

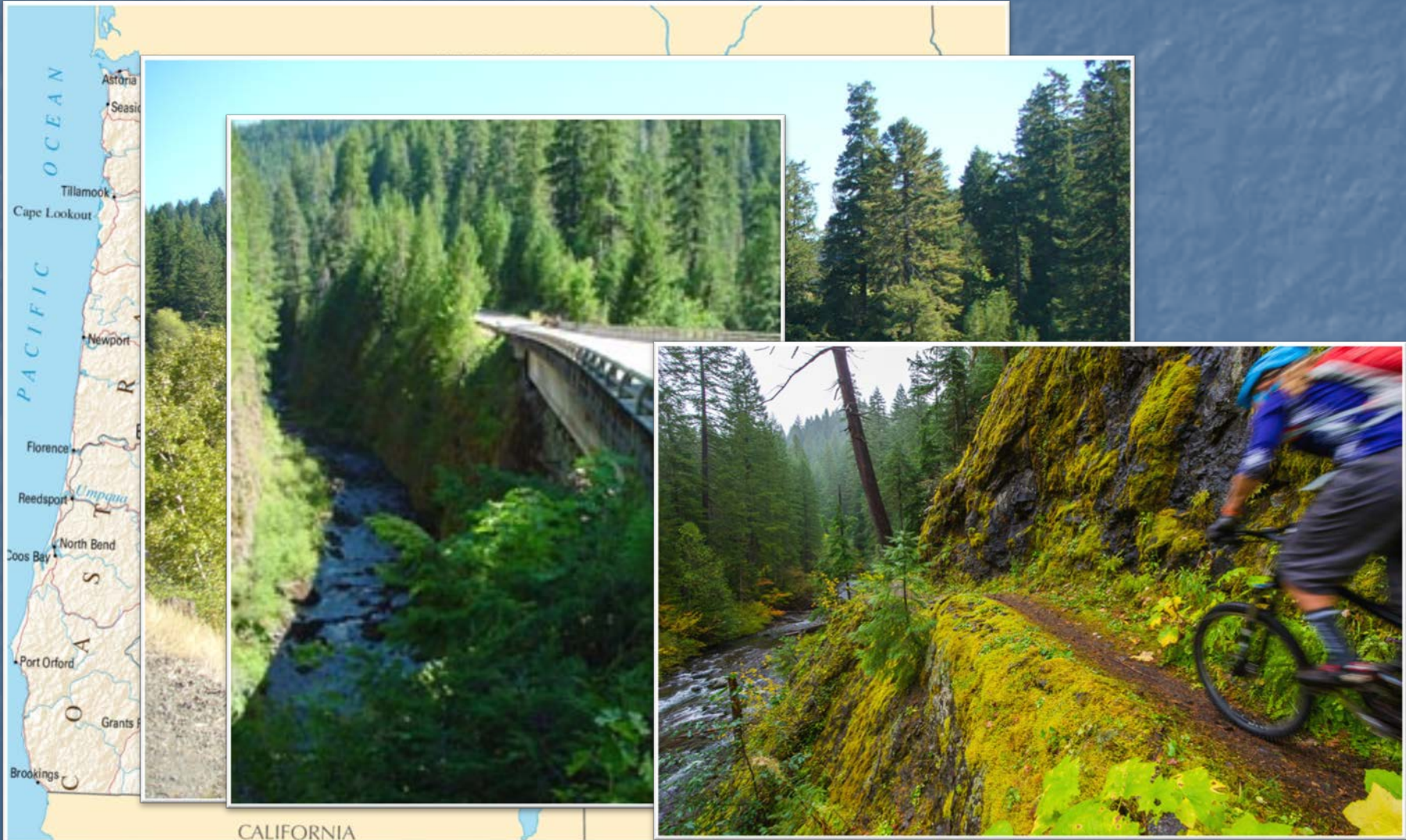
Tioga Pedestrian Bridge

Replacing what once was



Bob Grubbs, PE
ODOT Bridge Design Unit, Region 3

Location



CALIFORNIA

History



Original Bridge



1964 Flood



All That Remains



BLM Plan

Tioga Bridge and Susan Creek Day-Use Area Improvements Roseburg District, Bureau of Land Management Vicinity Map

T26S R2W, W.M.



Design Challenges

Narrow Adjacent Road



Design Challenges

No information on Existing Piers



Design Challenges

Poor Access to South Side



Design Challenges

Rock Abutment Along Trail



Project Challenges

More than engineering challenges

- Funding
- Environmental permitting
- Public expectations
- Public outreach
- Design & contracting methods

Funding

- Forest Enhancement
- Western Federal Lands Highway Division
- Scenic Byways

Environmental Permitting

- Biological assessment for spotted owls
- Archaeological clearances required
- Storm water management plan
- Sctn. 7a Wild & Scenic River Requirements
- In-water-work for access to south side

Public Expectations



Public Outreach

- Field Trips

Public Outreach

- Field Trips
- Circle of Trust

Circle of Trust



BLM Expectations



**WESTERN WOOD
STRUCTURES, INC.**

Working Wonders with Wood

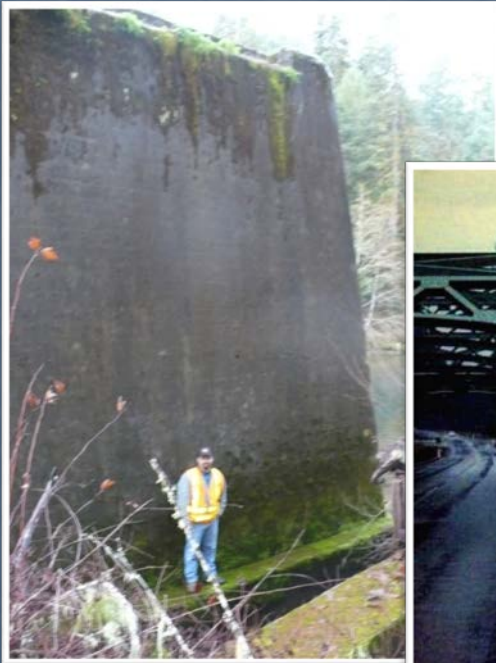
Bumps In the Road

- Evidently you don't care for this project?



Bumps In the Road

- Evidently you don't care for this project?
- Design Challenges



Bumps In the Road

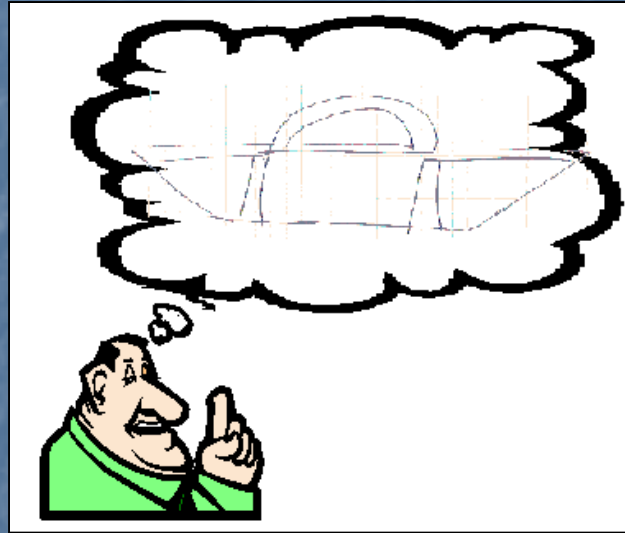
- Evidently you don't care for this project?
- Design Challenges
- Right of Way and road use agreements
- You want to add what?

How Do We Do This?

- Design it ourselves?
- Add it as a proprietary item?
- Purchase through procurement contract?
- Acquire through an AE Contract?
- Design Build-Low Bid...yeah that'll work

The Steps of the DBLB

From here:



To here:



Design Build Low Bid

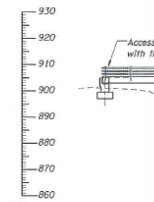
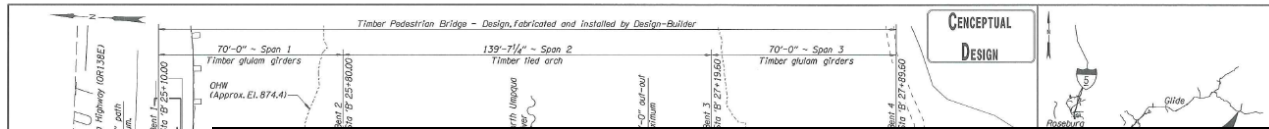
- Challenges
 - First DBLB, first time bugs
 - Not set up for this unique case
- Requirements
 - Schedule between projects
 - Who inspects?
- Next time
 - Clearly define roles for inspection, details, etc.
 - Better defined schedule between contracts

Preliminary Contract & Layout

OREGON

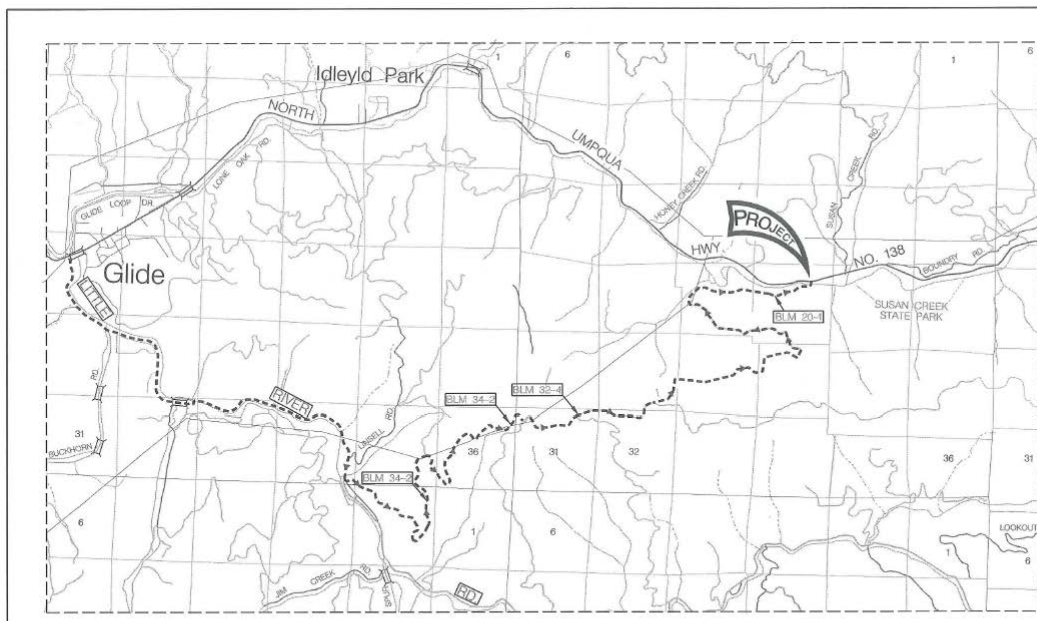
S

CLASS OF
CLASS OF
BID OF



Notes
Elevations shown are based on the American Vertical Datum, 1988.

\\n-rag3hq\user\seng\hwy64p\0001



--- Road for Access

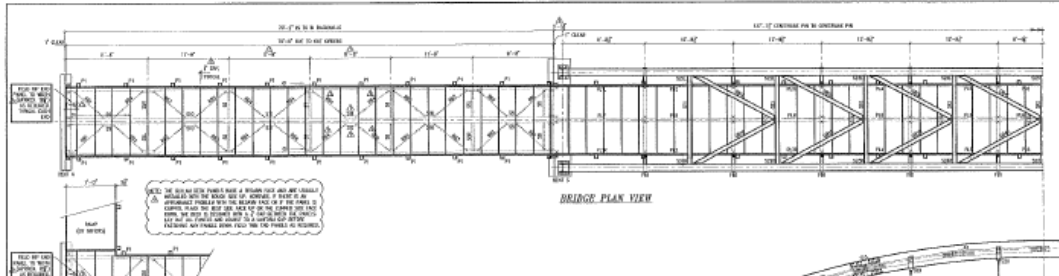
BLM 34-3 Road Number (BLM)

O OREGON DEPARTMENT OF TRANSPORTATION

N. UMPQUA RIVER HWY 138E
MP 28.0 (TIOGA BRIDGE) SECTION
DOUGLAS COUNTY

CONSTRAINT MAP C

Design



DESIGN CRITERIA

DESIGN LOADS: AS PER AASHTO H-20

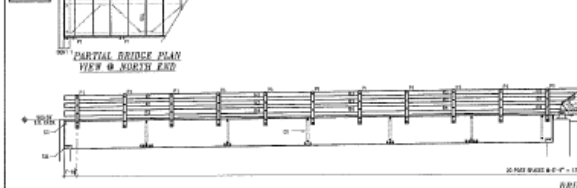
DESIGN SPEED: 55 MPH

STEEL SPECIFICATIONS

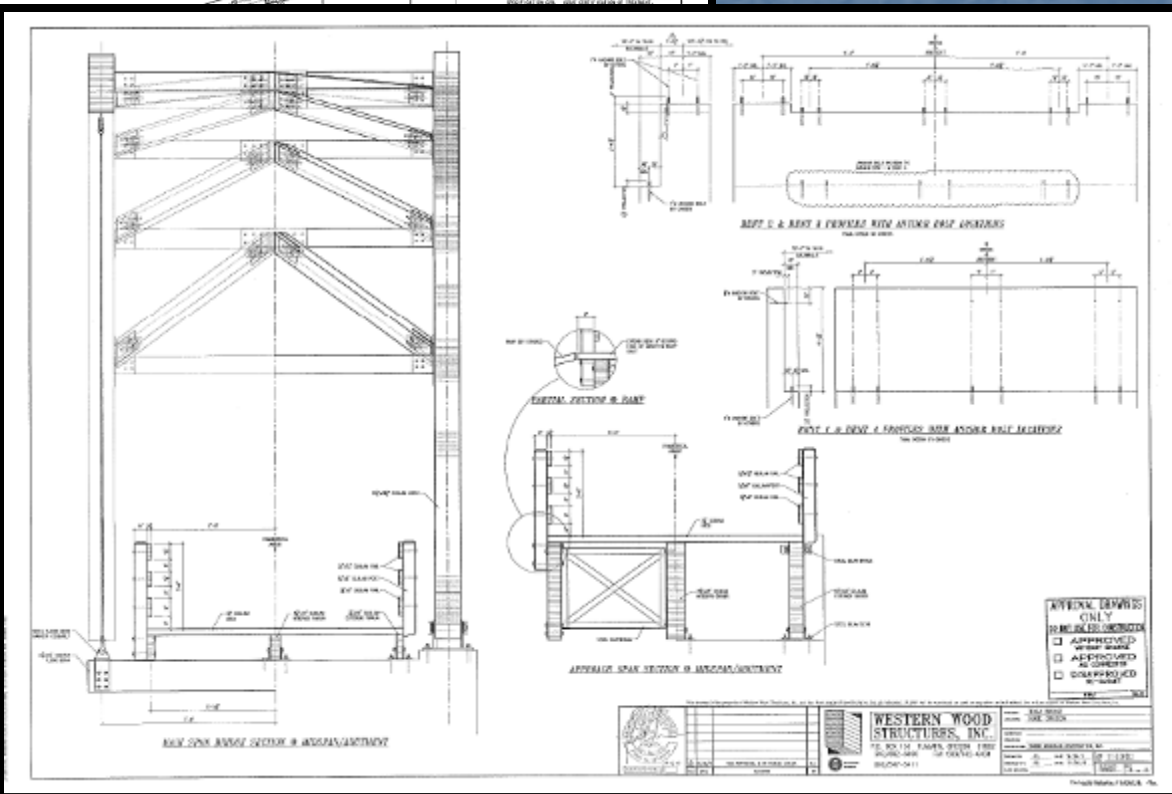
STEEL GRADE: A572-50

WELDING: E70XX

ALL DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS IN PARENTHESIS ARE TO BE USED IN CONNECTION WITH DIMENSIONS IN FEET AND INCHES. DIMENSIONS IN PARENTHESIS ARE TO BE USED IN CONNECTION WITH DIMENSIONS IN FEET AND INCHES.



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| <p>1. DESIGN BRIDGE TO CARRY AASHTO H-20</p> <p>2. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>3. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>4. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>5. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> | <p>6. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>7. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>8. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>9. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>10. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> | <p>11. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>12. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>13. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>14. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>15. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> | <p>16. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>17. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>18. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>19. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> <p>20. BRIDGE DECK SHALL BE DESIGNED TO CARRY A TRUCK LOAD OF 20 KIPS ON ONE WHEEL AND A TRUCK LOAD OF 10 KIPS ON TWO WHEELS.</p> |
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WESTERN WOOD STRUCTURES, INC.

1000 S. 1000 E. TONOPAH, NEVADA 89001

PHONE: (775) 738-1111 FAX: (775) 738-1111

WWW.WESTERNWOODSTRUCTURES.COM

DATE: 10/15/2011

PROJECT: BRIDGE

SCALE: AS SHOWN

BY: J. W. WOOD

CHECKED: J. W. WOOD

APPROVED: J. W. WOOD

DATE: 10/15/2011

Fabrication



Construction Road Realignment



Construction

Preparing Piers for Bridge



Construction Assemble Bridge on Site



Construction Fly it in!



















Then



Now



Questions

