



# ***ABC in Oregon***

## ***Peer to Peer ABC Workshop***

**Sacramento, CA**

**May 19, 2015**

***Craig Shike, P.E.***

**Bridge Operations & Standards Manager**

**Bridge Engineering Section**

**Oregon Department of Transportation**



# ***ABC in Oregon***

## ***ABC Committee***

**Started by Ben Tang – June 2008**

**BDDM Section 3.24**

- **24 ABC projects 1973 - 2014**



# ***ABC in Oregon***

## ***ABC Projects***

**1973 – Fremont Bridge – Arch span floated on barges and moved into place using strand jacks**

**1997 – Imnaha Bridge – Single span steel, lateral slide (NE Oregon, 21 miles from Wallowa Lake Highway)**

**1997 – I-5 Interstate Bridge – Trunion assembly replacement – 7 days (14 days ahead of schedule)**

**2002 – OR 26 Mill Creek Bridge Deck Replacement  
- 3-span truss – Deck panels replaced sequentially, 24 days**



# ***ABC in Oregon***

## ***ABC Projects***

**2006 – US 20 over Hayes Creek – Precast cap and slabs – Bridge constructed during a 72-hour closure**

**2007 – Sauvie Island over Columbia River – 365 ft steel tied arch – SMPT used to skid and load the span on barges and floated into place**

**2007 – Depot Street Rogue River – 306 ft concrete tied arch built adjacent to existing and slid laterally into place – 5 day road closure**

**2008 – OR 38 over Elk Creek / Hardscrabble Creek – Both structures built to the side and slid laterally into place**



## 2012 – US 30 Burnt River (UPRR)

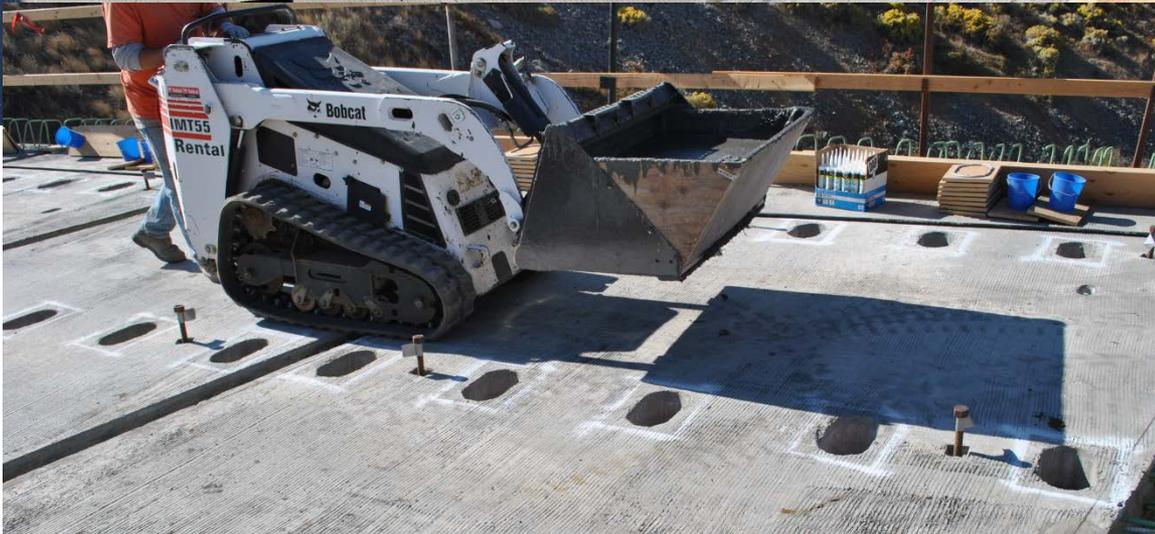
- Precast prestressed deck panels with UHPC joints





## 2012 – US 30 Burnt River (UPRR)

- Precast prestressed deck panels with UHPC joints





## **2012 – US 30 Burnt River (UPRR)**

- **Lessons Learned**

- ❖ **Texturing HPC Deck Concrete in the plant is not easy**

- ❖ **UHPC is expensive!**

- ❖ **CIP end sections work well**

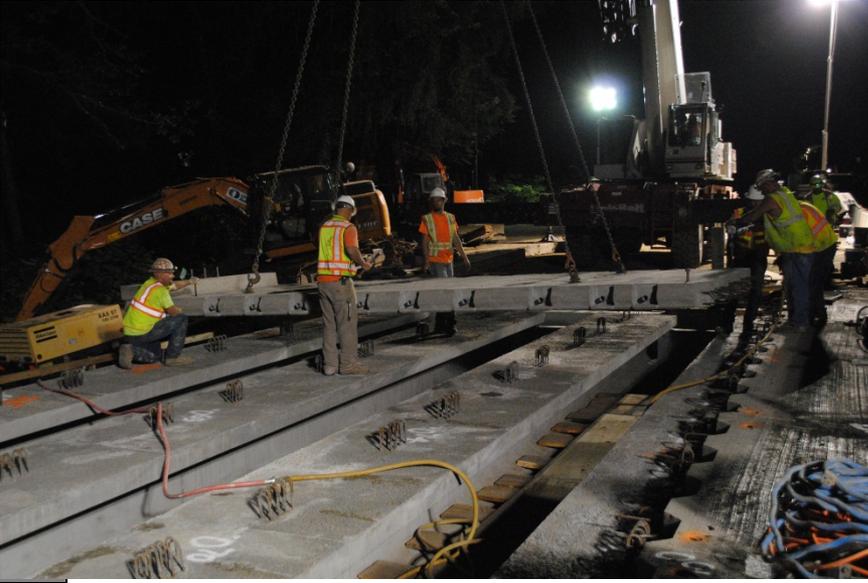
- ❖ **Precast deck panels cost more than CIP**

- **See *Aspire* magazine, Summer 2014**



## 2014 – US 26 West Humbug Creek

- Precast prestressed deck panels with P/T joints





## 2014 – US 26 West Humbug Creek

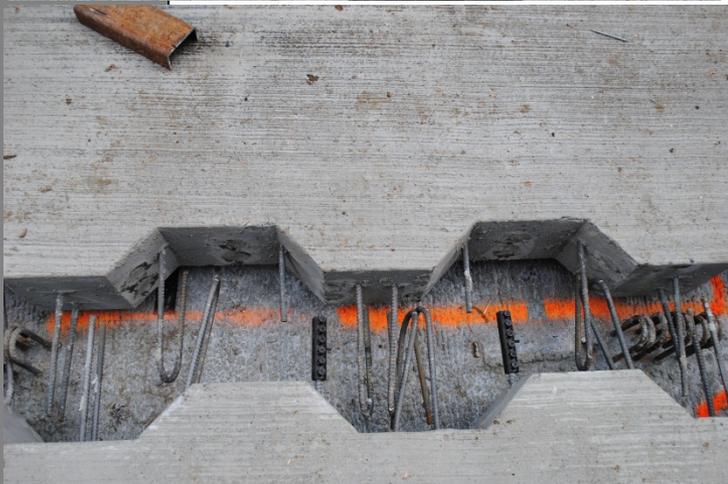
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## 2014 – US 26 West Humbug Creek

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## 2014 – US 26 West Humbug Creek

- Precast prestressed deck panels with P/T joints





## 2014 – US 26 West Humbug Creek

- Lessons Learned

- ❖ UHPC Joints preferred over P/T
- ❖ Match cast joints should have epoxy
- ❖ Post Tensioning all panels at once is difficult
- ❖ When using new technology, it may be beneficial to specify some means and methods
- ❖ Project will test durability of precast deck panels



## 2012 – OR213 I-205 Redland Road

- Lateral Slide





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- Lateral Slide





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## ***Future Direction***

**More use of UHPC if cost is reasonable**

**Possible Geosynthetic Reinforced Soils Integrated Bridge System (GRS-IBS) for a county bridge**

**Need more funding (ODOT currently replaces 1 bridge per year)**

**Falsework for CIP concrete construction generally not allowed for overpass construction due to mobility requirements (17 ft minimum vertical clearance)**

**Designers and Contractors are ready and willing to use ABC**



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## **Questions?**

***Craig Shike, P.E.***

Bridge Operations & Standards Managing Engineer

Bridge Engineering Section

Oregon Department of Transportation

[Craig.L.SHIKE@odot.state.or.us](mailto:Craig.L.SHIKE@odot.state.or.us)

503-986-33323