



Bureau of Environmental Services Co-Generation Facility Buildings, City of Portland, Oregon

CP provided architectural and structural engineering services to design 2 buildings to house the engines and electrical facilities. Building types are reinforced masonry and steel frame. Aerial hot water and gas pipe support structure design was also part of the scope.

Water Bureau Mt. Tabor Reservoir Emergency Generator Building, City of Portland, Oregon

CP provided structural engineering design for the CIP reinforced concrete building. Designing the hillside wall functioning as a retaining wall to sustain the large earth surcharge was a challenge.



Power Substation Building, Portland Mall Light Rail Project, Portland, Oregon

CP provided foundation and hold-down anchoring design for the substation building and signal/communications building.

Power Substation and Signal/Communications Buildings, I-205 Light Rail Extension Project, Portland Oregon:

CP is the engineer of record for 4 power substation and signal /communication buildings, and 300 system pole foundations. CP also provided independent design checks for 2 light rail bridges.





Bull Run Dam 2 Expansion, Portland, Oregon

For this City of Portland Water Bureau, flow control towers expansion project, CP provided structural condition assessment, structural design to construct a building on the top of each of the 2 control towers. Extensive egress stairways, metal grates, railings, decking and boat docks are among the scope.



MLK Blvd./Grand Ave. Viaduct Portland, Oregon

For this 10-span bridge, CP provided structural design and check for the bridge pylons (towers) and railings. The 50 ft tall pylons consist of reinforced concrete and stainless steel structures. The complex bridge railing duplicated historical appearance.



Airport Way IT Hut (Building), Port of Portland, Oregon

For this POP improvement project, CP provided structural design for an IT hut (building), sign bridges, and a 12-conduit underground communication duct bank in the median of the Airport Way. CP also provided utility research and conflict resolution coordination.

Fire Dept. Training Tower at 1135 Powell Blvd., Portland, Oregon

CP provided structural condition assessment for the 6 story fire department training tower of reinforced concrete structure.





**Joint Water Commission (JWC)
Emergency Power Backup Power
Facilities, Forest Grove, Oregon**

CP provided design manager managing the building design including geotechnical exploration, civil, drainage, utilities, building architectural and structural design. CP is directly responsible for the design of civil site plan, drainage and stormwater treatment, architectural and structural design for the new power backup facility.



**The Suey Sing Building Seismic
Retrofit, Portland, Oregon**

CP provided building inspection, condition assessment and seismic retrofit design for the 3-story, 30,000 sf unreinforced brick and timber structure building. Civil site plan was also part of the scope.

**Gifts & Toys Building
Southeast Portland, Oregon**

For this 2-story (with full basement) 20,000 sf reinforced masonry and steel frame retail business building, CP provided full engineering services including structural, civil and utility to study, design and support during construction





**8615 SE Division Street, Portland
Oregon**

CP provided building condition assessment, architectural and structural design for remodeling the building to new restaurant operation on the first floor and office spaces on the second floor. CP also provided permit application assistance.



**1119 SE 163rd Place, Vancouver,
Washington**

CP provided building condition assessment, architectural and structural design for remodeling the building to new restaurant operation. CP also provided permit application assistance, on behalf of client managed construction bids, contract negotiations, scheduling, inspections and accounting.

**Water Bureau Water Tanks and Pump Station Structural
Condition Assessment. City of Portland , Oregon**

CP provided field inspections for over 64 City's water tanks and pump stations. The tank types included reinforced concrete and steel. Tank situation included aerial and underground. Condition assessment report, short term and long term maintenance strategies and costs estimate were included in the deliverables as part of the master plan.

