

FIRST HILL STREETCAR TESTING AND STARTUP OVERVIEW

Status as of December 1, 2014

Overview

Preparations are underway to begin service on the First Hill Streetcar Line, a new urban mobility option funded through Sound Transit's "ST2" mass transit expansion plan. The First Hill Streetcar will support economic growth and strengthen connections among the places where people live, work and socialize. It will be an important link in the regional transit system, and will connect the diverse and vibrant residential neighborhoods and business districts of Capitol Hill, First Hill, Yesler Terrace, Central Area, Chinatown ID and Pioneer Square. The system will provide reliable, frequent service with headways of approximately 10 minutes during peak periods. Service will operate 5 AM to 1 AM Monday through Saturday. On Sundays and holidays, service will operate 10 AM to 8 PM.

A fleet of six streetcars will support this service, with three to five streetcars in operation during the service day. The streetcars are supplied by Inekon, the Czech company that built the streetcars that have operated on Seattle's South Lake Union Line since 2007. Three of the cars are being assembled in the Czech Republic and three are being assembled by a local labor force at Seattle's First Hill Streetcar Operations and Maintenance Facility.

Streetcar Manufacturing Status

The streetcar manufacturer began commissioning of the first vehicle in November. Commissioning includes static testing of major subsystems with technical support from the subsystem suppliers and functional tests of acceleration, braking and battery performance on a test track. Commissioning is continuing through mid-December, with shipment of the first commissioned vehicle to follow; delivery is anticipated late January or early February.

The Czech manufacturer will be providing training and supervision of local workers throughout the production of the three vehicles to be assembled in Seattle. This technology transfer process introduces some uncertainty into the vehicle assembly schedule for these three vehicles.

Testing & Training

As the First Hill Streetcars arrive and are readied for service they will become visible to the public, moving about the alignment during various stages of testing and training. In all of these stages, the streetcar destination signs will present an "out of service" message so the public will be aware that these streetcars will not be picking up passengers.

The streetcar manufacturer conducts extensive vehicle qualification testing to verify the vehicles meet all technical requirements and will be reliable throughout their service life. Additionally, each vehicle is tested before being accepted for service. These acceptance tests consist primarily of acceleration and deceleration (braking) tests, and tests of systems such as doors, lighting and passenger communications.

When a car has been qualified by passing all of these tests, it will become available for training King County Metro's Streetcar Operations Supervisors. This training will consist of training in the classroom, on the vehicle in the OMF yard, and on-street operations. During this time there will also be the dynamic (street) testing of the remaining cars. Metro Streetcar Operations will schedule to

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accommodate both testing and training activities simultaneously; at times there may be several cars operating on the alignment to support testing and training.

Additionally, streetcars will periodically be in operation to support integrated testing of the Traction Electrification System and Train Signaling System. Streetcars will be operated at various speeds and locations to measure actual traction power performance and determine final settings of the power control systems of the traction power substations (TPSS). (The TPSS provide DC power to the streetcars through an overhead contact wire). Streetcars will also be operated through various intersections that are controlled by train signals, while signal technicians observe and make adjustments to these signal systems.

Vehicle/systems testing and Supervisor training may take several weeks and will be followed by two classes of approximately 10 Streetcar Operators training on the alignment, mixed with classroom and static training in the yard. To minimize the impact of the delay in streetcar deliveries, King County Metro will conduct some of the operator training on the South Lake Union streetcar line.

Operator training will be followed by two weeks of Pre-Revenue Service, during which the actual service plan will be simulated, without passengers, to establish a baseline knowledge of variations in operating conditions and events and inform the details of operation and supervisory support. At the end of the Pre-Revenue Service period, service will begin with Grand Opening events.