

2023 Western Bridge Engineer Seminar: Scottsburg Bridge

Zach Beget, PE – Superstructure Designer
Bob Grubbs, PE – Substructure Designer



Original Scottsburg Bridge

Constructed in 1928 at site
of ferry crossing

632' 3-span continuous
Warren Truss with RCDG
approach spans.



Ramifications of issues

Numerous reported crashes

Evidence of more unreported crashes

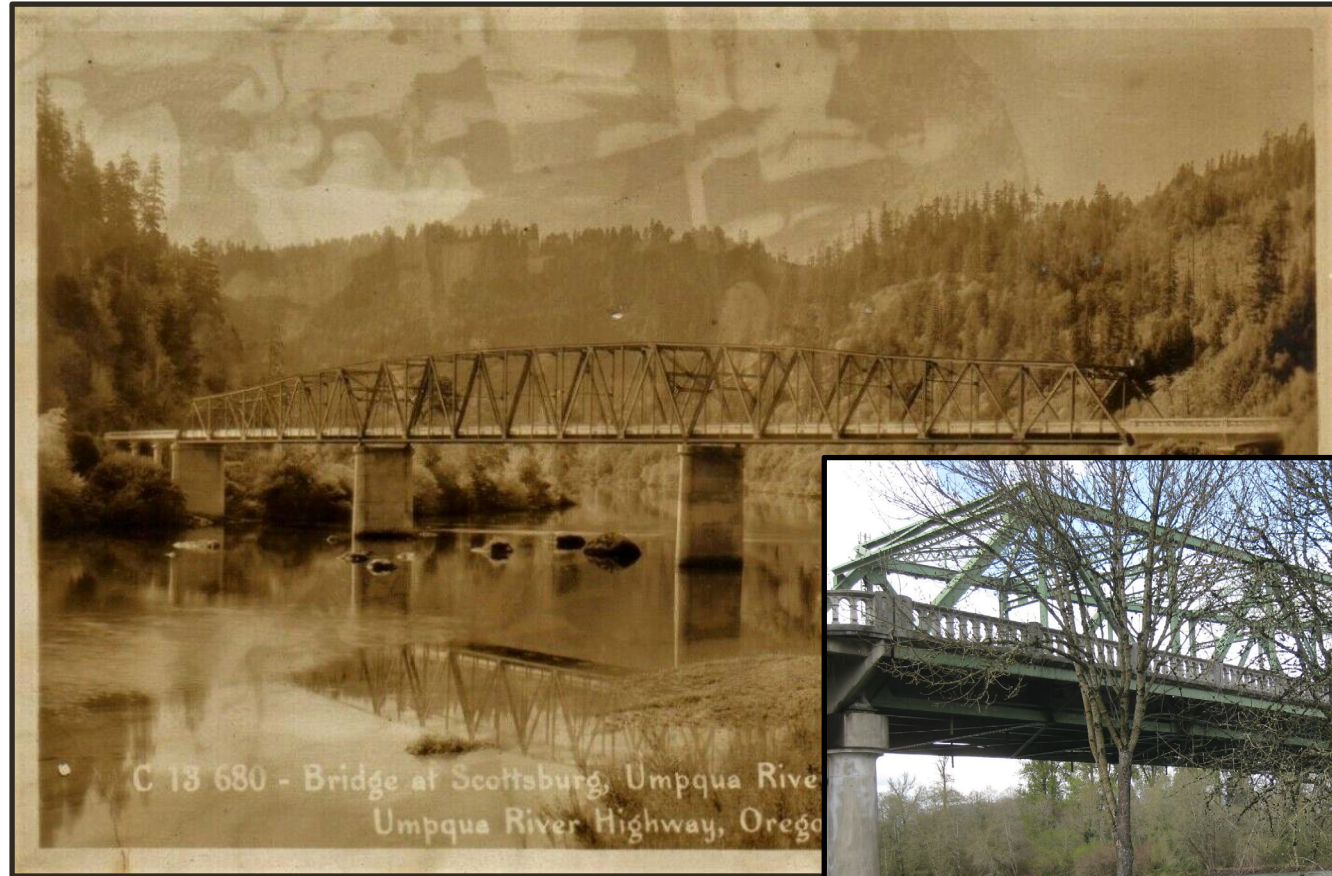


EXPOSED REBAR

LARGE CRACK & SPALLING

How do you
remove a historic
bridge?

Having a sister bridge helps



C 13 680 - Bridge at Scottsburg, Umpqua River
Umpqua River Highway, Oregon



Roadway Alignment

New bridge, new alignment

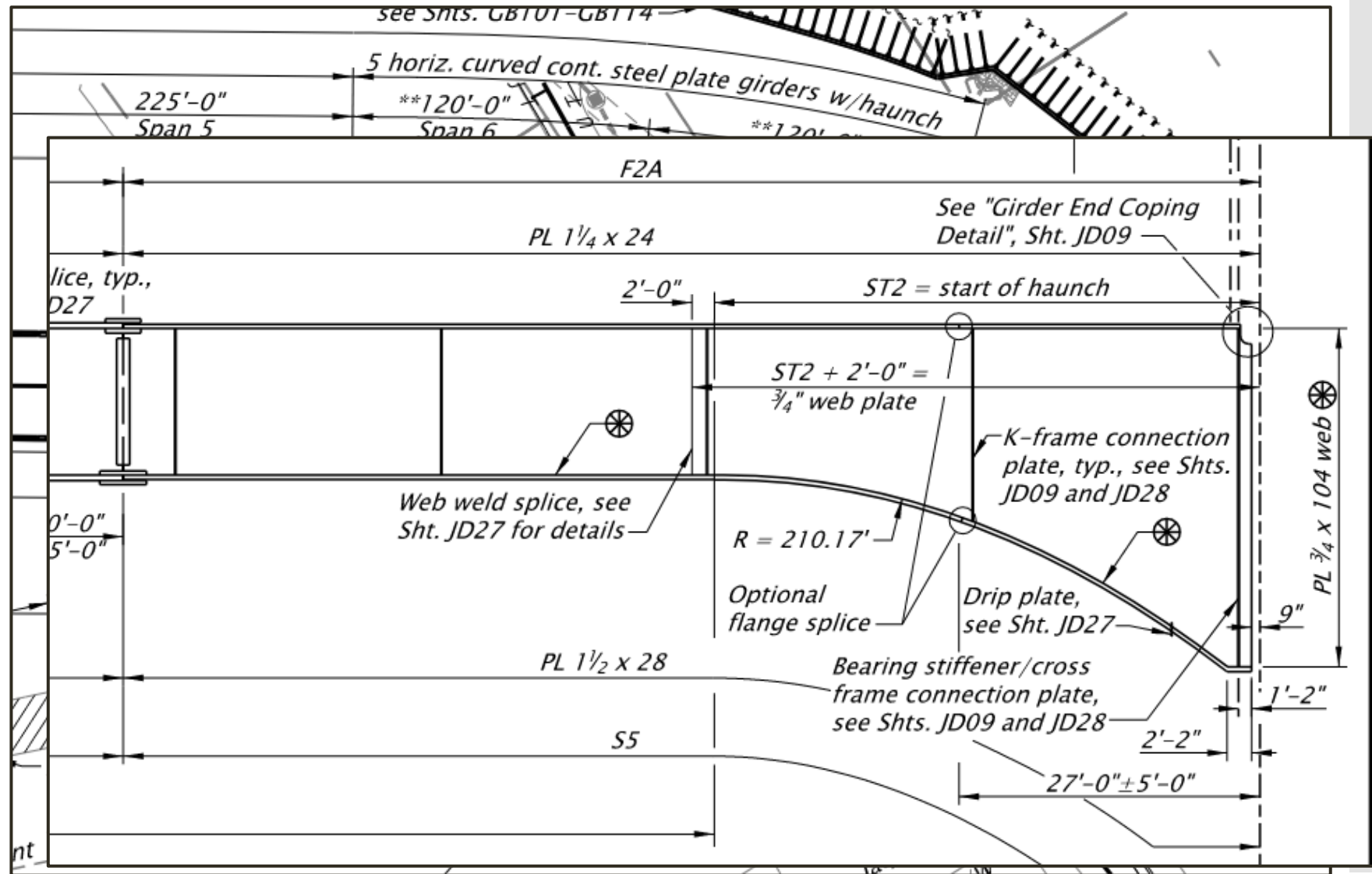
Tangent girders and
tangent alignment

750' tangent section; 150'
girder segments



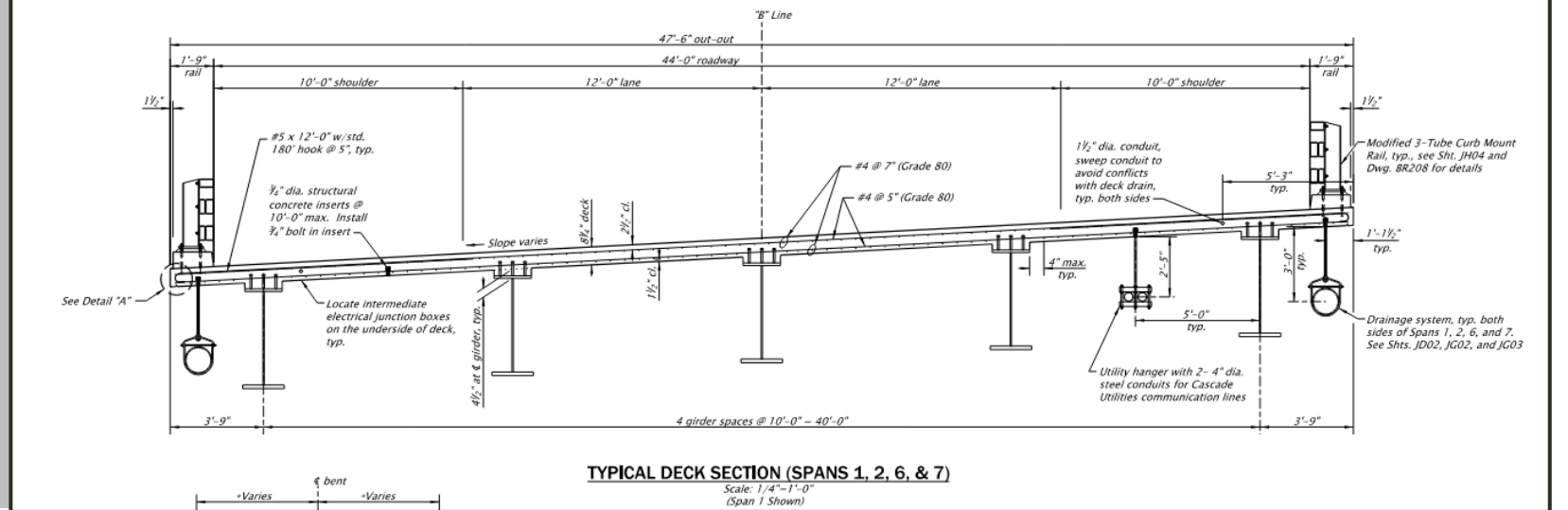
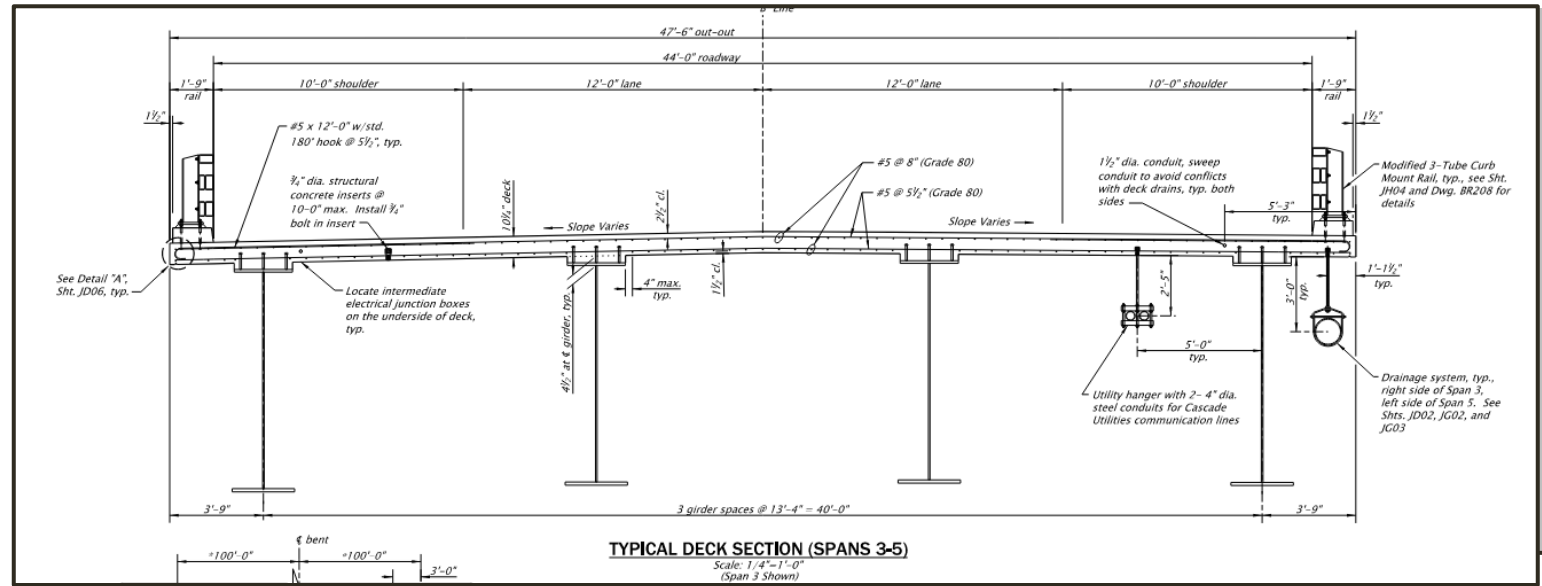
Steel Girder Details

Curved and haunches approach spans



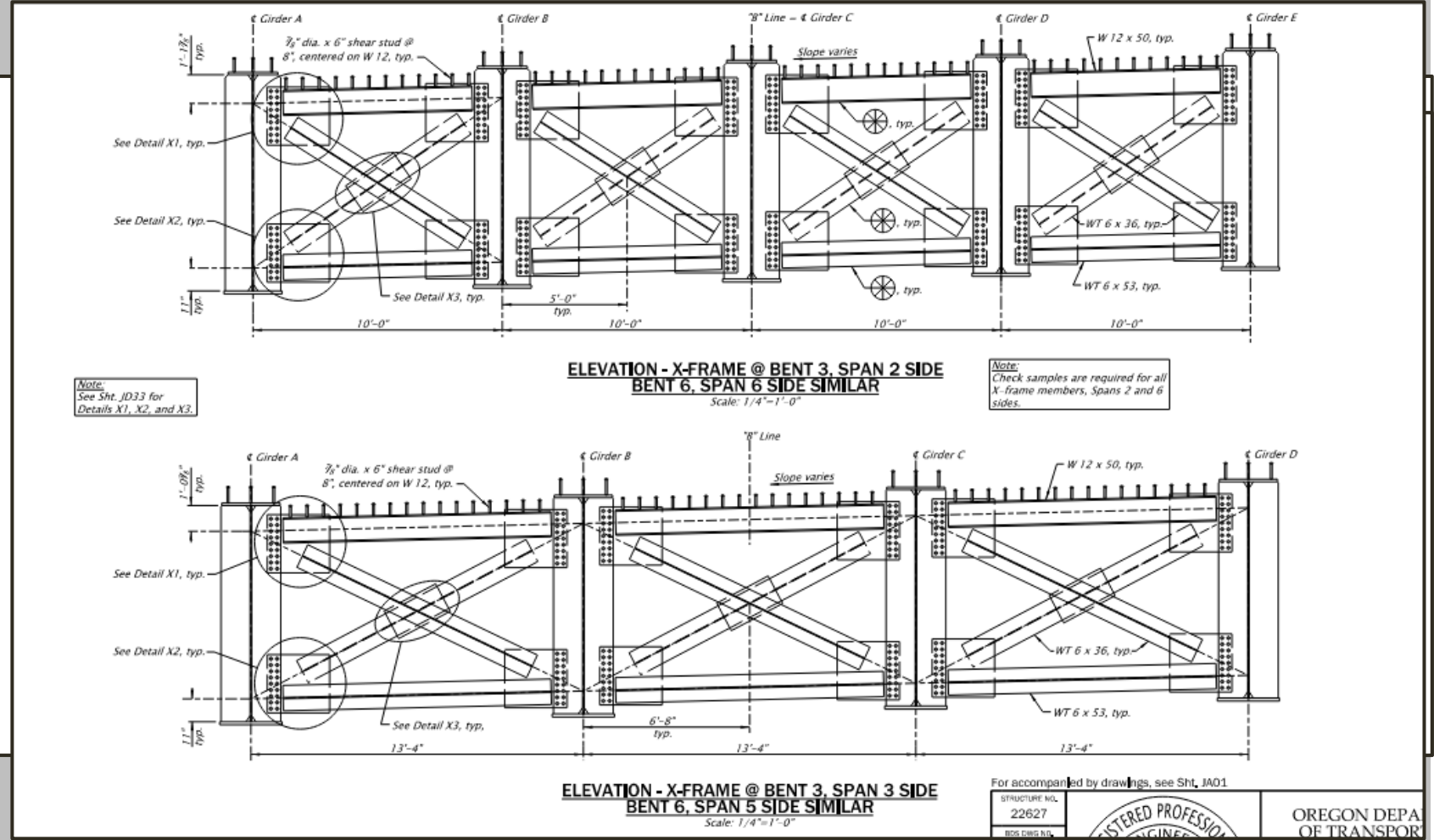
Steel Girder Details

Typical deck sections



Steel Girder Details

Diaphragms

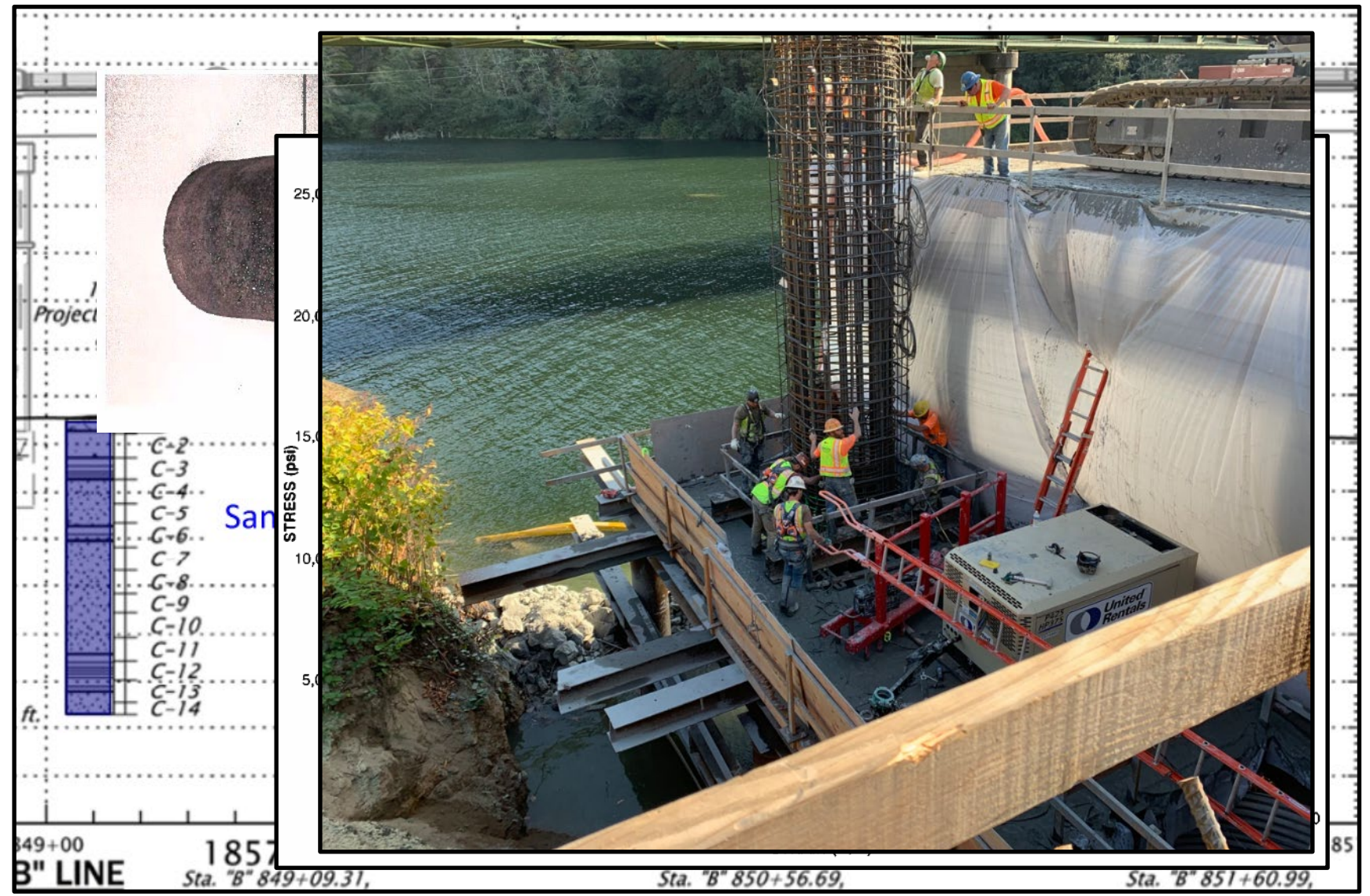


Geotechnical

The Good

Drilled Shaft Foundations
for interior bents

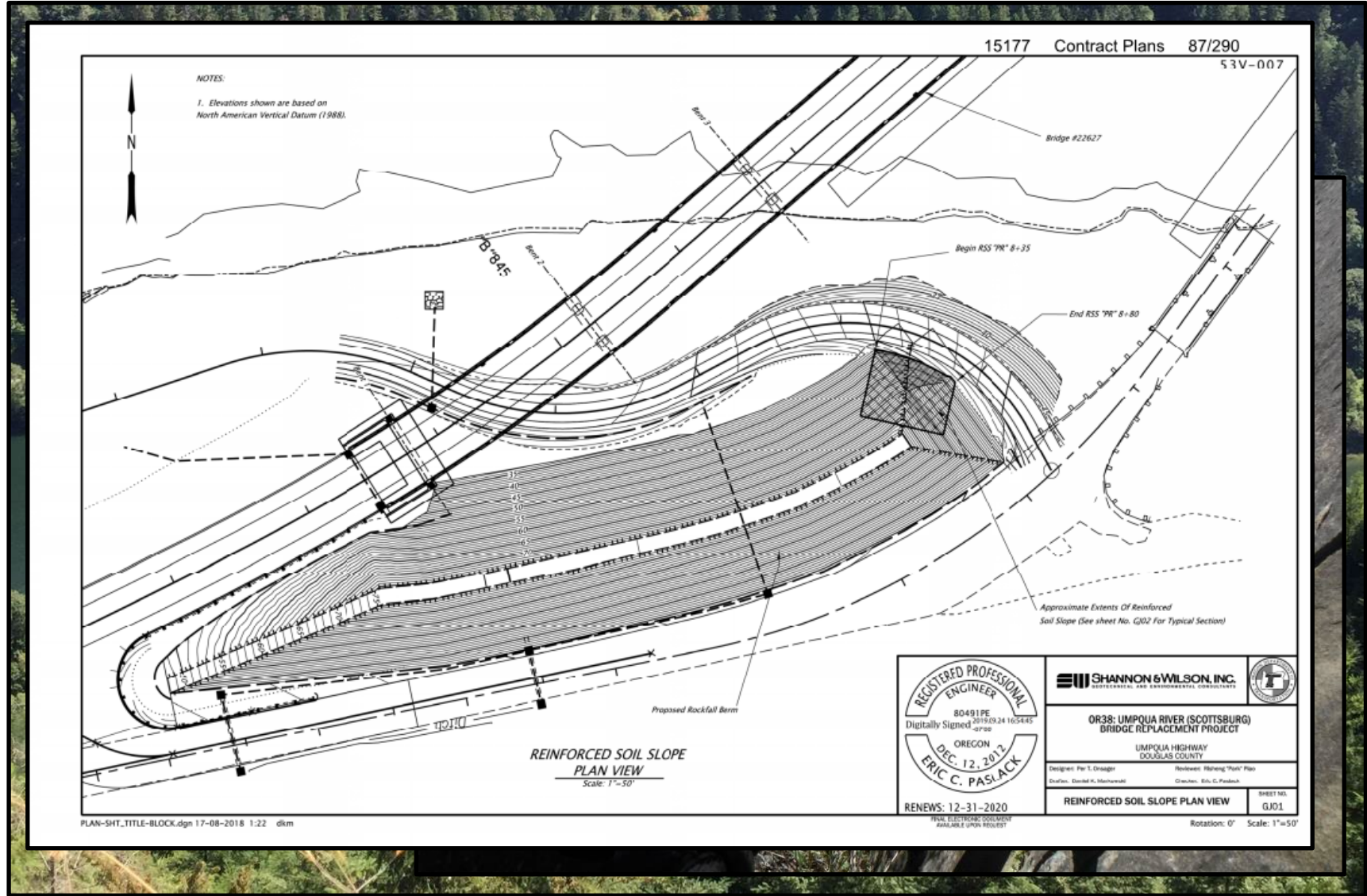
Spread footings on end
bents



Geotechnical

The Bad

Seismic Rock Fall



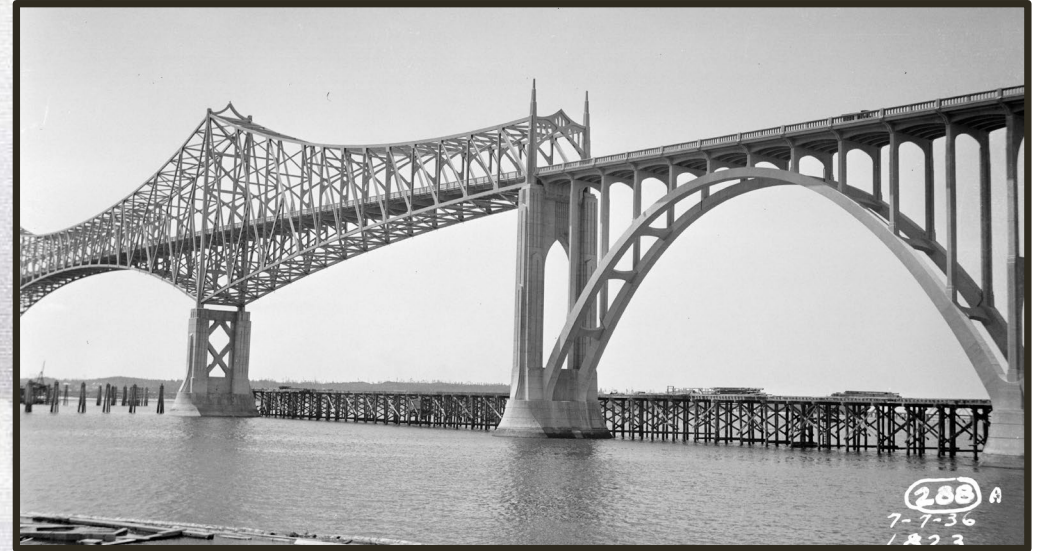
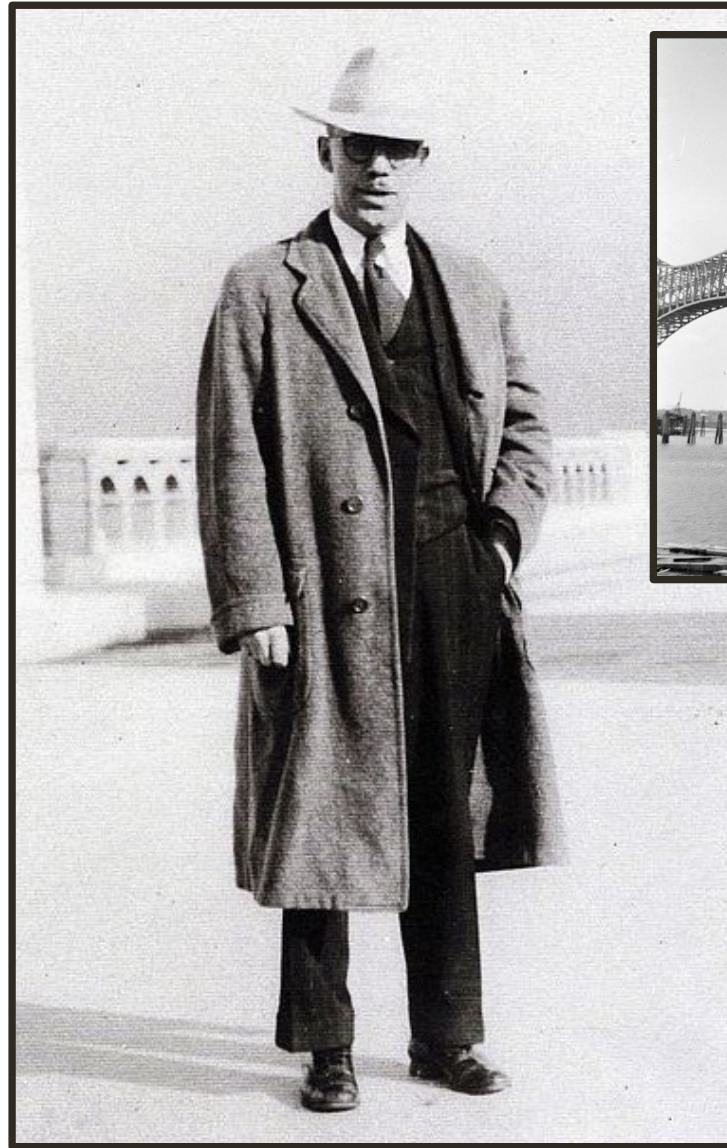
Geotechnical

The not so Pretty Liquefaction Mitigation via Deep Soil Mixing



Bridge Aesthetics

What would Conde do?



Bridge Aesthetics

Let's not put art on the bridge,
Let's make the bridge the art

Arch types



Bridge Aesthetics

Let's not put art on the bridge,
Let's make the bridge the art

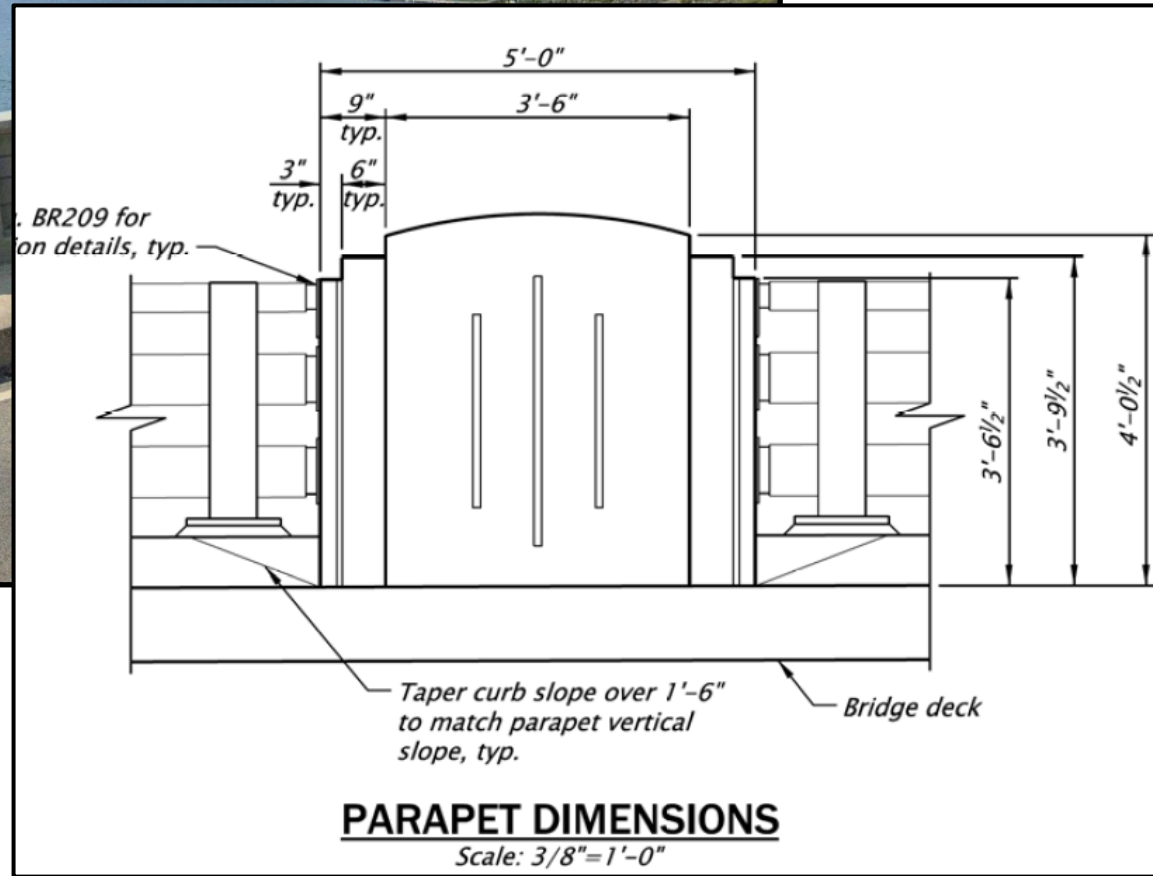
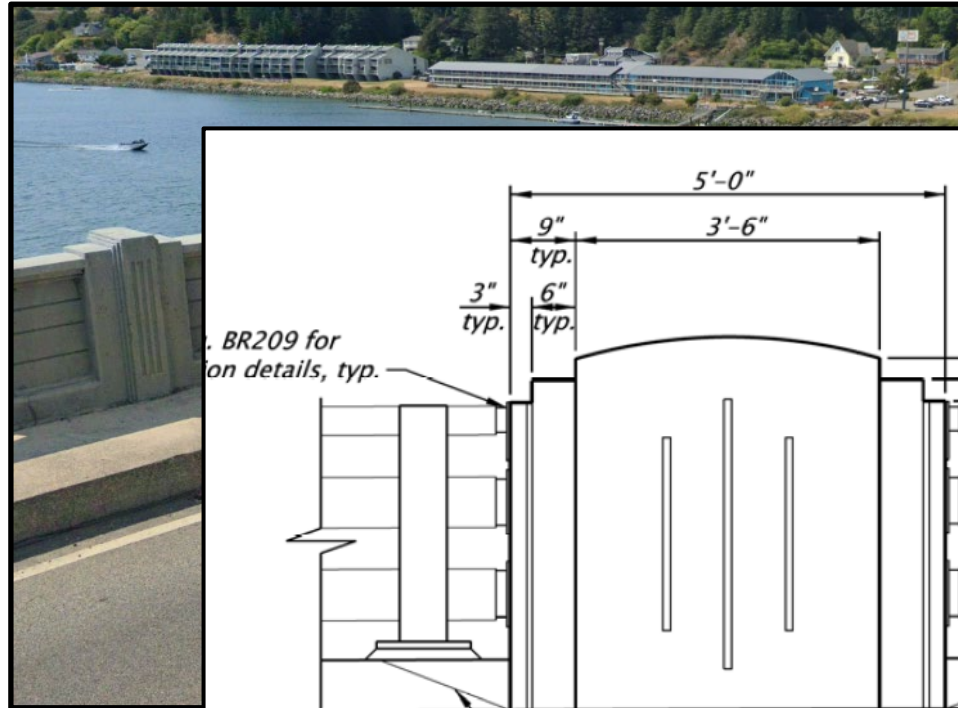
Columns



Bridge Aesthetics

Let's not put art on the bridge,
Let's make the bridge the art

Rail



Bridge Aesthetics

Let's not put art on the bridge,
Let's make the bridge the art

Pylons



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge Construction



Bridge



Bridge Opening Ribbon Cutting



Bridge



Bridge



QUESTIONS?

Feasibility Estimate: \$38.5-Million

Engineers Estimate: \$32.6 - Million

Low Bid: \$39.5-Million

