CTP Electrical Distribution System Upgrade Project

Presenter:

• Max Drathman, P.E., Project Manager, mdrathman@cityoftacoma.org
What issues is the project addressing?

Safety | Reliability | Redundancy | Shutdowns

Eliminate “one too many” distribution
Design

Provide electrical redundancy with new switchgear powering independent “A” and “B” sides of the distribution system with new MV cabling and new/reused duct banks

Design Considerations

- New building location
- Future site use
- New utility alignments
- Safety
- Eliminating single points of failure
- Underground vs Overhead power

Coordination

- TPU Power
- Union Pacific Railroad
- Public Works
- United States Army Corps of Engineers
- United States Environmental Protection Agency
- WA State Department of Ecology
- CTP Operations
Funding

- 60% Design cost projections ($31M) exceeded the project budget ($17M)
- Pursued low-interest loans from EPA and WA Ecology to fund the project
  - $20M from EPA WIFIA (30 years at 1.2%) – Design and Construction
  - $3M from Ecology SRF (20 years at 1.2%) – Design Costs
  - $14M from Ecology SRF (30 years at 1.6%) – Construction Costs
- Current estimate is $34M total project cost
Construction

• Public bidding from March to May 2020.
  • 5 bids were received
  • Awarded to second lowest bid due to participation in City’s SBE (now EIC) Program
  • Prospect Construction, Inc. from Puyallup, WA
• Construction started in August 2020
Completed Work
• New electrical building
• Switchgear installation and energization
• North side duct bank, cable, & paving
• B-Side electrical cutovers
• 30” wastewater force main reroute
• 48” effluent extension

Remaining Work
• South side duct bank, cable, & paving
• A-Side electrical cutovers
• Perimeter fencing
• Site landscaping, paving, and restoration
• August 2022 Substantial Completion
CTP Electrical Upgrade

30” Wastewater Force Main Reroute
CTP Electrical Upgrade

48" Effluent Extension
CTP Electrical Upgrade

Duct Bank Excavation and Construction
CTP Electrical Upgrade

Electrical Building and Switchgear
Environmental Services Commission

City of Tacoma | Environmental Services Department

Environmental Services Commission
Next Meeting: Thursday, April 7, 2022