



PORTLAND-MILWAUKIE
LIGHT RAIL PROJECT

CONCEPTUAL DESIGN REPORT

Public Discussion Draft

February 18, 2010



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Table of Contents

Executive Summary	1	6. Future Station	88
Key Next Steps	8	a. Future Harold Street Station Area	88
Introduction	11	Station Furnishings, Equipment and Signage	89
1. Project Overview	12	Public Art	90
2. Project Goals and Objectives.....	13	Sustainable Practices	92
3. Purpose of this Report	14	Preliminary Engineering Recommendations	94
Community Involvement	15	1. Transit Operations.....	94
Context: Planning and Urban Design	18	a. Preliminary Bus Plan	94
Corridor and Station Area Design Concepts	24	b. Shared Transitway	95
1. Innovation Quadrant.....	25	c. Quiet Zones	96
a. Portland State University/Lincoln Street Station Area	26	d. Union Pacific Railroad	97
b. Harbor Drive Structure	30	2. Traffic Management.....	98
c. South Waterfront Station Area	34	a. Truck Access/Freight Mobility.....	98
d. Willamette River Bridge	38	b. Capacity of Roadways.....	98
e. OMSI Station Area	42	c. Signalization/Crossing Protection	98
2. Neighborhoods/Employment Segment.....	47	3. Safety and Security	99
a. Clinton Street Station Area	48	a. CPTED Principles in Design.....	99
b. Rhine Street Station Area (SE 17th Avenue).....	54	b. Emergency Access and Response.....	100
c. Holgate Boulevard Station Area (SE 17th Avenue)	58	c. Fare Enforcement Zones	101
3. Neighborhoods/Recreation Segment	63	4. Bicycle, Pedestrian and ADA Accessibility.....	102
a. Bybee Boulevard Station Area	64	5. Right-of-Way Displacement and Relocation	105
b. Tacoma Street/Springwater Corridor Station Area and Park & Ride	68	6. Utility Relocation Plan	105
c. Tillamook Branch Alignment (Springwater Corridor to Hwy 224)	72	Budget and Financial Strategy	106
4. Downtown Milwaukie Segment.....	73	Project Schedule	107
a. Downtown Milwaukie Station Area	74	List of Appendices	108
5. Green Gateway/Multi-Modal Segment.....	80		
a. Kellogg Creek Bridge/Island Station.....	81		
b. Park Avenue Station Area and Park & Ride	82		
c. Trolley Trail	82		

EXECUTIVE SUMMARY

Project Summary

A regional effort to extend light rail service from downtown Portland to downtown Milwaukie and North Clackamas County is currently underway. Expanding transit options is essential to the livability and economic vitality of the region, which is expected to see significant growth during the next two decades—one million new residents in the region and nearly 100,000 new jobs within the project corridor are expected by 2030. The Portland-Milwaukie Light Rail (PMLR) project is a vital transportation element in the region's strategy to manage growth and build livable communities for future generations (Fig. 1).*

This project is about much more than engineering 7.3 miles of infrastructure and providing transit to under-served communities. It is about enhancing pedestrian facilities in neighborhoods and improving the region's bicycle network. It is about helping communities envision and achieve their aspirations. To be truly successful, the project must support the transportation, urban design, environmental, social and economic objectives of the region—and of each neighborhood and community.

Project partners Metro, Clackamas County, Multnomah County, the cities of Portland, Milwaukie and Oregon City, the Oregon Department of Transportation, TriMet and the Portland Development Commission are collaborating to carry out this ambitious project.

* Project station names have not been finalized; names assigned to stations and station areas in this report designate station locations only and are subject to change.



FIGURE 1: Map of alignment and stations on the Portland-Milwaukie Light Rail project

Community Involvement

Since the adoption of the Locally Preferred Alternative in July 2008, the community relations team, comprised of staff members from TriMet, Metro, Clackamas County and the cities of Milwaukie and Portland, has been meeting with a variety of organizations, neighborhood associations and business and property owners. TriMet also created a public website for the project (trimet.org/pm) that provides project updates, access to planning and design documents, notes from past meetings and a current list of upcoming meetings.

In addition to the public input received from community meetings, guidance on the project has been provided by five oversight committees—the Steering Committee, Project Management Group, Project Team Leaders, Citizens Advisory Committee and Willamette River Bridge Advisory Committee. Extensive community outreach will continue through the Final Design phase of the project.

The project partners created this Conceptual Design Report to further engage the public in discussions about the project's current design and issues yet to be resolved. Additionally, this report will initiate more comprehensive conversations with stakeholders around station area planning and urban design.

Overall Corridor Concept: Connecting Communities

The PMLR project will provide light rail connections to communities in the corridor. It also presents opportunities to make related improvements and add significant design features that connect neighborhoods, encourage pedestrian activity and bicycle use, and create engaging public spaces where people *want* to be. The stations themselves will become neighborhood landmarks and community gathering places. Major elevated structures, such as the Willamette



Staff work with members of the community at open houses and stakeholder meetings to address project concerns.

THOMAS NGO

River and Kellogg Creek bridges, present special opportunities for design distinction. Pedestrian/bicycle overcrossings at locations along the alignment will create important links across freight rail lines and major arterials that are currently barriers between neighborhoods and, if thoughtfully designed, can also become neighborhood features.

Significant development opportunities in many of the station areas create the potential to maximize access to public transportation and enhance livability by expanding walking and cycling opportunities, thereby increasing auto independence. Combining infrastructure improvements and major design features with new transit-oriented development along the alignment will create neighborhood landmarks and vibrant environments that bring communities together.

Station Area Design Concepts

Building on a series of public workshops held in 2007-08, this report provides an overview of station area design concepts developed through Preliminary Engineering. The corridor's station areas have been grouped together into separate segments to reflect their similarities within the context of surrounding neighborhoods and their distinctiveness within the context of the entire corridor (Fig. 8). An overview of these five segments—Innovation Quadrant, Neighborhoods/Employment, Neighborhoods/Recreation, Downtown Milwaukie and Green Gateway/Multi-Modal—and the context, opportunities, challenges and vision for each station area are discussed in the Corridor and Station Area Design Concepts section of this report. Below is a brief summary of the improvements planned for each station area and for major structures along the alignment.

Innovation Quadrant

PSU/Lincoln Street Station Area: This is the starting point for the new light rail line in downtown Portland and the point of connection with the existing system at the southern terminus of the Green and Yellow lines on the Portland Mall (Fig. 2). Located in the Halprin District and adjacent to Portland State University (PSU), this station will be on a center platform on SW Lincoln Street between the Halprin pedestrian walkways on SW 2nd and 3rd avenues. Enhanced crossings aligned with these walkways will create a portal to these major pedestrian features, and green treatments added to SW Lincoln Street will include vegetated storm water elements. SW Lincoln Street will be extended one block to connect to SW Naito Boulevard. Bicycle lanes will be provided on SW Lincoln Street in both directions between SW Naito and 1st Avenue and in the westbound direction (uphill) from SW 1st to 4th Avenue. These



The new light rail line will connect to Portland Streetcar and the Portland Aerial Tram in the South Waterfront.

improvements will help activate the Halprin District and better connect it to the rest of downtown.

Harbor Drive Structure: This elevated structure will allow the light rail to cross over SW Harbor Drive and proceed on a structure under the I-5/I-405 ramps and into the South Waterfront District travelling along the west side of SW Moody Avenue. It will be a well-rendered element that preserves future development opportunities, improves connectivity between neighboring districts and supports pedestrian activity. The northern section of the structure will be the most visible to pedestrians, and will be designed to optimize the experience for people walking underneath it (the top of the structure will not be accessible to pedestrians or cyclists). The three columns under this section (near SW Harrison, SW Harbor and SW River Parkway) have been identified as public art opportunities. The structure will also be highly visible for drivers coming from the I-5 freeway and South Waterfront, and can therefore contribute to a sense of arrival in downtown.

South Waterfront Station Area: This station and related improvements will be integrated with the future development of the Oregon Health & Science University's (OHSU) Schnitzer Campus, the Zidell Company property, the greenway and the district's street infrastructure. The light rail station will be configured with separate platforms for east- and westbound trains; light rail trains will run on the outside and buses will run in the middle. The platforms will be built approximately 14 feet above the current grade and future local streets will be constructed to slope up and meet the grade of the station. Buses, future streetcar and light rail will pass through this station as they head to and from the east side of the river, and the platform will serve both light rail and buses (streetcar will not stop at the platform but will have stations nearby). Bicycles will also move through this station in one-way cycle tracks, between the light rail trackway and sidewalks, to access existing and future street

networks. As part of a separate project, the City of Portland will improve Moody Avenue, which will enhance pedestrian and bicycle connections from the PMLR project to the Portland Aerial Tram.

Willamette River Bridge: This is the first bridge built across the Willamette in 35 years, and it will be a significant addition to the city and its riverscape. Many stakeholders, architects and community leaders have participated in advisory committees formed to choose the bridge location and type. The elegant cable-stayed bridge will be located between the Marquam and Ross Island bridges. It will begin north of the property line between OHSU's future Schnitzer Campus and the Zidell Company property in the South Waterfront, and cross the river to land on the east bank at the former SE Sherman Street right-of-way just north of the Portland Opera. It will include a 14-foot wide shared pedestrian and bike path on each side of the bridge and will have integrated artwork.

OMSI Station Area: The station is located and designed to support plans for future development of the Oregon Museum of Science & Industry (OMSI), Portland Opera and Oregon Rail Heritage Foundation properties, and the future streetcar loop. The station platform will be located approximately one block north of SE Caruthers Street between the proposed "new" and the existing "old" Water Avenue, where it will be surrounded by these development opportunities. There will be separate platforms for east- and westbound trains; light rail trains will run on the outside and buses will run in the middle and share platforms with light rail. Future streetcars will come on and off the alignment near the west end of the station and will have separate platforms on "old" Water Avenue. The project will include a rebuild of a portion of the greenway that runs under the Willamette River Bridge to improve the vertical clearance between the bridge and the trail. Bicycles will move through this station area in one-way cycle track.



For much of its length, the light rail alignment parallels Union Pacific Railroad tracks.

TIM JEWETT

Neighborhoods/Employment Segment

Clinton Street Station Area: This station will become a central gathering place that spurs new transit-oriented development and connects the well-established neighborhoods that surround it. The platform will be located east of SE 12th Avenue, parallel with SE Gideon Street. The project will include significant bicycle and pedestrian improvements in this area. A new Powell Boulevard overpass and improved pedestrian/bicycle connections under SE Powell (on the west side) will greatly enhance safety and accessibility through this station area. A new pedestrian/bike bridge at SE 14th Avenue will replace the existing one to link directly to the light rail station and better connect the Brooklyn and Hosford-Abernethy neighborhoods, and new bike lanes will be added to a widened SE Milwaukie Avenue from SE Powell to the 11th/12th Avenue split adjacent to the station. Various trackway crossing improvements will be made to help meet the standards required for a quiet zone.

Rhine Street Station Area: This station will be a gateway to the Brooklyn neighborhood and provide connections to major employment sites and open spaces, including the Powell and Brooklyn parks. This section of the alignment crosses SE Powell Boulevard on a new structure and then continues south in the center of a rebuilt SE 17th Avenue. The station platform is in a center island configuration between SE Haig and SE Rhine streets. Bicycle and pedestrian improvements planned for the station area include new bike lanes added to SE 17th Avenue, and a new pedestrian/bike bridge that crosses the Union Pacific Railroad's Brooklyn Yard between SE Lafayette and SE Rhine streets.

Holgate Boulevard Station Area: This station will be a gateway to the Brooklyn neighborhood. The platform will be in a center island configuration on SE 17th Avenue, north of the intersection with SE Holgate Boulevard. New bike lanes will be added to SE 17th Avenue to create a safe north-south connection through this area. Green enhancements, such as storm water treatments, street trees, planters, and pervious (tie and ballast) trackway, and public art, will also be added to SE 17th Avenue.

Neighborhoods/Recreation Segment

Bybee Boulevard Station Area: This station is surrounded by greenery and parkland, providing an easy escape from the urban landscape. The light rail alignment through this area runs between SE McLoughlin Boulevard and the freight rail line. The station platform will be in a center island configuration immediately north of the Bybee Boulevard overpass, which will have stair and elevator access down to the station. The project includes a bridge span over Crystal Springs Creek to accommodate future riparian restoration efforts in the watershed. Floodplain mitigation for the project's fill within the 100-year floodplain of Crystal Springs Creek will establish an equal amount of floodplain capacity south of the bridge at SE Bybee.

Impacts to wetlands near Crystal Springs Creek will be mitigated through partial funding of the City of Portland's Westmoreland Park Restoration Project.

Tacoma Street/Springwater Corridor Station Area: This station will celebrate Johnson Creek and the Springwater Corridor. The station and Park & Ride facility are located just south of Johnson Creek. The platform will overlook the creek area, which will be enhanced with additional riparian vegetation. The project will include a multi-use path connection to the Springwater Corridor, with a sculptural storm water feature planned to help activate the connection.

Tillamook Branch Alignment: This segment of the alignment does not include a station. The trackway runs on an elevated structure through an industrial area that begins south of the Springwater Corridor and crosses over the railroad tracks and lands north of Mailwell Drive (north of Highway 224). The elevated structure is necessary to transition the light rail tracks from the west side of the Union Pacific Railroad main line tracks to the east side of the Tillamook Branch alignment in order to eliminate freight conflicts, minimize property impacts in downtown Milwaukie and serve the Milwaukie station.

Downtown Milwaukie Segment

Downtown Milwaukie Station Area: After crossing under Highway 224, the alignment enters a residential area, then downtown Milwaukie's design district. In these sensitive neighborhoods, the project will be designed to a scale and level of care that reinforces the community's plans for revitalization. This station will honor the historic character of downtown and support the community's revitalization aspirations by incorporating elements of the South Downtown Concept. It is located at the south end of downtown at the intersection of Lake Road and 21st Avenue, adjacent to the



Riverfront Park is a major destination within the City of Milwaukie.

UPRR tracks. It is at the hub of the city's network of bikeways and will include facilities and connections that support bicycle use and pedestrian activity. The space created under the new trackway bridge that crosses over Lake Road will be well-lit and designed to create a safe and comfortable environment for pedestrians and cyclists; this will be an important passageway from the station platforms and Lake Road to the city's planned plaza at the terminus of Main Street.

Green Gateway/Multi-Modal Segment

Kellogg Creek Bridge: Heading south out of the Downtown Milwaukie station, the alignment will cross Kellogg Creek on a new bridge that extends from Lake Road, over the creek and Robert Kronberg Park, and lands south of River Road on the west side of SE McLoughlin Boulevard. The project will construct the bridge for light rail and with the infrastructure to accommodate a future multi-

use path under the track that would be built outside of the project scope. The design of the bridge is still in development but it presents opportunities to incorporate elements of distinction that enhance the visual aesthetics of the structure.

Oak Grove/Park Avenue Station Area: The Park Avenue station and Park & Ride are located at the intersection of McLoughlin Boulevard and Park Avenue, adjacent to the developing Trolley Trail and at the gateway to the Oak Grove community. If additional funding is granted, the project will restore riparian areas to the southwest of the station, provide a new ecosystem-based storm water treatment along McLoughlin Boulevard, treat and manage storm water flows from the Trolley Trail and the Milwaukie Elks Club site, and add elements to the Park & Ride that collect storm water and create a vertical garden. The station will link with the Park & Ride, Trolley Trail and other pedestrian/bicycle improvements to capture Clackamas County commuters and provide multi-modal connectivity for cyclists, bus riders, pedestrians and transit users. The rail segment running parallel to the Trolley Trail is being carefully designed to provide a quality experience for trail users, limiting site obstructions and utilizing design principles that enhance safety.

Future Station

Future Harold Street Station: The Harold Street station was examined and ultimately designated for future development due to a variety of factors, including low boarding projections, the close proximity of other stations, travel delays and land use in the area that does not support the station and the cost of the necessary pedestrian overcrossings. In coordination with the adjacent neighborhoods, a set of “triggers” is being developed to identify conditions for the future construction of the station. The future station would be located on the south side of the Harold Street

intersection in an elevated, side platform configuration. Pedestrian overcrossings of the UPRR tracks and McLoughlin Boulevard would likely also be constructed when the future station is added.

Project Budget

The total cost of the project is currently estimated at \$1.417 billion. A 60 percent match from the Federal Transit Administration will be requested and regional partners will provide a 40 percent local share to fund the project. The local share of \$567 million will include contributions from the State of Oregon through bonds backed by the state lottery, Metro through bonds backed by the Metropolitan Transportation Improvement Program (MTIP), the cities of Portland and Milwaukie, Clackamas County, TriMet and in-kind contributions from land donations.

Project Schedule

The Preliminary Engineering phase of the project started in March 2009 and will be completed in March 2010. It is expected that the Final Environmental Impact Statement will be completed and published by the Federal Transit Administration in May 2010, and the project will be in Final Design from October 2010 to January 2012. The Full Funding Grant Agreement is projected to be executed in June 2012. Construction is scheduled to begin in 2011 and the new light rail service is expected to commence in September 2015.

KEY NEXT STEPS FOR THE PORTLAND-MILWAUKIE LIGHT RAIL PROJECT

There are several key next steps to be implemented that will inform Final Design and help ensure that project improvements enhance the quality and livability of the neighborhoods:

- **Station area planning:** The next series of station area planning will evaluate opportunities that focus on land use, zoning and other planning initiatives associated with each station area, to help inform the light rail project and plan for future transformations of surrounding neighborhoods. These efforts build on Metro's station area assessment work in 2007 and 2008 as well as input from community meetings. Pending funding approval, the City of Portland intends to facilitate station area planning activities beginning in summer 2010. Clackamas County will begin station area planning efforts for the Park Avenue station in spring 2010. The City of Milwaukie is engaging the community to refine existing plans to incorporate the concepts from the South Downtown Pattern Language.
- **Station area urban design:** In coordination with the station area planning efforts by Clackamas County and the cities of Portland and Milwaukie, TriMet is developing an urban design program for the stations along the alignment. The objective is to follow up on issues raised by this report, identify opportunities to be pursued during the project's Final Design, coordinate with current and future planning efforts by other jurisdictions, inform the project's Conduct of Construction program, and design/select the appropriate station elements for each station area. Workshops focusing on station area urban design begin in March 2010 and will continue into Final Design (fall 2010).
- **Urban design workshops for major structures:** Design workshops that focus on major structures along the alignment, including the Harbor Drive structure, Tillamook Branch alignment and Kellogg Creek Bridge, will take place in 2010 to advance the design work in accordance with community goals and expectations. The workshops will also allow the City of Portland and TriMet to reach consensus on the details of the future greenway connections from the proposed Willamette River Bridge.
- **Final transit plan/bus routing:** Additional planning for the new bus routes is currently underway. The final transit plan will detail a bus service strategy that identifies routing changes and stop locations and addresses how buses will connect with the Willamette River Bridge and serve riders adjacent to the Ross Island Bridge. Planning for LIFT service will also commence. The community will be involved in the decision-making process.
- **Bicycle/pedestrian access:** Although opportunities and strategies for bicycle and pedestrian improvements have been identified and are discussed in the station area sections of this report, a comprehensive approach that fully integrates bike and pedestrian access with each station area and the Willamette River Bridge is still in development. There will continue to be meetings with bicycle and pedestrian stakeholder groups to finalize the improvement plans.

- **Design and Planning Commission review by jurisdictional partners:** Starting with two open houses in February, this report will be presented to the public and to a variety of neighborhood associations, jurisdictional agencies and commissions. This process will continue through spring 2010, and include the design and planning commissions for the cities of Portland and Milwaukie, and Clackamas County. These commissions will review the draft report and be asked to provide input on the project design.
- **Permitting:** The project team will apply for the necessary environmental and construction permits and land use approvals during the Final Design and construction phases. A fast-track permitting process may be pursued to ensure timely approvals necessary to meet the project schedule.
- **Right-of-way acquisition process:** After the Federal Transit Administration publishes the Final Environmental Impact Statement (May 2010) and issues its Record of Decision (July 2010), the process of acquiring impacted property begins. This process includes environmental studies of each parcel, third-party appraisal of each parcel's market value and an outside review of these appraisals, followed by the presentation of an offer of just compensation to each property owner. It is expected that right-of-way acquisition will be completed in 2013.

Planning Process Roadmap

Phase 1—2010 to 2011

Urban Design and Land Use Framework

Continue developing the framework for station area planning and future development that considers:

- Community aspirations and existing neighborhood and land use plans
- Existing and future land use character
- Urban design opportunities and challenges
- Development market analyses
- Transportation access and circulation analyses

Phase 2—2011 to 2012

Project Development

Study land use and development opportunities by performing:

- Pre-development analyses for specific sites
- Zoning analyses
- Additional engineering studies and cost estimations of transportation improvements

Phase 3—2012 to 2015

Implementation

Implement land use changes and development plans that support the urban design and land use framework:

- Local implementation of any changes to zoning and planning documents
- Execute development agreements with property owners
- Construct transportation and other public improvements (outside of the PMLR project scope) that support redevelopment and transit utilization

INTRODUCTION

The quality of life in the Portland region is the result of conscious decisions and hard choices made to protect farms and forest land, preserve the character of residential neighborhoods, revitalize commercial districts, invest in transportation options and safeguard and restore our ecosystems.

By connecting land use and transportation, the Portland region has become a national model for maintaining and creating vibrant communities. Investing in transit is one of the region's most effective elements of this success. Since the opening of the first light rail line in 1986, more than \$8 billion in new development has occurred along light rail lines, much of it mixed-used property that promotes transit and other alternative modes of travel.

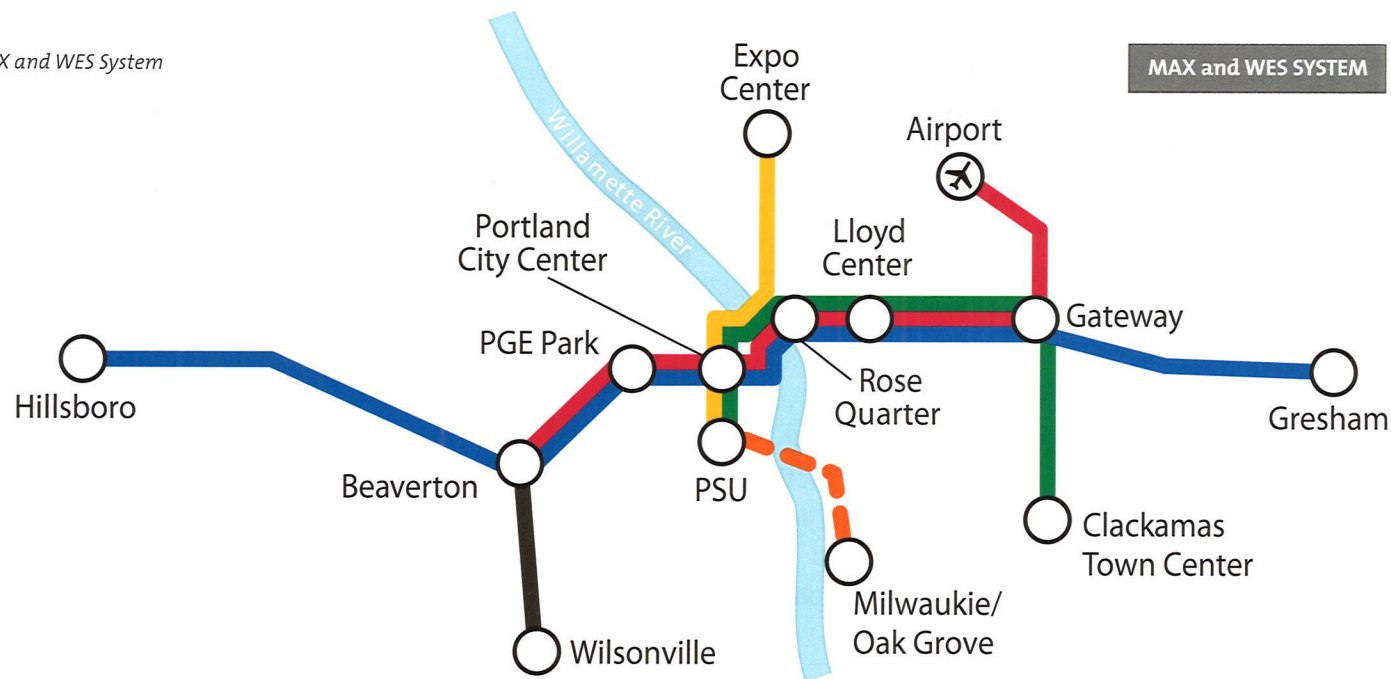
As the region looks forward, more opportunities lie ahead. The Portland region, and the Milwaukie/North Clackamas corridor, is expected to see significant growth during the next two decades—one million new residents in the region and nearly 100,000 new jobs within the project corridor by 2030. The Portland-Milwaukie Light Rail (PMLR) project is a vital transportation link in the region's roadmap to continue managing growth and building livable communities for future generations.



The Portland-Milwaukie Light Rail Project will bring high capacity transit to the City of Milwaukie and North Clackamas County.

BRUCE FORSTER

FIGURE 2: The MAX and WES System



PROJECT OVERVIEW

Light rail (MAX) was first introduced to the Portland region in 1986 on a 15-mile-long track between the city of Gresham and downtown Portland, and was then expanded to Beaverton/Hillsboro (1998), Portland International Airport (2001) and Interstate Avenue/Expo Center (2004) (Fig. 2). In 2003, the Metro Council adopted a two-phase South Corridor plan to extend light rail to Clackamas County. The first phase, which opened in September 2009, included a light rail extension from Gateway Transit Center along I-205 to a new Clackamas Transit Center and another from the Rose Quarter to Union Station and on to Portland State University along the Portland Mall in downtown Portland. The Portland-Milwaukie Light Rail project represents the second phase of this plan. It will connect to the terminus of the Green and Yellow lines at the south end of the Portland Mall and extend light rail service between Portland State

University (PSU)/Portland's Central Business District (CBD) and Clackamas County. The project will serve a "corridor" that includes Portland's CBD and much of southeast Portland, as well as the cities of Oregon City, Gladstone and Milwaukie, and the northwest portion of unincorporated Clackamas County.

In February 2009, TriMet also opened the Westside Express Service (WES), which is a 14.7-mile commuter rail line between Beaverton and Wilsonville. The diesel-powered passenger rail service runs on upgraded existing freight rail tracks operated by the Portland & Western Railroad (P&W).

The PMLR project consists of a new 7.3-mile light rail line critical for creating transit capacity to support projected population and job growth in the corridor (Fig. 1). The new light rail line, which is projected to open in 2015, will open with 10 stations and up to

1,400 Park & Ride spaces, and carry an estimated 27,400 daily trips by 2030. The alignment will run primarily at-grade (i.e., street level), but also will cross the Willamette River on a new bridge, and cross over other bodies of water, roads and freight rail lines on elevated structures.

Light rail stations will be located at: SW Lincoln Street, South Waterfront, Oregon Museum of Science and Industry (OMSI), SE Clinton Street, SE Rhine Street, SE Holgate Boulevard, SE Bybee Boulevard, SE Tacoma Street, Downtown Milwaukie/SE Lake Road and Oak Grove/SE Park Avenue. A future station is planned at SE Harold Street.

Project partners Metro, Clackamas County, Multnomah County, the cities of Portland, Milwaukie and Oregon City, the Oregon Department of Transportation, TriMet and the Portland Development Commission have been collaborating to bring the project to the start of the Final Design phase. Key milestones achieved to date include the preparation and approval of the Supplemental Draft Environmental Impact Statement (SDEIS) and the Locally Preferred Alternative (LPA), and the federal approval to begin Preliminary Engineering.

In May 2008, the Federal Transit Administration (FTA) published the project SDEIS, which evaluated the environmental, transportation, social and economic impacts of the project. Metro led the SDEIS effort on the FTA's behalf. The key decision points addressed in the SDEIS were the alignment alternatives and terminus options. A 45-day public comment period followed publication of the SDEIS. Local jurisdictions approved the light rail alignment, terminus and station locations by endorsing the LPA in July 2008.

The FTA approved TriMet's entry into Preliminary Engineering (PE) for the PMLR project in March 2009. This approval allowed TriMet to advance the project design from 10 percent to 30 percent completion. During this phase, project staff met regularly with residents, business and property owners, and other stakeholders along the alignment to share developing design concepts, encourage public involvement and gather community input regarding conceptual designs. This Conceptual Design Report marks the end of the PE phase and will serve as a guide for the Final Design phase.

PROJECT GOALS AND OBJECTIVES

The purpose and need for the project, originally defined for the South/North Corridor Study and reaffirmed through the 2002 South Corridor SDEIS and the 2008 Portland-Milwaukie SDEIS, is:

To implement a major transit improvement in the South Corridor that maintains livability in the metropolitan region, supports land use goals, optimizes the transportation system, is environmentally sensitive, reflects community values, and is fiscally responsive.

The goals and objectives established for the project derive from the purpose and need and, as stated in the 2008 SDEIS, are to:

- Provide high-quality transit service in the corridor
- Ensure effective transit system operations in the corridor
- Maximize the ability of the transit system to accommodate future growth in travel demand in the corridor
- Minimize traffic congestion and traffic infiltration through neighborhoods in the corridor

- Promote regionally agreed upon land use patterns and development in the corridor
- Provide for a fiscally stable and financially efficient transit system
- Maximize the efficiency and environmental sensitivity of the engineering design of the proposed project

PURPOSE OF THIS REPORT

This report presents the vision, process and preliminary design for the PMLR project. It is a culmination of the community input and the discussions and decisions made by project partners and stakeholders that dictate what the project will look like and how it will perform. The design team and project partners are focused on anticipating future opportunities and designing the project to be able to accommodate future needs and developments in the project corridor. The concepts and recommendations put forth in this report reflect these efforts and will guide the project into the Final Design phase. This document serves four primary purposes:

- Present the current conceptual design of a number of project elements such as major structures, stations, pedestrian and bike connections, and terminus points, and provide an overview of the urban design vision, public process and key outstanding issues
- Further engage the public in discussions about the project's current design and issues yet to be resolved
- Guide policymakers and technical staff throughout the design of the project
- Identify future projects and processes that influence the design of the project

This report will be used as the basis for community, stakeholder and jurisdictional review of the urban design concepts and the recommendations for essential project elements. The responses will guide decision making by the Design Team, Citizens Advisory Committee, Project Steering Committee and the Project Management Team.

Additional related project reports

- *Portland-Milwaukie Light Rail Project Supplemental Draft Environmental Impact Statement* (Metro: May 2008)
- *Portland-Milwaukie Light Rail Project: Willamette River Bridge Type Selection Process* (TriMet: February 2009)
- *Portland-Milwaukie Light Rail Project: Locally Preferred Alternative Report* (Metro and TriMet: July 24, 2008)
- *Portland-Milwaukie Light Rail Station Area Best Practices, Assessments and Recommendations* (Metro: September 2009)
- *Portland-Milwaukie Final Environmental Impact Statement* (Metro: expected May 2010)

COMMUNITY INVOLVEMENT

SUMMARY

The PMLR project will impact a wide variety of communities, and it is therefore essential for project partners to provide consistent yet site-specific information regarding design, funding and construction. To provide timely and accurate information and gain valuable community feedback throughout the process, the project team has implemented a comprehensive public involvement program.

The goals of the community involvement program are to ensure that the project acknowledges and reflects community needs and aspirations, and mitigates, as much as possible, impacts created through the construction and operation of the project. The program provides multiple opportunities for the public to comment on the project's design, schedule and impacts and to participate in the decision-making process.

Community relations activities have been designed to:

- Establish and maintain regular communication with communities, organizations, property owners and businesses along the alignment regarding project progress and milestones
- Encourage engagement and ownership of the project that promotes the development and communication of thoughtful input from these project stakeholders
- Provide timely forums for stakeholders to comment on project design
- Work directly with residents, property owners and businesses to inform them of project impacts, timelines and schedules

- Influence project design and planning to minimize, to the extent possible, impacts resulting from the construction and operation of the light rail project

PUBLIC INVOLVEMENT

The community relations team, comprised of staff members from TriMet, Metro, Clackamas County and the cities of Milwaukie and Portland, has met with a variety of organizations, neighborhood associations and business and property owners regarding the project. In 2009, the staff hosted or presented at more than 100 public meetings. These meetings included four general project open houses, one each held in downtown Portland, RiverPlace, SE Portland and Oak Grove in Clackamas County.

Three TriMet Community Affairs representatives are assigned to act as liaisons between the project and the communities in which light rail will be introduced. One representative works with communities on the west side of the Willamette River and with Willamette River Bridge stakeholders; another works with communities along the alignment in Southeast Portland and a third works with Milwaukie and north Clackamas County communities. All three representatives serve as project ombudsmen from conception through design and construction.

Station area assessment: Community open houses and workshops were held in fall 2007 and spring 2008 to assess station areas and look for suggestions on the locations, design and the integration of station elements into the proposed station. A series of maps were produced to document what was seen and heard at the meetings. These meetings and resulting maps provided important input for Preliminary Engineering designs. The station areas included Clinton Street, Rhine Street, Holgate Boulevard, Bybee Boulevard, Tacoma Street, Downtown Milwaukie and Park Avenue.

In addition, since entering Preliminary Engineering many meetings have been held to discuss specific station areas and project elements. Meeting topics covered a variety of issues, including bike and pedestrian integration, bridges over Kellogg Creek and the Willamette River, the relationship between the Trolley Trail and the alignment, train horn noise and quiet zones, and station configurations.

Regular project updates: Beginning in April 2009 the City of Milwaukie began holding regularly scheduled monthly meetings to provide project updates, gain citizen feedback and learn about community concerns. Staff from TriMet, Metro and Milwaukie collaboratively compose the agendas, gather the information and make presentations. In certain instances, separate community involvement efforts have been organized around specific issues to better understand the community's concerns and to develop strategies that address those concerns.

Website: In addition to holding numerous community meetings, TriMet created a public website for the project that offers a comprehensive one-stop information source. Site visitors have access to planning and design documents, including the Station Area Assessment maps, and a current list of upcoming meetings along with notes from past meetings. An opt-in email subscription database allows individuals to receive all email updates regarding the entire project or only those updates for any of seven subsections of the project alignment. The project website can be accessed at trimet.org/pm.

PROJECT OVERSIGHT

Five oversight committees provide guidance on the project, as follows:

Steering Committee

A project Steering Committee consisting of community, transit and government leaders was originally formed in February 2007, and was reconfigured for the Preliminary Engineering process in January 2008. The Steering Committee provides policy guidance and oversees the project on behalf of local jurisdictions.

Project Management Group

The Project Management Group consists of directors and high-level managers from project partner agencies. This committee meets monthly to provide direction regarding project issues.

Project Team Leaders

The Project Team Leaders committee is comprised of the lead staff representing project partner agencies. This group meets weekly to flag and track emergent and continuing issues.

Citizens Advisory Committee

Originally formed in September 2007, TriMet reconvened a Citizens Advisory Committee (CAC) in November 2008 to oversee the project through to completion. The CAC meets monthly with project staff to provide advice on project design, construction, impacts on businesses and neighborhoods, and other concerns. The committee includes representatives from neighborhood associations, businesses, institutions, and organizations that represent people with disabilities, cyclists and other project stakeholders. Meetings occur the third Thursday of every month and are open to the public.



The Willamette River Bridge Advisory Committee guided the selection of the bridge type.

Willamette River Bridge Advisory Committee

Between July 2008 and May 2009, the Willamette River Bridge Advisory Committee (WRBAC) met to consider bridge types for the site of the future multi-use bridge. Under the leadership of former Portland Mayor Vera Katz and working with national and international bridge engineers and architects, the committee studied a wide variety of bridge types and evaluated how each fit an array of criteria specific to the site, the budget and project aspirations. During this same time frame, a working group of technical staff representing project partners and consultants met to evaluate selection criteria and provide reports, options and recommendations to the committee.

In May 2009 the committee recommended that the project proceed with designing a cable-stayed bridge type with two in-water piers and two landside piers. The design phase of this bridge type is now underway. The committee continues to meet periodically to advise the project on bridge design issues. (See *Portland-Milwaukie Light Rail Project: Willamette River Bridge Type Selection Process*, TriMet: February 2009)

CONCEPTUAL DESIGN REPORT REVIEW PROCESS

This Public Discussion Draft of this report will be included in a package of information that presents the project at the end of Preliminary Engineering for jurisdictional and stakeholder review by the Portland City Council, Portland Planning and Design commissions, Portland Development Commission, Milwaukie City Council, Milwaukie Planning Commission, Milwaukie Design and Landmarks Committee, Clackamas County Board of Commissioners, Clackamas County Design Review Committee and Metro Council.

The project design direction as summarized in this report will also be reviewed with a number of other entities, including the City of Portland Bike Advisory and Pedestrian Advisory committees, Portland State University, the Portland Chapter of the American Institute of Architects, the Bicycle Transportation Alliance, Main Street Milwaukie, neighborhood associations along the alignment and the various project committees. Briefings will also be provided to key stakeholders along the alignment and agencies or jurisdictions with a direct interest in the project, including the Oregon Transportation Commission, Gresham City Council, Oregon City's City Commission, Multnomah County Board, Portland Streetcar Board and others. Through this extensive outreach process the community will have many opportunities to provide feedback on the current design direction of the project and help shape the final product.

CONTEXT: PLANNING AND URBAN DESIGN

OVERVIEW

The PMLR project must respond to the context of the corridor and the aspirations of the surrounding neighborhoods to provide maximum benefit to the community. The project's general urban design goals are to:

- Create a high capacity transit option for the neighborhoods and communities through which it passes
- Be accessible to all modes of transportation, including walking, cycling and mobility devices, as well as private vehicles using Park & Ride facilities
- Apply principles of *Crime Prevention Through Environmental Design* to the entire alignment
- Engage with corridor communities on design issues
- Design station areas that reflect the history and aspirations of adjacent neighborhoods, while maintaining a system-wide identity
- Minimize disruption to adjacent communities via careful station area access planning and design
- Create clean, functional and inviting station areas which allow for accessory amenities and flexible use where appropriate
- Make improvements to the right-of-way wherever possible, within established budgets
- Foster redevelopment of adjacent properties where appropriate and desired
- Enhance community sustainability objectives
- Design station areas with effective wayfinding strategies
- Coordinate specific station area urban design objectives with the Public Art Program's integrated art strategies

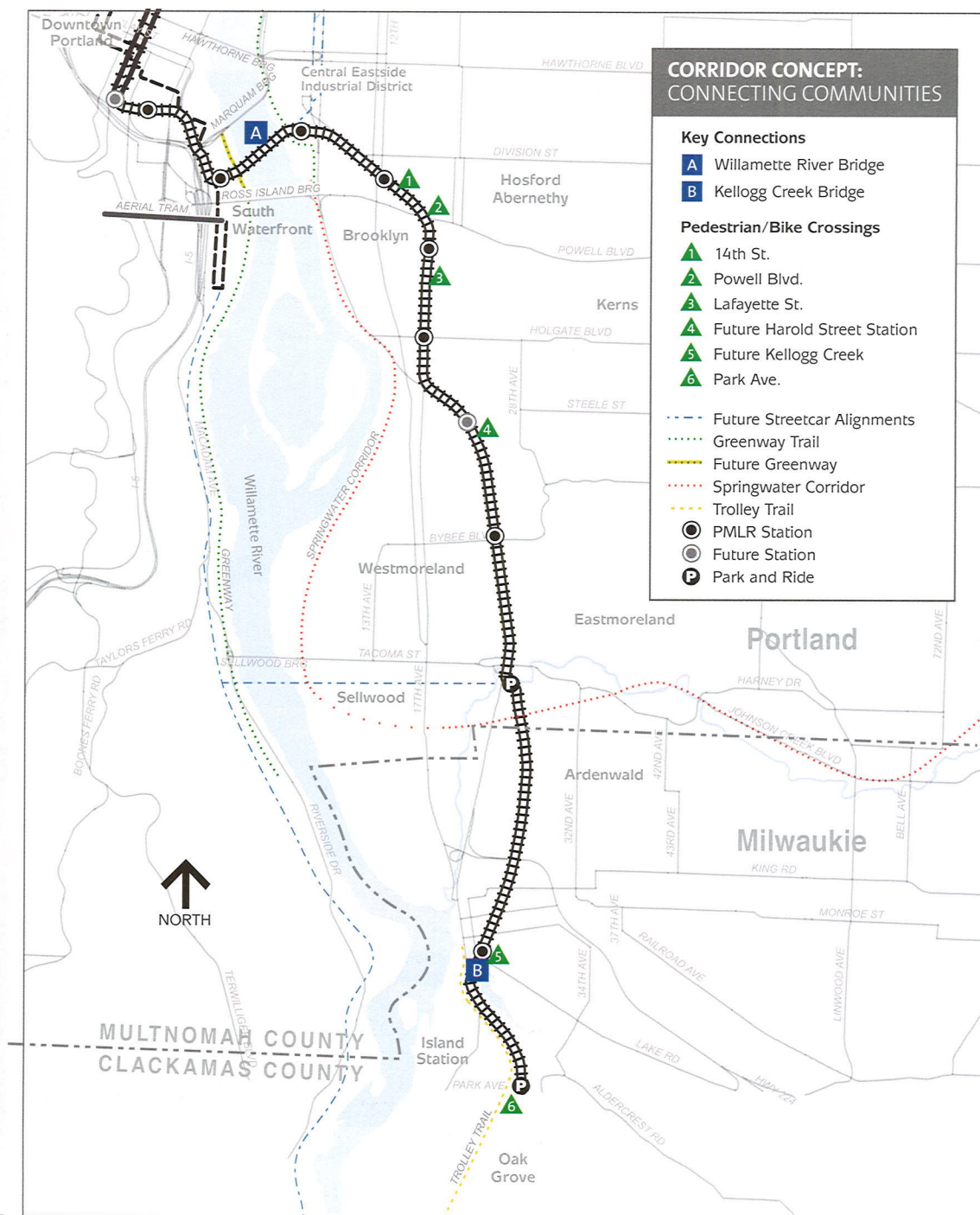


SALLY PAINTER

The integration of the I-205 multi-use path into the station design was a critical component for the design of the Lents Town Center/Foster Rd MAX Station.

The PMLR project will provide new transit connections to communities in the corridor. It also presents opportunities to make related improvements and add significant design features that connect neighborhoods, encourage pedestrian activity and bicycle use, and create engaging public spaces people want to use (Fig. 3). The stations themselves will become neighborhood landmarks and community gathering places. Major elevated structures, such as the Willamette River and Kellogg Creek bridges, present special opportunities for design distinction. Pedestrian/bicycle overcrossings at locations along the alignment will create important links across freight rail lines and major arterials that are barriers between neighborhoods and, if thoughtfully designed, can also become neighborhood features. The alignment itself and stations in particular will help “knit” together communities that in some locations have been isolated by previous transportation features.

FIGURE 3: Corridor Concept map



STATION AREA DESIGN OBJECTIVES

The project is designed to be responsive to the character and aspirations of surrounding neighborhoods, while maintaining a system-wide identity. This approach will support and enhance each neighborhood's livable community goals and allow for special treatments that reinforce their distinguishing characteristics. At the same time, the system design will ensure that transit patrons have a safe, comfortable and easy to use transit experience. To achieve these objectives the project will include the following elements:

- **Elements of consistency** establish and reinforce TriMet's transit system identity, such as signage, ticket machines, information displays and shelters. These elements help manage capital costs, are responsive to maintenance budgets and establish a consistent level of quality. Elements of consistency also enhance the ease of use for transit riders (Fig. 4).
- **Elements of distinction** emphasize where patrons are within the overall regional transit system. Such elements include public art and site-specific sustainability initiatives. These elements create tangible connections to neighborhoods and their distinctive qualities, and are a result of a collaborative process (Fig. 5).

- **Fixed elements** ensure regulatory compliance, such as ramps, tactile paving for the visually impaired and code-required lighting. These elements respond to building codes, accessibility, operational efficiency and maintainability (Fig. 6).
- **Flexible elements** can be changed by degree to meet neighborhood-specific goals or respond to adjacent transit-oriented development opportunities. These elements could include special paving materials, bike parking amenities or furnishings that respond to the neighborhood context (Fig. 7).

The urban design goals and objectives that are specific to each station or transit segment are presented in the Corridor and Station Area Design Concepts section of this report.



FIGURE 4: Static signage



FIGURE 5: Tiles used on a shelter column



FIGURE 6: Tactile paving



FIGURE 7: Bench with art

KEY DEVELOPMENT OPPORTUNITIES

Significant development opportunities in many of the station areas create the potential to maximize access to public transport and enhance livability by expanding walking and cycling opportunities. Combining infrastructure improvements, including major design features, with new transit-oriented development along the alignment can create neighborhood landmarks and make even more vibrant environments that bring communities together (Fig. 8).

Past projects have demonstrated that light rail is a catalyst to develop underutilized sites. Transit-oriented development is a major goal for all of TriMet's light rail projects, and the PMLR line offers ample opportunities to stimulate investment. The Lincoln Street station area has several underutilized properties that are prime for transit-oriented development. The South Waterfront and OMSI station areas are near-clean slates for redevelopment with many planning efforts already underway. The other station areas—particularly Clinton Street, Holgate

Boulevard, Tacoma Street, Downtown Milwaukie and Park Avenue—have key development opportunities close to the station. Many of these station areas may likely have remnant parcels from right-of-way acquisitions (in public ownership) that can be used for transit-oriented development and/or community uses.

Development activities throughout the alignment must be context-sensitive and consistent with neighborhood plans and community aspirations. The Lincoln Street, South Waterfront and OMSI station areas can expect to experience larger-scale development with urban densities. Development in the other station areas will be at a neighborhood scale that is consistent with the character of those communities.

More details on development opportunities are provided in each station area description.



THOMAS NGO

The scale of the Arciform building next to the Prescott St MAX Station is consistent with what future development may look like in Downtown Milwaukie.



THOMAS NGO

Riva on the Park, located next to a Portland Streetcar stop in South Waterfront, is an example of the type of large-scale transit-oriented development in the Innovation Quadrant.



SALLY PAINTER

Patton Park Apartments, located next to the Killingsworth St MAX Station, offers mixed-income housing for 53 households.

COORDINATION WITH OTHER PLANNING EFFORTS

The project design will respond to, and be coordinated with, the long-term goals of each neighborhood and the expected or potential future developments along the alignment. Significant planning work has been done in most of the districts and some of the private property along the alignment and serves to guide many of the design decisions for the project. A summary of these plans is provided in Appendix C posted on trimet.org/pm.

- Portland Plan
- Central Portland Plan (Central City Plan update)
- Portland Bicycle Master Plan
- Streetcar System Plan
- Portland-Lake Oswego Streetcar
- River Renaissance Plan
- University District Framework Plan
- Columbia River Crossing
- Portland State University Master Plan (PSU)
- South Auditorium Plan
- OHSU Schnitzer Campus Strategic Framework
- South Waterfront Plan (City of Portland)
- South Waterfront Greenway Plan (City of Portland)
- OMSI Master Plan
- Oregon Rail Heritage Foundation (ORHF) Restoration Facility
- Portland Opera Redevelopment Planning
- Neighborhood Plans: Hosford-Abernethy, Brooklyn and Sellwood-Moreland and the Central City Community Plan
- Division Streetscape and Reconstruction Project
- Inner SE Powell Streetscape Plan
- Sellwood Bridge Project
- Milwaukie Downtown and Riverfront Land Use Framework Plan
- Milwaukie South Downtown Concept
- Milwaukie Transportation System Plan
- Kellogg for Coho Initiative
- Clackamas County's McLoughlin Area Plan
- Clackamas County Transportation System Plan (TSP)
- Clackamas County Bike Master Plan
- Clackamas County Pedestrian Master Plan
- Clackamas County's Park Avenue Station Transit-Oriented Design Plan
- Trolley Trail Master Plan

The corridor's station areas are g

segments to reflect their similarities within the context of surrounding neighborhoods and their distinctiveness within the context of the entire corridor (Fig. 8). Stations in the same segment may share similar design themes, but each station differs to some degree depending on adjacent areas, accessibility, safety, operational characteristics and other factors.

Station areas are roughly defined by the 1/2-mile radius that surrounds each light rail station. These station areas have been grouped into five segments: Innovation Quadrant, Neighborhoods/Employment, Neighborhoods/Recreation, Downtown Milwaukee and Green Gateway/Multi-Modal. This section of the report is organized by these segments and the station areas are described from north to south.

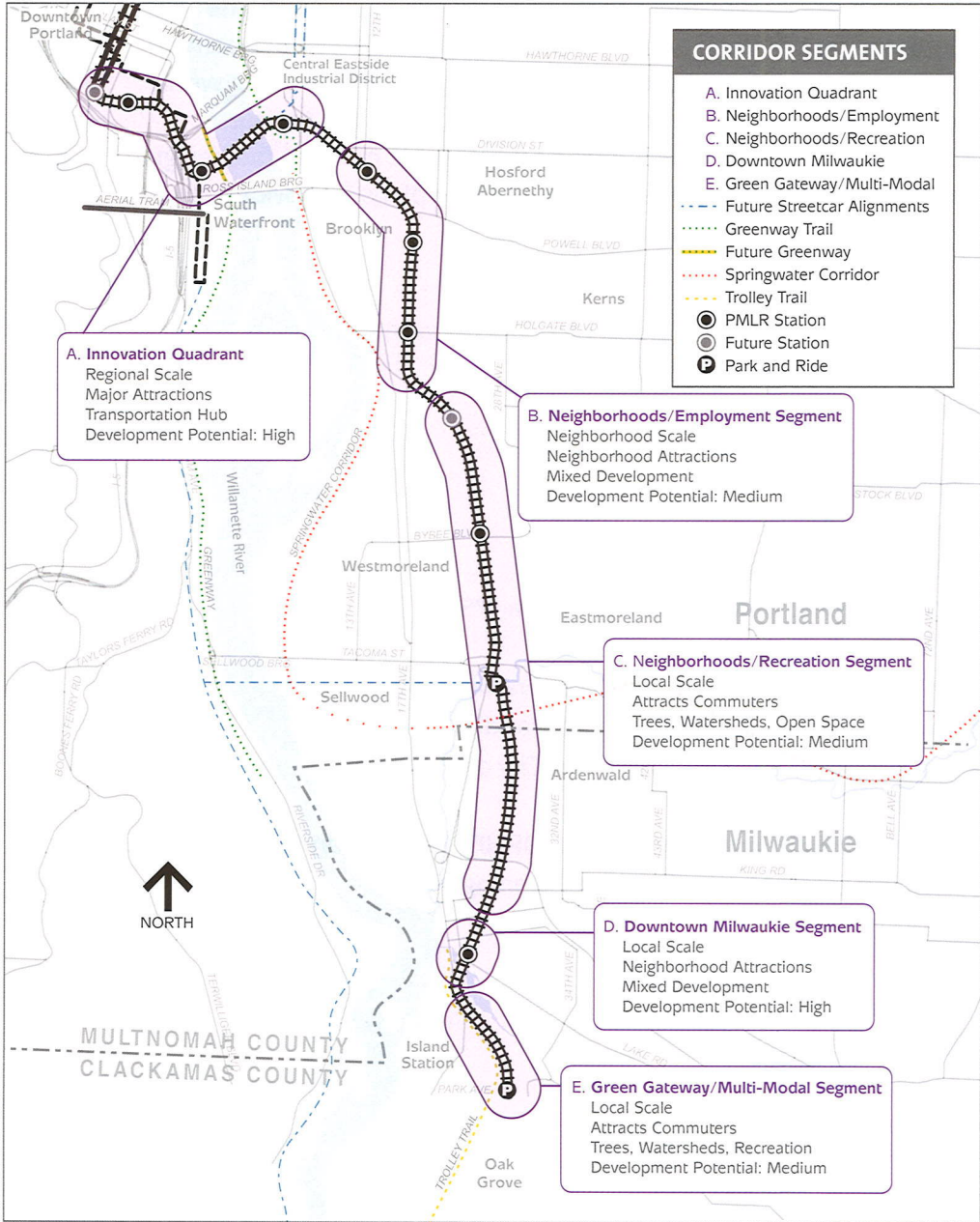


FIGURE 8: Corridor Segments map

CORRIDOR CONCEPT: INNOVATION QUADRANT

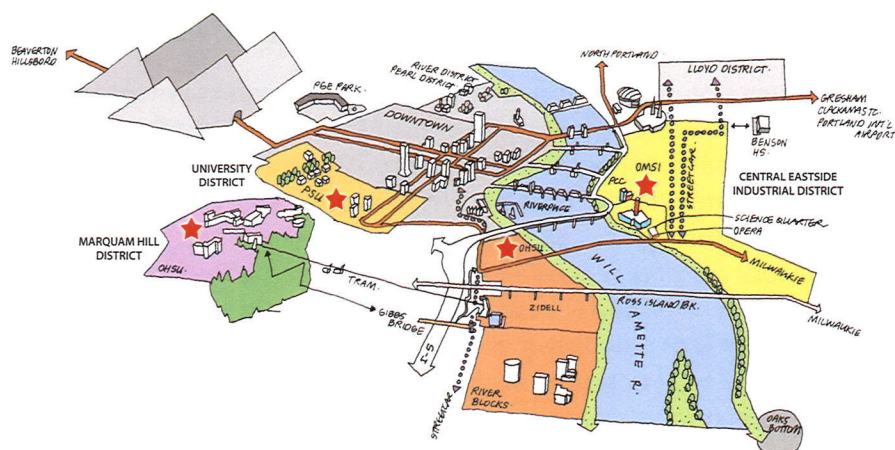


FIGURE 9: Innovation Quadrant illustration

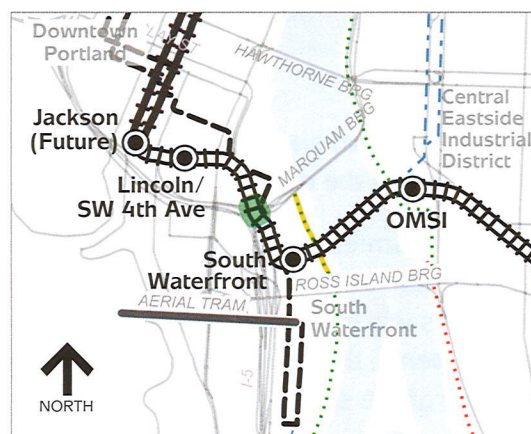


FIGURE 10: Innovation Quadrant map

The City of Portland has identified a functional relationship intended to enhance the connections and collaborations between higher education institutions, workforce development providers and private sector partners that are currently located in the Central City. The “Innovation Quadrant” spans both sides of the Willamette River (Figs. 9 and 10). On the west side are three cornerstones of the Quadrant: Portland State University’s (PSU) University District, Oregon Health & Science University’s (OHSU) Marquam Hill Campus and OHSU’s Schnitzer Campus in the South Waterfront. On the river’s east side is the Central Eastside Industrial District, which contains the Oregon Museum of Science and Industry (OMSI), Portland Opera and Portland Community College (PCC). PSU, OHSU and PCC are the three largest higher education providers and employers in the region, and their current and potential collaborations with one another and with the private sector are the economic engine that drives the Innovation Quadrant. Together, the four districts of the Quadrant are projected to grow by approximately 30,000 jobs and 11,000 households over the next 25 years.

Various public and private investments are being made in the Innovation Quadrant to improve access to employment centers, educational opportunities and community services, expand business opportunities, facilitate new job creation, enhance environmental initiatives and spur inner city redevelopment. The PMLR project will help advance these goals by providing high-capacity transit to connect the major institutions within the Quadrant to each other as well as enhancing regional access to resources in the Quadrant.

STATION AREA DESIGN CONCEPTS: INNOVATION QUADRANT

PORTLAND STATE UNIVERSITY/ LINCOLN STREET STATION AREA

Neighborhood Context, Opportunities and Challenges

This station area is in a mixed-use urban neighborhood adjacent to Portland State University (PSU), which is the region's No. 1 transit destination with 28,000 students and nearly 4,000 employees. Approximately forty percent of faculty, staff and students are regular transit riders. Within 10 years, PSU expects to have 35,000 students and nearly 4,800 employees.

Light rail will transition through this area from the downtown character of the Portland Mall into the neighborhood character of the Halprin District (South Auditorium Plan District). This is the starting point for new PMLR line in downtown Portland and the point of connection with the existing system at the southern terminus of the Green and Yellow lines on the Portland Mall. Coming from the south or the east this area serves as a gateway to the downtown core, due in part to the presence of I-405.

Largely built during the urban renewal movement of the 1960s, this district is defined by its high-rise residential and commercial buildings surrounded by green space, and the series of fountains, plazas and connecting pedestrian spines that were designed by renowned landscape architect Lawrence Halprin. The district is also rich with mid-century modern architecture.

The new station provides an opportunity to activate the public spaces and strengthen pedestrian and bicycle connections with the

URBAN DESIGN VISION

The new station platform and related project improvements in this area reinforce the identity of the Halprin District as distinct from the neighboring downtown core. The station is located and designed to celebrate the Halprin public spaces, activate the pedestrian spines along SW 2nd and 3rd avenues and highlight the mid-century modern architectural character of the area. The district is now well-linked to the Portland Mall and the rest of downtown as well as OHSU's Schnitzer campus and other key institutions in the Innovation Quadrant. The project enhances redevelopment opportunities in the district and incorporates sustainable design features to manage storm water runoff. It supports PSU's expansion and mixed-use development efforts and serves the PSU students, downtown workers and residents living in the Halprin District.

rest of downtown and the Halprin District (Fig. 11). It will also create a strong link to the downtown transit spine—the Portland Mall.

SW Lincoln Street is currently lined with mature trees from SW 4th to 1st Avenue and has a tree-lined median in this area. Although these trees will have to be removed to accommodate the PMLR improvements, there are opportunities to redefine the green character of the street.

Development opportunities: There are signature opportunity sites for transit-oriented development—including the PSU University Place Hotel & Conference Center and neighboring properties that will further activate the area.