



Portland to Milwaukie Light Rail Project, Portland Oregon

CP is the engineer of record for a 5-span 700-ft long light rail bridge, a bridge widening for a rubber-tire vehicular bridge. CP also provided design for over 20 retaining walls including soldier pile, gravity, MSE and gabion wall types. In addition, CP provided independent design check of another bridge designed by others.



I-205 Light Rail Extension Design/Build Project, Portland Oregon

CP provided light rail alignment alternative analyses and train envelope clearance check through the tunnel, bridges, stations and other obstructions for the entire 6-mile alignment; and provided independent design checks of 2 LRT bridges and is the engineer of record for 300 system pole foundations and the signal/communication/power substation buildings. The alignment studies initiated by CP near the alignment's tail end, Clackamas Town Center, resulted in the elimination of the necessity of a pedestrian bridge from previous design by others. The elimination of the pedestrian bridge imposed a close to \$1 million project saving. The studies and design were involved in very complex multiple model operations including light rail, freeway, bike/pedestrian path, bus transit center and a park & ride structure.



I-84 Hood River-Cascade Lock Bridge Load Rating Project, Oregon

Convergent Pacific conducted bridge as-built documentation research and review, bridge inspection, computer load rating modeling and replacement/repair recommendations for 8 different bridges. The repair recommendations included pin and stringer replacement for the steel girder bridges and girder and cross beam strengthening for the concrete bridges.



Convergent Pacific Projects



ODOT Old Youngs Bay Bridge Repair, Astoria, Oregon

CP provided detailed inspection using boat and snoopy truck. The over 90 years old and 57 span timber pile bridge experienced deteriorations on the piles, braces and bent caps. Based on the inspection results, CP provided PS&E full services for the bridge repair design including pile splicing, FRP wrap filling with resin and HDPE wrap to the timber piles based on the pile conditions. .



I-5 Portland Avenue Project, Douglas County Oregon

Convergent Pacific conducted bridge as-built documentation research and review, bridge inspection, computer load rating modeling and replacement/repair recommendations. CP also provided repair design and construction documentation including specifications and costs estimate.



Interstate MAX Light Rail Project, Portland Oregon

In this \$350 Million project, as a vendor to PB, CP provided Design Manager for the Expo Segment which included the 4000' Vanport Bridge Design Build which just south of the Columbia River Crossing and next to I-5. CP's principal Hardy Li directly managed the design from preliminary engineering, TS&L, procurement development for design/build RFP and final design review.

CP also provided roadway design for the intersection modification to accommodate a new Tri-Met bus stop.



The Steel Bridge, Portland Mall Light Rail Project

The addition of the new LRT ramp to the Steel Bridge requires significant removal and replacement of the concrete deck and structural steel supporting members from the end of the existing Glisan Street vehicle ramp to the beginning of the west fixed span at the river. The existing Glisan Street ramp consists of nine spans of structural steel girders with a concrete deck. CP was involved in as-built document research and engineering drawing preparations for the TS&L submittals.



Convergent Pacific Projects



Portland Streetcar Project, Portland Oregon: For this PDOT project, CP provided structural engineering services designing the overhead contact system (OCS) pole foundations and attachments to the existing structures including to 4 bridges, buildings and the Tramp structure. CP also provided structure design for the railings off the MLK Bridge.



North Vancouver Ave. Bridge Over Columbia Slough, Portland, Oregon

For this City of Portland project, Convergent Pacific provided bridge load rating analysis and report, and utility coordination to relocate the conflicted utilities including those of Pacific Power, Qwest Communication, NW Natural Gas, BES, Water Bureau, TW Telecom, and Comcast. Specification preparation and cost estimating were also parts of the scope.



I-5 Willamette River Bridge Replacement, Eugene, Oregon

For this Oregon's largest bridge project in history, Convergent Pacific provided railroad coordination to acquire railroad crossing order, C&M agreement and utility relocations. CP also provided roadway design for the bike/pedestrian paths.



I-5 Victory Blvd. – Lombard St. Improvement Project (Just South of Columbia River Crossing), Portland, Oregon

For this nearly \$50 million ODOT Region 1 project involving freeway widening, bridge widening and a new ramp bridge, Convergent Pacific is responsible for the utility conflict coordination and relocation design coordination. CP also provides structural calculation and modeling of all the bridge cross beams.



Convergent Pacific Projects



Martin Luther King Blvd./Grand Ave. Hwy 99E Bridge Replacement, Portland Oregon

For this just constructed Portland landmark, \$60 million and 10-span bridge final design project, Convergent Pacific provided structural design for four over 60-foot bridge pylons (towers) which comprises reinforced concrete and stainless steel components. CP also provided independent structural design check for the complicated bridge railing design as well as near 100 sheets of railing drawing development and drafting.



I-405: I-5 to SR167 Stage 1 Widening Design/Build, King County, Washington

For this nearly \$100 million WSDOT project involving freeway widening, bridge widening and replacement, Convergent Pacific provided design quality assurance manager to ensure the design in compliance the contract requirements and quality plan. CP also provided roadway engineer and CAD technician to model the roadway and layout the retaining wall elevations.



US 20 Pioneer Mt. – Eddyville Section Design/Build, Oregon

For this \$150 million ODOT project involving in 10 mile highway realignment with 7 new bridges and 4 major culvert structures, CP's principal Mr. Hardy Li served as deputy project manager directly involving in scope and budget development, coordinating project meetings with clients, ODOT consultants as well as PB team, directly giving day to day design directions for roadway, water quality and structures, coordinating with Portland & Western Railroad and reviewing TS&L for the railroad crossing bridge, and applying railroad crossing order from ODOT Rail. Hardy was also involving in the bridge construction staging plan and cost estimate.



US 30 at Eilertsen Creek Project, Portland, Oregon

For this ODOT Region 1 project involving replacing existing culverts with bridges on the highway and adjacent railroad, Convergent Pacific is responsible for the utility conflict coordination and relocation design coordination.



Convergent Pacific Projects



OR 200: Hayes Creek Bridge Replacement, Lane County, Oregon

For this highway improvement project involving highway widening, vertical realignment and a bridge replacement, Convergent Pacific was responsible for roadway, bridge, retaining wall and stormwater modeling and treatment facility design. CP also provided project report writing and cost estimates at various stages according to ODOT's project delivery protocol.



ODOT Region 1STIP Project Scoping, Portland Metro Area, Oregon

For this ODOT Region 1 project scoping contract involving a total of 64 projects, Convergent Pacific provided roadway and geo/hazmat expertise to conduct brief paper/database research and field observation before drafted the project scopes including preliminary costs estimate.