DAVID EVANS AND ASSOCIATES INC.

JACKSON COUNTY Roads

Depot Street Bridge
Wild and Scenic Rogue River

Presenters

Ken Stoneman, PE, PLS – David Evans and Associates, Inc.

Guido Portier, PE – David Evans and Associates, Inc.

Depot Street Bridge

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The Site

- Project Location: City of Rogue River, in southern Oregon – adjacent to Interstate 5, between Cities of Grants Pass and Medford
- New bridge replaces existing truss bridge spanning the Wild and Scenic Rogue River at River Mile 111 (from Pacific Ocean)
- Bridge Owner: Originally Jackson County, now ODOT

History

- Fourth in a series of bridges over the Rogue River in this location
- 1897 - Ad Helms built a rope and wood plank suspension bridge suitable for foot traffic only
- Earlier, the area was known as “tail holt,” as early settlers grabbed “holt” of their horses tail to cross river

History

The original steel truss bridge was built in 1909. The sign posted above the entrance is for $25 fine for those riding or driving faster than a walk.

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Some of the Challenges

- Bridge had a Sufficiency Rating of 8
- Bridge deck below 100 year flood elevation
- Horizontal and Vertical constraints at I-5 touchdown
- Vertical constraint at Highway 99 touchdown

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Some of the Challenges (Con't.)

- Increased capacity required, including a third lane
- Crossing is critical to City of Rogue River
- Two parks under south end of bridge

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Citizen Concerns

- Crossing must be kept open for connectivity and economics of City
- Protect trees during construction and restore the parks after construction
- Keep boat ramp open
- Maintain City utilities across bridge during construction
- Losing a landmark bridge, want new bridge to be landmark as well
- Any closure limited to less than one week

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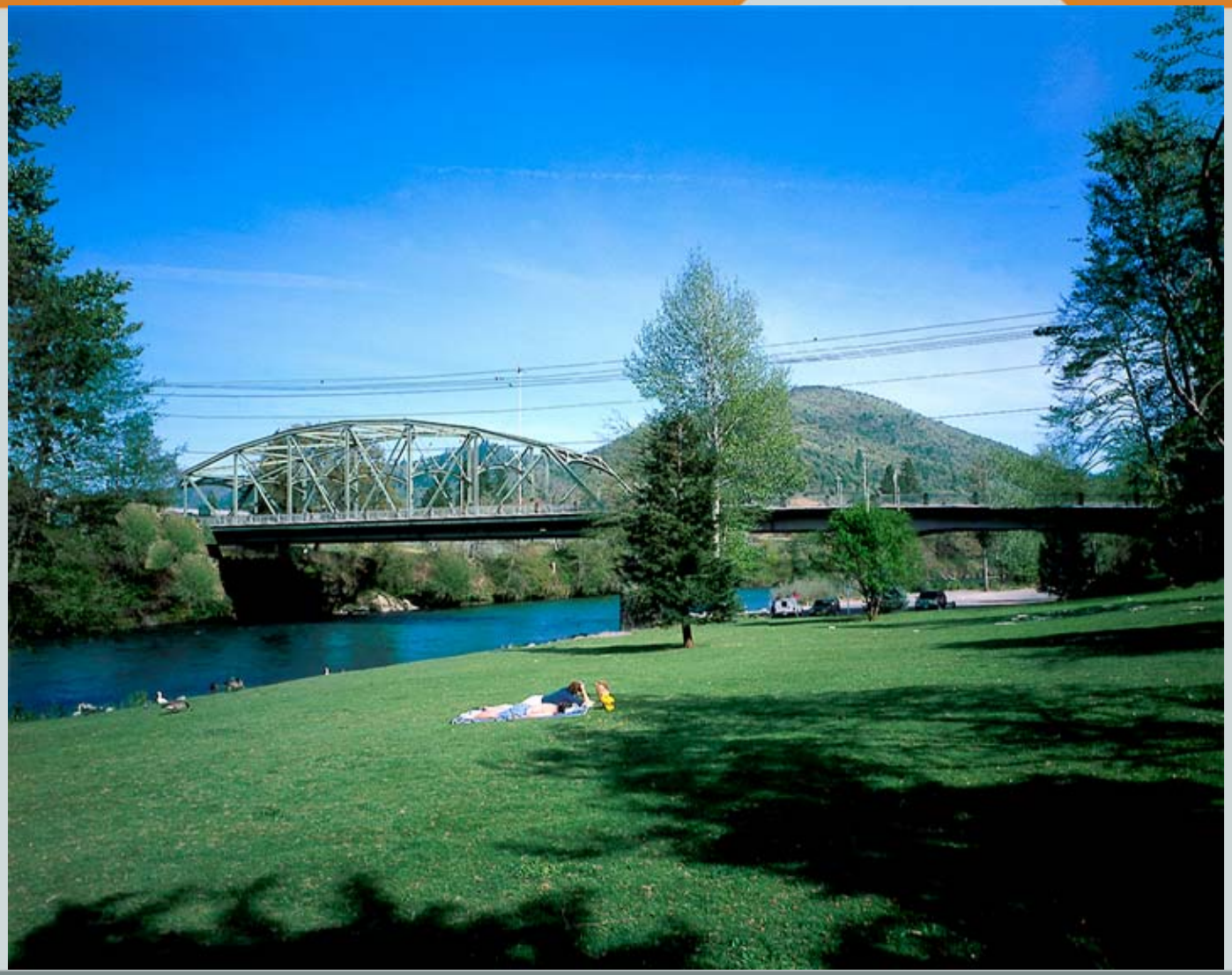
Solution Alternatives

- Several bridge alternatives were investigated:
  - New Truss Bridge
  - One-way Truss Couplets
  - Cable Stay Bridge
  - Concrete Box Bridge
  - Arch

A Truss Bridge



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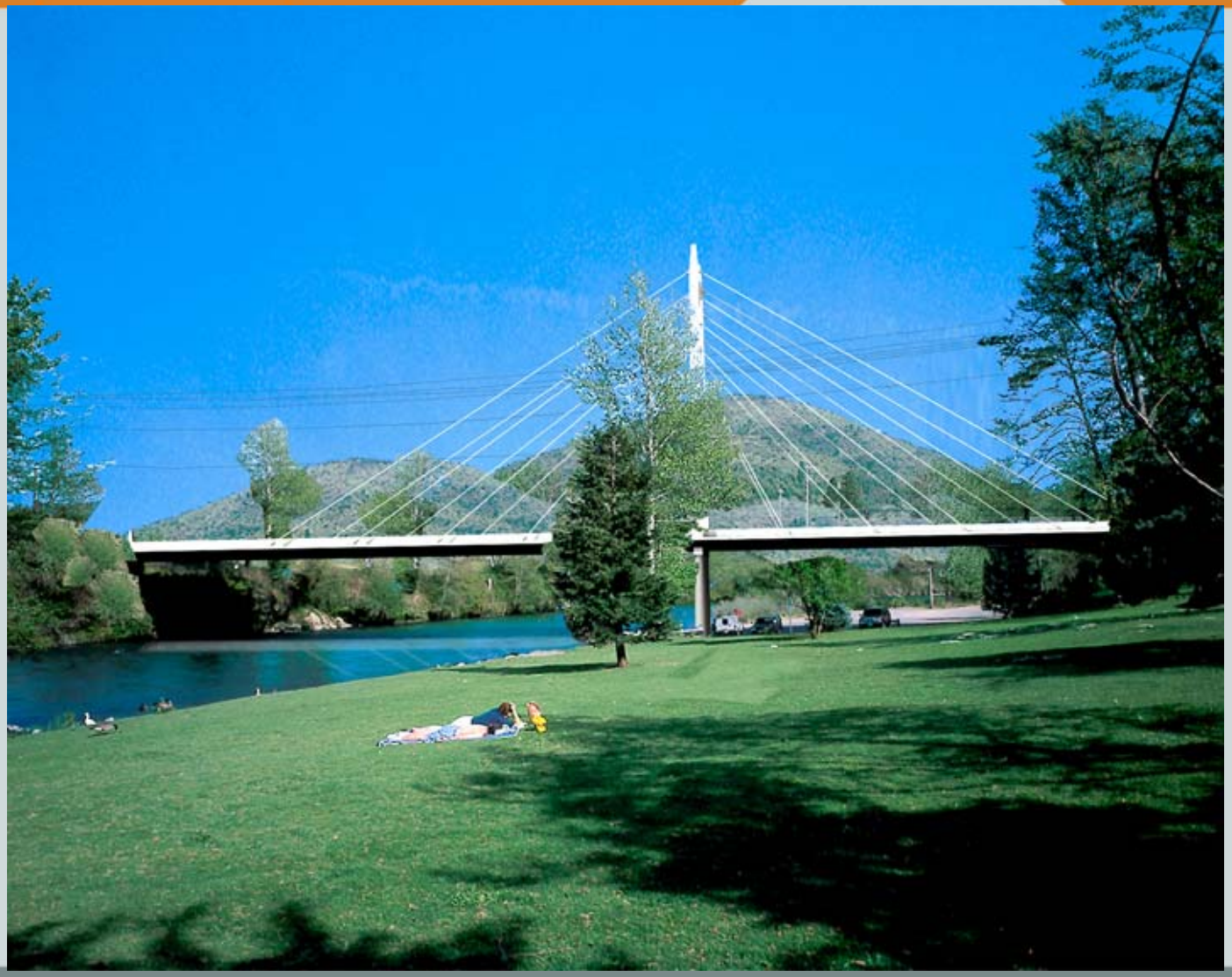
A Cable Stay Bridge



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A Concrete Box Alternative

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A Short Arch Alternative

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The Solution:
Longer Concrete Tied Arch Bridge

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Innovative Solution

- Once bridge type determined, needed to address challenges of construction while maintaining public access across river.
- A Combination of Solutions used:
  - Construct a by-pass bridge (new bridge)
  - Alter the traffic patterns on I-5
  - Rework the on and off Ramps to the City

Why The Solution?

- The thin deck of the arch raises the bridge above the flood plain in the area of the active channel
- Least cost solution that closed crossing for less than 1 week
- Kept piers mostly out of active river

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How?

- Build the new bridge 25 feet out of alignment to keep crossing open

- This allowed closure only during bridge move (5 days)

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But How to Move the Bridge?

- OK, decision was made to build the new bridge in a 25-ft. off-set location, then move it into position after it was constructed…
- But how to move the 5000 ton bridge?

How to Move the Bridge?

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Contractor Alternative

- The Specifications called for Hillman Rollers - or an approved alternate
- Contractor inexperienced with bridge moves, so called in an expert in the arena of heavy moves…
- Subcontracted with Mammoet of Denmark – one of the worlds largest movers of mega-ton structures

Mammoet Equipment

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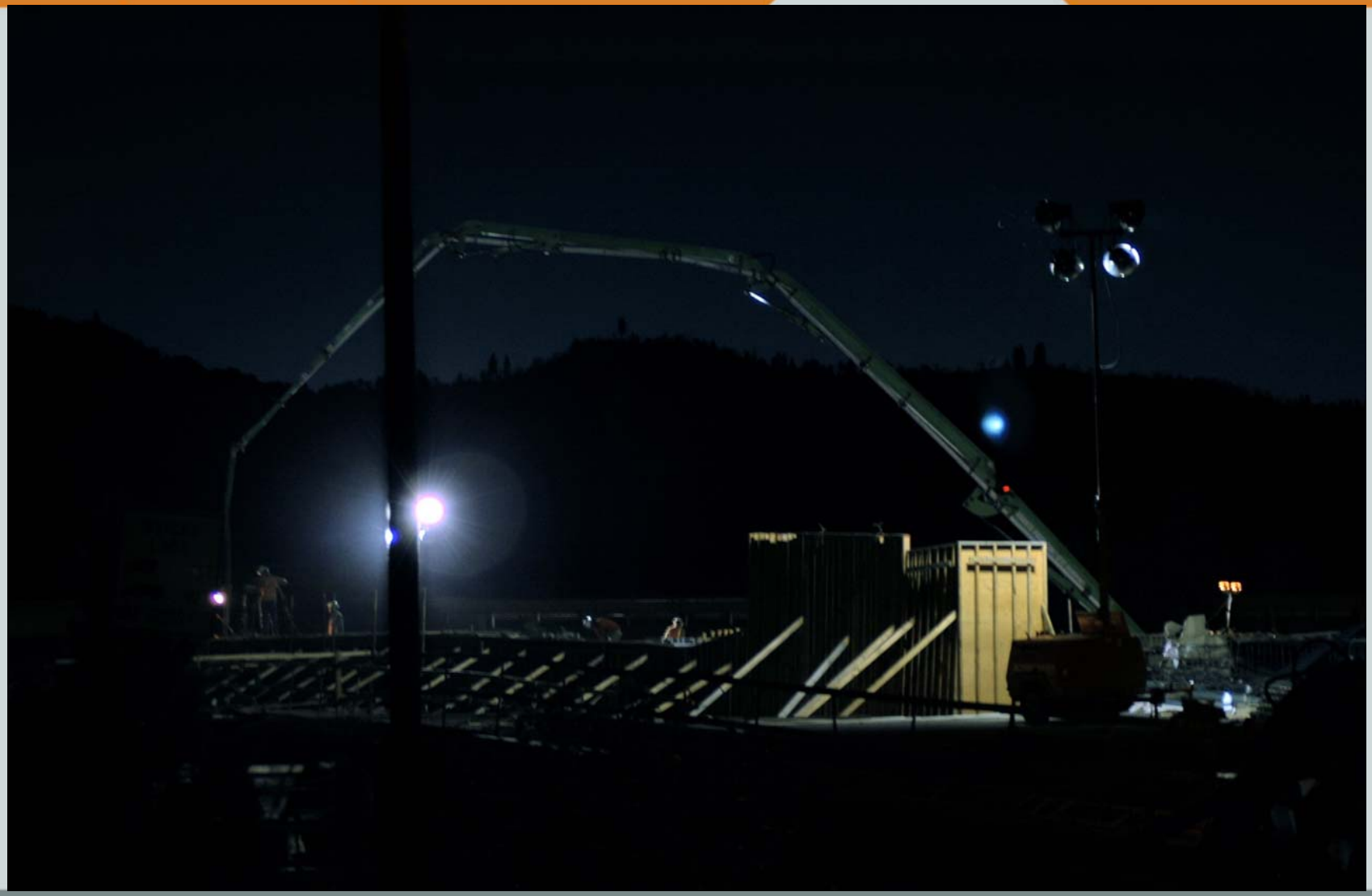

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The new bridge being built next to the old bridge

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Moving the Bridge - The Movie

The City gets to enjoy it's new addition

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QUESTIONS?

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