I-205 Improvements Project: Abernethy Bridge

Top: Aerial photo of the Abernethy Bridge from West Linn looking north.

Below: Aerial photo of the Abernethy Bridge from Oregon City looking south.

Local Area Improvements
**West Linn Interchange Improvements**
OR 43 interchange ramp reconfiguration and roundabout – underway now

**Oregon City Interchange Improvements**
OR 99E SB ramp reconfiguration (2023 - 2024)
Abernethy Bridge Construction
Substructure Retrofit

- Outrigger bents at piers 3-6 in river
- Additional outriggers at piers 2, 7 and 8
- Other piers widened in kind with existing substructure

Abernethy Bridge – Symmetrical Widening
Bridge slide and median widening (2025)

1. Slide northbound lanes by 8 feet
2. Slide southbound lanes by 8 feet
3. Construct the median
4. Final bridge configuration
Abernethy Bridge Slide

Subsurface Conditions

- Fill
- Gravel Alluvium
- Sand Alluvium
- Fine Grained Alluvium
- Decomposed Basalt
- Basalt
- Fault Breccia
Abernethy Bridge Construction
Temporary Work Bridges and Pier Construction (2022 - 2023)

Construction barges on the Willamette River looking into West Linn.

New bridge support, temporary work bridge and barges.

Nighttime construction work on the river.

Crews installing new support for the Abernethy Bridge.

Current Activities
Temporary Work Bridges
Drilled Shafts

• 12’ dia. shafts – 10 total – Approx. 1,790 feet total
  • largest shaft 240’
  • One of the most powerful oscillators in North America.
    • Weight – 221,000 lbs
    • Torque – 22.9 million lb-ft
    • Extraction Force – 2.8 million lbs
• 10’ dia. Shafts – 2 total – Approx. 270 feet total
  • largest shaft 130’
• 8’ dia. Shafts – 9 total – Approx. 1,040 feet total
  • largest shaft 130’
• 7’ dia. Shafts – 1 total – Approx. 282 feet total
  • largest shaft 282’ with bi-directional load test
• 6’ dia. Shafts – 6 total – Approx. 230 feet total
  • largest shaft 50’

Current Activities
Load Test Shaft (2B) – 45,950 kips
Current Activities
Drilled Shafts

Current Activities
Drilled Shafts
Current Activities
Drilled Shafts

Current Activities
Column Construction
Current Activities
Column Construction
Encapsulating existing cross beams

- Up to 50(EA) 37 strand tendons and 100(EA) PT bars in a single crossbeam
- Nearly 2 miles of PT duct and 70 miles of strand in a single crossbeam

Partnering

- Co-located at jobsite
- Formal partnering sessions quarterly
- Project First
- Diversity and workforce dashboard
Stay Connected!

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Thank you!

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