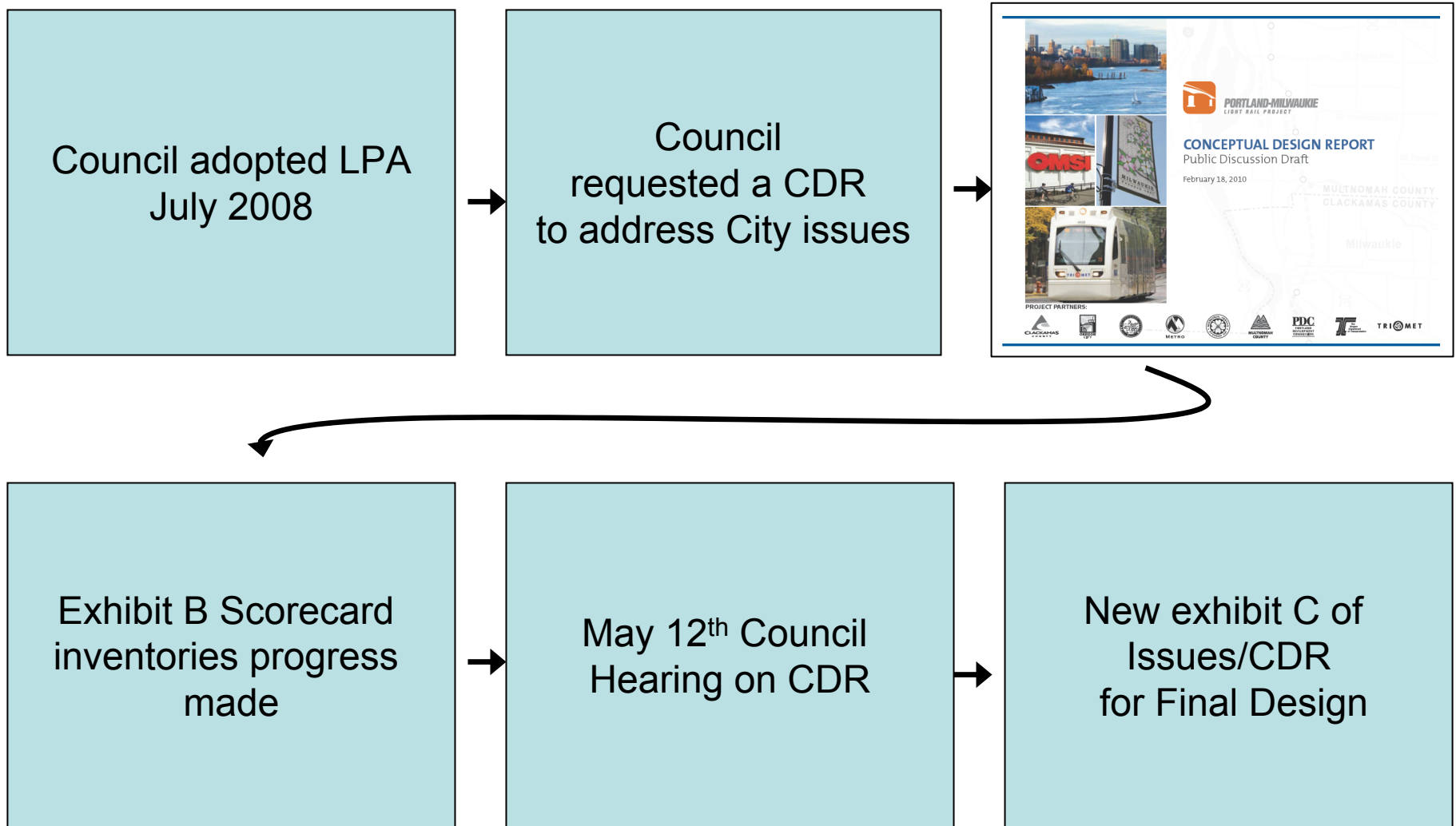


PORTLAND MILWAUKIE LRT Conceptual Design Report

May 12, 2010

Portland Milwaukie LRT project design and City feedback process



PORTLAND MILWAUKIE LRT

Conceptual Design Report

Innovation Quadrant

Lincoln, SOWA, OMSI stations

Halprin District

Harbor Drive Structure

Tiger Grant – Moody Project

Streetcar/LRT nodes of connectivity

Willamette River Bridge

Greenway trail and connections

In-water mitigation

Water Avenue

OHRF

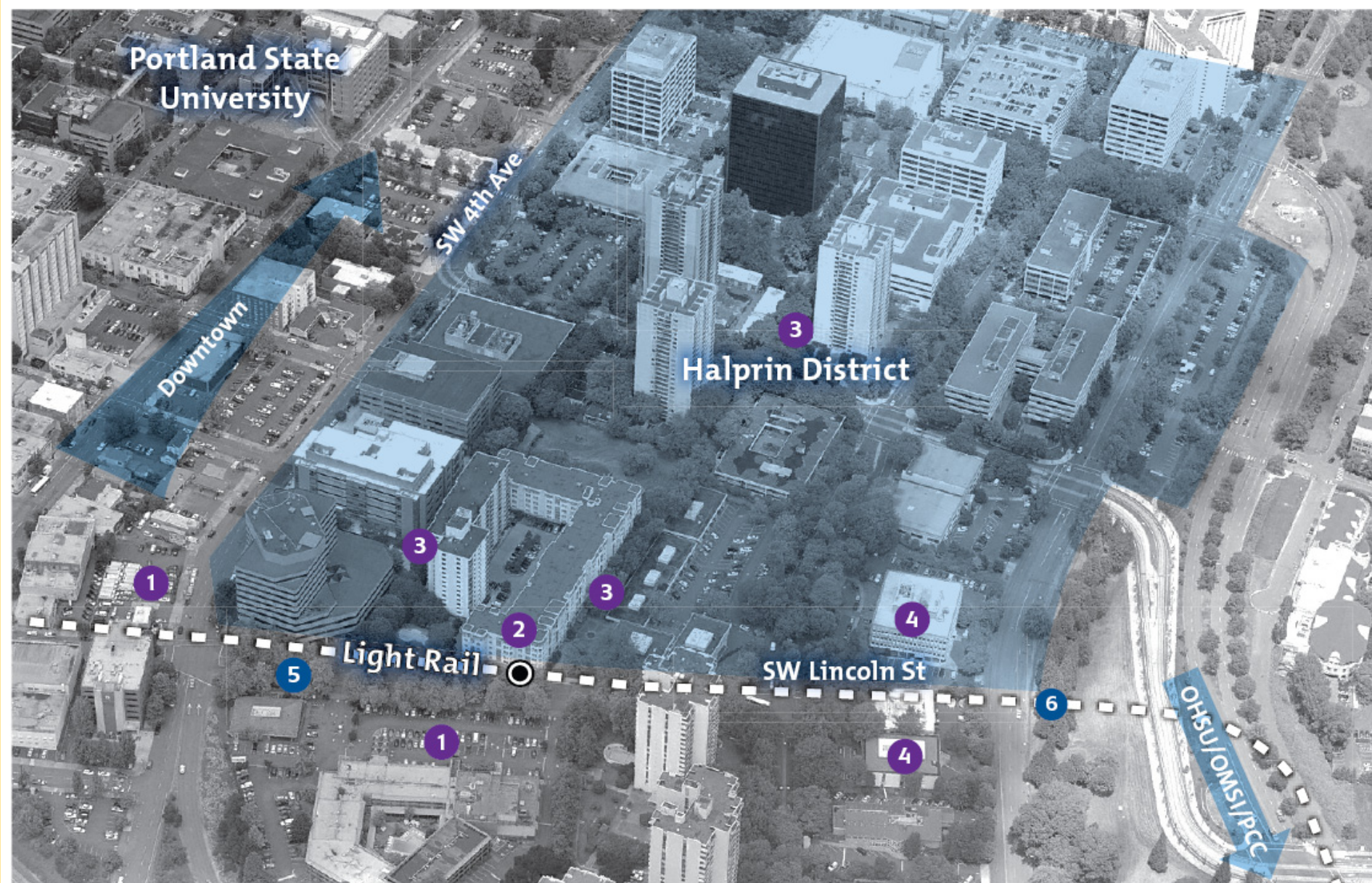


FIGURE 11: PSU/Lincoln Street station area—Opportunities and Challenges

SOUTH WATERFRONT STATION AREA

Neighborhood Context:

The South Waterfront District is an emerging high-density, mixed-use neighborhood. The new station will be in the undeveloped north end, which will be anchored by OHSU's future 19-acre Schnitzer Campus and the Zidell Company's 33-acre property, as well as the City's South Waterfront Greenway along the banks of the Willamette River.

Opportunities

- 1 Create a westside transit hub with regional connections
- 2 Connect to complementary institution on the east side of the river
- 3 Anchor the station with the planned public plaza in the OHSU campus
- 4 Celebrate bridgehead/riverfront location
- 5 Connect the station to the future Greenway Trail

Challenges

- 6 Address the complexities of the multi-modal (bus, streetcar and light rail) use of the alignment and the station platform
- 7 Accommodate distance between station and tram landing
- 8 Provide good pedestrian and bicycle circulation across multiple track sections
- 9 Activate station in absence of near-term development
- 10 Resolve significant grade changes to support adjacent redevelopment
- 11 Coordinate with future street improvements

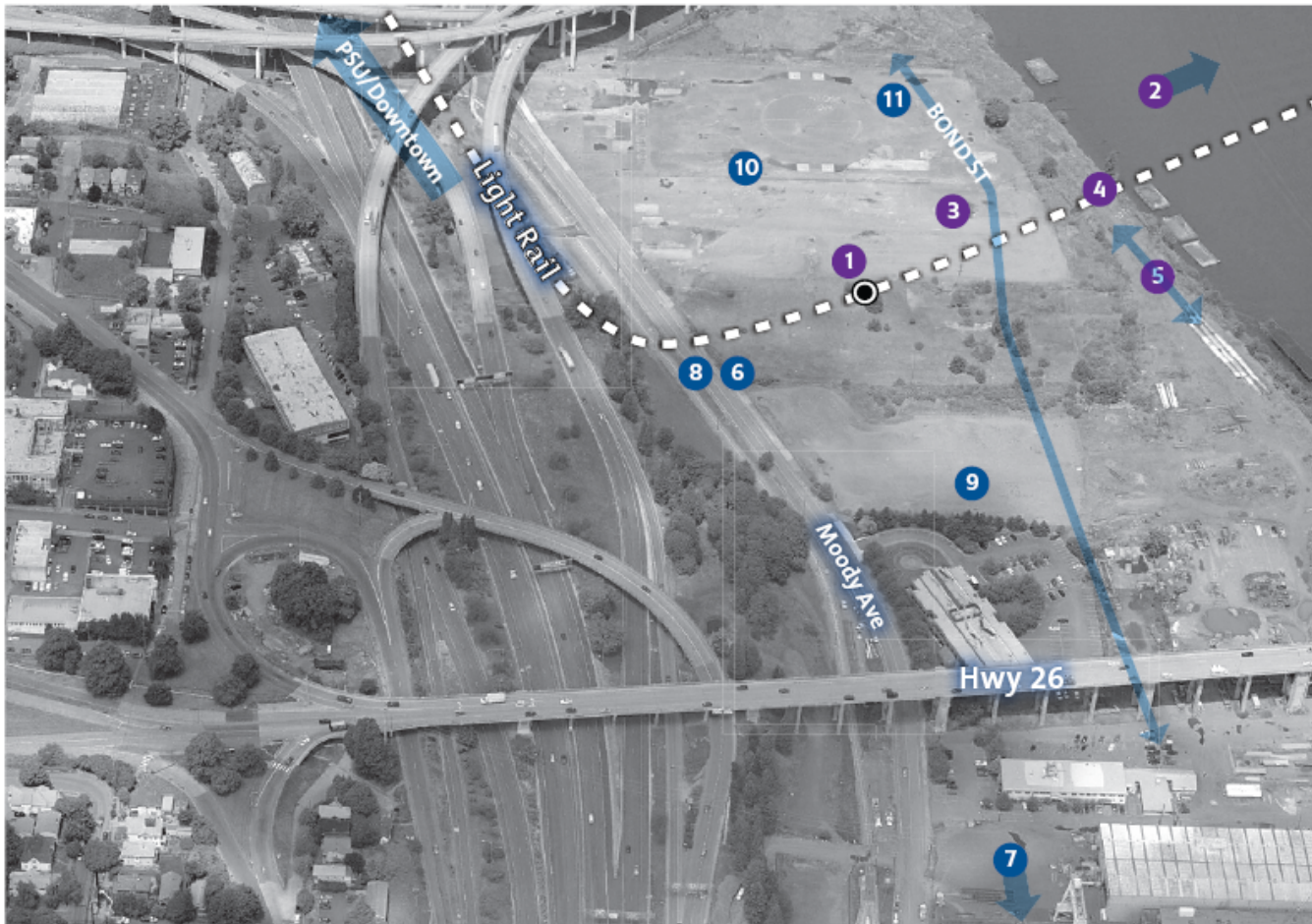


FIGURE 17: South Waterfront station area—Opportunities and Challenges



OMSI STATION AREA

Neighborhood Context:

This station area has a rich industrial history and is largely characterized by warehouse, distribution and manufacturing uses, with some commercial and institutional uses, including the Oregon Museum of Science and Industry (OMSI), Portland Community College's Workforce Training Center, Portland Opera and the future Oregon Rail Heritage Foundation (ORHF) museum.

Opportunities

- 1 Create eastside transit hub with regional connections
- 2 Connect to future OMSI streetcar station
- 3 Coordinate with future development of Portland Opera site
- 4 Connect to complementary institution on west side of the river
- 5 Coordinate with the future development of ORHF's Rail Museum
- 6 Coordinate with OMSI's master planning of its 21.4-acre property
- 7 Connect to the river and the Eastbank Esplanade
- 8 Construct a "new" Water Avenue for vehicular traffic

Challenges

- 9 Provide safe and clear multi-modal (motor vehicle, bike and truck) connections through the area
- 10 Provide good pedestrian and bicycle connections to the Eastbank Esplanade while minimizing impacts to the structure

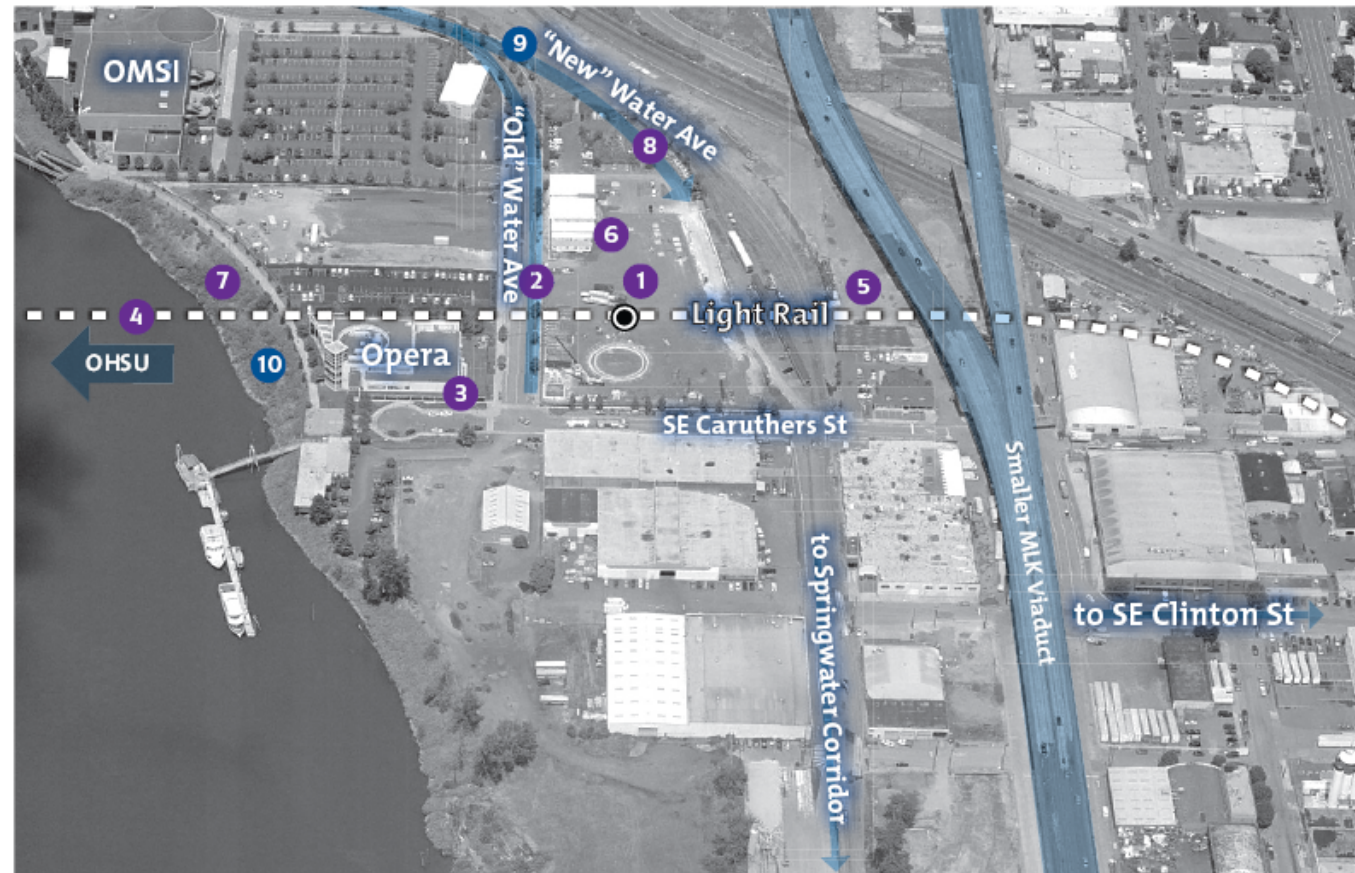


FIGURE 23: OMSI station area—Opportunities and Challenges

PORTLAND MILWAUKIE LRT

Conceptual Design Report

Neighborhood/Employment

Clinton, Rhine, Holgate stations

Quiet Zone

Bike/Peds to river

Station Area Planning

CLINTON STREET STATION AREA

Neighborhood Context:

While the area immediately surrounding the Clinton Street station area is largely comprised of industrial/commercial uses and is bisected by the Union Pacific Railroad (UPRR), the Hosford-Abernethy residential neighborhoods extends to the north (Ladd's Addition) and the east (Clinton), and the Brooklyn neighborhood is south of the station and Powell Boulevard.

Opportunities

- 1 Create transit-oriented developments on underutilized sites to help bridge Hosford-Abernethy and Brooklyn neighborhoods
- 2 Locate the station at the crossroads of major southeast corridors of Division, Milwaukie and Powell
- 3 Incorporate an art installation to draw visual attention to platform
- 4 Redevelop large parcels in station area
- 5 Improve pedestrian and bicycle crossings over and under SE Powell Blvd and over the Union Pacific tracks
- 6 Provide good bicycle connections between the station and Clinton Street bike route, add bike lanes to Milwaukie Avenue, create bicycle/pedestrian multi-use path along busway between SE 11th and SE 8th/9th avenues, and create future improved connections to the bridge
- 7 Utilize remnant acquisition and right-of-way parcels for transit-oriented development/community uses

Challenges

- 8 Draw attention to the station, which has little visibility from major corridors
- 9 Design an attractive pedestrian bridge over Union Pacific tracks
- 10 Enhance north/south connections; street improvements may be necessary

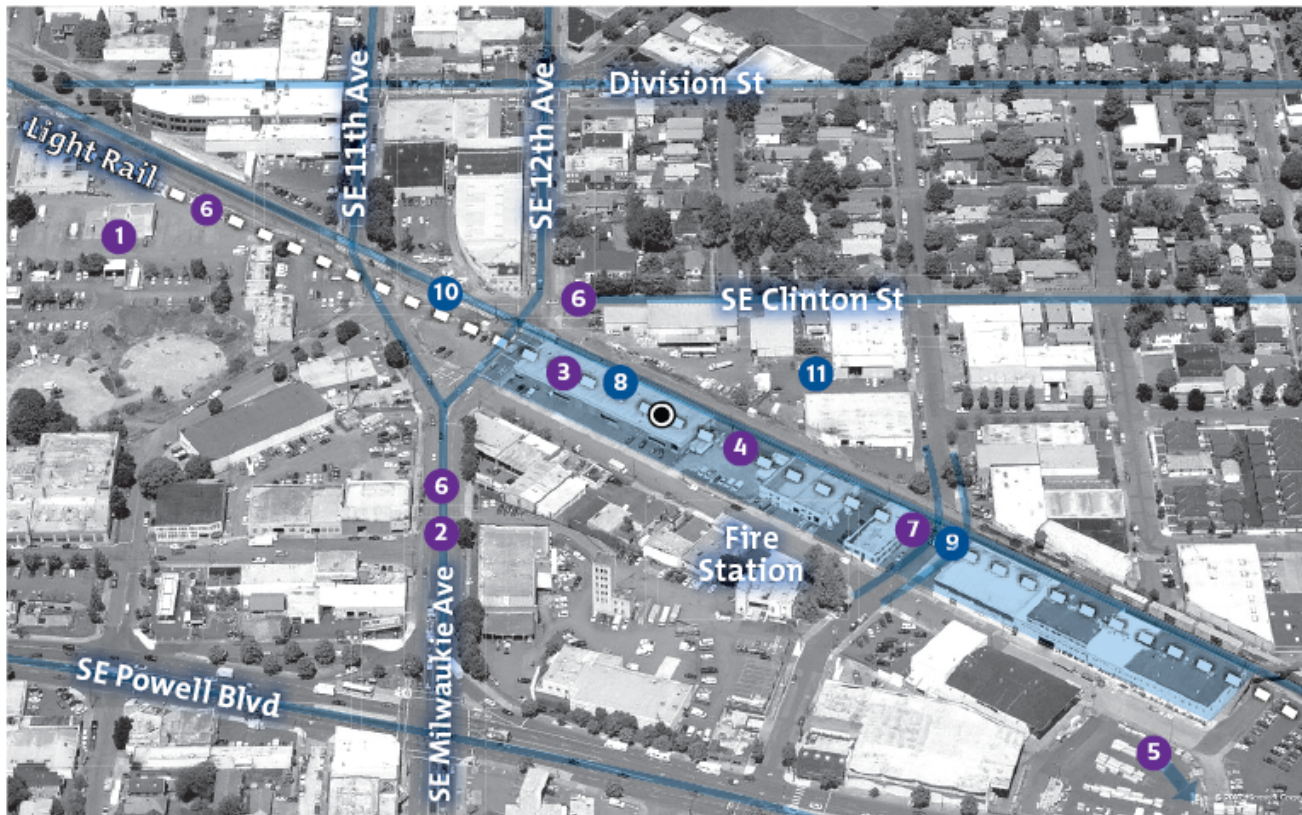


FIGURE 28: Clinton Street station area—Opportunities and Challenges

RHINE STREET STATION AREA

Neighborhood Context:

This station area is characterized by the Brooklyn neighborhood's residential and commercial properties to the west of the alignment and regionally significant industrial lands to the east, with properties immediately adjacent to the light rail trackway dedicated to commercial and industrial uses. The surrounding employment base includes Fred Meyer, Portland General Electric, Union Pacific Railroad's Brooklyn Yard and TriMet.

Opportunities

- 1 Reinforce connection between Brooklyn neighborhood, Powell Park and Fred Meyer corporate headquarters
- 2 Reconstruct and realign the pedestrian/bike bridge that crosses the Union Pacific's Brooklyn Yard
- 3 Improve pedestrian and bicycle crossings over and under SE Powell Blvd
- 4 Add new bike lanes and green features on SE 17th Avenue
- 5 Pursue the few redevelopment opportunities along SE Powell Blvd

Challenges

- 6 Lack of east-west connections over the railroad tracks and through the industrial area
- 7 View of the pedestrian bridge from the station platform is partially obscured by adjacent development parcels
- 8 Heavy freight and bus traffic on SE 17th Avenue
- 9 Few transit-oriented development and redevelopment opportunities in area
- 10 Relatively long walking distance to neighborhood destinations



FIGURE 30: Rhine Street station area—Opportunities and Challenges

HOLGATE BOULEVARD STATION AREA

Neighborhood Context:

This station area lies between the Brooklyn neighborhood's residential and commercial properties to the west and the industrial sanctuary to the east, with Holgate Boulevard providing east/west connections through the area and the Milwaukie Avenue commercial corridor extending just to the south.

Opportunities

- 1 Connect to the Milwaukie Avenue commercial corridor
- 2 Locate station at a visible and accessible street (SE Holgate Boulevard) that provides good east/west connections
- 3 Optimize bus facility to improve transit-oriented development compatibility
- 4 Create transit-oriented development on project-owned, underutilized sites
- 5 Convert remnant 40-50' deep parcels to community use (e.g. community gardens)
- 6 Add new bike lanes and green features on SE 17th Avenue

Challenges

- 7 Narrow sidewalks on Holgate
- 8 High traffic volumes and speeds
- 9 Truck circulation and access must be accommodated
- 10 Proximity of residential neighborhoods; potential impacts to be mitigated
- 11 At SE Schiller Street, the transition of light rail tracks from center- to side-running
- 12 Heavy bus and freight traffic at Schiller



FIGURE 32: Holgate Boulevard station area—Opportunities and Challenges

PORTLAND MILWAUKIE LRT

Conceptual Design Report

Neighborhood/Recreation

Harold, Bybee and Tacoma stations

Future connect to Reed College and industrial

Impacts to Bybee Bridge

Bybee requires modal connectivity

P&R at Tacoma

Johnson Creek Blvd traffic signal

BYBEE BOULEVARD STATION AREA

Neighborhood Context:

The Bybee Boulevard station area is largely characterized by the verdant landscape created by Westmoreland Park, Eastmoreland Golf Course, Crystal Springs Rhododendron Garden and the rows of mature trees that align McLoughlin Boulevard, with Reed College approximately a half-mile northeast of the station in the heart of the Eastmoreland and neighborhoods.

Opportunities

- ① Provide convenient westbound bus transfers
- ② Connect station to Reed College campus/ Eastmoreland neighborhood using existing bicycle network and accommodate bike transfers at station
- ③ Provide access to Westmoreland Park/ golf course

Challenges

- ④ Accommodate distance between station and eastbound bus transfers
- ⑤ Provide safe and secure station despite relatively isolated location
- ⑥ Mitigate floodplain and wetland impacts and coordinate with the City of Portland and other regulatory agencies
- ⑦ Must preserve mature trees along McLoughlin Blvd
- ⑧ Station area has little transit-oriented development potential
- ⑨ Provide enough bike parking facilities to meet demand

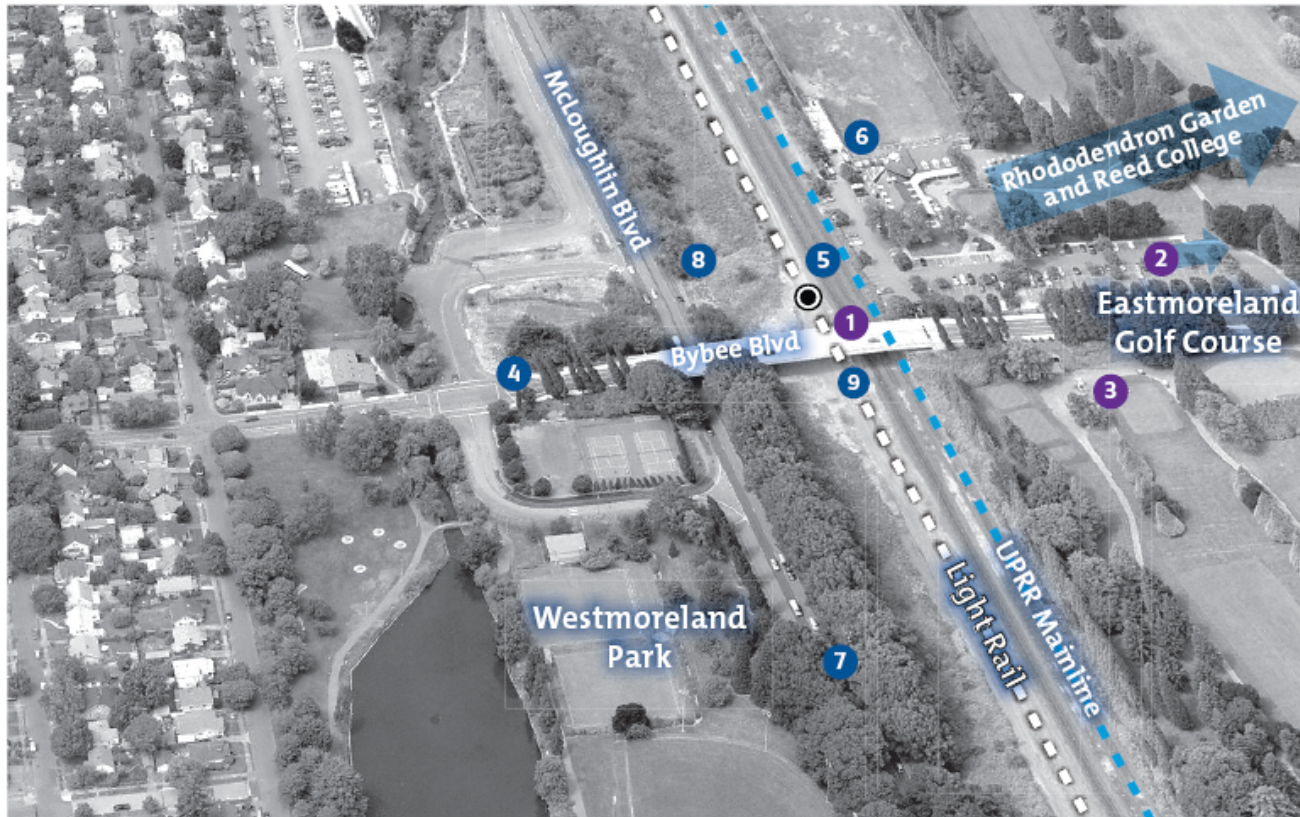


FIGURE 36: Bybee station area—Opportunities and Challenges

TACOMA STREET/SPRINGWATER CORRIDOR STATION AREA

Neighborhood Context:

This station area is mostly comprised of industrial/commercial uses, although Johnson Creek runs just north of the station platform, while the Eastmoreland Golf Course and residential neighborhood extend north of the station area, the Ardenwald-Johnson Creek residential neighborhood extends to the east and the Sellwood and Westmoreland neighborhoods lie to the west across McLoughlin Boulevard.

Opportunities

- 1 Connect to the Springwater Corridor trail
- 2 Stimulate investment and redevelopment of property west of McLoughlin Blvd
- 3 Link to future streetcar on Tacoma Blvd
- 4 Support the redevelopment of the adjacent Pendleton site
- 5 Design an architecturally distinct parking structure
- 6 Restore and celebrate Johnson Creek

Challenges

- 7 Isolated station location between Union Pacific Railroad and McLoughlin Blvd.
- 8 Mitigation of traffic impacts on Johnson Creek Boulevard and for McLoughlin Boulevard on/off ramps
- 9 Scale and aesthetics of a large parking structure
- 10 Site is partially located within the Johnson Creek floodplain



FIGURE 41: Tacoma station area—Opportunities and Challenges

PORTLAND MILWAUKIE LRT

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Feedback from Bureaus

Common issue

Greenway trail and
connections

Other Shared issues

Enviro Mitigation
Sta Area Planning
Quiet Zone
Bike/ped connect

PORTLAND MILWAUKIE LRT

Conceptual Design Report

Feedback from Others

Neighborhood Assoc and Citizens

Advisory Committees

Design Commission

Planning Commission

PDC Board

Other Agencies

PORTLAND MILWAUKIE LRT

Upcoming Council Actions

PDC/PBOT finance IGA Council action May 19th

Net Rise Council action in June

Staffing IGA Council action in June

Darigold Spur Council action in Jun/Jul