

SR432 Realignment Feasibility Study Longview Rail Simulation Final Presentation

August 14, 2007

Presented by
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Goal of Final Phase of Study

- To quantify effects of conceptual 2030 rail network improvements on rail fluidity and grade crossings in and around the Longview area

2030 Improved Network Approach 1

- Final simulation - 2030 projected rail traffic was simulated over improved rail network
 - Previously completed 2007 Base, 2030 unimproved network simulations for comparison
- Two areas of improvements
 - Main line improvements
 - Utilized WSDoT's long term infrastructure plan associated with Amtrak growth
 - Improvements at LVJ, LSC Yard and along POL's ARC
 - Developed based upon simulation results from 2007 Base and 2030 unimproved network scenarios

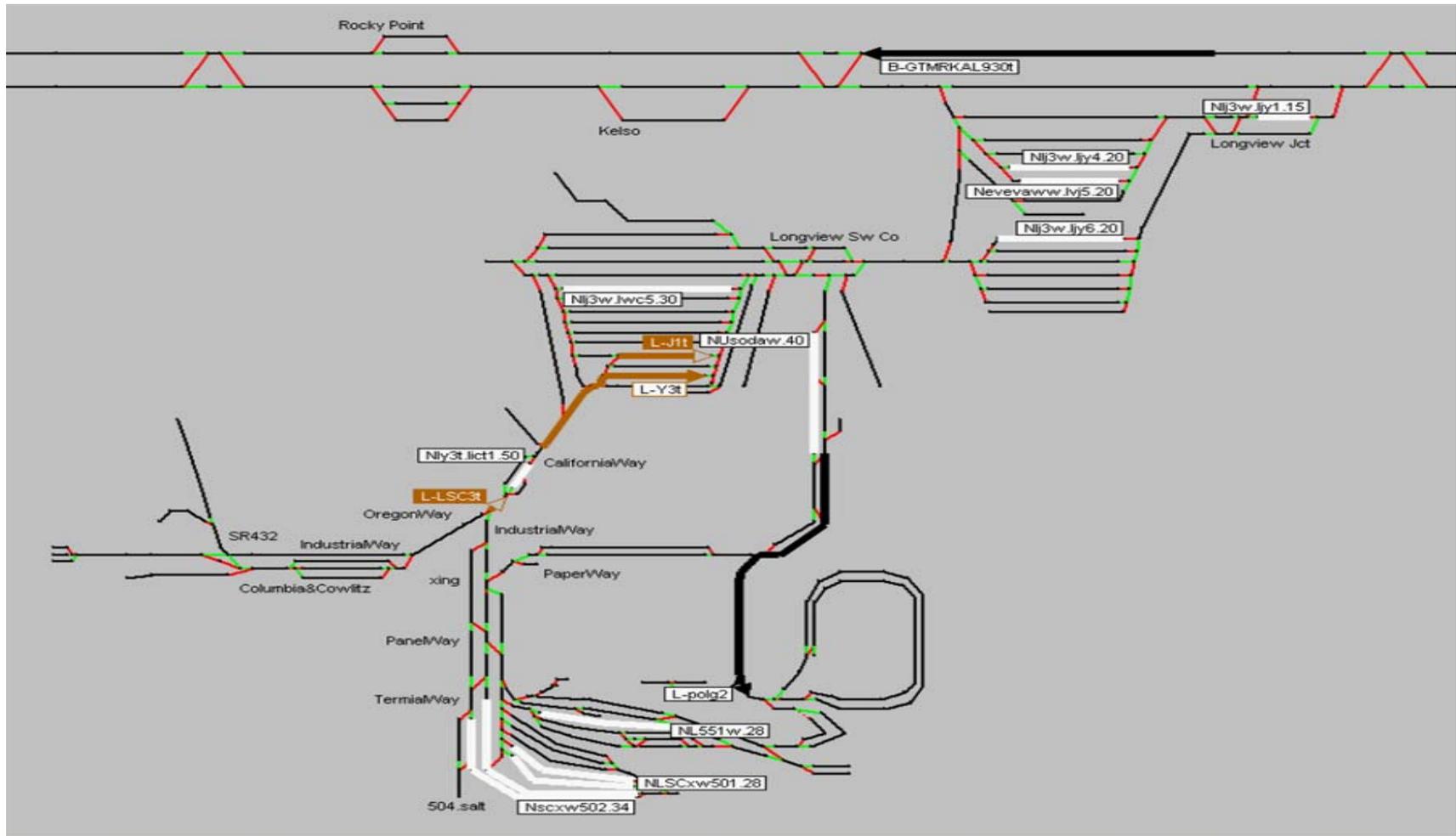
2030 Improved Network Approach 2

- Main line analysis only included trackage between Castle Rock and Woodland
 - Improvements extended from Vader to Felida
- Volume and schedules of freight and passenger trains remained constant between 2030 unimproved and 2030 improved scenarios
 - Benefits due solely to track and routing modifications

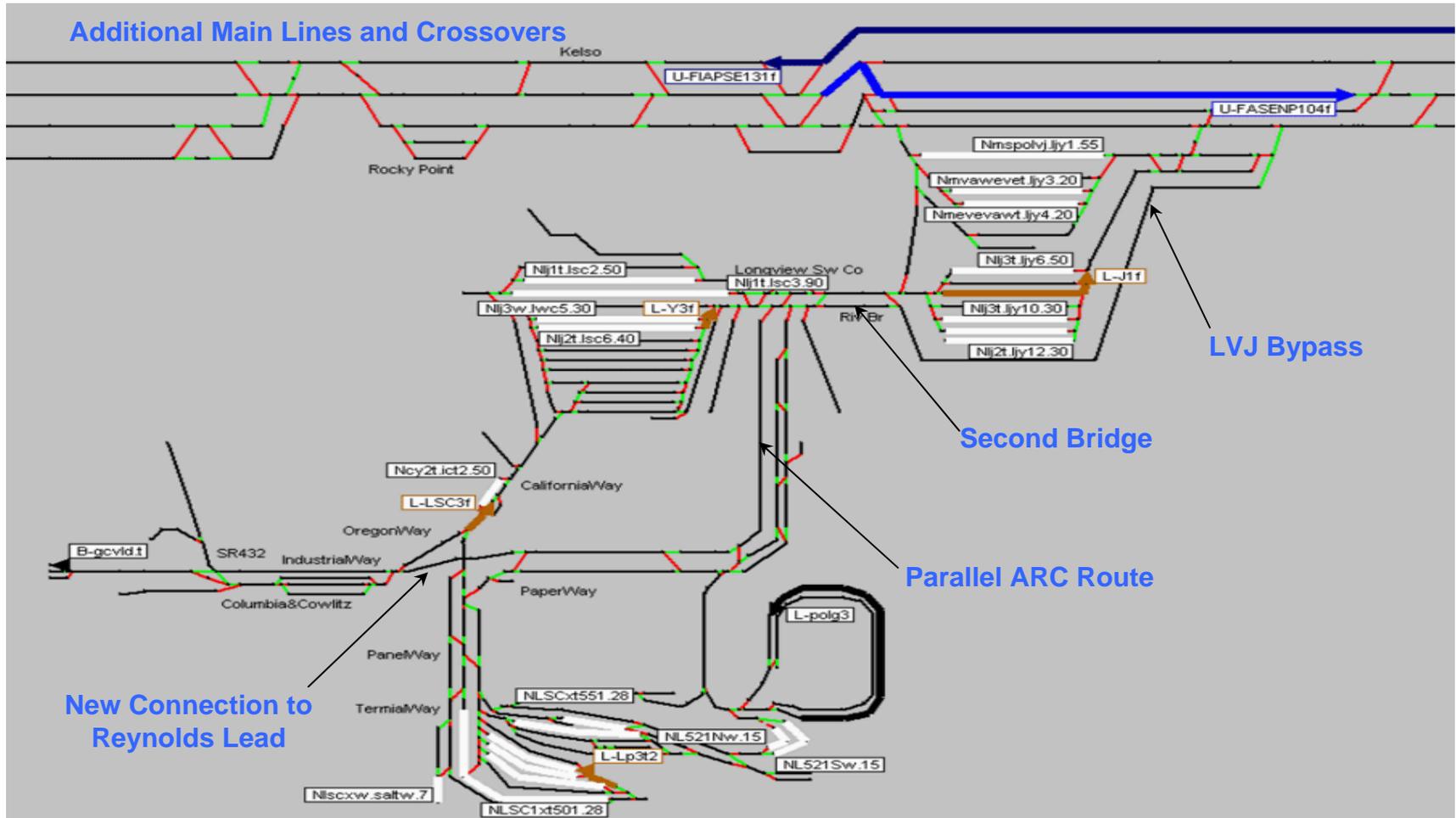
Major Modifications - 2030 Imp Network

- Third and fourth main lines between Vader and Felida, with crossovers for flexibility
 - Storage and grain yard at Woodland, Kalama
- LVJ switching lead bypass
- Second bridge over Cowlitz River
- Parallel route along ARC from LSC Yard to new connection into Reynolds Lead
 - Will require diamond across existing POL lead
 - Will also require crossovers in LSC Yard

2030 Unimproved Network (Case 2)



2030 Improved Network (Case 3)



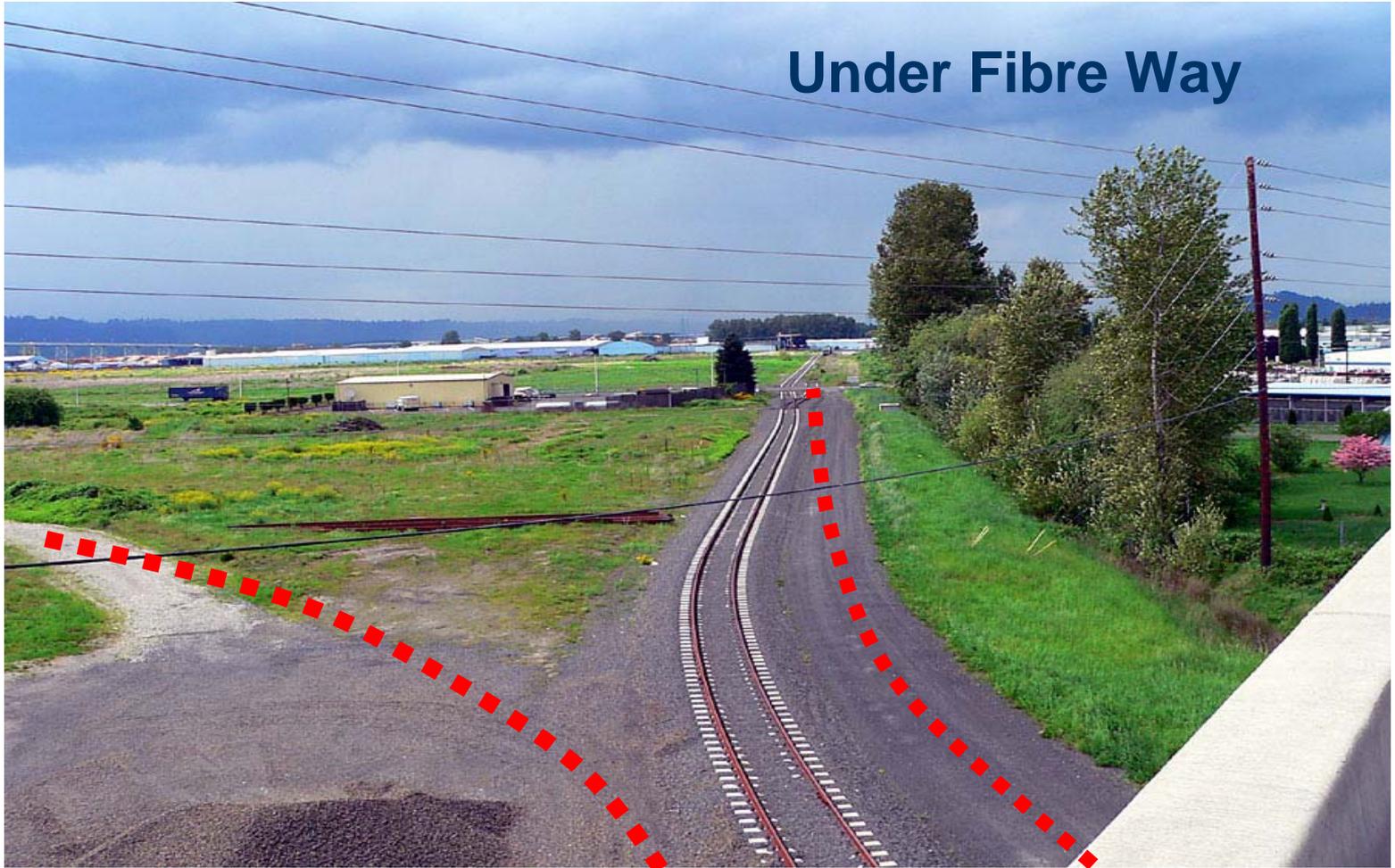
Parallel Route along ARC

Near the Log Pond



Parallel Route along ARC

Under Fibre Way



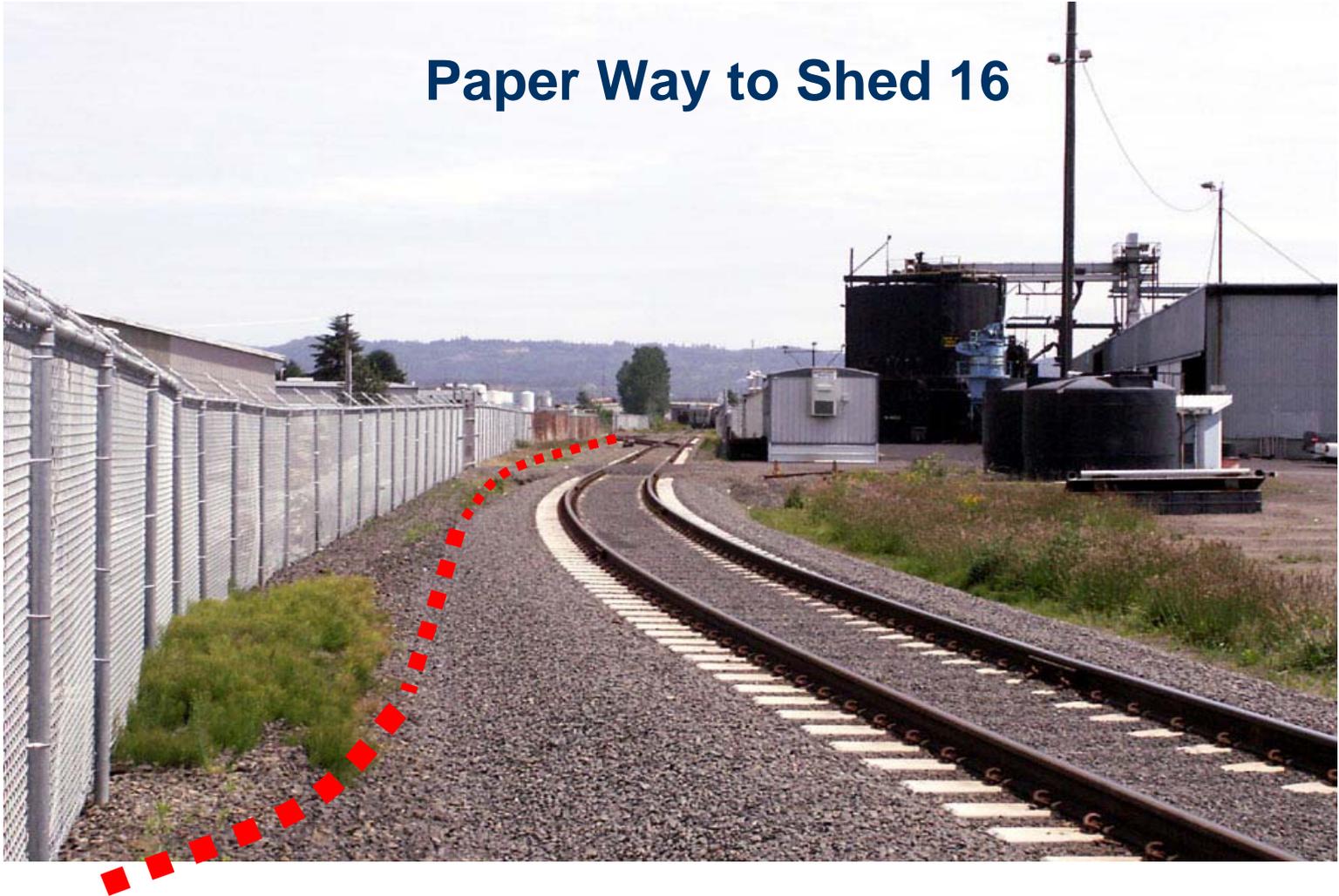
Parallel Route along ARC

Paper Way



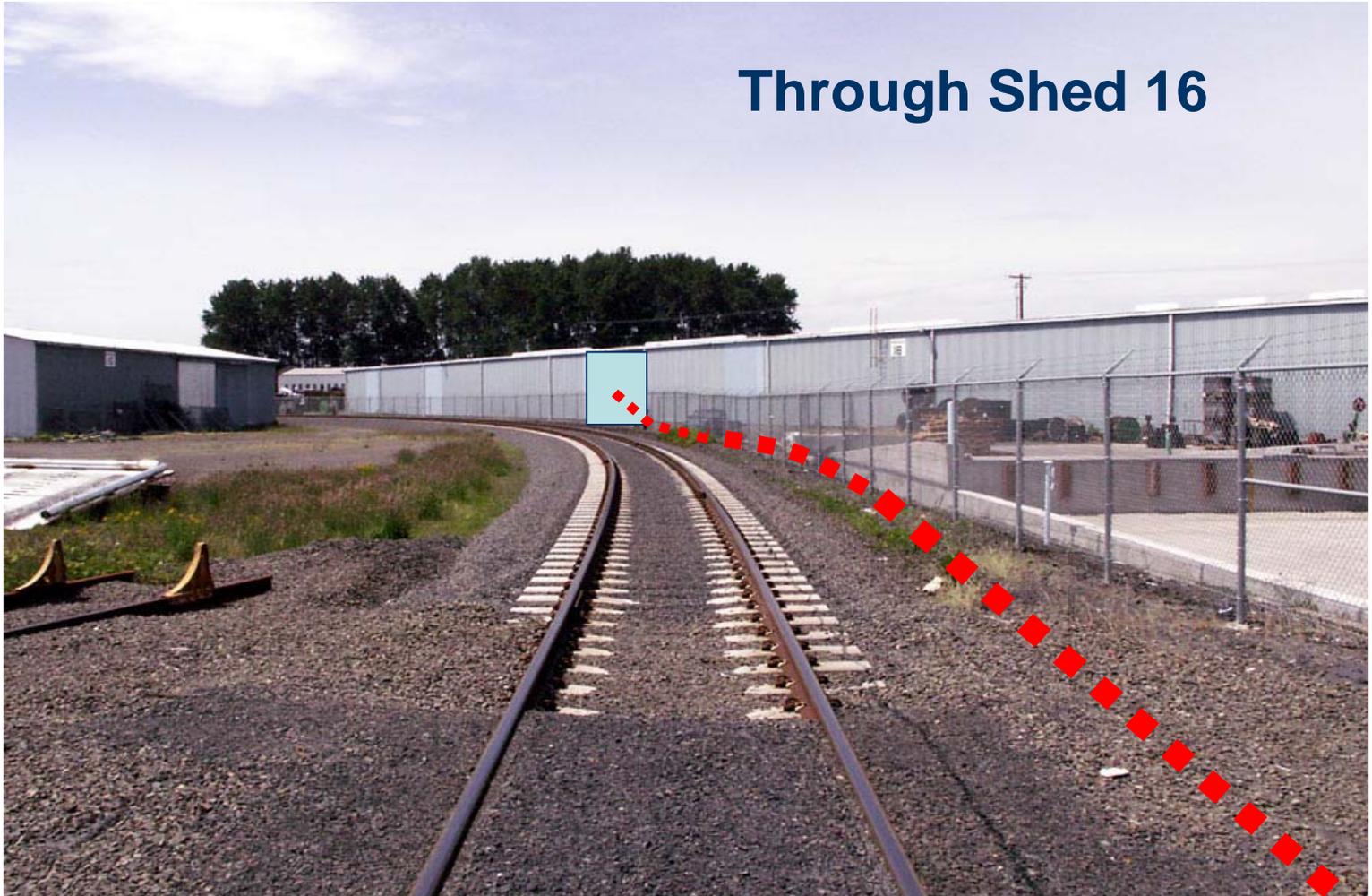
Parallel Route along ARC

Paper Way to Shed 16



Parallel Route along ARC

Through Shed 16



Parallel Route along ARC

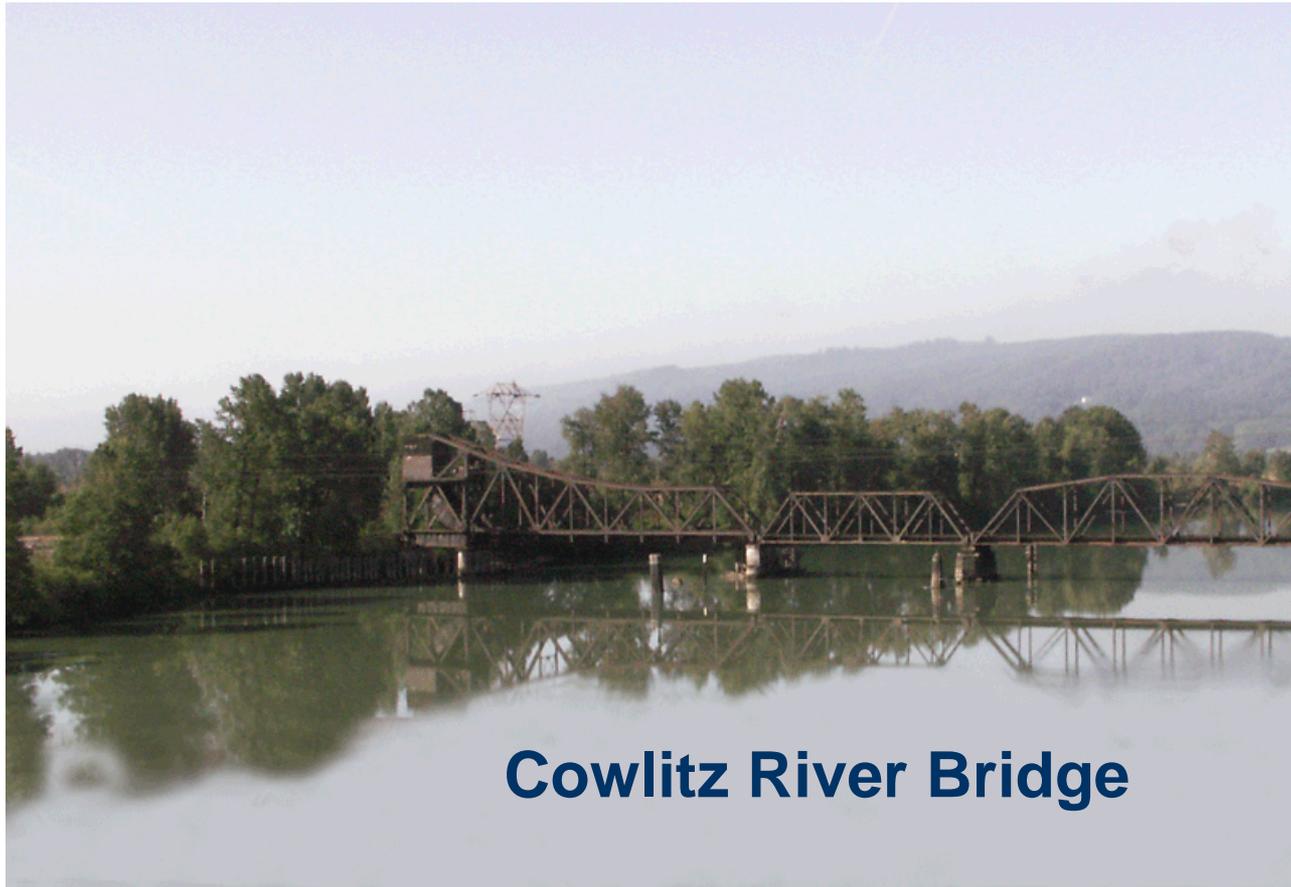


Parallel Route along ARC

West end near Weyerhaeuser

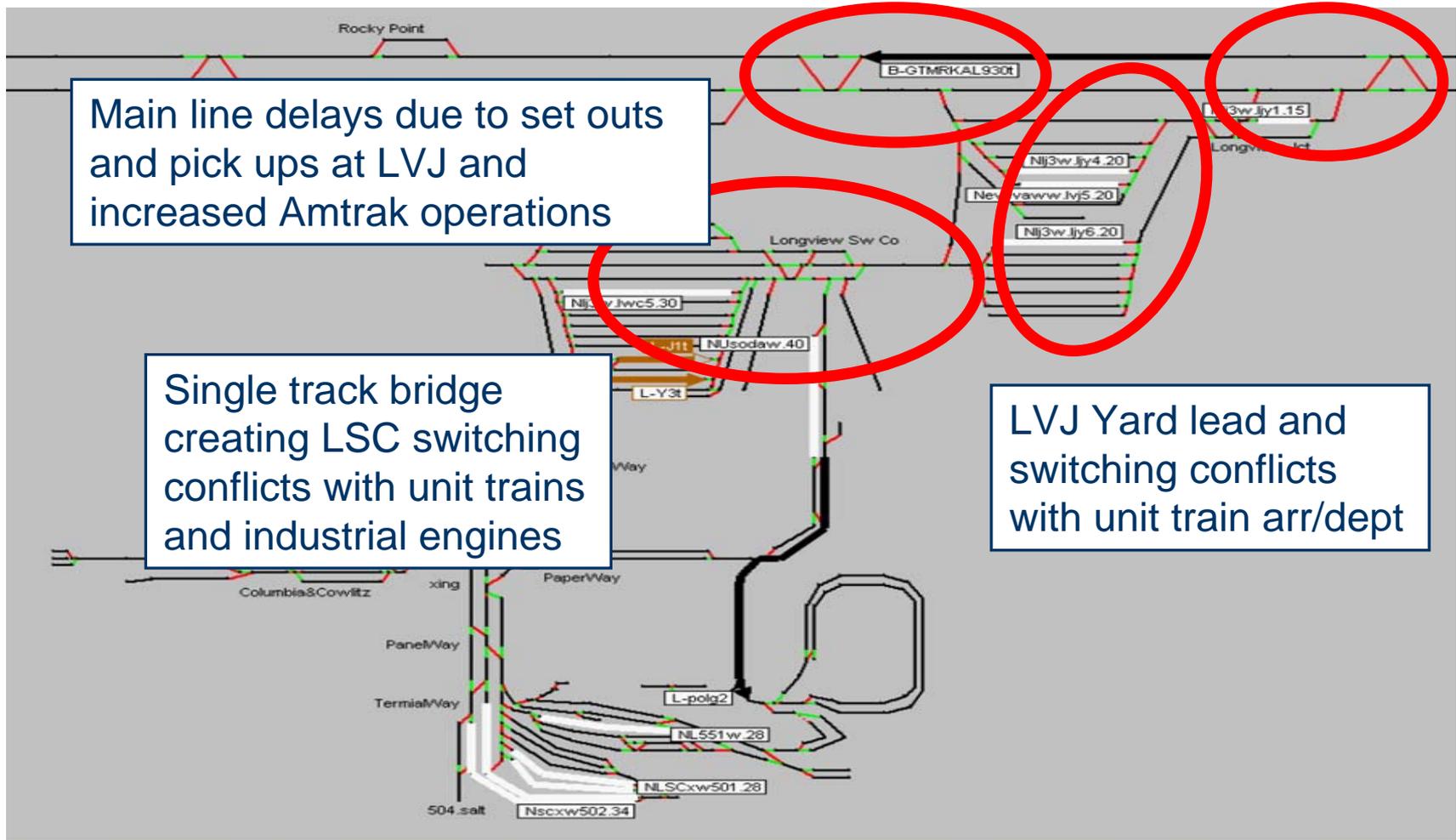


Impact on Rail Fluidity



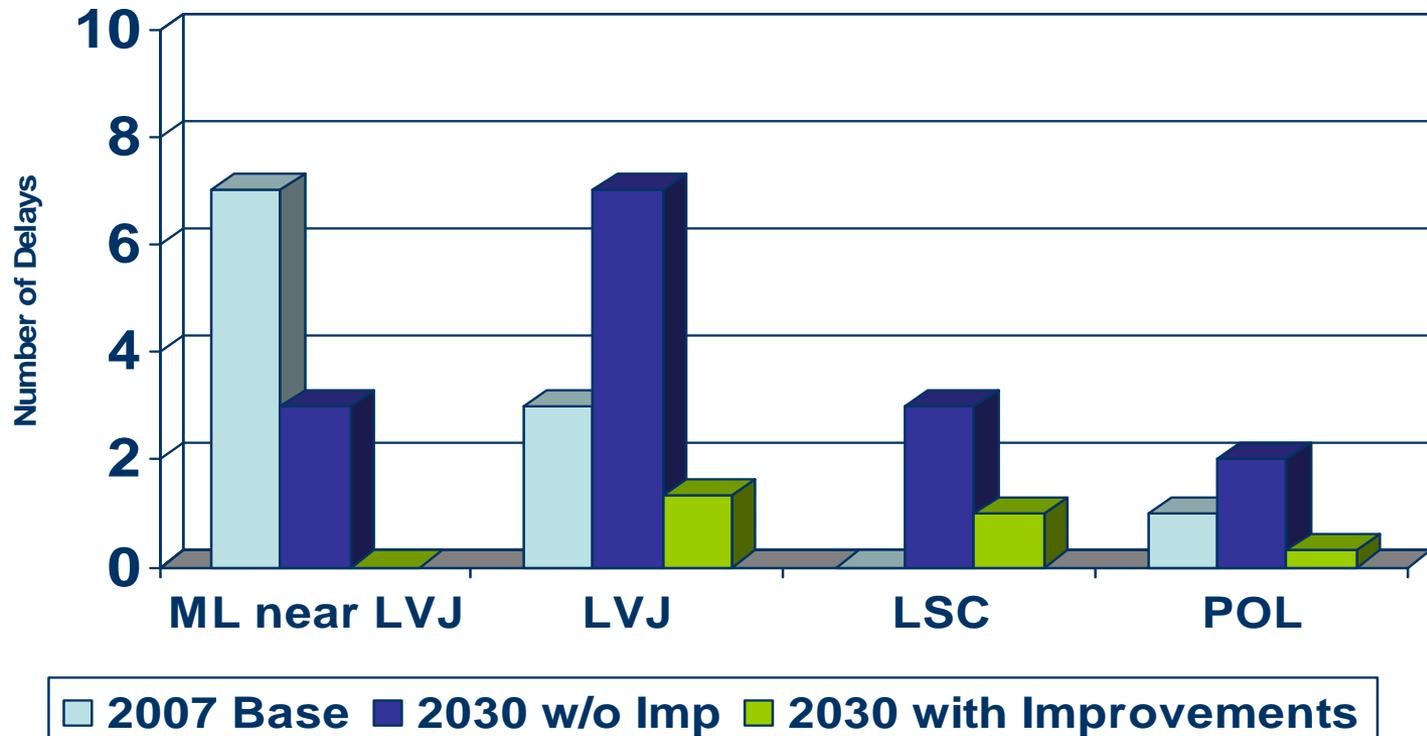
Cowlitz River Bridge

Recap of 2030 Unimproved Network Delay Locations

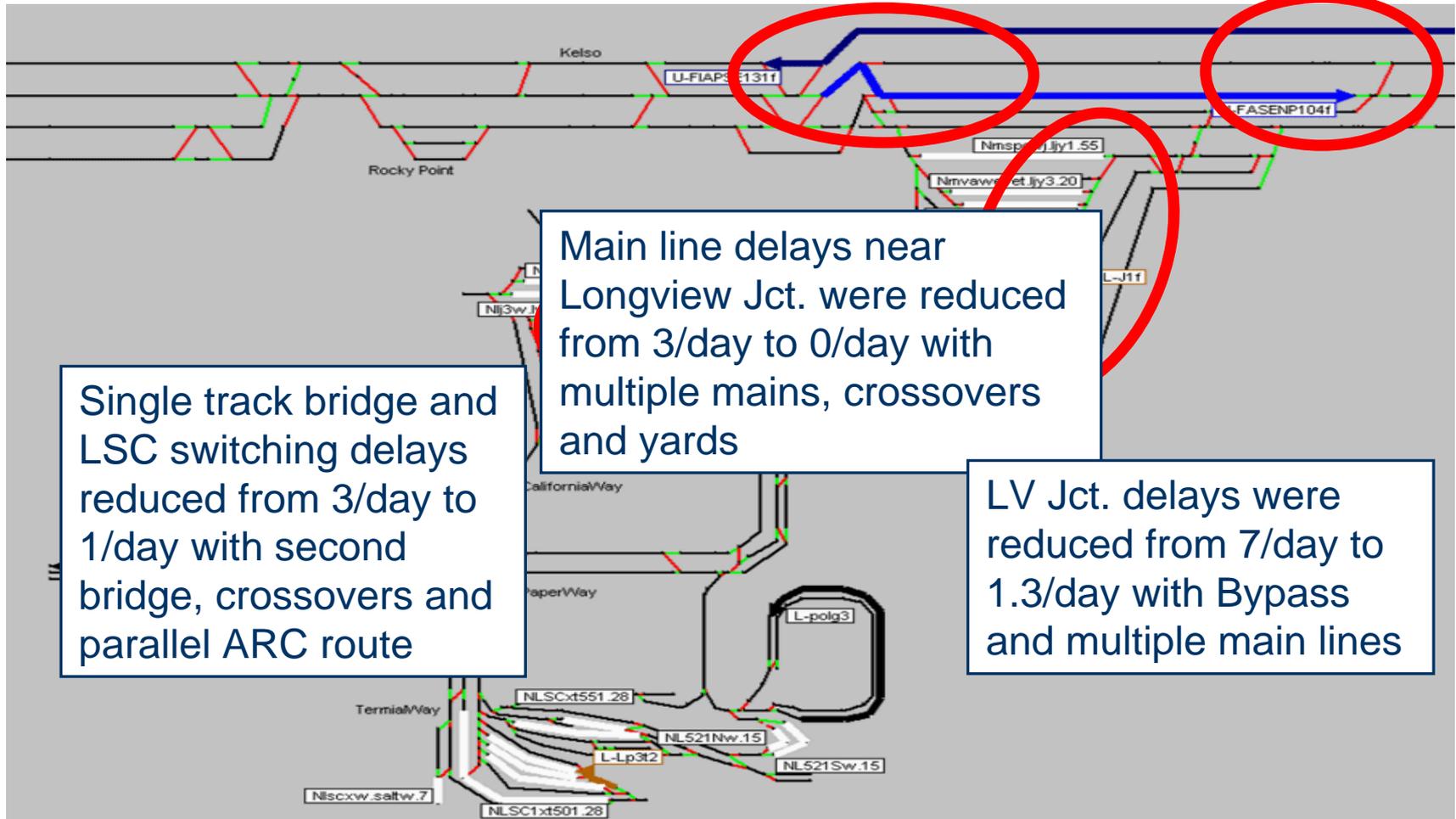


Impact on Rail Fluidity

Avg. Daily Delays > 30 Minutes



Impact of Improvements



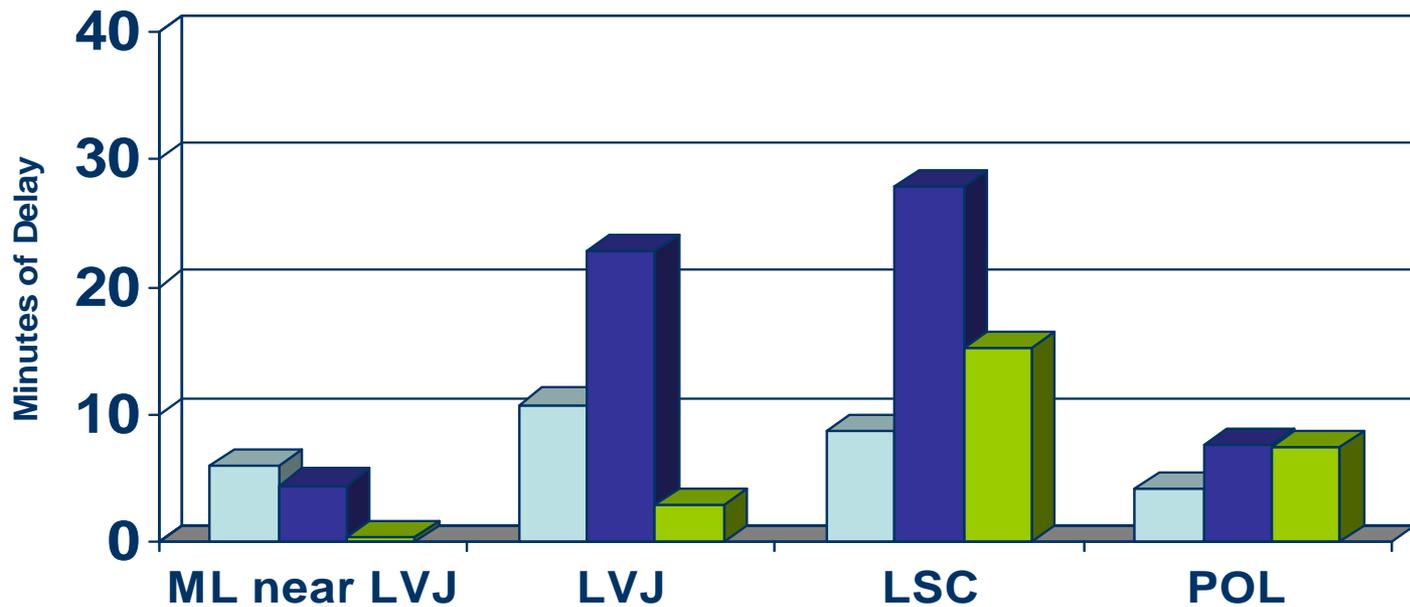
Single track bridge and LSC switching delays reduced from 3/day to 1/day with second bridge, crossovers and parallel ARC route

Main line delays near Longview Jct. were reduced from 3/day to 0/day with multiple mains, crossovers and yards

LV Jct. delays were reduced from 7/day to 1.3/day with Bypass and multiple main lines

Impact on Rail Fluidity

Delay Minutes per 10 Train Miles Operated



2007 Base 2030 w/o Imp 2030 with Improvements

Impact on Grade Crossings

Oregon Way



3rd Avenue



Industrial (Port Lead)



Industrial (CLC main)

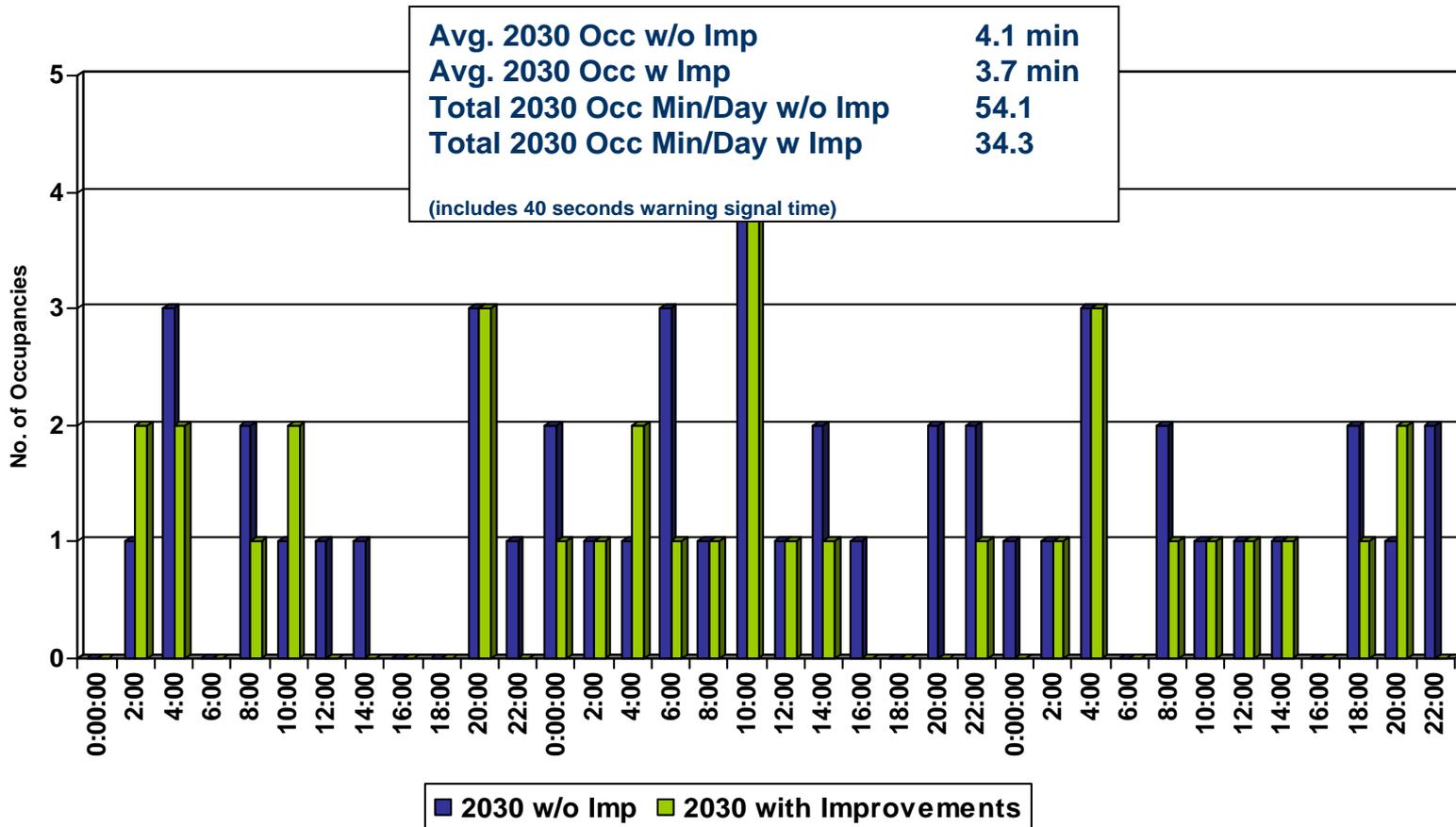


Kemira Spur



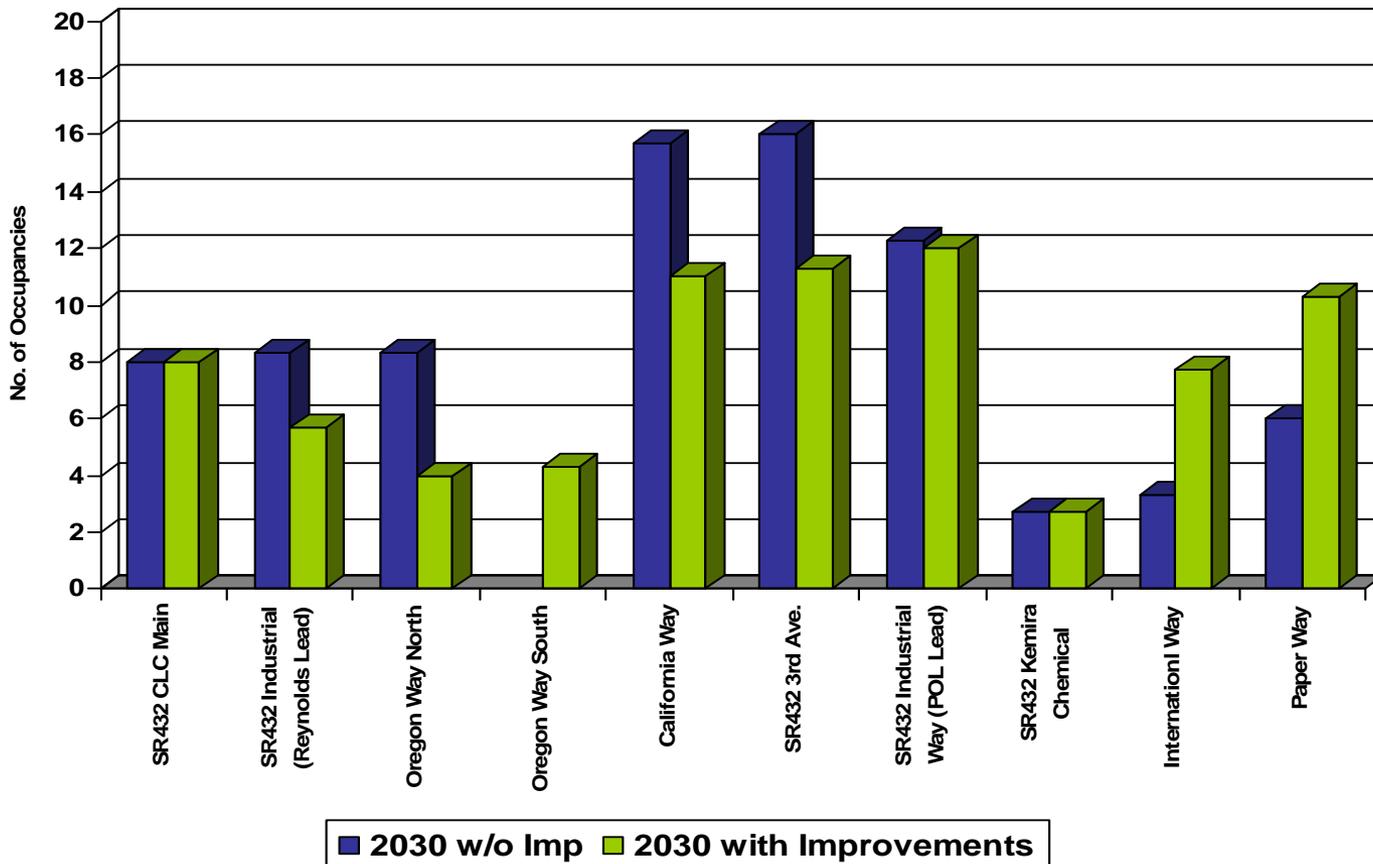
Impact on Grade Crossings

Example of Occupancy Window Analysis - 3rd Ave.



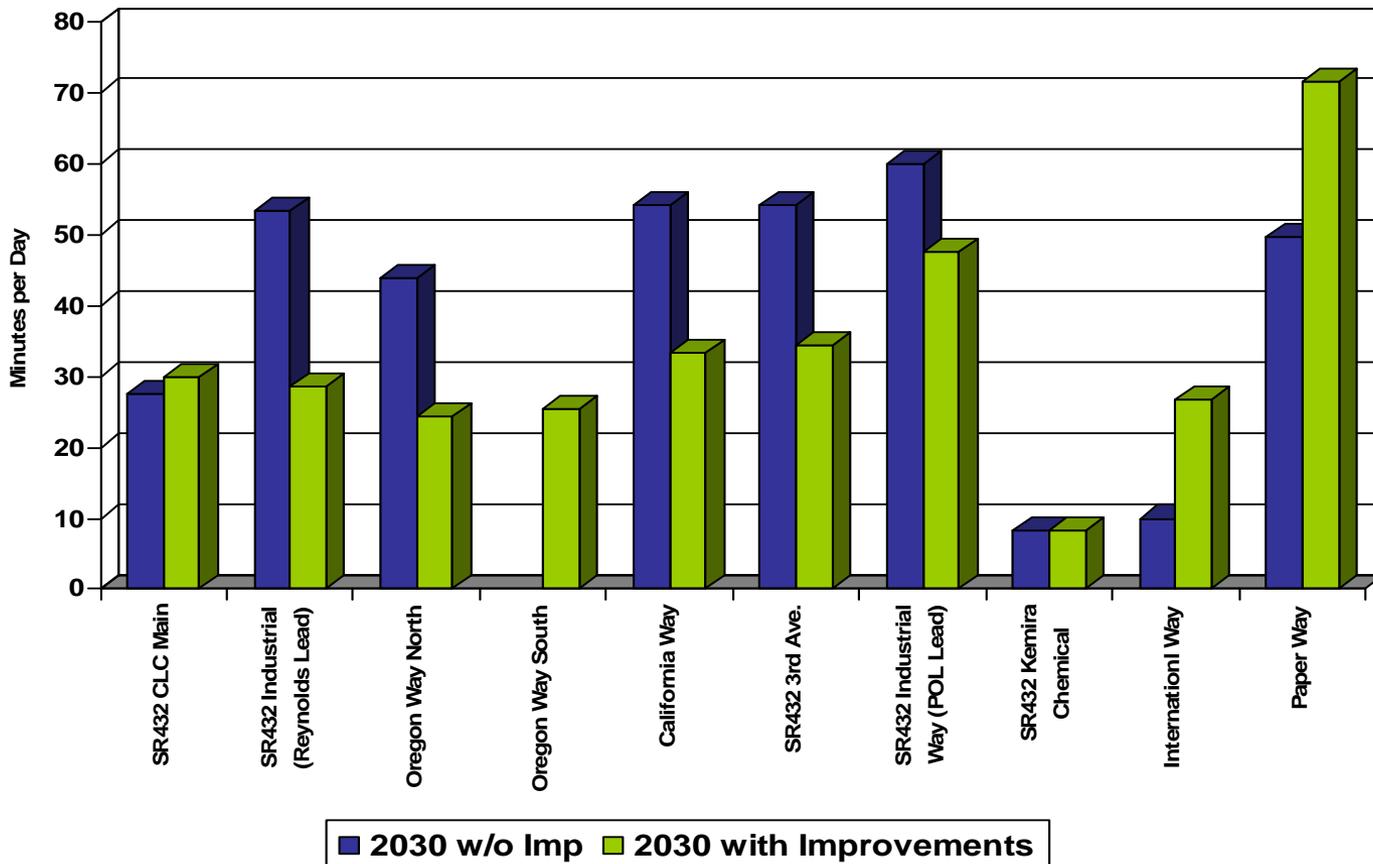
Impact on Grade Crossings

Average Daily RR Occupancies by Crossing



Impact on Grade Crossings

Average Total Occupancy Minutes by Crossing



Conclusions 1

- Projected 2030 rail growth will have major impact on main line and Longview rail fluidity
 - Additional passenger service in combination with increased freight levels will congest main lines near LVJ
 - Customer service demand will require additional engines and switching movements throughout LV industrial areas
- Projected 2030 rail growth will have major impact on grade crossing occupancies
 - Additional switching requirements will lead to more movements to/from industrial areas
 - Projected unit trains will block multiple crossings simultaneously, impacting highway flows

Conclusions 2

- WSDoT projected main line improvements will address passenger/freight conflicts near Longview/Kalama
- LVJ Bypass, second bridge will alleviate most unit train/switching conflicts
- ARC parallel route will reduce impact to major grade crossings in Longview
 - Some occupancies will remain due to switching movements