US

Background:

The Yamhill Overflow Bridge was built in 1963 and consists of 10 – 30’-0” RCDG spans supported on timber pile trestle bents. The 300’ bridge carries two lanes of traffic on a 30’ roadway with an ADT of 23,000. Reinforcement in the deck was design to have only 1” of cover for top and bottom mat reinforcement in a 6” deck.

Due to significant deterioration maintenance is considering a deck rehabilitation that would be completed in concurrent weekend closures (8:00 PM Friday to 5:00 AM Monday). ODOT doesn’t have significant experience with projects of this type of is seeking assistance.

Structural Deck Rehabilitation Options:

Silica Fume Overlays:

- 1/2 to 3/8” nominal aggregate
- Significant shrinkage cracking
- 7 day wet cure

Material or Property	Specification or Test Method	Unit	Property Requirements
Fine aggregate	02690.30	% total aggregate (by Weight)	45 - 55 (SFC) 50 - 60 (LMC)
Dry Silica Fume	02330.20	% total cementitious material	4
Fly Ash	02330.10	% total cementitious material	30
Latex Emulsion Admixture	02030.30	gal./cu. yd.	24.5 (min.)
Water-Cementitious Ratio *	AASHTO T 121	lb. water/lb. cementitious material	0.40 (max.)
Air Content	AASHTO T 152	% plastic mix	6 ± 1 1/2
Concrete Temperature	WAQTC TM 10	° F at time of placement	50 (min.) 80 (max.)
Slump	AASHTO T 119	inch	6 ± 2
Compressive Strength (<i>f</i> 'c) at 7 Calendar Days	AASHTO T 22	psi	3,000 (min.)

* Include free moisture in aggregate and for LMC, non-solids in latex

Latex Modified Concrete:

- Hasn’t been used in Oregon for decades.
- No clear reason why it fell from favor.
- Need additional information on who is using LMC and why.

High Performance Concrete:

- Very similar to Silica Fume Specification but uses larger aggregate (3/4 or 1”).
- May reduce shrinkage cracking
- Expected to have better durability.

Bridge Condition:

The reinforcement within the deck wasn’t placed at the proper depth which has led to significant spalling (potholing). An in depth evaluation of the deck was performed which confirmed chloride contamination in the surface concrete. Approximately 50% of the deck is expected to require patching.





YAMHILL RIVER OVERFLOW - BR# 08492 - HWY 39 - MP: 45.76

SIDE ELEVATION