

DENNY WAY SUBSTATION (ABB, INC.)

Project Summary

This project consisted of new construction of a Substation off Denny Way in Seattle, WA to accommodate new power requirements. The Denny Substation, energized in May 2018, is a long-term asset for City Light's entire system, providing reliability and flexibility

through the ability to back up adjacent substations. This portion of the entire project was valued at \$18,000,000. The Denny Substation will have an initial capacity of 50 Megavolt-ampere (MVA), and could increase to 405 MVA with facilities expansions. An underground distribution network, scheduled to be completed in 2020, will direct electricity from the substation to the Denny Triangle and South Lake Union neighborhoods. The substation will be connected to the Massachusetts Substation in SoDo via a 115-kilovolt (kV) transmission line through Downtown Seattle. The use of a gas-insulated switchgear in the Denny Substation allowed for a smaller footprint; the facility also uses solar cells to produce its electricity and a heat recovery system. Outside consultants hired by the city government in 2018 later concluded that the overall demand in the Denny Triangle and South Lake Union area would rise to 60 megawatts by 2027, far below the 180-megawatt capacity that the substation was designed for.

Burke Electric Scope

Electrical construction included Installation of: 74 each 13.8 KV Main and Feeder Breakers, 5 each 13.8KV - KVAR Capacitor Banks, 3 each 45 MVA 115 / 13.8 Station Transformers, 3 each Grounding Transformers, 15 KV Cabling from Transformers to Main 13.8 KV Switchgear, 15 KV Cabling from Capacitor Banks to Main 13.8 KV Switchgear, 15 KV Cabling from Grounding Transformers to Transformers, Substation Grounding and control wiring and integration. The entirety of this work required the coordination of several Burke crews of inside and outside electrical construction, across multiple separate contracts for ABB, Mitsubishi and Seattle City Light working on the same project.



Equipment and Systems Overview

- (4) 13.8 KV Main and Feeder Breakers
- (5) 13.8KVAR Capacitor Banks,
- (3) 45 MVA 115 / 13.8 Station Transformers
- (3) Grounding Transformers,
- 15 KV Cabling from Transformers to Main 13.8 KV Switchgear
- 15 KV Cabling from Capacitor Banks to Main 13.8 KV Switchgear
- 15 KV Cabling from Grounding Transformers to Transformers
- Substation Grounding
- Control Wiring and Integration

Offeror Role

Subcontractor

Owner Information

Seattle City Light
700 5th Ave #3200
Seattle, WA 98104
206-684-3000

Contract Amount & Type

\$1,722,482—firm fixed price,
No. 4502032819

Customer Information

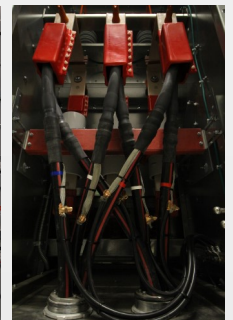
ABB, Inc.
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Project Start and Finish Dates

4/15/2017—5/1/2018

Project Location

1250 Denny Way
Seattle, WA 98109-5403



Burke Electric Project Personnel

Ken Nash, *General Foreman*
Greg McBride, *Project Manager*
Dominic Burke, *COO*
Katie Morton, *Safety Manager*

