

Federal Way Link Extension Project

SOTERIA PROJECT PROFILE

Project: Federal Way Link Extension Project

Agency: Sound Transit

Soteria's Role: Reliability Analysis, Demonstration Test, and FMECA for Communications, Traction Power, and Signals

Completion: Estimated 2024

Project Overview

This project extends Sound Transit's light rail from Angle Lake Station in the city of Seattle/Tacoma to the Federal Way Transit Center, and further to a temporary maintenance facility for vehicle inspection and interior cleaning at the southerly end of the track.

Guideway types on this project include at-grade, retained fill, retained cut, and elevated structure.

Three stations will be built: Kent/Des Moines Station, Star Lake Station, and FWTC Station. The project's scope of work includes all civil, structural, architectural, landscaping, artwork coordination, mechanical, electrical, plumbing, and systems elements to provide a fully functioning light rail extension.



Soteria's Contribution to This Project

Kiewit is the prime contractor on this project, and Soteria is subcontracted to the Massachusetts Electric Construction Company to lead the Reliability Program Services, including the following activities:

- Preparation of a Reliability Program Plan
- Performance of a Reliability Predictions/Analysis
- Preparation of a Maintainability Program Plan (Signals only)
- Performance of a Reliability Test Demonstration on the following Subsystems:
 - Emergency and Passenger Telephone System
 - Elevator Analog Telephone
 - Public Address System
 - Closed Circuit Television System
 - Radio System
 - Access Control System
 - Supervisory Control and Data Acquisition
 - Station Fire/Life Safety Equipment providing data to Emergency Ventilation System
 - Local Centralized Monitoring System PLC & HMI

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- Intelligent Electronic Device PLCs & HMIs
- DC Circuit Breaker
- AC Circuit Breaker
- Battery and Battery Charger
- Microprocessor Based Interlocking
- Uninterruptible Power Supplies
- Audio Frequency Track Circuits
- Power Frequency Track Circuits
- Train Control Maintenance Computer
- Switch Controller Unit
- Switch Machine
- Failure Mode, Effects, and Criticality Analyses (FMECA)
- Reliability Block Diagram