WELCOME TO MERCER ISLAND CONSTRUCTION KICKOFF OPEN HOUSE

EAST LINK EXTENSION

The purpose of tonight's meeting is to:

- Provide an overview of key project elements.
- Introduce the community to members of the construction team.
- Present details on early construction activities.

Agenda

- **5-7 p.m. Open House**
  - Meet with project staff and view display boards and graphics featuring information about construction activities in Mercer Island.
- **7 p.m. Meeting adjourns**

07/12

SOUNDTRANSIT
RIDE THE WAVE

LIGHT RAIL ALIGNMENT

EAST LINK EXTENSION

Length: 14 miles

Ride times:

- Mercer Island to University of Washington: 20 minutes
- South Bellevue to Sea-Tac Airport: 50 minutes
- Overlake Transit Center to Bellevue Transit Center: 10 minutes

Rider projection: About 50,000 riders will use East Link every day by 2030

Budget: $2.8 billion (2010 $)

Start of service: Targeted 2023

2006-2011	2011-2015	2015-2022	Targeted 2022	Targeted 2023
Planning and environmental review	Final design	Construction (we are here)	Testing & pre-operations	East Link in service

07/12

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND SEGMENT OVERVIEW

EAST LINK EXTENSION

Benefits:

- Provides access to high quality, frequent transit service that operates 20 hours per day.
- Approximately 5,900 daily boardings (2035).
- Increases travel options for Mercer Island residents and employees, consistent with Mercer Island transportation goals.
- Improves regional air quality by displacing more than 2.5 greenhouse gas emissions when riders leave their cars behind.

Travel times (from Mercer Island Station)

- International District/Chinatown = 10 minutes
- University of Washington = 20 minutes
- Sea-Tac Airport = 44 minutes
  (with transfer at International District Station)
- Bellevue Transit Center = 15 minutes

07/12

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND COMMUNITY OUTREACH

EAST LINK EXTENSION

Community Outreach's mission is to represent Sound Transit's interests in the community, and the community's interests in Sound Transit. During construction, it is our job to keep community members informed of major construction activities and project progress. We are your point of contact for Sound Transit's projects.

Good Neighbor Commitments:

- Provide advanced notification of work activities.
- Maintain business and residential access.
- Maintain a clean work site.
- Minimize noise, dust and debris.
- Provide wayfinding and signage.
- 24-hour construction hotline.

Contact us

tel: 206-398-5465

email: eastlink@soundtransit.org

web: soundtransit.org/eastlink

24-hour Construction Hotline: 1-888-298-2395

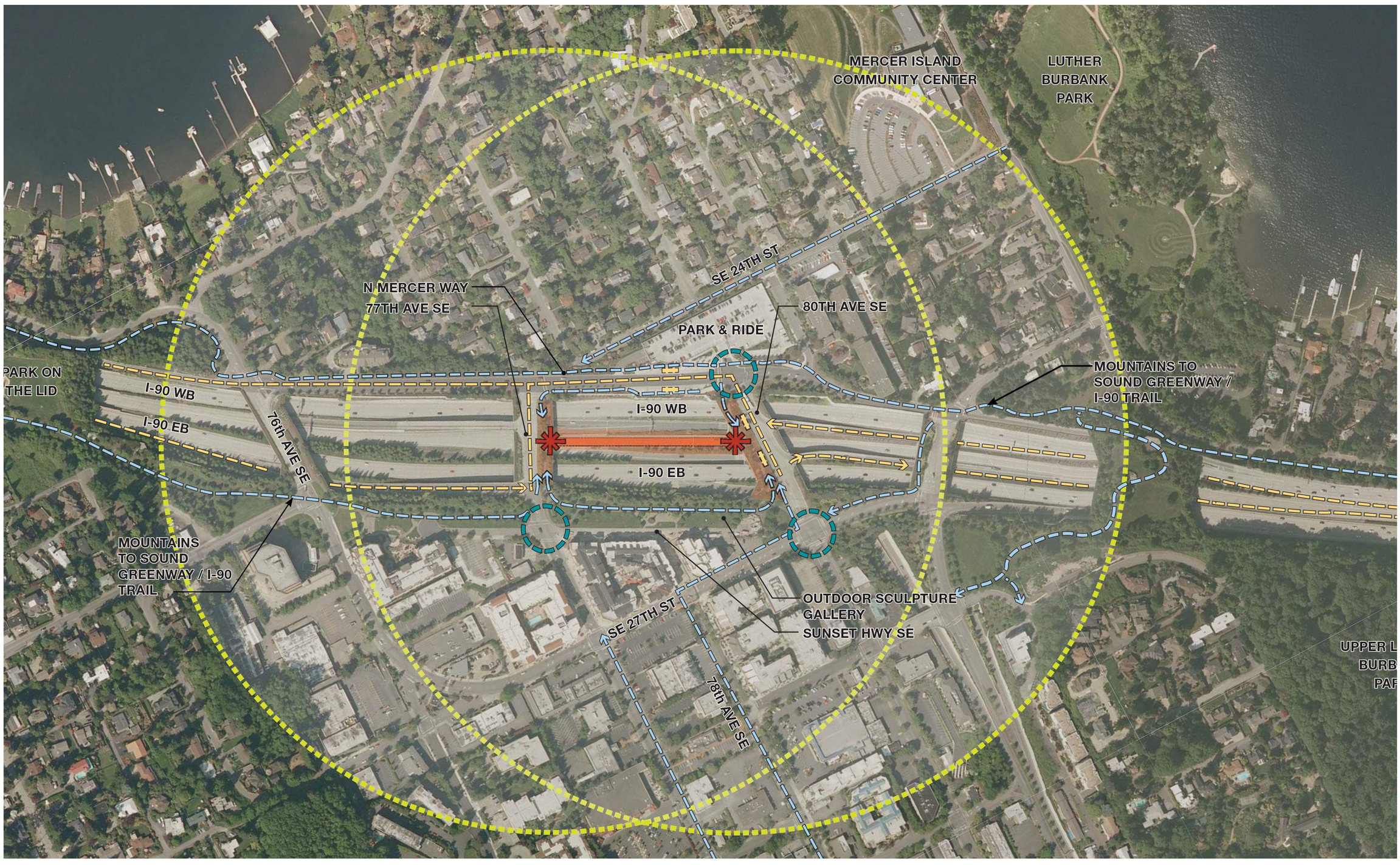
For issues that need immediate attention after normal business hours

07/12

SOUNDTRANSIT
RIDE THE WAVE

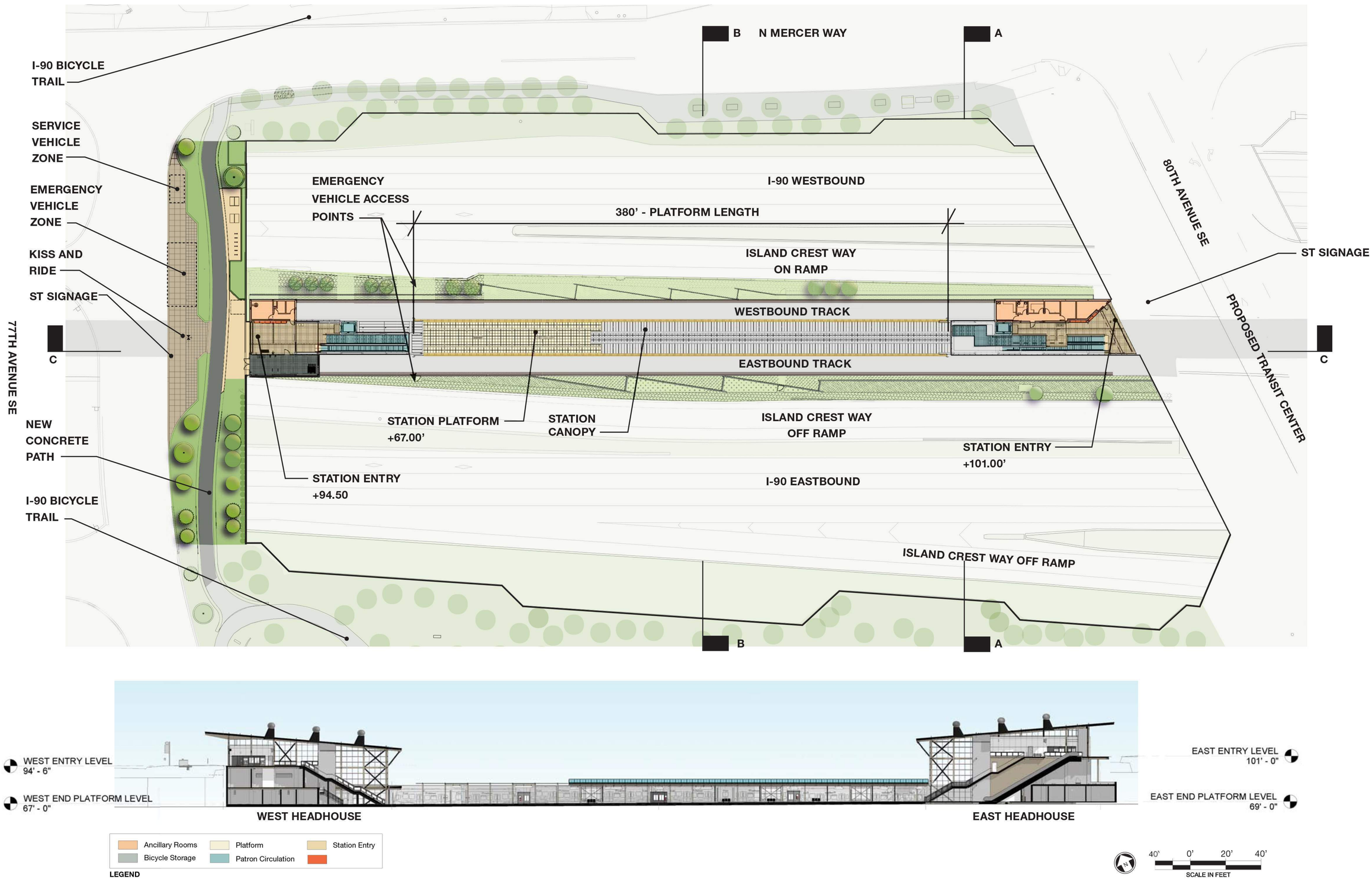
MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION



CONTEXTUAL PLAN

SITE PLAN



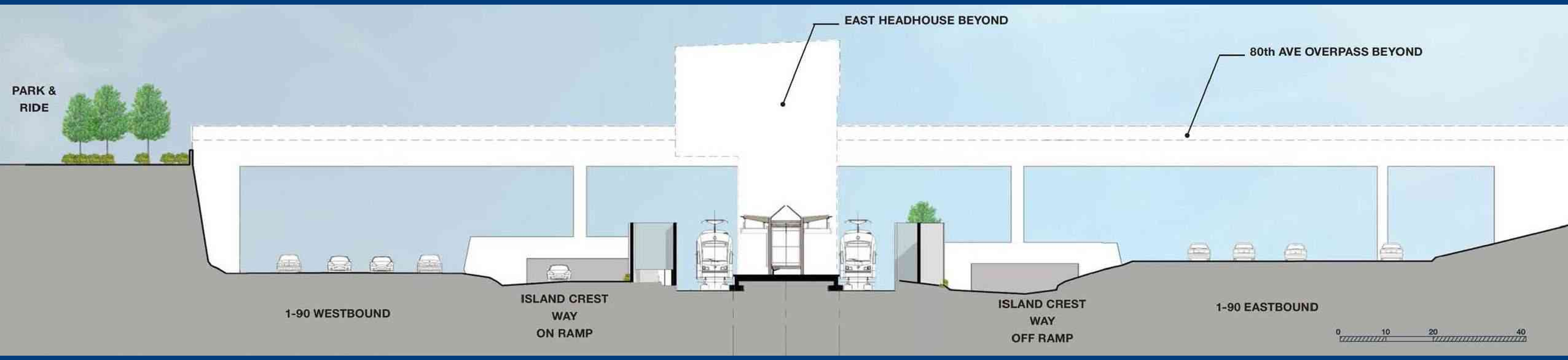
07/12

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION

SITE CROSS SECTION AT EAST HEADHOUSE



SITE CROSS SECTION AT PLATFORM

07/12

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION

EAST HEADHOUSE FACING WEST

EAST HEADHOUSE INTERIOR

EAST HEADHOUSE ELEVATION

07/12

SOUNDTRANSIT
RIDE THE WAVE

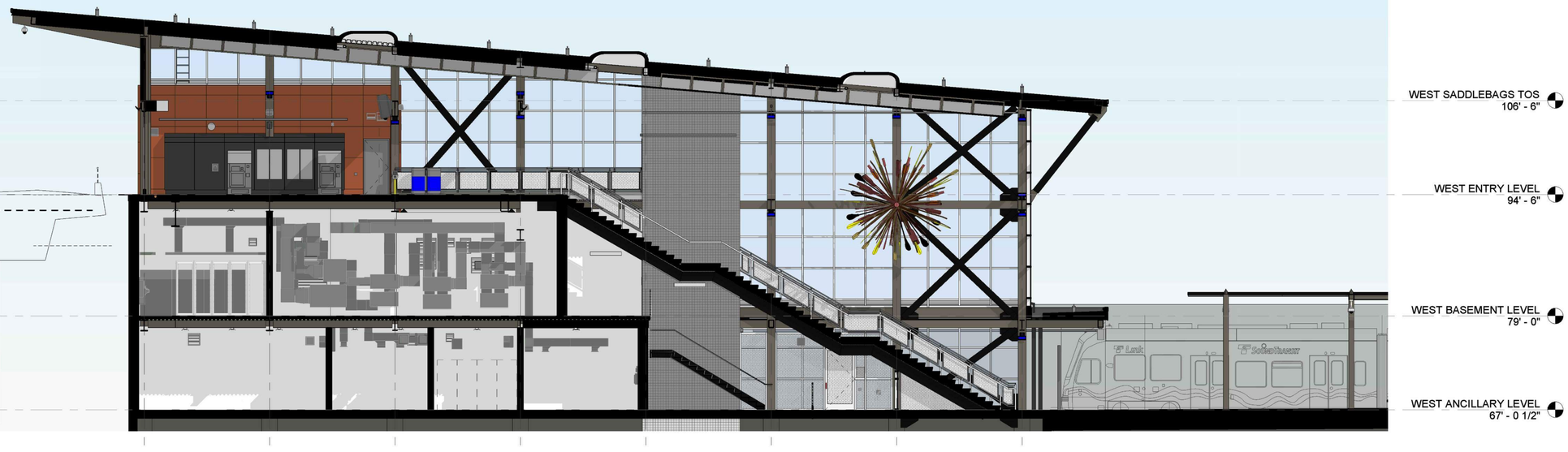
MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION

WEST HEADHOUSE FACING EAST

WEST HEADHOUSE INTERIOR

WEST HEADHOUSE ELEVATION



07/12

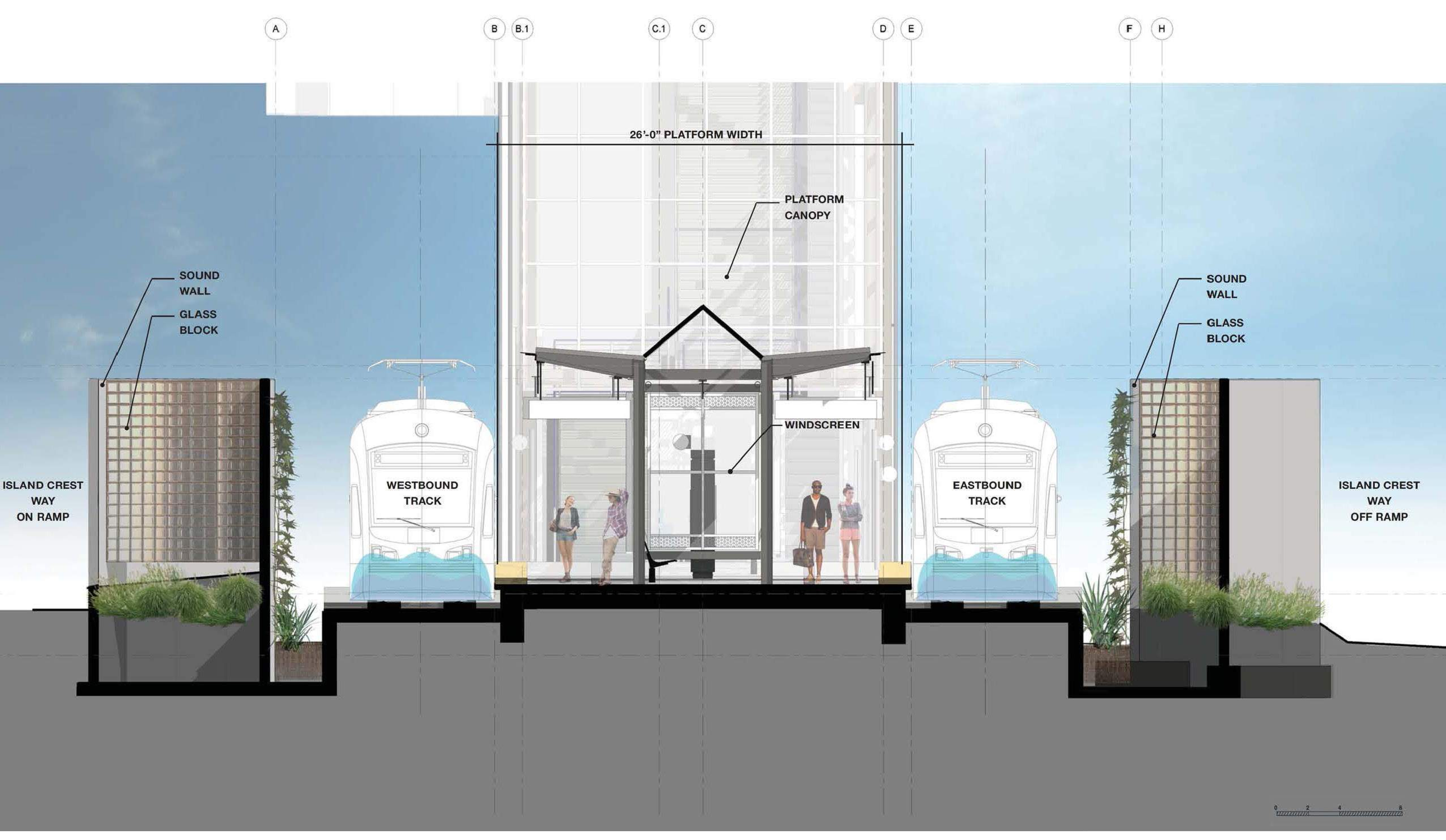
SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION

STATION PLATFORM FACING EAST

PLATFORM CROSS SECTION

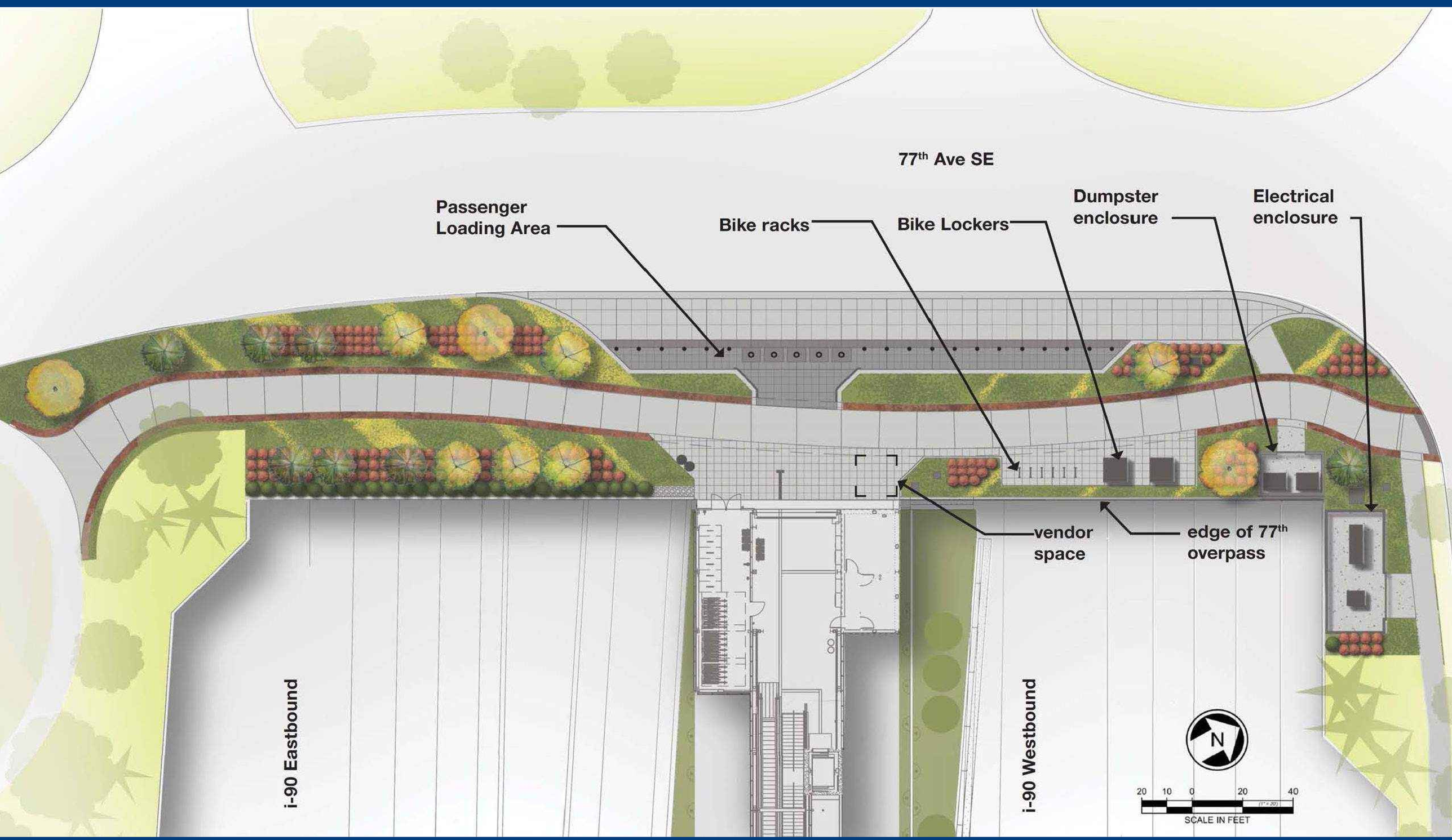


07/12

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION



77TH AVE LANDSCAPING PLAN

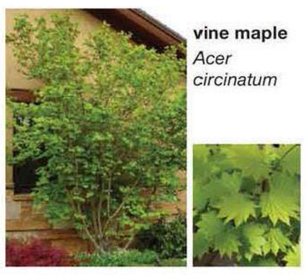
PLANT MATERIALS

TREES - EVERGREEN

Shore Pine
Pinus contorta var. contorta

TREES - DECIDUOUS

Kousa dogwood
Cornus Kousa



vine maple
Acer circinatum

columnar hornbeam
Carpinus betulus 'Fastigiata'

SHRUBS

parney cotoneaster
Cotoneaster lacteus

Little moses burning bush
Euonymus alatus 'Little Moses'

zabel laurel
Prunus laurocerasus 'Zabeliana'

arctic sun red twig dogwood
Cornus sanguinea 'Cato'

dwarf winged euonymous
Euonymus alatus 'Compactus'

ShRub Serviceberry
Amelanchier alnifolia

evergreen huckleberry
Vaccinium ovatum

Groundcovers, GRASSES AND VINES

mount Vernon Laurel
Prunus Laurocerasus 'Mount Vernon'

Creeping Mahonia
Mahonia repens

Sword Fern
Polystichum munitum

Lady Fern
Athyruium filix-femina

Deer Fern
Blechnum spicant

Douglas Iris
Iris douglasiana

giant lily turf
Liriope Gigantea

dwarf sweetbox
Sarcococca hookeriana var humilis

Hybrid epimedium
Epimedium x perralchicum

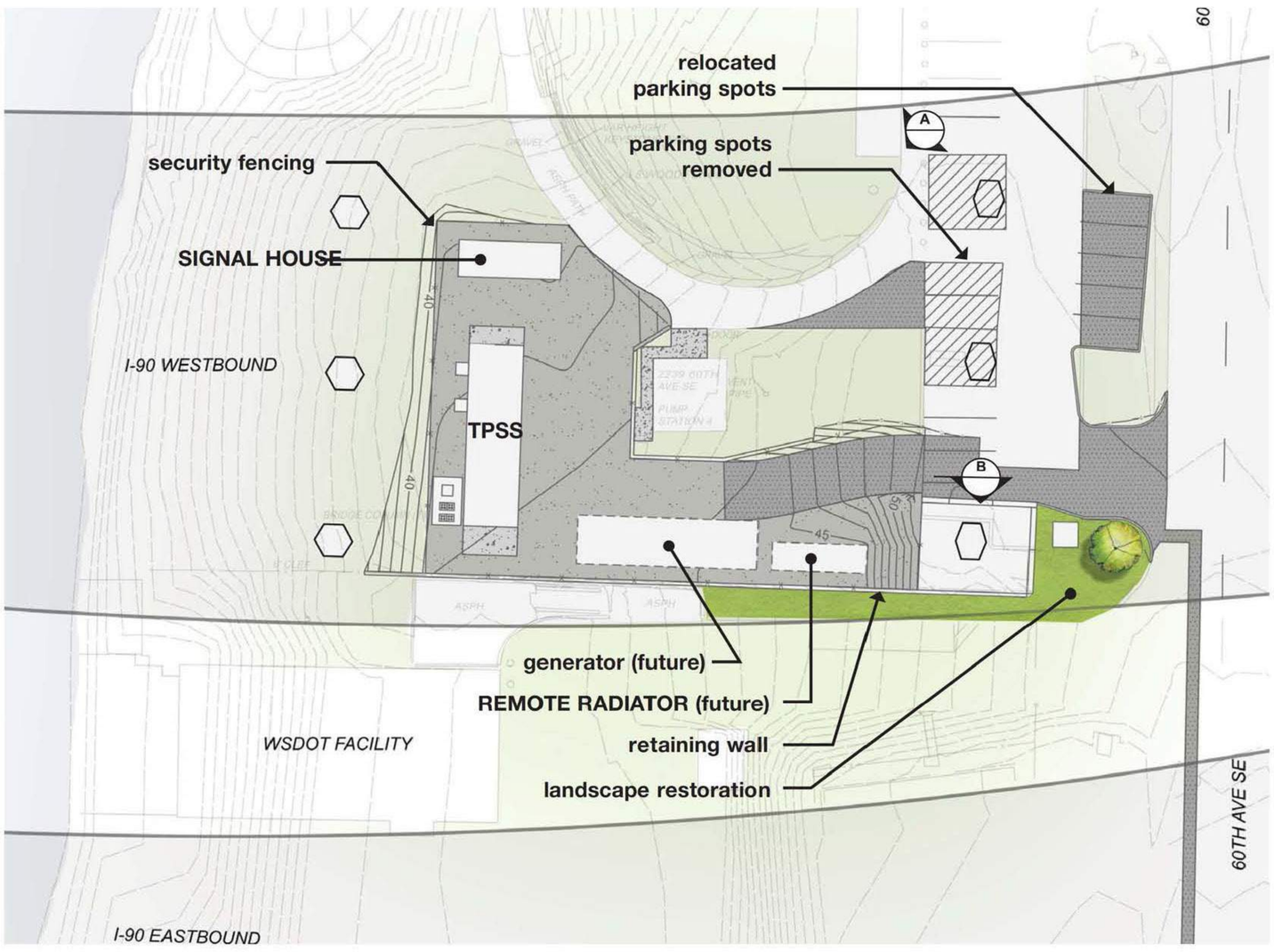
Camas
Camasia spp.

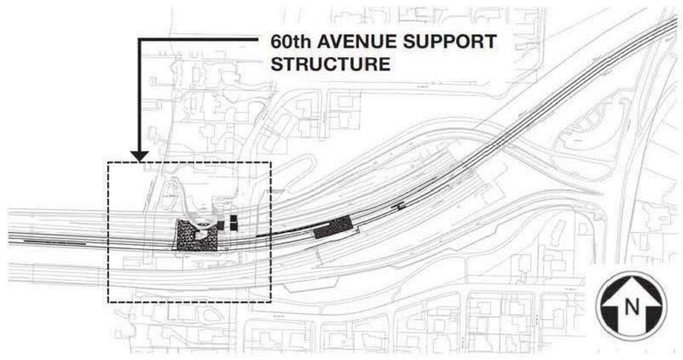
Boston Ivy
Parthenocissus tricuspidata

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION





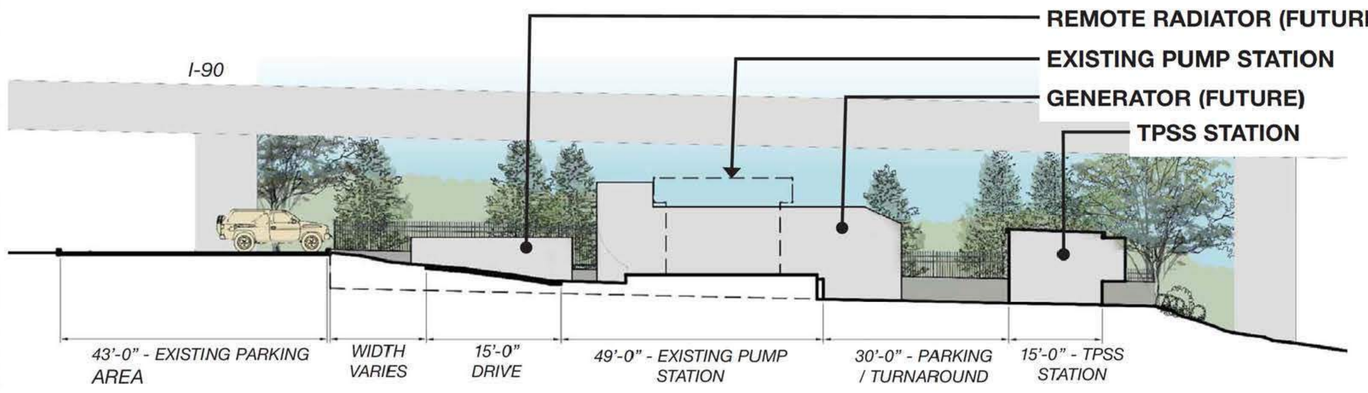
60th AVENUE SUPPORT STRUCTURE - VICINITY MAP

60TH AVENUE SUPPORT STRUCTURE SITE PLAN

60TH AVENUE SUPPORT STRUCTURE SECTION

(A) 60TH AVENUE SUPPORT STRUCTURE - ISOMETRIC

EXISTING CONDITIONS

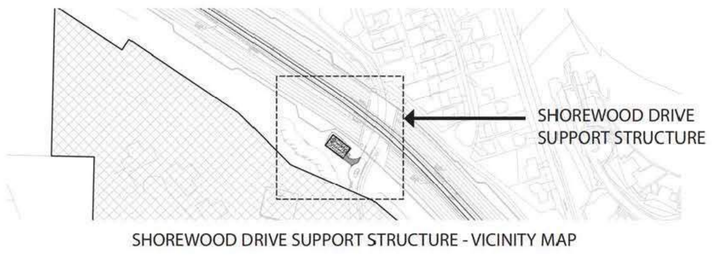


(B) 60TH AVENUE SUPPORT STRUCTURE - SECTION

SOUNDTRANSIT
RIDE THE WAVE

MERCER ISLAND STATION – FINAL DESIGN

EAST LINK EXTENSION



SHOREWOOD DRIVE SUPPORT STRUCTURE - VICINITY MAP

Grand Fir
Abies grandis

Deodar Cedar
Cedrus deodara

Austrian Pine
Pinus nigra

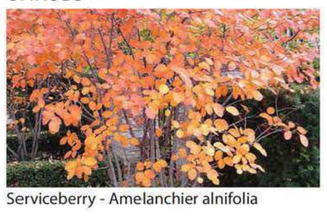
Excelsa Cedar
Thuja plicata 'Excelsa'

DECIDUOUS TREES

Venus Dogwood
Cornus kousa x nuttallii 'Venus'

Crape Myrtle
Lagerstroemia indica

SHRUBS

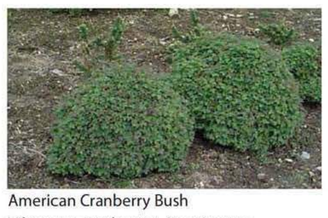


Serviceberry - Amelanchier alnifolia

Coast Silk Tassel - Garrya elliptica

Mock Orange - Philadelphus lewisii

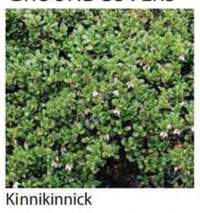
Birch Leaf Spirea - Spiraea betulifolia 'Tor'



American Cranberry Bush
Viburnum opulus var. Americanum

Mugo Pine - Pinus mugo 'Mugo'

GROUNDCOVERS



Kinnikinnick
Arctostaphylos uva-ursi

Japanese Spurge
Pachysandra

Red Edge Hebe
Hebe 'Red Edge'

sword fern
Polystichum munitum

salal
Gaultheria shallon

SHOREWOOD DRIVE SUPPORT STRUCTURE SITE PLAN & PLANTS

SHOREWOOD DRIVE SUPPORT STRUCTURE ELEVATION

EXISTING CONDITIONS

(A) SHOREWOOD DRIVE SUPPORT STRUCTURE - ISOMETRIC

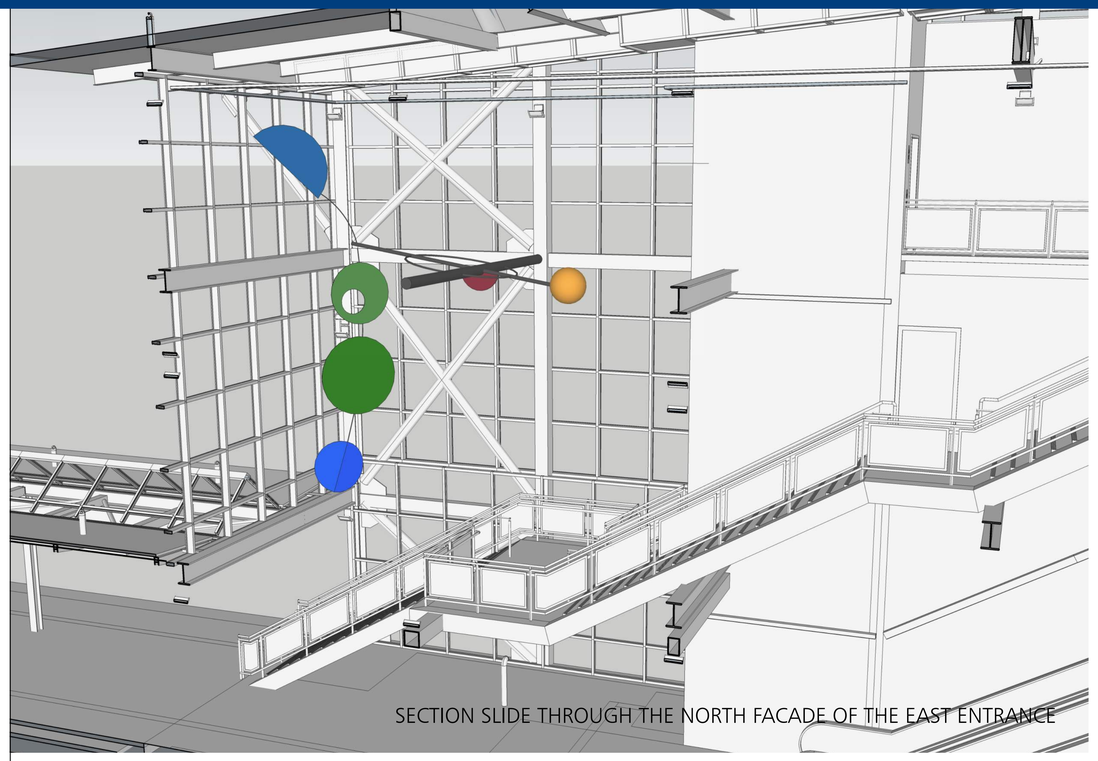
(B) SHOREWOOD DRIVE SUPPORT STRUCTURE - SOUTH & NORTH ELEVATION

(C) SHOREWOOD DRIVE SUPPORT STRUCTURE - EAST ELEVATION

SOUNDTRANSIT
RIDE THE WAVE

EAST ENTRANCE ARTWORK

BELIZ BROTHER



SECTION SLIDE THROUGH THE NORTH FACADE OF THE EAST ENTRANCE

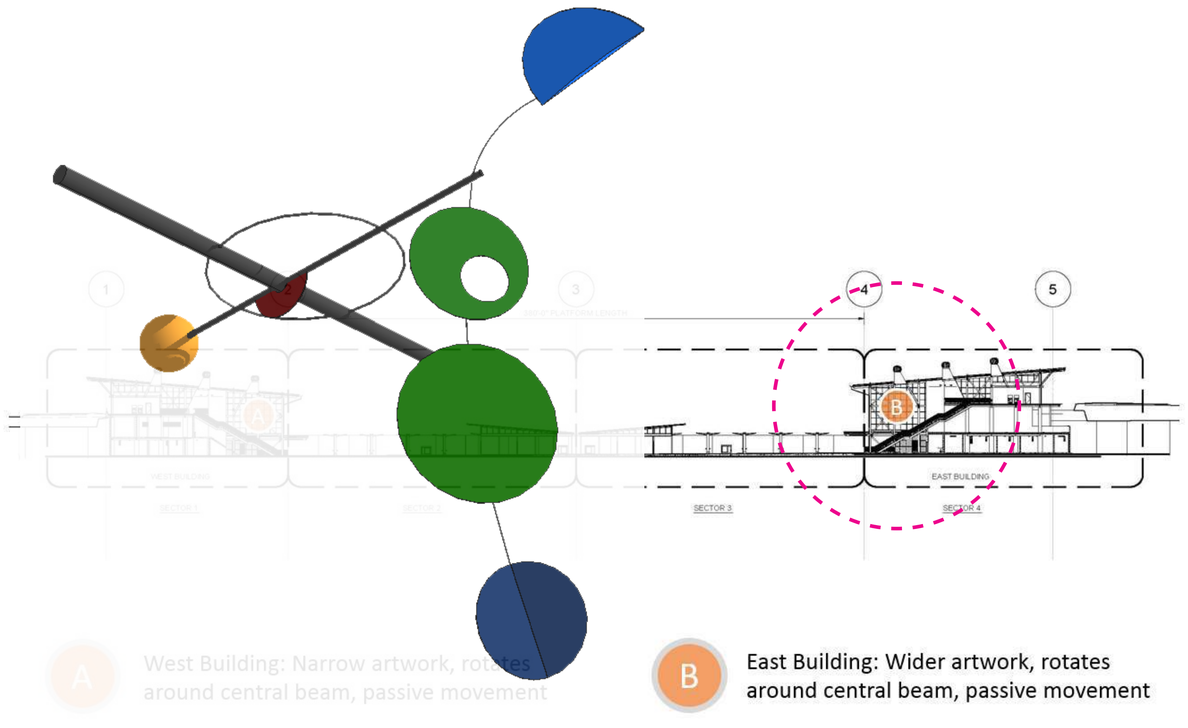
LOOKING WEST TOWARDS THE TRAIN PLATFORM

ABOUT THE ARTWORK

Beliz Brother writes that her artwork for the east entrance "is a quiet piece of color and balance, referring to reflections in both the sky and water." Located in the glass pavilion leading to the station platform, the sculpture will guide patrons in from the street, hover gently above them while moving up and down the stairs, and serve as a marker, differentiating between the east and the west entrances to the station. Like its companion piece in the west entrance, the sculpture will be mounted to an axle, allowing for slight movements of the large disc-like forms, animating the space with both shadows and reflections.

ABOUT THE ARTIST

Beliz Brother is an artist who not only highlights the complexity of interchange and interaction, but also seeks to incorporate this very process into the creation of her work. Her work has been exhibited at the Seattle Art Museum, San Francisco's New Langton Arts and the Henry Art Gallery in Seattle. Permanent installations of her sculpture can be seen at Seattle City Hall, the Tech Museum of Innovation in San Jose, and Swedish Hospital and Harborview Medical Center in Seattle.

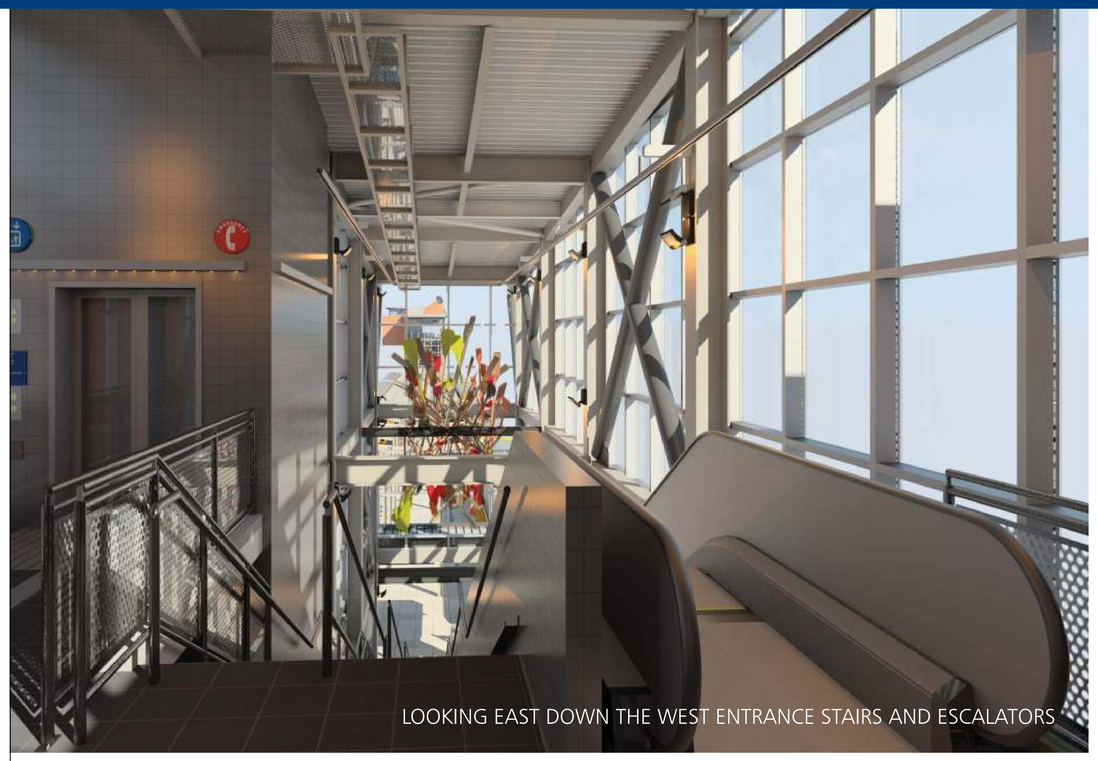


June 2017

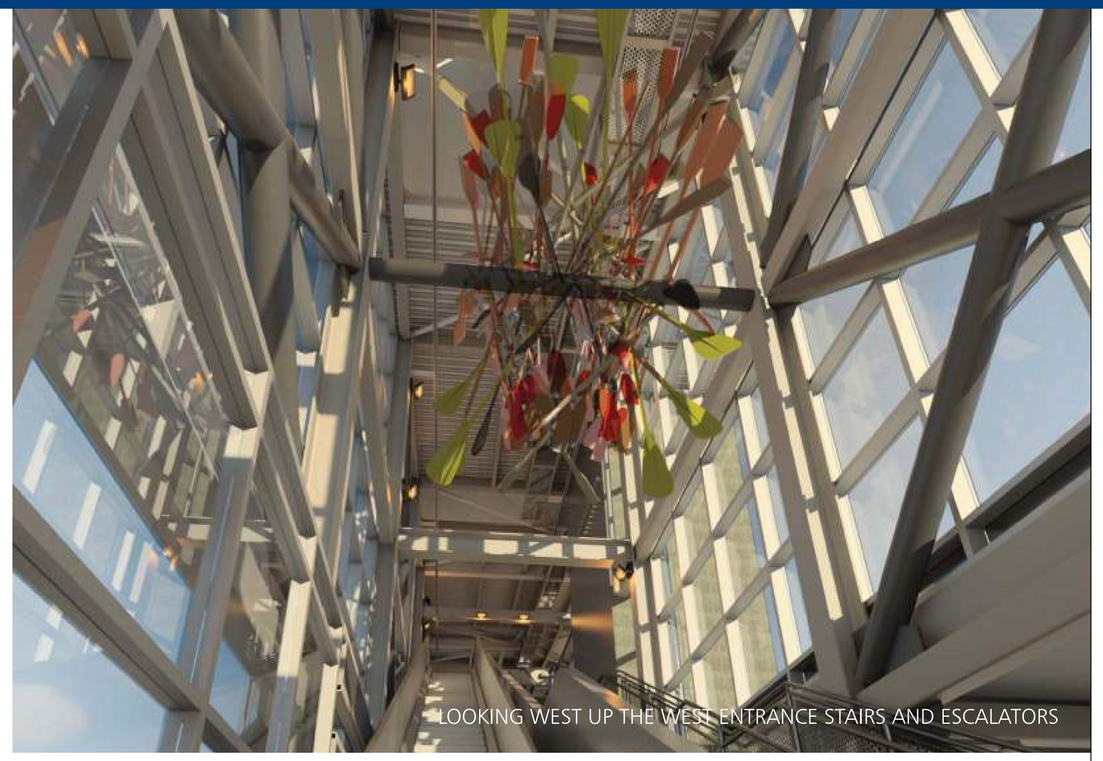
SOUNDTRANSIT

WEST ENTRANCE ARTWORK

BELIZ BROTHER



LOOKING EAST DOWN THE WEST ENTRANCE STAIRS AND ESCALATORS



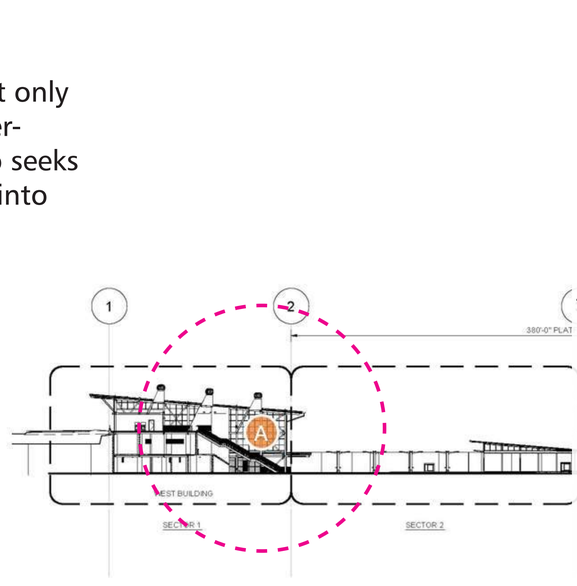
LOOKING WEST UP THE WEST ENTRANCE STAIRS AND ESCALATORS

ABOUT THE ARTWORK

The artwork for the west entrance is a grouping of paddles and oars, each designed and built by artist Beliz Brother and gathered into a cluster above the stairs and escalators leading to and from the station platform. Based on paddles and oars used with native canoes, native and contemporary kayaks, rowboats, skulls and paddleboards refer to the traditions of transportation and recreation, both old and new, on the lake surrounding the island. Together they form an animated and colorful sculpture that can be seen when entering from the street, descending the stairs and from the light rail trains. The materials will be steel and fire proofed cedar wood.

ABOUT THE ARTIST

Beliz Brother is an artist who not only highlights the complexity of interchange and interaction, but also seeks to incorporate this very process into the creation of her work.
Her work has been exhibited at the Seattle Art Museum, the Philadelphia Institute of Contemporary Art, San Francisco's New Langton Arts and the Henry Art Gallery in Seattle. Permanent installations of her sculpture can be seen at Seattle City Hall, the Tech Museum of Innovation in San Jose, and Swedish Hospital and Harborview Medical Center in Seattle.



A West Building: Narrow artwork, rotates around central beam, passive movement

B East Building: Wider artwork, rotates around central beam, passive movement

June 2017

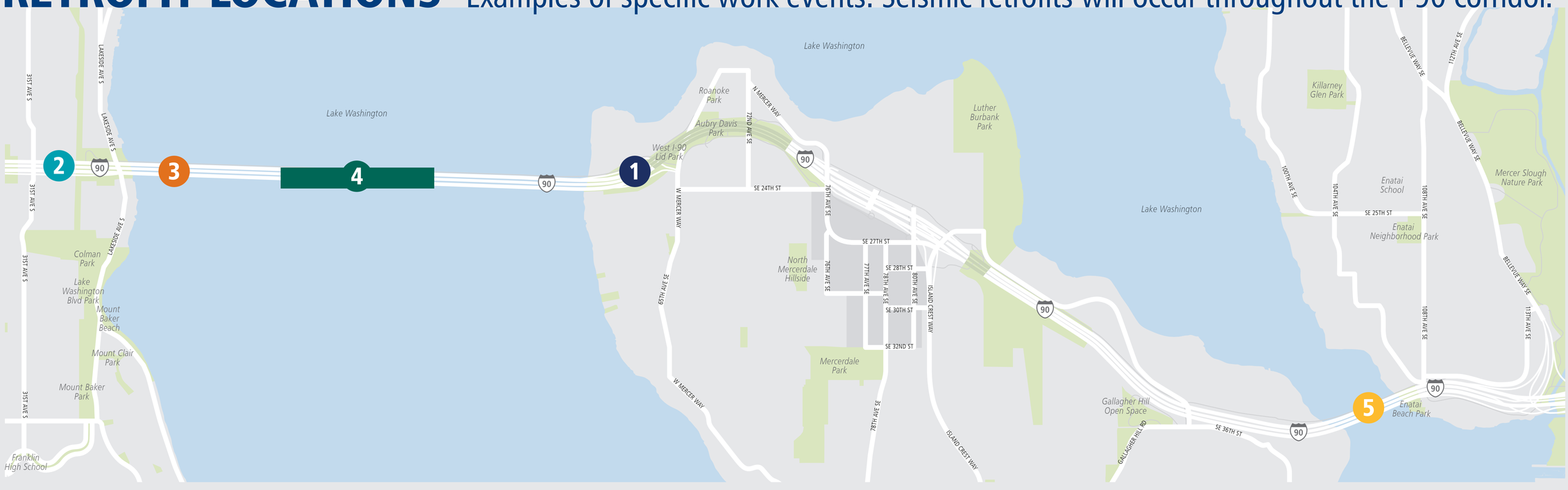
SOUNDTRANSIT

I-90 Seismic Retrofit

EAST LINK EXTENSION

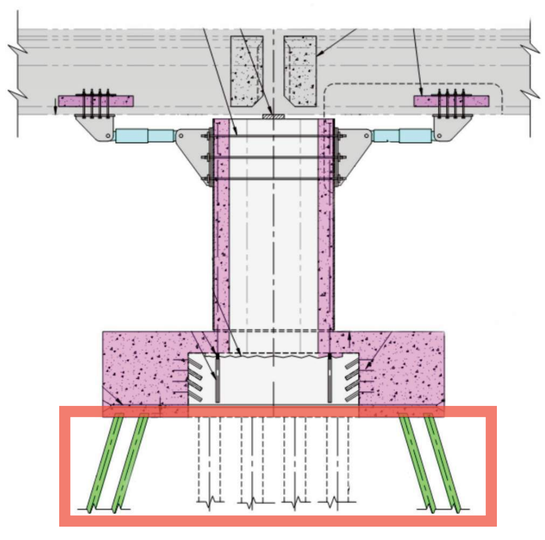
RETROFIT LOCATIONS

Examples of specific work events. Seismic retrofits will occur throughout the I-90 corridor.



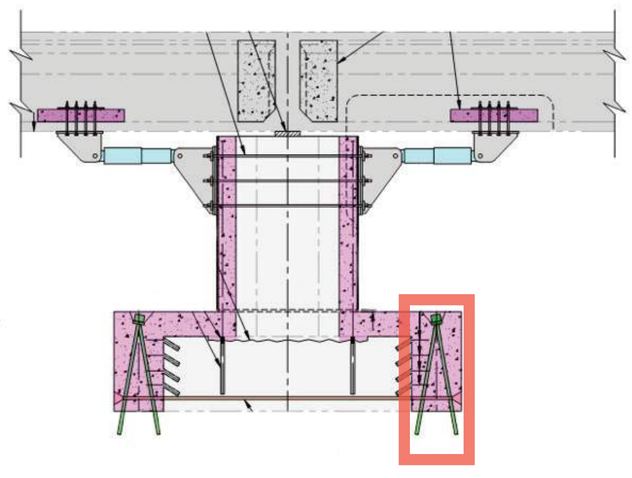
1 Micropile installation

Micropiles are installed to add additional anchoring support for the West Approach structure.



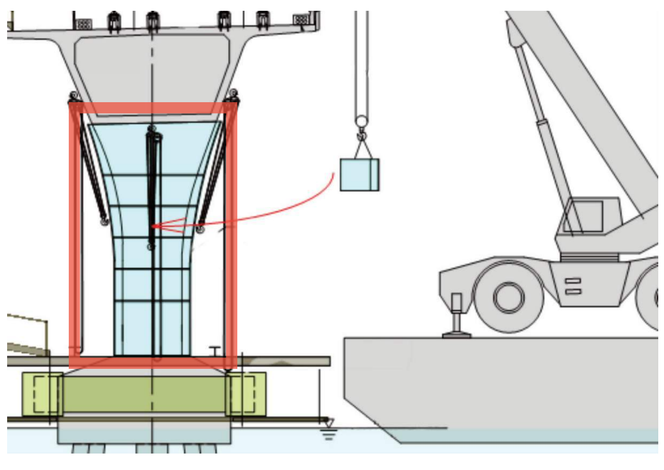
2 Steel dowels

Steel dowels are added and covered in epoxy to form a connection between existing concrete and new concrete. Over 5,000 steel dowels will be installed.

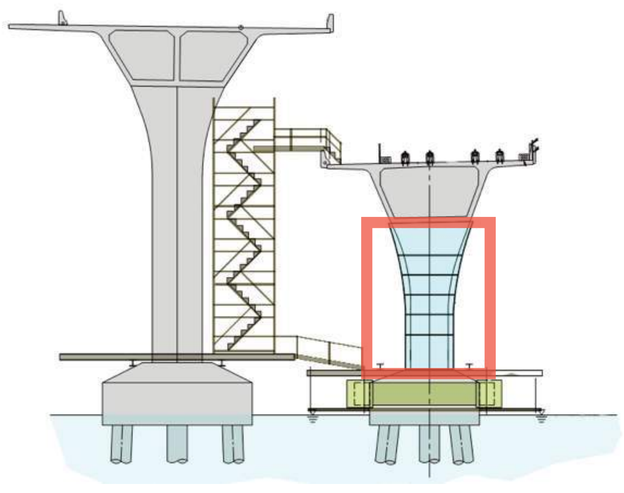


3 Steel jackets

Steel jackets will be added to some existing columns and will be delivered by barge. The heaviest piece is 11,000 pounds.

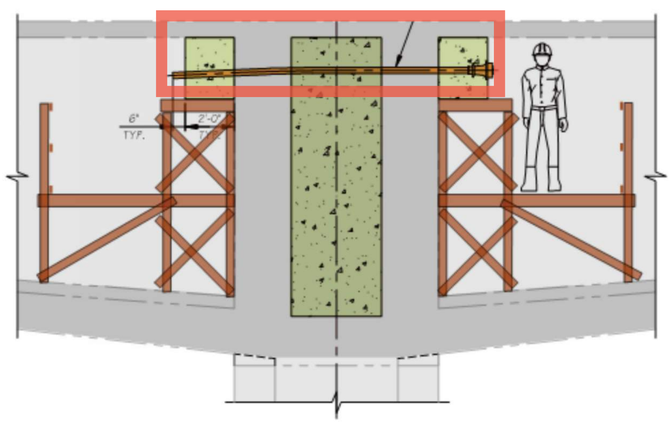


Similar steel jackets will be installed to the supports for the D2 roadway in Seattle.



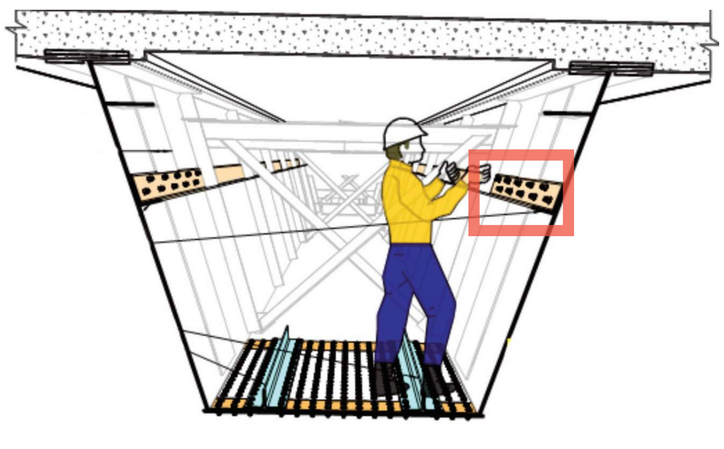
4 Post-tensioning

Post-tensioning is a method to strengthen concrete by adding steel strands to existing concrete. The steel strands are anchored to various points on the bridge. The steel strands are then jacked to very high stresses and then released. The end result is compressed and stronger concrete.



5 Stiffeners

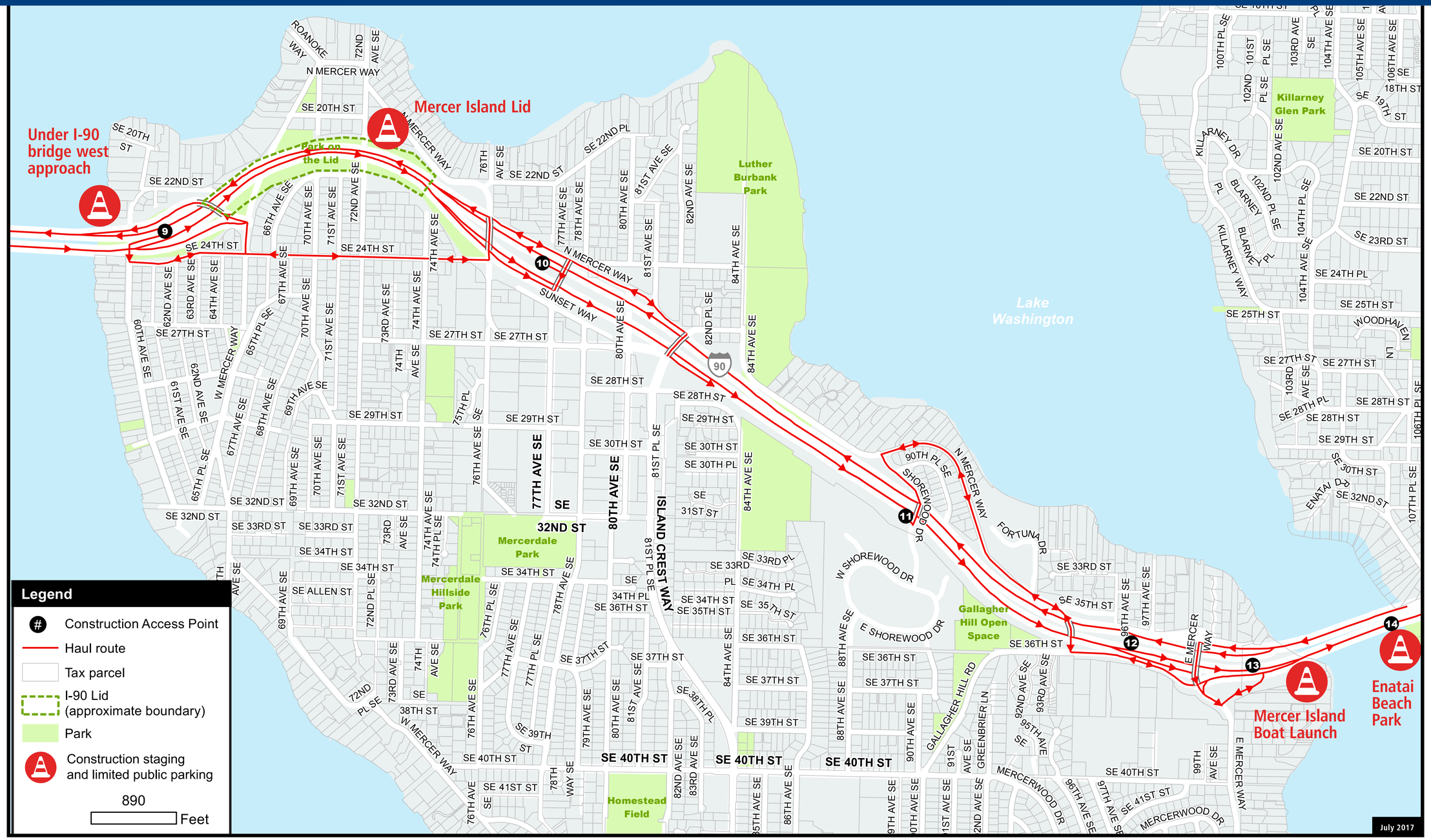
Longitudinal stiffeners are added to the box girders.



Washington State Department of Transportation
SOUNDTRANSIT
King County METRO

Mercer Island Construction Access & Haul Routes

EAST LINK EXTENSION



SOUNDTRANSIT
RIDE THE WAVE

Mercer Island Construction Timeline

EAST LINK EXTENSION

BLOCKS 11, 12

Mercer Island Tunnel

Schedule subject to change

ACTIVITY	2017	2018	2019	2020	2021	2022	2023
Demolition							
Tunnel modifications (OCS, fans, lighting)							
Install utilities							
Install overhead catenary system, east and westbound track and track bridge system							
Install electrical / control systems/ signals							
Commission tunnel							
System installation and testing							

BLOCK 13

Mercer Island Station

ACTIVITY	2017	2018	2019	2020	2021	2022	2023
General							
Demolition							
Station construction							
Install electrical / control systems / signals							
Install utilities							
Install overhead catenary system and tracks							
Commission station							
System installation and testing							
Specific							
Construct East and West Head Houses							
Construct platform							
Impacts							
Localized impacts along haul routes							

BLOCK 14

I-90 East

ACTIVITY	2017	2018	2019	2020	2021	2022	2023
Demolition							
Install utilities							
Install overhead catenary system and track							
Install electrical / control system/ signals							
Install traction powered substation (TPSS)							
Seismically retrofit East Channel Bridge							
System installation and testing							

07/17

Washington State Department of Transportation
SOUNDTRANSIT
King County METRO
CITY OF MERCER ISLAND WASHINGTON

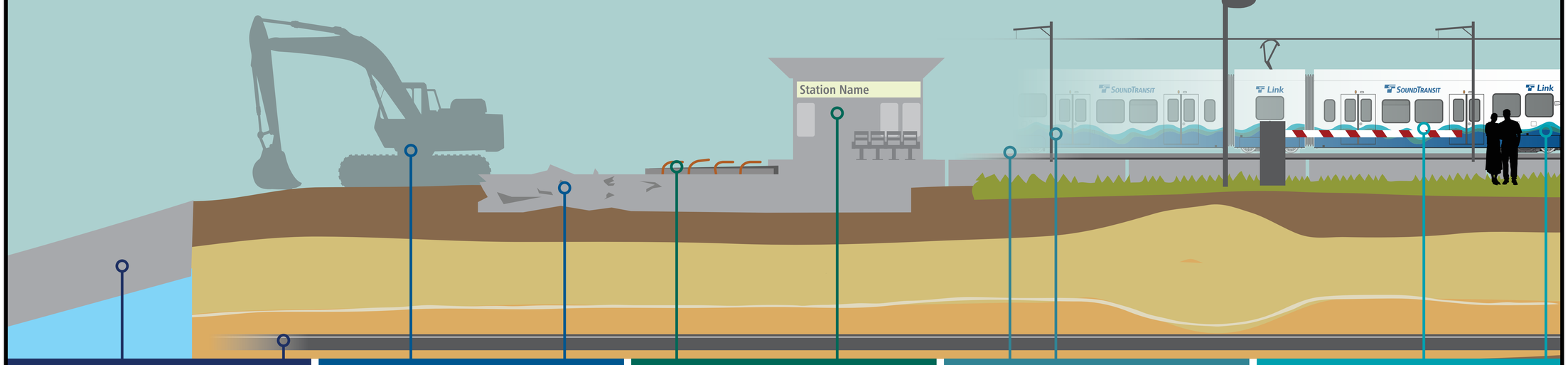
Typical Light Rail Construction Sequence

EAST LINK EXTENSION

East Link construction includes building at-grade, elevated, and tunnel light rail infrastructure

2016
Construction begins

2023
Open for service

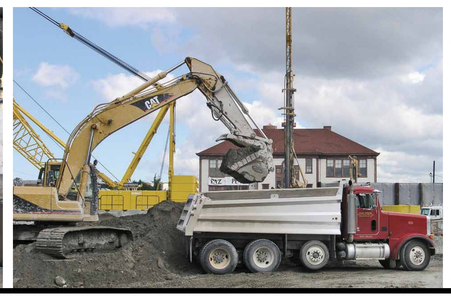


Install seismic retrofits

The I-90 roadway and floating bridge will be seismically retrofitted to prepare the structures for light rail operation.

Prepare the work zone

Crews must clear buildings and soil and prepare the work zone for East Link construction crews. This includes erecting barriers and fencing to keep the work zone safe.



Build station and supporting infrastructure

Next, Sound Transit lays the foundations necessary to run light rail track and builds stations and supporting infrastructure.

Install track and power

Sound Transit installs track and wire while placing poles and ancillary structures that power the system and operate the signals.

Install and test systems

Before light rail opens to passengers, Sound Transit completes a safety certification process testing communications, safety and emergency systems, as well as signals and crossing gates.

SOUNDTRANSIT
RIDE THE WAVE

Crossing Lake Washington

EAST LINK EXTENSION

Pioneering engineering

As part of the East Link extension, Sound Transit will do something that's never been done before—run light rail trains across a floating bridge.

To do this, engineers and designers had to consider a number of factors, including six ranges of motion as trains travel onto the floating portion of the I-90 bridge. Here's how we stepped up to the challenge.

What did we do?

To accommodate running trains from the land bridge to the floating bridge, Sound Transit built two life-size test "track bridges." The track bridges consist of rails that rest on a series of bearings and plates to let them move with the changing lake levels and bridge movements.

Passing the test

Sound Transit shipped the test bridges and two light rail vehicles to the Transportation Technology Center (TTC) in Pueblo, Colorado, where freight and commuter rail agencies from around the country test new technologies.

At the TTC, Sound Transit was able to mimic the forces and movements the track bridges will experience during normal and extreme conditions, including lake level, sway, roll and surge forces.

The results

After collecting more than 500 channels of data during each light rail vehicle pass, the track bridges passed all critical test criteria with the ability to provide safe and comfortable light rail service at speeds up to 55 mph.

Learn more about the track bridge and watch a video

soundtransit.org/trackbridge

07/17

Washington State Department of Transportation

SoundTransit

King County METRO