Memorandum

To: **Tacoma Station Area Plan Stakeholders Advisory Group**

From: **Scot Siegel, Interim Planning Director**

CC: **Kenny Asher, Community Development and Public Works Director**
JoAnn Herrigal, Community Services Director

Date: **June 27, 2012**

Re: **Packet for July 9 – Stakeholders Advisory Group Kickoff Meeting**

Thank you for agreeing to assist the City of Milwaukie with planning for the Tacoma Station Area. You are receiving this packet because you have expressed interest in serving on the Stakeholders Advisory Group (SAG) or wish to be kept informed of the process.

The first meeting of the SAG is July 9, 6:30PM-8:30PM, at Milwaukie City Hall, Upstairs Conference Room.

Please refer to the attached meeting materials:

- Agenda
- Project Description and Draft Goals and Objectives
- Draft Evaluation Measures
- Summary of Stakeholder Interviews
- Baseline Conditions, Opportunities and Constraints Report

I look forward to meeting with you on July 9th. Please feel free to contact me beforehand with any question. You can reach me at SiegelS@ci.milwaukie.or.us, or 503-786-7653.

AGENDA

Tacoma Avenue Station Area Plan
Stakeholder Advisory Group Meeting #1

July 9, 2012

6:30 – 8:30 pm

City of Milwaukie, City Hall (10722 SE Main Street), Upstairs Conference Room

1. Introductions and meeting objectives
2. Project overview and SAG roles and responsibilities
3. Draft Project Goals, Objectives and Evaluation Measures
4. Baseline Conditions, Opportunities and Constraints
5. Redevelopment Scenarios – initial ideas and discussion
6. Other planning issues or concerns
7. Next steps

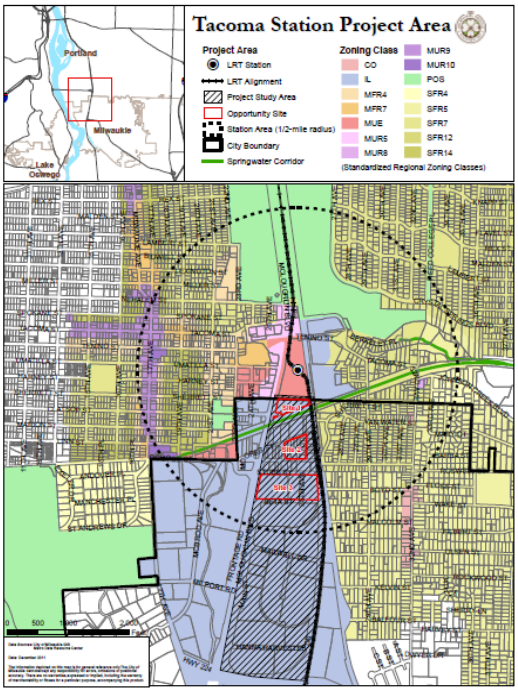
Tacoma Station Area Plan
DRAFT Goals and Objectives

Introduction

The Portland to Milwaukie Light Rail line is expected to open for service in 2015 and will include a station near the SE McLoughlin Blvd/Tacoma Street interchange. The **Tacoma Station Area Plan** (Plan) is being developed by the City of Milwaukie in coordination with others to examine opportunities for redevelopment and investment in the vicinity of the new light rail station. As part of this process, team members will work with property owners and other stakeholders to identify and evaluate potential redevelopment scenarios for the area.

Tacoma Station Area Rendering

The Plan study area is bound by McLoughlin Boulevard (OR99E) on the west, the railroad on the east, the Tacoma Station on the north and Highway 224 on the south. The study area includes areas within the City of Portland; however, proposed changes included with the final Plan will be limited to those areas within the City of Milwaukie. Plan development will occur from summer 2012 to June 2013 and will include participation from area property owners, tenants, interested community members and affected public agencies.



Plan Study Area

One of the first steps in the planning process is to identify goals and objectives for the Station Area Plan. The goals and objectives will be used to guide the planning process and will provide a framework for the evaluation measures that will be used to assess potential redevelopment scenarios. This document includes draft goals and objectives and also provides an overview of the plan development process, including a brief description of major steps and indicates public input opportunities.

Portland to Milwaukie Alignment

Goals & Objectives

Goal 1 – Land Use & Economy. Develop a proposed future land use scenario for the study area that promotes an active station area community and addresses barriers to redevelopment.

Goal 1 Objectives

- Plan the study area to take advantage of its proximity to the light rail station, Springwater Corridor regional multi-use trail, Highway OR 99E and heavy rail. Include land use and implementation measures to promote the area as an employment center and potential entertainment hub.
- Allow the existing industrial uses on manufacturing land to continue to operate and be viable while also considering a broader mix of uses in the future.
- Identify a preferred redevelopment scenario that is feasible from a market and transportation perspective.
- Consider how the area could redevelop to support a baseball stadium or other major redevelopment of the existing Oregon Department of Transportation maintenance facility (called Opportunity Site 3).

Goal 2 – Transportation. Develop a transportation plan for the Tacoma Station Area that provides multi-modal access to the Tacoma light rail station and enhanced connections within the study area.

Goal 2 Objectives

- Improve bicycle and pedestrian access in the study area, especially to the Tacoma light rail station and downtown.
- Limit improvements to OR 99E in the study area to those needed to enhance operations and safety.

- Determine whether the station area would qualify for reduced trip generation rates by meeting requirements to be a "Multimodal Mixed-Use Area" as defined in the Oregon Transportation Planning Rule (TPR), section 0060(10).
- Use the Sustainable Transportation Analysis & Rating Systems (STARS) to develop evaluation criteria for access and mobility, safety and health, and economic benefit and consider system performance.

Goal 3 – Implementation. Develop an achievable plan that is acceptable to stakeholders and policy-makers.

Goal 3 Objectives

- Prepare a Tacoma Station Area Plan for adoption as an element of the Milwaukie Comprehensive Plan.
- Identify amendments to the City's Comprehensive Plan, Transportation System Plan and Zoning Code to update the city's existing Manufacturing Zone, and to implement the Tacoma Station Area Plan.
- Include land use and implementation measures that result in attractive, transit-supportive and people-oriented development.

Plan Development Process

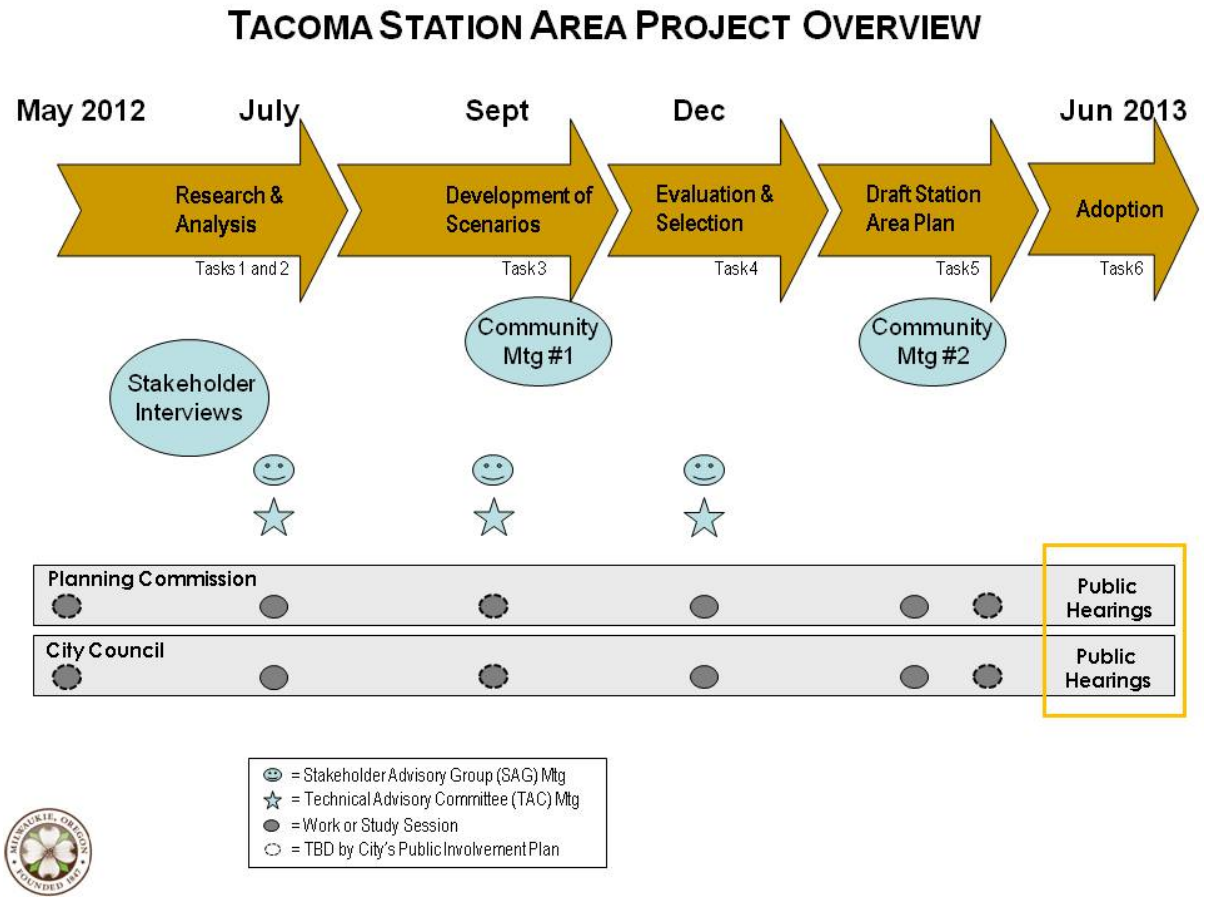
Development of the Tacoma Station Area Plan will include the following steps:

1. **Research and outreach**. The project team will conduct research and identify opportunities and constraints to future redevelopment in the study area. The City will conduct stakeholder interviews with local property owners and others during this step.
2. **Development of scenarios**. This step will focus on development of the three land use and development scenarios for the study area.
3. **Evaluation and selection**. The three scenarios will be refined and assessed using the evaluation measures established in previous steps; City Council will select a preferred redevelopment scenario.
4. **Draft Station Area Plan.** The project team will draft the Tacoma Station Area Plan based on the results of the evaluation of scenarios and community input.
5. **Adoption.** The city will present the Tacoma Area Station Plan at a series of public work sessions and hearings before the Planning Commission and City Council for adoption into the Comprehensive Plan.

Meaningful opportunities for citizens to be involved in the Tacoma Station Area Planning process throughout the plan development will include the following:

- Involve major employers, other property owners, institutions and business groups that will be impacted by and/or benefit from the plan.
- Inform and involve other established community groups and surrounding residents.
- Work with technical and stakeholder advisory groups to review and comment on project deliverables and make recommendations to the Project Management Team.
- Use a variety of tools to allow all citizens of Milwaukie the opportunity to learn about and participate in the planning process.
- Regularly update the city's Planning Commission and City Council about the project and seek their advice on key decision points.

The following diagram summarizes the plan development process and indicates timing for various public input opportunities.



Tacoma Station Area Plan
DRAFT Evaluation Measures

The following table contains draft Evaluation Measures for the City of Milwaukie Tacoma Station Area Plan project. The consultant team will use the measures to evaluate proposed redevelopment scenarios for the plan area. The evaluation measures are intended to be consistent with the project goals and objectives, while implementing the requirements of the Transportation and Growth Management (TGM) Program Grant for the Tacoma Station Area Plan. The Evaluation Measures include a combination of quantitative and qualitative indicators, which are intended to serve as guidelines for planning in the study area.

Project Goals, Objectives and Evaluation Factors	Evaluation Measures/Metrics
***Land Use*:** ▪ Promote the area as an employment center and potential entertainment hub. ▪ Generate jobs. ▪ Allow existing industrial uses on manufacturing land to continue to operate and be viable while also considering a broader mix of uses in the future. ▪ Provide amenities (in the form of attractors or new land uses) for the surrounding neighborhoods.	▪ The Plan allows existing industrial uses to continue with minimal disruption – e.g., preserves rail spurs and maintains or improves freight access, land use flexibility, and predictability in permitting. (Relative Ranking of Alternatives) ▪ The Plan facilitates transit-supportive development, including development intensity, land use mix, and building or site design, pedestrian-orientation and connectivity. (Relative Ranking of Alternatives) ▪ The Plan allows new employment uses at densities of 45 persons per acre, consistent with Metro Functional Plan Title 6, Sections 3.07.610 – 3.07.640. (Yes/No) ▪ The Plan results in a net increase in the number of employees at buildout, based on proposed zoning. (Relative Ranking of Alternatives) ▪ The Plan accommodates large-scale redevelopment, where applicable. (Relative Ranking of Alternatives) ▪ The Plan provides for land uses and/or other amenities that would benefit future workers and residents in the area. (Relative Ranking of Alternatives) ▪ The Plan provides for a mix of feasible uses, based on market analysis. (Relative Ranking of Alternatives) ▪ The Plan is generally supported by study area property owners. (Relative Ranking of Alternatives) ▪ Potential redevelopment costs are reasonable based on the professional opinion of a market analyst and feedback from property owners. (Relative Ranking of Alternatives)

Project Goals, Objectives and Evaluation Factors	Evaluation Measures/Metrics
Transportation: ▪ Achieve the 2030 Light Rail Station weekday ridership and mode split forecast. ▪ Comply with the State Transportation Planning Rule (TPR), in particular the requirements of OAR 660-012-0060(10). ▪ As applicable, apply the TPR provisions for Multimodal Mixed Use Areas, under OAR 660-012-0060(1), to maximize redevelopment opportunities. See also, Land Use Goals and Objectives. ▪ Improve bicycle and pedestrian access in the study area, especially to the Tacoma light rail station and downtown Milwaukie. ▪ Limit improvements to OR 99E to those needed to enhance operations and safety. ▪ Minimize the duration of congestion on Highway 99. ▪ Optimize transportation access and mobility for all modes of transportation, while addressing health and safety concerns, and maintaining transportation system performance, per the Sustainable Transportation Analysis & Rating System (STARS).	▪ The Plan improves connections to and between the station, the Springwater Trail and downtown Milwaukie. (Relative Ranking of Alternatives) ▪ At Plan buildout, projected pedestrian and bicycle mode share is significantly increased through transit-supportive development and design, safe and convenient access and supportive amenities. (Relative Ranking of Alternatives) ▪ At Plan buildout, the number of motor vehicle trips on OR 99E does not exceed the "worst case" vehicle trip projection under existing zoning and/or mitigates those increases to ensure compliance with the Oregon Transportation Planning Rule. (Yes/No) ▪ The duration of congestion on OR 99E, is lower than for other alternatives. (Relative Ranking of Alternatives) ▪ The Plan is not predicated on ODOT making motor vehicle capacity improvements to OR 99E. (Yes/No) ▪ As applicable, the Plan (or portion of Plan) potentially complies with the definition of a Multimodal Mixed Use Area, under the Transportation Planning Rule. (Yes/No/NA) ▪ The Plan includes transportation safety improvements which can reasonably be expected to mitigate the causes of accidents described in crash history data and to address Tacoma interchange queuing per TPR 0060(10). (Yes/No) ▪ The Plan provides for needed local street network improvements within the plan area. (Yes/No)

Required Evaluation Factors from Project Scope of Work

a. Consistency with the TPR and in particular the requirements found under TPR 660-012-0600(10).
b. Achieving compliance with Metro Title 6 (Functional Plan Sections 3.07.610 – 3.07.640) provisions for recommended employment density of 45 persons per acre and criteria for 30% generation reduction in trips;
c. Achieving compliance with the definition of a Multimodal Mixed Use Areas in TPR 0060(1);
d. Achieving 2030 Station weekday ridership and mode split forecast as a qualitative measure based on improved access, transit supportive land uses, etc.;
e. Achieving objectives resulting from utilizing STARS to develop goals and objectives;

f. Generating jobs;
g. Providing amenities (in the form of attractors or new land uses) for the surrounding neighborhoods;
h. Differences in VMT using the regional model;
i. Local vehicular system impacts;
j. Duration of congestion on OR 99E; and
k. Potential redevelopment costs (order of magnitude).

Introduction

Scot Siegel, City of Milwaukie Consultant, interviewed the following individuals for the Tacoma Station Area Plan during May 31- June 21, 2012:

- Richard Anderson and George Anderson, Anderson Die & Manufacturing
- Charles Bishop, Pendleton Woolen Mills
- Scott Churchill, Milwaukie Planning Commissioner
- Joseph Bradford, Urban Evolution (Multifamily developer in Sellwood)
- Angelene Carpenter, Ardenwald resident
- Gary Hunt, Oregon Transfer Company (Warehousing and distribution)
- Matt Rinker, Co-Chair Ardenwald-Johnson Creek Neighborhood Association
- Peter Stark, for Howard Dietrich

Comments are not attributed to individuals, except where they pertain to a specific properties or businesses. The City of Milwaukie Community Services staff extended interview invitations to Howard Dietrich and owners of the Kasch's property.

Overall Themes/Conclusions

- Improve the area around the light rail station (e.g., safety, gateway/appearance, etc.).
- Maintain an industrial base and encourage job creation.
- Support the City's pursuit of baseball.
- Allow/attract complementary commercial uses.
- Improve the transportation network for freight, cars, bikes, and pedestrians.

Summary of Comments

What would you like to see as an outcome of this planning effort?

1. Remove obstacles to commercial-industrial uses, including industrial 'incubators,' vocational schools, manufacturing-related retail (e.g., artisanal uses), and possible community service uses (e.g., Clackamas Community College branch/satellite).
2. Continue light industrial and allow commercial; allow as much flexibility as possible for changes of use and adaptive reuse of potentially historic building. (Pendleton)
3. Preserve access and parking. Note that some unimproved public rights-of-way (street ends) are currently used by businesses for parking; consider vacating stub of SE Clatsop. (Pendleton)
4. Consider off-peak/joint use of park-and-ride with redevelopment concepts.
5. Address concern about loss of parking due to light rail ROW acquisition. (Pendleton distribution center at Mailwell)
6. Address concern about safety/visibility back of building. (Pendleton)
7. Activate at night for safety; consider adding residential and commercial uses.
8. Would like to see more foot traffic in area for safety and security.

9. Can we establish a speed limit of 15 miles per hour on Moores Street? (Anderson)
10. Provide more flexible zoning for live-work lofts.
11. Do not compete with downtown for commercial uses.
12. Would like to see grocery store walkable from LRT station and neighborhoods.
13. Improve Main Street for auto, bike and pedestrian connections to downtown.
14. Improve connection(s) to Springwater Trail.
15. Improve Ochoco for cyclists; add signage for connecting to downtown.
16. Could use bicycle lanes and sidewalk improvements to 32nd (outside study area).
17. Provide connection(s) through Springwater Trail to connect north and south.
18. Trail connection through private property is a concern, as location next to auto repair and Earth's Footprint business would displace business access and parking (Anderson).
19. Consider connections between Ardenwald and study area to relieve pressure on Johnson Creek Boulevard and Tacoma Street.
20. "Connect quadrants, or do not." (Plan process should determine whether quadrants can/should be connected.)
21. Plan should "Break Down Barriers." Would like to see an urban design plan/framework for ballpark district with tunnel under or new building opening onto Springwater Trail, connecting quadrants.
22. Change zoning to allow 65 feet (5 floors) instead of 45 feet.
23. Improve Ochoco/McLoughlin intersection and/or provide overpass.
24. Improve bus stop access and safety, add buffering from traffic, and add shelter, for 31, 32 and 33.
25. Bus ends at 32nd; would like to see neighborhood shuttle connecting to LRT.
26. City should consider short-term "baby steps" as well as long-term vision.
27. Consider vacating 25th and end of Ochoco after light rail complete to compensate for loss of outdoor storage areas. (Anderson)
28. Address inadequate local streets.
29. Buildings along south edge of Ochoco currently do not have adequate loading space. This would be impacted by plan. (Anderson)
30. Railroad is a 'hard edge' for neighborhood; this is a positive, as neighborhood is concerned about park-and-ride spillover. (Ardenwald Neighborhood)
31. Neighborhood concerned about train noise and McLoughlin-Johnson Creek Blvd cut-through traffic; note that a previous proposal to replace stop signs with stoplights along JCB was opposed, because it would have encouraged higher speeds. (Ardenwald Neighborhood)

32. Keep us notified; even if we were unable to attend meetings would like to follow process and plan. (Oregon Transfer)

Why is this location working/not working for your business? Are you motivated to do anything different with your property now or in the future?

The area works well for Anderson Die because of access to highway and rail, proximity to Portland and nursery industry, and large land base for outdoor storage. Invested $12 million recently in new equipment, and not likely to move in foreseeable future. Realigning Main Street through Anderson site or closing Stub Street for baseball stadium on game days would harm business. (Anderson)

Location works well for Oregon Transfer Company, which stores and distributes 3rd party goods (e.g., bush beans, C&H Sugar, food and beverage) and sees up to 8 railcars per week during peak periods. Company stores and distributes, but also has some customers who do their own. Buildings constructed in 60s-70s have low ceiling clearance (20'-24') and no sprinklers, "not great buildings, oldest in portfolio." Good parking and loading, taxes favorable compared to Portland, fair access, rail a plus. No issues with access presently, working around peak traffic hours. (Oregon Transfer)

If a baseball stadium is built in the study area, what kinds of businesses should be encouraged to locate near the stadium?

1. Sports-retail (e.g., restaurants, pubs, sports apparel stores, etc.).
2. More commercial but not at the expense of losing the manufacturing base; do not encroach into industrial area to the extent that it is no longer viable for manufacturing. All shared this general sentiment.
3. Provide neighborhood-serving commercial uses (e.g., bike repair shop. restaurant); attract commercial uses that do not compete with, or are not likely to locate in, downtown.
4. Would like grocery store, as options in the area are too distant or do not meet all needs.

Are there examples from elsewhere that you think Milwaukie should emulate?

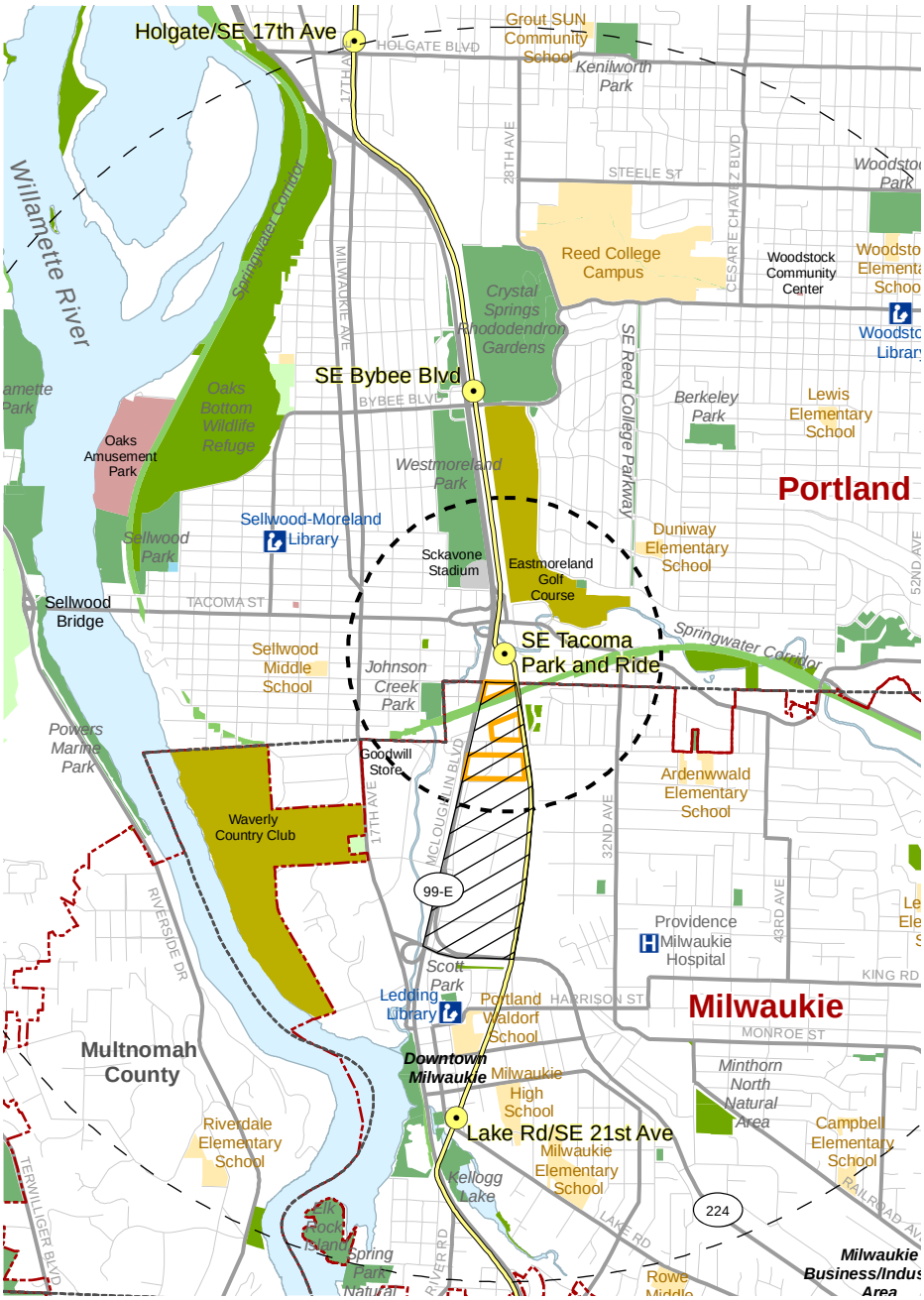
Look at industrial gulch off Holgate along SE 26th as an example; study this to see what works well and what would not work for Milwaukie.

Look at Emeryville, California, for industrial area redevelopment example; consider whether a smaller-scale version of this makes sense. (Note: On December 29, 2011, the California Supreme Court issued its decision in the California Redevelopment Association vs. Matosantos case, dissolving all redevelopment agencies as of February 1, 2012.)

Look at San Francisco's Production, Distribution and Repair (PDR) zone as a potential model. Look at SF ballpark area housing.

Tacoma Station Area Plan

Conditions, Opportunities and Constraints Report



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Task 2.3
June 22, 2012

City of Milwaukie

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1: Introduction

The Portland to Milwaukie Light Rail line is expected to open for service in 2015 and will include a light rail transit (LRT) station near the SE McLoughlin Blvd/Tacoma Street interchange, just north of the Milwaukie city limits. The Tacoma Station Area Plan (Plan) is being developed by the City of Milwaukie in coordination with others to examine opportunities for redevelopment and investment in the vicinity of the new light rail station. As part of this process, team members and city staff will work with property owners and other stakeholders to identify and evaluate potential redevelopment scenarios for the area.

For the purposes of this report and the planning process, the following geographical areas are being studied:

- The Project Study Area is bounded by McLoughlin Boulevard (OR99E) on the west, the railroad on the east, the Tacoma Station on the north and Highway 224 on the south. All parcels within the Project Study Area are currently zoned for manufacturing. This area will be the focus of recommendations related to potential future redevelopment scenarios.
- The larger surrounding area (referred to as the station area) includes the Project Study Area, as well as the area within one-half mile of the light rail station, including areas within Milwaukie and the City of Portland. This larger station area, as well as some intersection locations outside of it, has been evaluated for baseline and future conditions related to land use and transportation. However, recommendations in the final Plan will primarily be limited to those areas within the City of Milwaukie.

Plan development will occur from summer 2012 to June 2013 and will include participation from area property owners, tenants, interested community members and affected public agencies.

The purpose of this Tacoma Station Conditions, Opportunities & Constraints report is to summarize existing land and transportation conditions within the Project Study Area and the larger station area. The information in this report will be used to guide formation of the redevelopment scenarios that will be evaluated and ultimately lead to a preferred scenario in the final Plan.

Part 2 of this report contains information pertaining to land and land uses in the station area, including zoning designations, parcel data, current land uses, major activity areas, demographics and public infrastructure conditions. Part 3 describes conditions related to transportation and access in and around the station area, including the existing circulation system, future light rail alignment, intersection data and vehicle trip thresholds. Transportation conditions were summarized by team members in a separate memo which has been incorporated in part in Section 3 of this report and in full in Appendix A. The final section of this report provides an assessment of opportunities and constraints to redevelopment in the station area. The opportunities and constraints analysis focuses on issues of land use, multi-modal transportation and connectivity (including bicycle and pedestrian considerations), access to transit, and market conditions.

Project Study Area Overview

The Milwaukie North Industrial Area (NIA) is a 328-acre area at the northern boundary of the Milwaukie city limits; it is one of the city's three major industrial areas. The NIA is zoned for manufacturing (Milwaukie's M zone) and is currently comprised of warehouses, manufacturing uses, and an Oregon Department of Transportation (ODOT) maintenance yard. The Project Study Area is located entirely within the NIA. About 15 acres of the NIA have high redevelopment potential and are within walking distance of the proposed Tacoma Station. Those properties have been identified as Opportunity Sites 1-3 (shown on Figure 1) and are described in more detail below.

Opportunity Site 1

Opportunity Site 1 is 2.32 acres and is located closest to the Tacoma Station, just below the City of Portland limits. The site is currently owned by Pendleton Woolen Mills and is used for a number of different activities, including office/administrative work, storage, retail sales and photography of clothing and other merchandise for catalogs and marketing. Pendleton is currently leasing some spaces within the building to small complementary uses such as other textile sales uses. The building is one-story and may have historic significance or value. The owners are open to exploring possible new uses for the existing building but also are interested in maintaining the existing structure/shell. They do not plan to sell or vacate the building in the near term.

Opportunity Site 2

Opportunity Site 2 is 4.03 acres and is comprised of numerous smaller parcels that are all under the same ownership (Anderson Die & Manufacturing). The site is used for manufacturing and outdoor storage. It is well-served by rail and highway facilities. The owners have recently invested approximately $12 million in new equipment in the building and are not likely to move their operations in the foreseeable future. The Anderson family also owns several other smaller properties within the study area.

Opportunity Site 3

Opportunity Site 3 consists of three separate parcels totaling 8.72 acres. The three parcels are owned by Oregon Department of Transportation (ODOT) and are currently used as an ODOT maintenance facility. Existing improvements on the site include two vacant office buildings, several storage sheds and a truck washing facility. The maintenance facility is in the process of being relocated, which will make this site available for redevelopment.

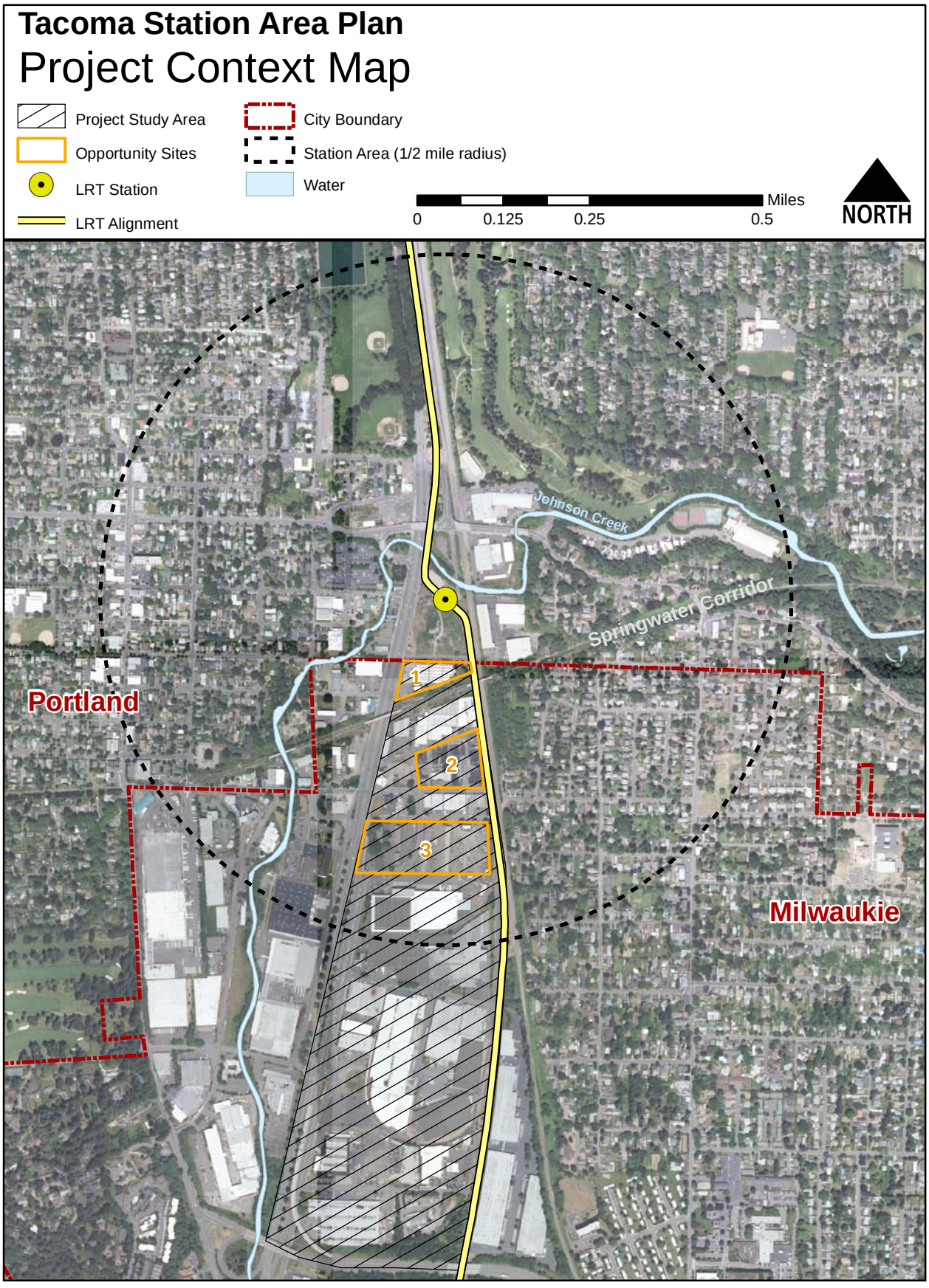


Figure 1. Project Context Map

2: Land Use Conditions

Land use designations

Zoning

The Project Study Area (described in the previous section) is currently zoned Manufacturing (M) by the city. There are no Title 4 (regionally significant) industrial employment lands in the Project Study Area. The M zone allows any combination of manufacturing, office and commercial uses as long as 25 percent of the total project involves an industrial use. Natural resource extraction and high-impact commercial uses (uses which would result in high amounts of traffic or noise) are allowed conditionally in the M zone. New residential construction, churches and schools are not permitted. Retail uses are limited to 60,000 square feet or less per building or business, unless they are located in an area mapped as Title 4 "Employment"; in those areas, retail uses are limited to 5,000 square feet per building or 20,000 square feet for multiple retail uses.

As part of this project, the city is considering amendments to the M zone that will help clarify existing requirements to improve administration of regulations. Additional amendments may also be applied to the Project Study Area specifically to support and implement the Tacoma Station Area Plan.

Additional Milwaukie zoning designations in the surrounding area include single-family residential zones (R5, R7 and R10) and a small amount of land within the Downtown zones (DO, DC and DOS) just south of the station area.

City of Portland zoning north of the Project Study Area (and within the station area half-mile radius) primarily consists of moderate density multi-family designations (R1, R2 and R2.5) and a single-family designations (R5 and R7). There is also a small amount of employment land (EG2) and industrial land (IG2) directly north of the Project Study Area.

Table 1. Total acreage by zone within analysis area

Acreage by Zone

Milwaukie	
Zone	**Acres**
CL	0.34
M*	119.35
R3	0.32
R5	30.53
R7	26.46
Total	**177.0**

**Project Study Area*

Zone	**Acres**
M	91.52

Portland	
Zone	**Acres**
CG	6.29
CN2	0.46
CS	7.45
EG2	14.73
EX	1.54
IG2	13.40
OS	69.84
R1	6.93
R10	3.64
R2	23.56
R2.5	16.79
R5	82.55
R7	8.99
RH	0.75
Total	**256.9**

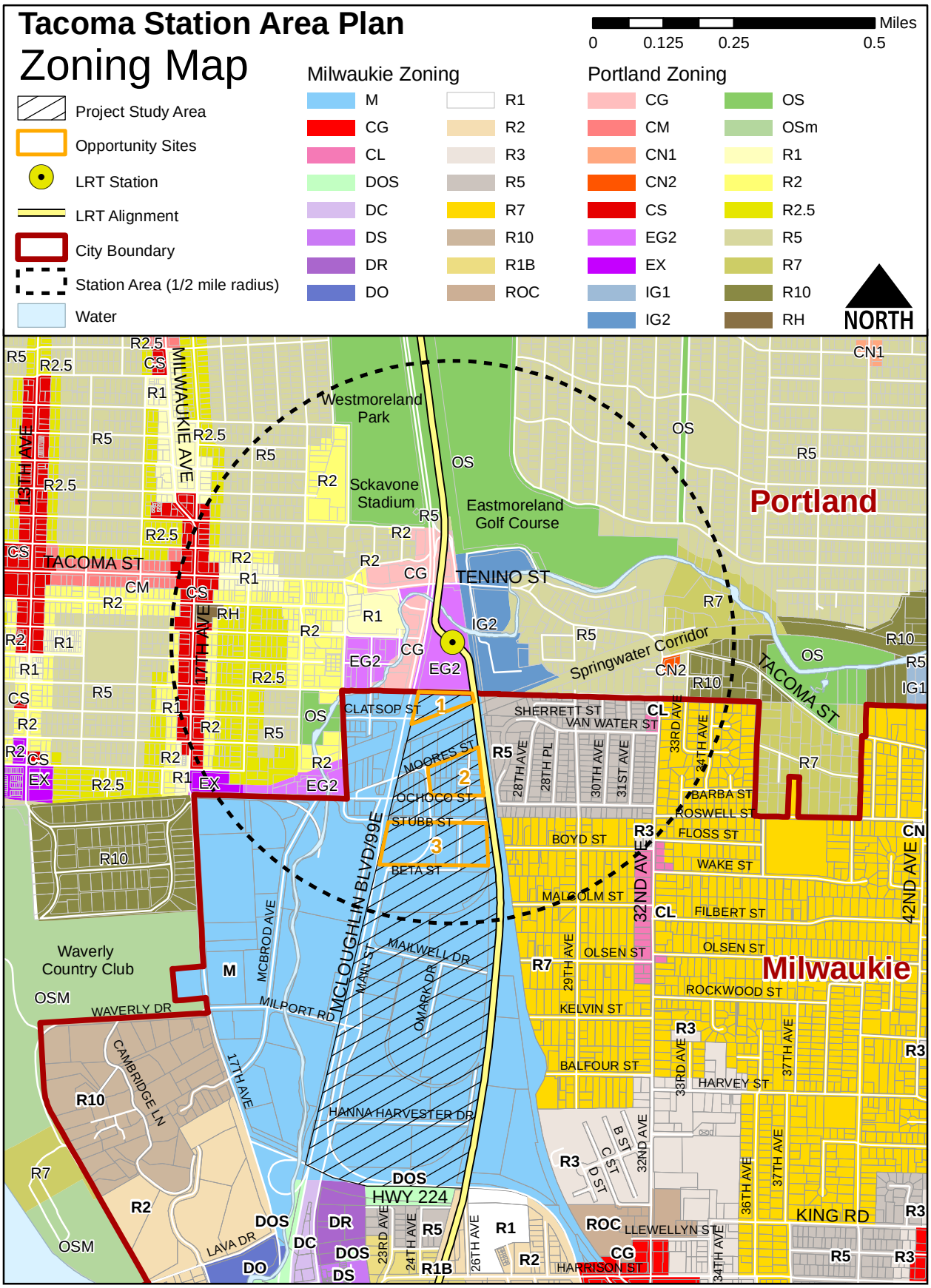


Figure 2. Zoning Map

Current land uses

Land Use

The Project Study Area is made up of primarily industrial land uses, as well as a few commercial sites and a limited number of vacant parcels. Within the Project Study Area, the vacant parcels are clustered within or near Opportunity Site #2. There are also several parcels within the Project Study Area that have potential for partial redevelopment, although they are not entirely vacant. As noted in the Kidder Matthews study in 2011:

> *Industrial vacancy in the NIA [North Industrial Area] is currently 10%, with the majority of the vacancy concentrated in spaces over 40,000 square feet. Vacancy in spaces under 40,000 square feet is currently 6.6%. The average quoted rental rate for vacant industrial space under 40,000 square feet is $6.23, per year, triple net. Market participants believe this figure represents the high-end range of achievable rental rates. It is important to note that the small number of buildings for lease in the NIA allows a single building or transaction to have disproportionate influence on rental rates.*
>
> *There are no known industrial buildings currently proposed or under construction in NIA. The most relevant proposed industrial project is located at 4200 SE Roethe Road in Milwaukie. If built this project would consist of three small industrial buildings totaling 40,350 square feet.*
>
> *The industrial market consists of tenant occupied space, both in existing buildings and new developments. However, tenants who occupy speculative space only represent part of the demand picture. Owner/users represent a large portion of the industrial building inventory in the NIA and have been most active during the past few years. Owner/users drawn to the area by the availability of attractively priced buildings located in the Portland close-in market and Clackamas County's favorable tax structure. Relocations associated with the light rail right-of-way acquisitions have created additional owner/user demand.*[1]

The industrial areas surrounding the Project Study Area are also bordered by single family housing, a few multi-family housing developments, and additional industrial and commercial uses.

The Springwater Corridor, a buffered trail designed for walking, bicycling and horseback riding, is a major element running roughly southwest to northeast across both the Milwaukie and Portland portions of the station area and forming the southern border of Opportunity Site #1. In addition to the Springwater Corridor, there are several nearby green spaces. These include Johnson Creek Park, Milwaukie Pioneer Cemetery, and the golf course at Waverly Country Club to the west; Roswell Pond Open Space, and Balfour Street Park to the east; and Scott Park to the south. More broadly, Westmoreland Park, Sckavone Stadium, and Eastmoreland Golf Course are in close proximity to the north of the Tacoma LRT station site.

The Project Study Area includes a mix of industrial and other uses, including the following:

- Opportunity sites 1, 2 and 3 described in detail on page 6.
- A large, primarily vacant building located south of Beta Street and currently used by TriMet for operations and meetings in the study area.
- Oregon Transport, a large storage and distribution site located south of Mailwell Drive, with operations on either side of Omark Drive. The owner reports that buildings on this site were constructed in the 1960s and 1970s, have relatively low ceilings and are "not great buildings" but have good parking and loading, access to rail and no current problems with access to roads.
- Several other manufacturing and other industrial buildings for which no specific use or building information has been gathered at this time. More information about these buildings and sites will be gathered during subsequent field visits and meetings with Stakeholder Advisory Group members.

1 9002 SE McLoughlin Best Use Study, Michael George and Blair Howe, Kidder Mathews, July 2011.

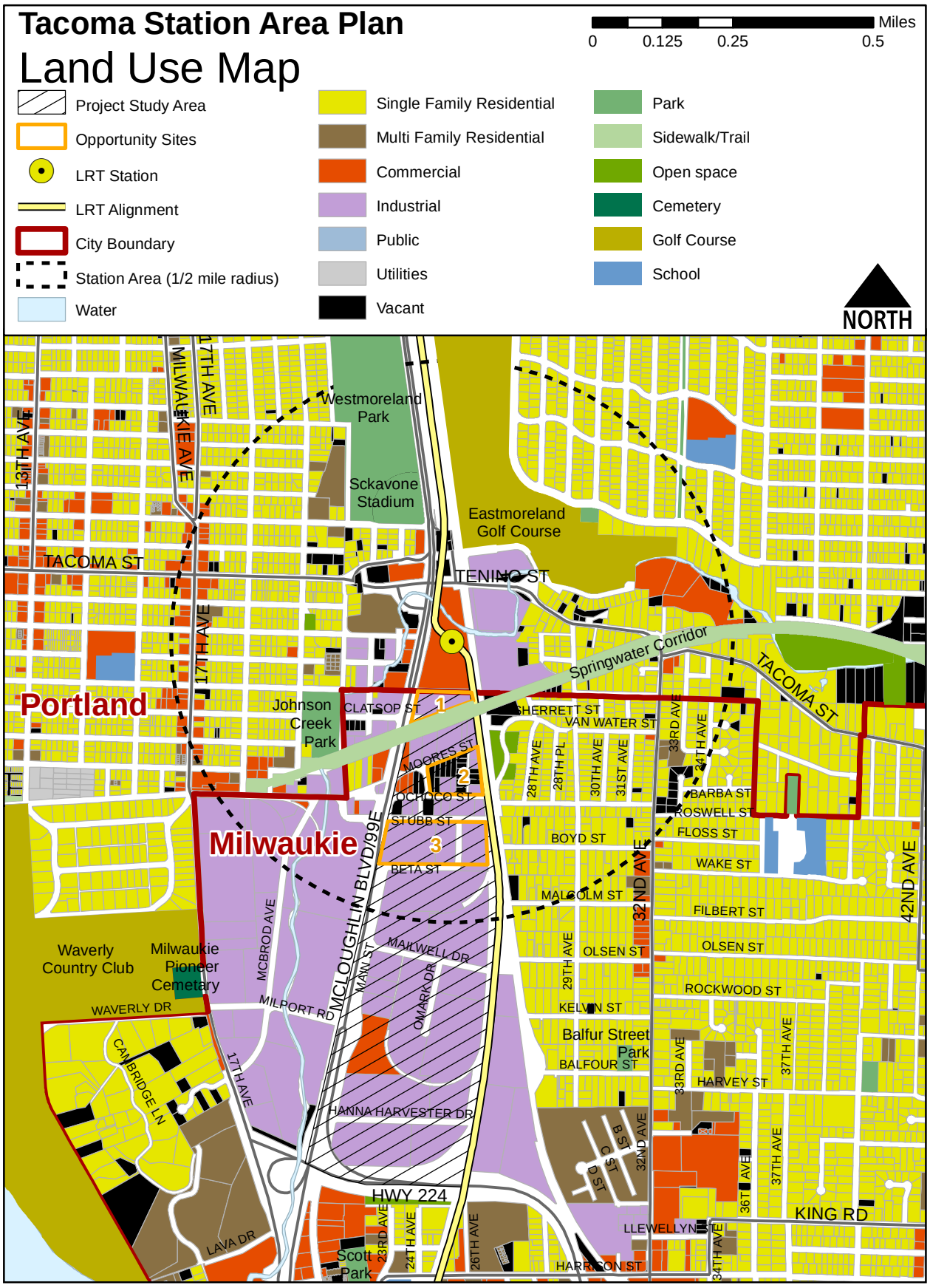


Figure 3. Land Use Map

Parcel Analysis

All parcels within the station area were analyzed in terms of ownership, size, value, and age of structures, as shown in Figures 4-7. These figures reflect tax assessor data updated January 2012 and retrieved in GIS format from the Regional Land Information System (http://rlisdiscovery.oregonmetro.gov/). There are a total of 1,351 parcels are in the larger station area (Project Study Area and area within one-half mile of the light rail station), and TABLE 2 shows general land use classifications for these parcels.

Table 2. Land Use of Parcels in Station Area

Milwaukie

Land Use	Number of Parcels	Percent Parcels	Area (Acres)	Percent Area
Single Family Residential	345	73.25%	59.132	31.51%
Multi Family Residential	2	0.42%	1.177	0.63%
Commercial	14	2.97%	7.638	4.07%
Industrial	49	10.40%	102.186	54.45%
Vacant	51	10.83%	15.229	8.11%
Rural	0	0.00%	0.000	0.00%
Undefined (ROW)	10	2.12%	2.312	1.23%
Total	**471**	**100.00%**	**187.675**	**100.00%**

Combined Milwaukie + Portland

Land Use	Number of Parcels	Percent Parcels	Area (Acres)	Percent Area
Single Family Residential	1052	77.87%	159.586	36.79%
Multi Family Residential	24	1.78%	11.482	2.65%
Commercial	67	4.96%	34.563	7.97%
Industrial	63	4.66%	119.736	27.60%
Vacant	128	9.47%	38.195	8.81%
Rural	2	0.15%	67.088	15.47%
Undefined (ROW)	15	1.11%	3.099	0.71%
Total	**1351**	**100.00%**	**433.749**	**100.00%**

Parcel Ownership

Figure 4 shows parcels with public ownership, including the city, state, or Metro (outlined in blue). It also highlights nonresidential contiguous parcels within the Project Study Area that have the same ownership, each symbolized with a different fill color.

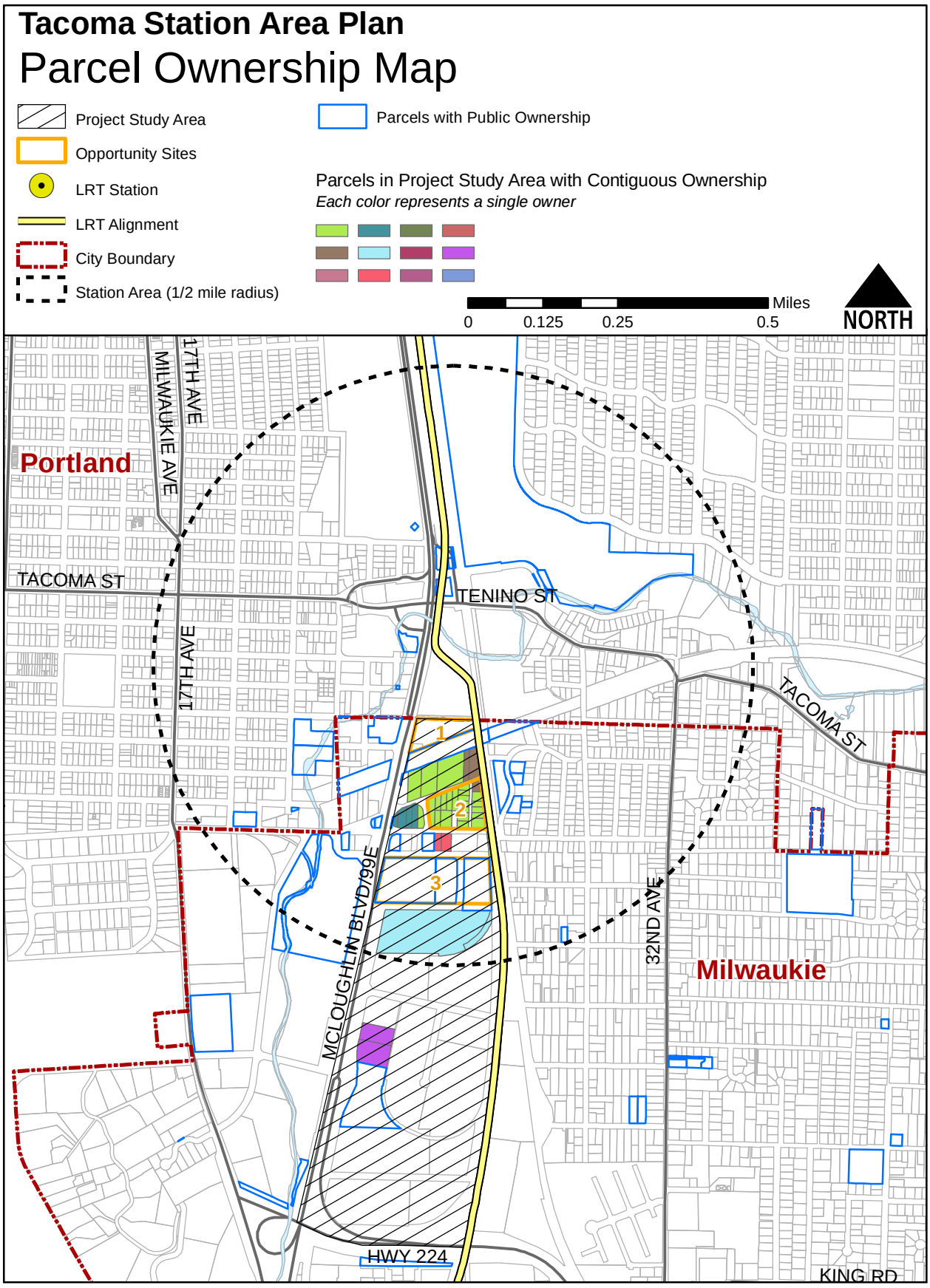


Figure 4. Parcel Ownership Map

Parcel Size

Figure 5 shows the distribution of parcels by size, which ranges from less than half an acre to a maximum of 67 acres (the large parcel to the north of the station where Eastmoreland Golf Course is located.) The majority of the parcels in the station area are single family residential; consequently, the average parcel size in the station area is less than a half acre (0.32 acres).

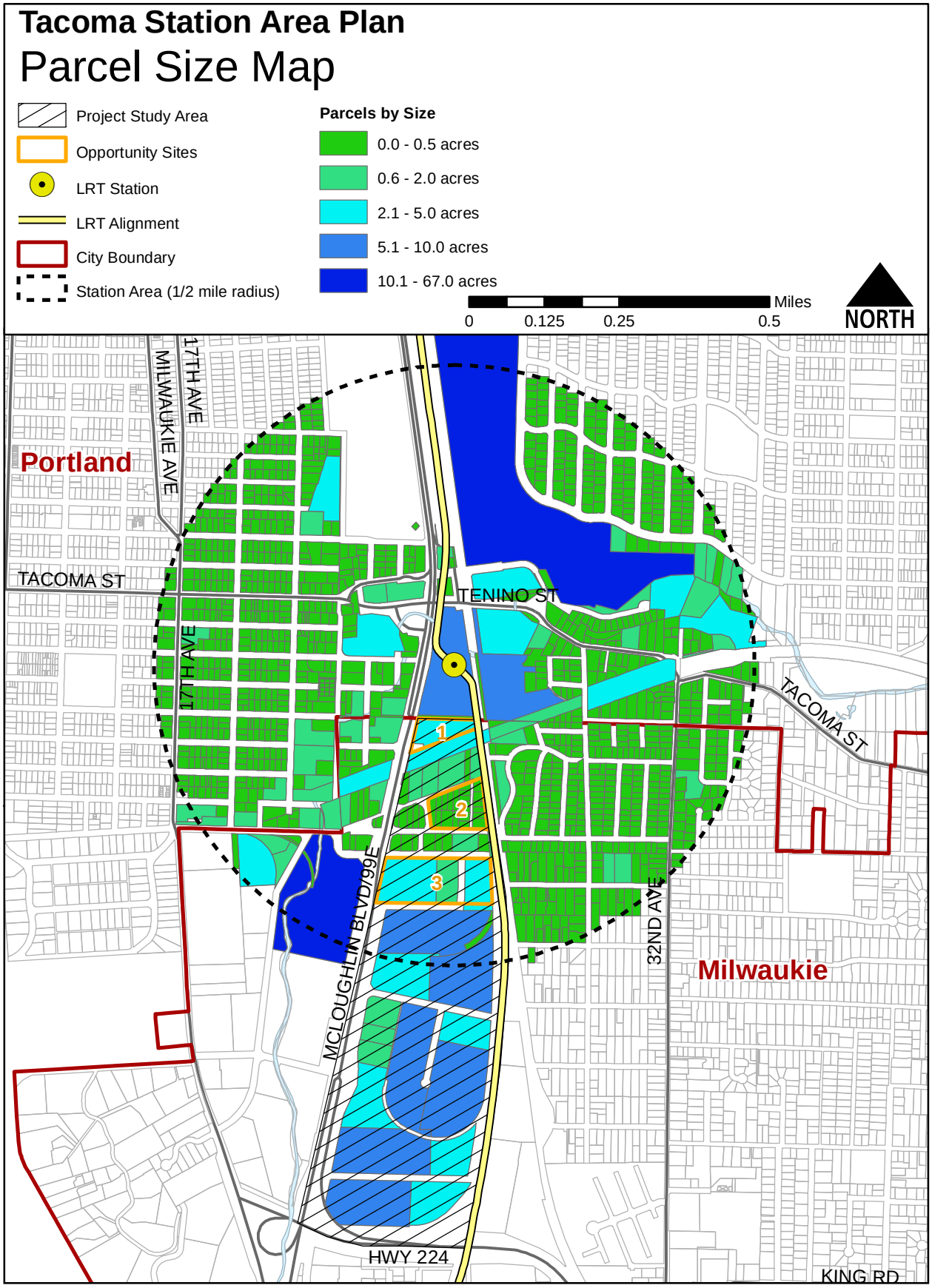


Figure 5. Parcel Size Map

Parcel Value

Figure 6 shows the total assessed values of land and structure per square foot for each parcel. Most of the parcels with the highest value per square foot are single family residences.

Within the Project Study Area, the value ranges from $0.07 to $84.19 per square foot, with an average value of $18.19 per square foot.

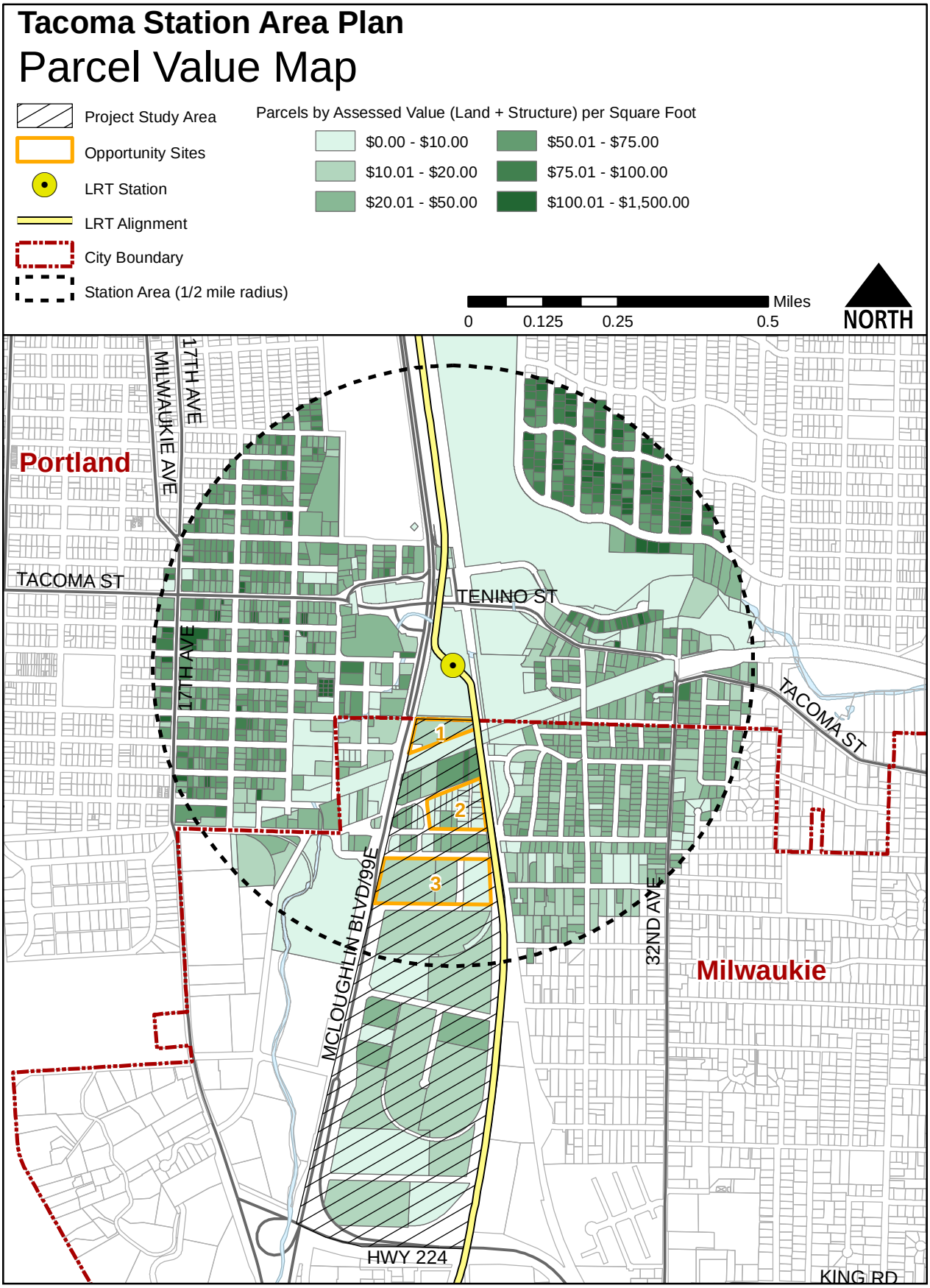


Figure 6. Parcel Value Map

Parcel Age Map

Figure 7 shows the year that structures were built by parcel. According to tax assessor data, there are several single family residences in the station area that are nearly 130 years old. There was no data available for any of the structures located within the Project Study Area.

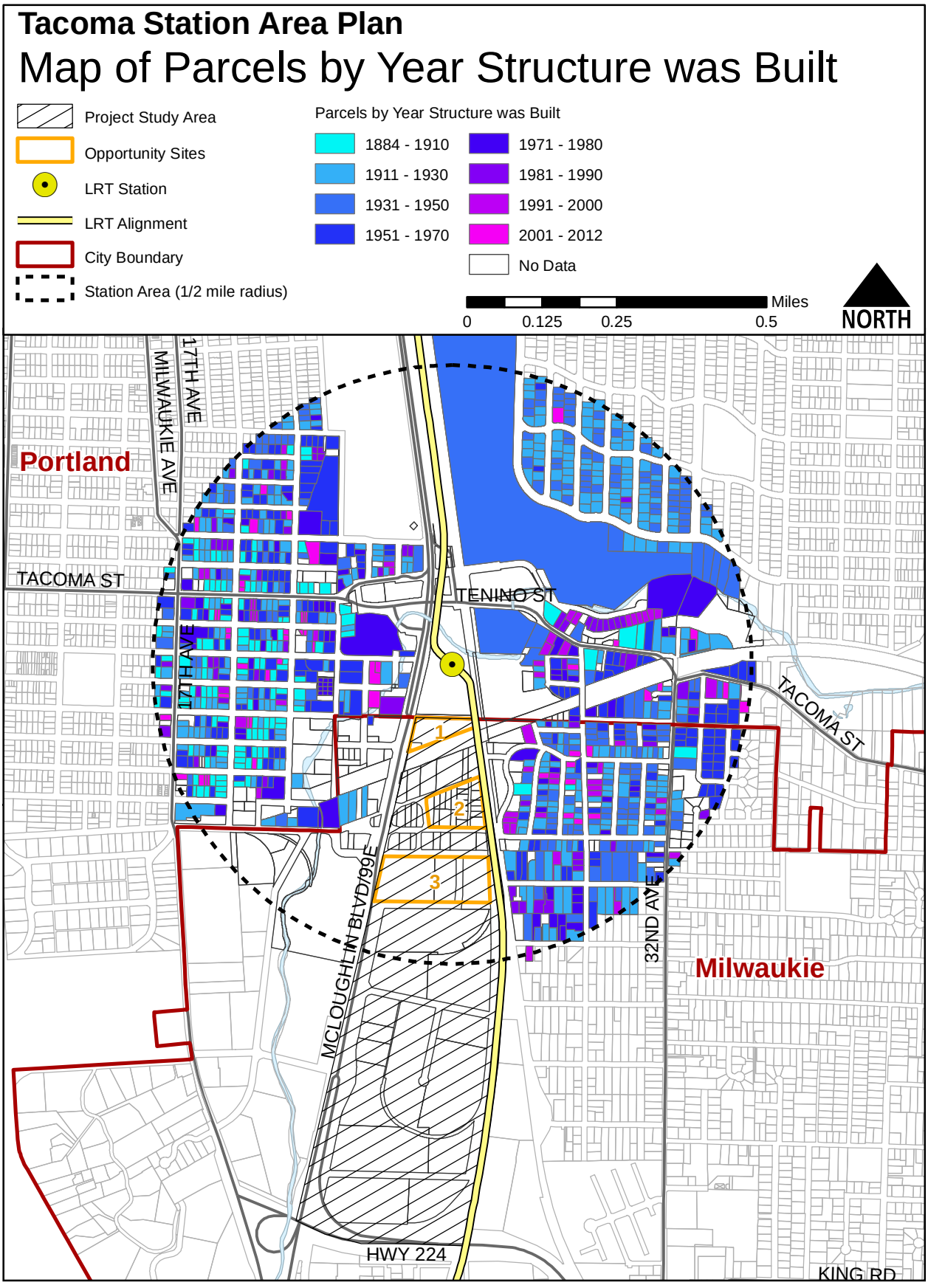


Figure 7: Parcel Age Map

Activity Centers

As shown in Figure 8, within a two-mile radius of the Tacoma LRT station there are several recreational and civic activity centers including the two nearby golf courses, the Crystal Springs Rhododendron Gardens, and Westmoreland Park. To the west, there are several parks and protected natural areas that flank the Willamette River corridor. The Goodwill outlet on Ochoco is also a popular local destination.

In terms of public amenities, there are three public libraries and fourteen public schools within two miles of the Tacoma LRT Station. Reed College is also approximately a mile to the north of the station (but closer to the SE Bybee Boulevard LRT Station). Downtown Milwaukie is south of the Project Study Area, but will be served more closely by the Lake Rd/SE 21st Avenue LRT Station.

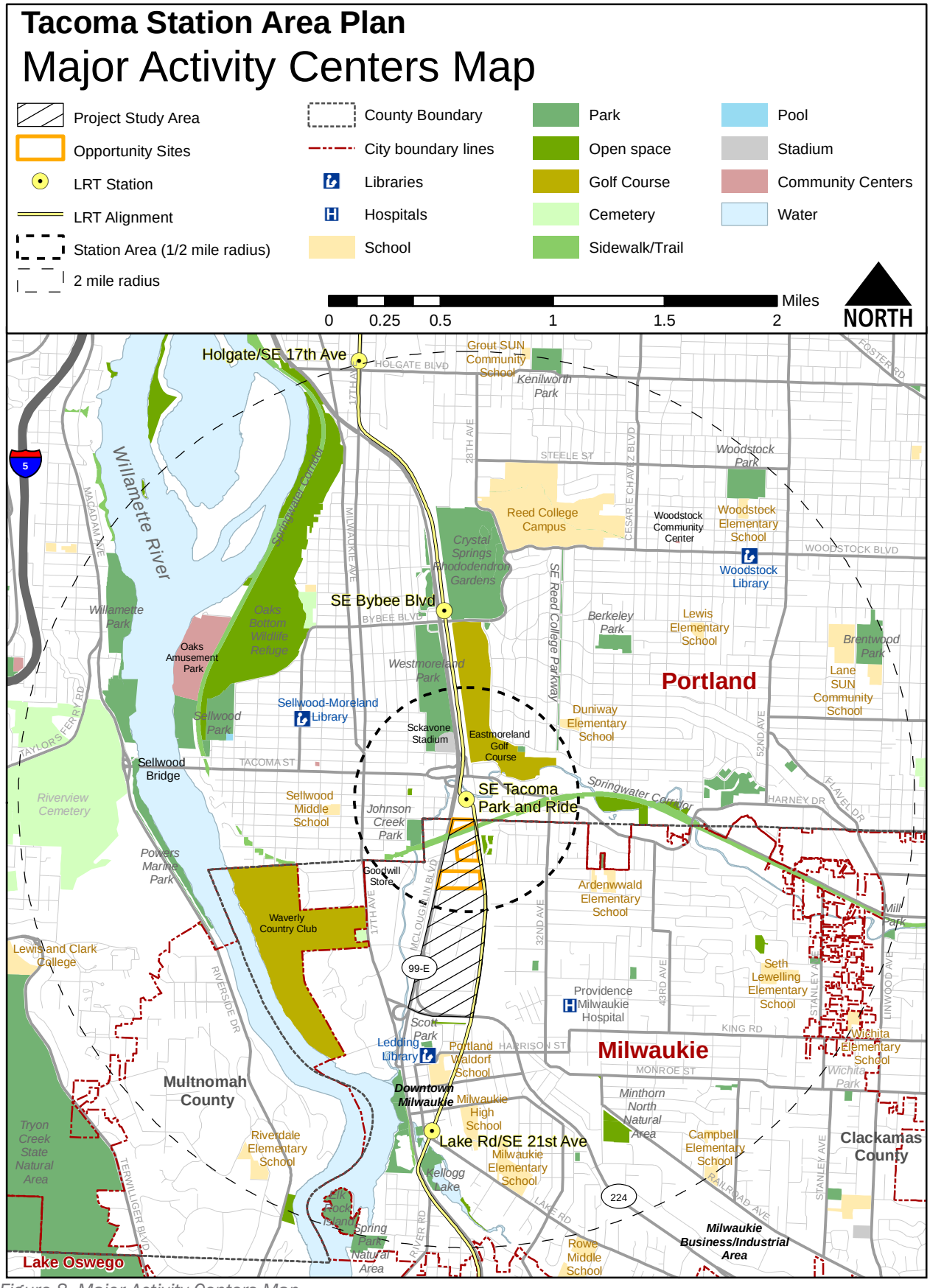


Figure 8. Major Activity Centers Map

Environmental Context

Figure 9 shows environmental features in the station area and vicinity that may affect development opportunities. The ten foot contour lines reveal insignificant slopes within the Project Study Area. However, there is a significant change in elevation between the railroad and residential areas to the west that acts as a buffer between the two areas.

In terms of water features, Johnson Creek runs through the station area, but does not cross directly into the Project Study Area. (Willamette River is shown in the context of the station area in Figure 8, but does not reach within a half-mile of the Project Study Area.) Similarly, the mapped 100 year flood areas show nearby flood potential, especially around the northern half of Tacoma LRT Station, but only extend into a small section of Opportunity Site 1 within the Project Study Area.

Figure 9. Environmental Context Map

Other land use conditions

Minority and low-income populations

Per the most recent *Clackamas County Consolidated Plan*[2] for housing and community development, the Tacoma station area does not contain high concentrations of minority populations. There is one census block group abutting the Project Study Area on the east (and within the station area half-mile radius) that has minority populations in the 16-25 percent range. The remainder of the station area within Clackamas County has minority populations in the 0-15 percent range.

The *Consolidated Plan* also indicates that there are concentrated areas of low to moderate income populations within the vicinity of the Tacoma station area. Block groups to the south and east of the Project Study Area have the highest percentage of low to moderate income households (60 percent or greater). Low to moderate income households are those that have incomes at or below 80 percent of the Area Median Income. Areas that have concentrations of lower income populations may qualify for projects benefitting the areas using Community Development Block Grant funds.

Clackamas County Housing Authority owns and operates two low-rent public housing (LRPH) developments located near the southeast corner of the Project Study Area off SE 32nd Avenue. The LRPH developments have a total of 200 units that are adjacent to the southern end of the Milwaukie industrial area, although separated somewhat by the Union Pacific rail line. The LRPH developments are not within the station area half-mile radius.

Public utility infrastructure issues/deficiencies

Generally, public utility infrastructure in the Tacoma station area is considered adequate to serve existing and future planned uses and does not have significant identified deficiencies. This assessment is based on conversations with city engineering and public works staff, and a review of the *Milwaukie 2010 Water System Master Plan* and *2004 Stormwater Master Plan*. There is an existing deficiency in a city water line along Ochoco Street that provides minor service to part of the Milwaukie North Industrial area. The deficiency is likely due to old pipes (pre-1960) with inadequate diameter (six inches or less). The *Water System Master Plan* indicates that upgrades to existing water lines (four and six-inch pipes) are planned throughout the Tacoma station area to improve peak hour water service and fire flow.

The *Stormwater Master Plan* also indicates two capital improvement projects (CIP) in the vicinity of the Tacoma station area. CIP 2 involves stormwater pipe improvements along SE 32nd Avenue at Meek Street, which is located at the southeast corner of the Project Study Area. The project will address flooding issues and will serve a drainage area of approximately 144 acres. CIP 15 will involve pipe replacement (roughly 300 feet) along Milport Road within the Project Study Area to address anticipated flooding issues. The project will serve a drainage area of approximately 35 acres.

2 2012-2016 Consolidated Plan for Housing and Community Development, Clackamas County Department of Community Development, Draft March 2012. Website: http://www.clackamas.us/docs/cd/conplanmain.pdf

3: Transportation Conditions, Opportunities and Constraints

This section documents baseline and future transportation conditions in the Tacoma station area of the Portland-Milwaukie Light Rail (PMLR) project. Included in this section are transportation inventories, previously documented gaps and deficiencies in the transportation network, and other data related to the station area for the following scenarios:

- Existing transportation system
- Future transportation system with Tacoma Station and Portland-Milwaukie light rail configuration (2030 conditions)

In addition, this section identifies the station area's vehicle trip threshold under existing zoning, establishing the maximum number of trips that would be allowed without requiring transportation mitigations. The study area for this transportation assessment is generally the same as the Project Study Area described in Section 1 and in some cases also includes the larger station area half-mile radius. The transportation study area also includes the following intersections:

- SE McLoughlin Boulevard/SE Tacoma Street Interchange NB and SB Ramps
- SE McLoughlin Boulevard/SE Ochoco Street
- SE McLoughlin Boulevard/SE Moores Street
- Main Street/SE Ochoco Street
- SE McLoughlin Boulevard Loop/ SE Ochoco Street
- SE McLoughlin Boulevard Loop/ SE West Frontage Road
- Main Street/ SE Mailwell Street
- Main Street/ SE Milport Road
- SE McLoughlin Boulevard/ SE Milport Road
- SE West Frontage Road/ SE Milport Road
- SE Main Street/SE McLoughlin Boulevard Pull Off
- SE 21st Avenue/ SE Harrison Street
- SE Main Street/ SE Harrison Street
- SE McLoughlin Boulevard/Harrison Street
- SE 32nd Avenue/ SE Johnson Creek Boulevard

This section is a summary of the *Tacoma Station Area Plan Transportation Conditions, Opportunities and Constraints Report* (TCOC report) prepared by DKS Associates on May 31, 2012. The TCOC report contains a more detailed transportation analysis including traffic counts and other data and is available in its entirety in Appendix A.

Existing Transportation Conditions

Roadways

Table 3 summarizes motorized and non-motorized functional classifications for key roadways within and near the study area. The functional classification provides data from the City of Milwaukie, Clackamas County, Metro and the Oregon Department of Transportation (ODOT) for standards, operational expectations, and street design, and establishes the basis for access control.

Table 3. Roadway Functional Classifications

Roadway	Bicycle	Pedestrian	Transit	Freight	Motor Vehicle	Design
ODOT						
SE McLoughlin Blvd (Sub Area Ca)	No classification	No classification	No classification	Freight route	Statewide highway	
SE McLoughlin Blvd (Sub Area Db)	Existing and proposed bike lanes	No classification	No classification	Truck/Freight route	District highway	STA
Metro						
SE McLoughlin Blvd	Regional access	Transit/mixed-use corridor	Potential light rail or rapid bus/Potential commuter rail	Main roadway route	Principal arterial	
SE Main Street (Sub Area D)	Regional corridor (on-street)¬¬ Regional access	(highway) Major arterial Pedestrian district	Highway/Regional boulevard No classification	Urban center area	Minor arterial	No classification
SE Main Street (Sub Area C)	Regional access	Pedestrian district	No classification	Urban center area	Minor arterial	No classification
SE Tacoma Street/ Johnson Creek Boulevard	Regional corridor	Transit/mixed use corridor	Regional bus	No classification	No classification	Regional street
SE Ochoco Street	No classification	Pedestrian district	No classification	Urban center area	No classification	No classification
SE Harrison Street	Regional access	Pedestrian district	Regional bus	Urban center area	Minor arterial	Community boulevard
SE Milport Road	No classification	Pedestrian district	No classification	Urban center area	No classification	No classification
Clackamas County						
SE McLoughlin Blvd	Proposed bikeway	No classification	High capacity transit	Freight route	Major arterial	Freeway/Regional Boulevard/Regional street
SE Main Street	No classification	No classification	Primary bus	No classification	Collector	Community boulevard
SE Harrison Street	Proposed bikeway	No classification	No classification	No classification	Minor arterial	Community boulevard
SE 17th Avenue	City bikeway	City walkway	Community transit street	Freight district (north of McLoughlin)	Neighborhood collector street (north of McLoughlin)	Community main street
SE Tacoma Street/ SE Johnson Creek Boulevard	City bikeway	City walkway	Transit access street	Minor truck street (west of McLoughlin)	District collector street	Community corridor
SE Harney Drive	City bikeway	City walkway	Transit access street	Minor truck street	Neighborhood collector street	No classification

Roadway	Bicycle	Pedestrian	Transit	Freight	Motor Vehicle	Design
City of Milwaukie						
SE McLoughlin Blvd	Existing and proposed bikeways network	Existing and proposed walkway	Transit route and potential light rail or rapid bus/Potential commuter rail	Major regional truck route	Arterial	Arterial
SE Main Street (Sub Area D)	Existing and proposed bikeways network	Existing walkway	No classification	No classification	Collector	Collector
SE Main Street (Sub Area C)	Proposed bikeways network	Existing walkway	Transit Route	Industrial area	Collector	Collector
SE Harrison Street	Existing and proposed bikeways network	Existing walkway	Transit route	Minor preferred truck (local)	Arterial	Arterial
SE 17th Avenue	Existing bikeways network/ Proposed Bikeways network	Proposed walkway	Transit Route	Minor preferred (local)	Arterial	Arterial
SE Ochoco Street	No classification	Existing walkway/ Proposed walkway	Transit Route	Industrial area	Collector	Collector
SE Milport Road	Existing bikeways network/ Proposed Bikeways network	Proposed walkway	Transit Route	Industrial area	Local industrial	Local industrial
SE 32nd Avenue	No classification	Existing walkway	Transit Route	No classification	Collector	Collector
SE 42nd Avenue	Existing bikeways network/ Proposed Bikeways network	Existing walkway	No classification	No classification	Collector	Collector
SE Johnson Creek Boulevard	Existing bikeways network/ Proposed Bikeways network	Existing walkway	Transit Route	Weight restricted minor preferred (local)	Collector	Collector
SE 21st Avenue	Existing and proposed bikeways network	Existing walkway	Transit route	No classification	Arterial	Arterial

Note: ODOT functional classification as shown in the *1999 Oregon Highway Plan*, January 2006.

Metro functional classification as shown in the *2004 Metro Regional Transportation Plan, July 8, 2004*.

Clackamas County functional classification as shown in the *Clackamas County Comprehensive Plan*, last updated January 6, 2005.

City of Milwaukie functional classification as shown in the *City Milwaukie Transportation System Plan*, Adopted Ord. #1975 December 4, 2007

NHS = Federal Highway Administrations (FHWA) classification of National Highway System.

[a] Sub Area C includes the area south of SE Tacoma Street and north of Highway 224

[b] Sub Area D includes the area south of Highway 224 and north of SE Park Avenue

Freight Operations

SE McLoughlin Boulevard is classified as a Regional Truckway, and SE Tacoma Street and SE 17th Avenue are classified as Truck Access Streets by the City of Portland TSP.[3] SE Johnson Creek Boulevard is identified in the City of Milwaukie TSP as a weight restricted local freight route[4]. During the PM peak hour (4:30 to 5:30 p.m.), truck activity along SE McLoughlin Boulevard generally makes up 2 to 3 percent of all vehicle trips (120 to 190 heavy vehicles). The activity along the side streets in this area varies between 1 and 21 percent (10 to 50 heavy vehicles) during the same time period. The intersection of SE McLoughlin Boulevard/SE Ochoco Street had the highest freight activity with nearly 200 heavy vehicles entering the intersection during the PM peak hour. SE Main Street carries about 25 heavy vehicles north of SE Milport Road during the PM peak hour.

The Union Pacific Railroad also has an active rail line that runs through the study area. Grade separated crossings in the study area occur at SE Tacoma Street (east of SE McLoughlin Boulevard), Highway 224 (east of Highway 99W), and the Springwater Trail.

There are a number of rail spurs from the Union Pacific Railroad Tillamook Branch line that currently service existing industrial land uses in the north Milwaukie area, particularly between SE Beta Street and SE Mailwell Street, and between SE Mailwell Street and SE Hana Harvester Drive. This branch line has an un-gated crossing at SE Mailwell Street and operates approximately three trains per day.[5]

Bicycle Facilities and Activity

SE McLoughlin Boulevard, SE 17th Avenue and parts of SE Tacoma Street are classified as City Bikeways by the City of Portland.[6] SE Milport Road and Highway 224 are classified as shared facilities for bicyclists. SE Tacoma Street has bike lanes within the study area, except for a short section east of SE 17th Avenue and east of SE McLoughlin Boulevard where gaps exist. SE 17th Avenue has no bike lanes within the City of Portland. Within the City of Milwaukie, SE 17th Avenue has bike lanes, but a few gaps are present near Highway 224 and SE McLoughlin Boulevard.

The City of Milwaukie's TSP identifies proposed bike lanes along SE Main Street and recommends filling in the missing gaps along SE 17th Avenue in this study area.[7] This project will construct a multi-use regional trail on the west side of SE 17th Avenue within the existing 60-foot right-of-way between the SE Harrison Street/SE McLoughlin Boulevard intersection and SE Ochoco Street in the City of Milwaukie. This facility will connect two significant regional trails: the Trolley Trail to the south, and the Springwater Trail to the north. The proposed cross-section will include two 11-foot vehicle lanes, two five-foot bike lanes, and a separate 11 to 12 foot multi-use path along the western edge of the right-of-way.

SE Main Street, SE Johnson Creek Boulevard and SE Harney Drive have bike lanes within the study area. SE 42nd Avenue has a shared facility between SE Johnson Creek Boulevard and SE Filbert Street and bike lanes south of SE Filbert Street.

At the north end of the study area, the Springwater Trail multi-use path traverses the study area east to west, connecting the City of Portland to the City of Gresham through the City of Milwaukie and Clackamas County. One existing access point on the north side of the trail connects via a steep ramp to the sidewalk on the eastern side of SE McLoughlin Boulevard. Figure 10 displays the existing bicycle network within the study area as previously identified in the South Corridor Final Environmental Impact Statement process. Additional (though substandard) bicycle connections exist on SE Main Street, SE 29th Avenue, and SE 17th Avenue.

3 City of Portland Transportation System Plan: 2006 Technical Update, Map 6.38.5
4 City of Milwaukie Transportation System Plan, 2007 Update, Figure 9-1
5 City of Milwaukie Transportation System Plan (December 2007), Chapter 3, Figure 3-15, page 3-43.
6 City of Portland Transportation System Plan: 2006 Technical Update, Map 6.38.3.
7 City of Milwaukie Transportation System Plan, 2007 Update, Figure 6-1, 2007.

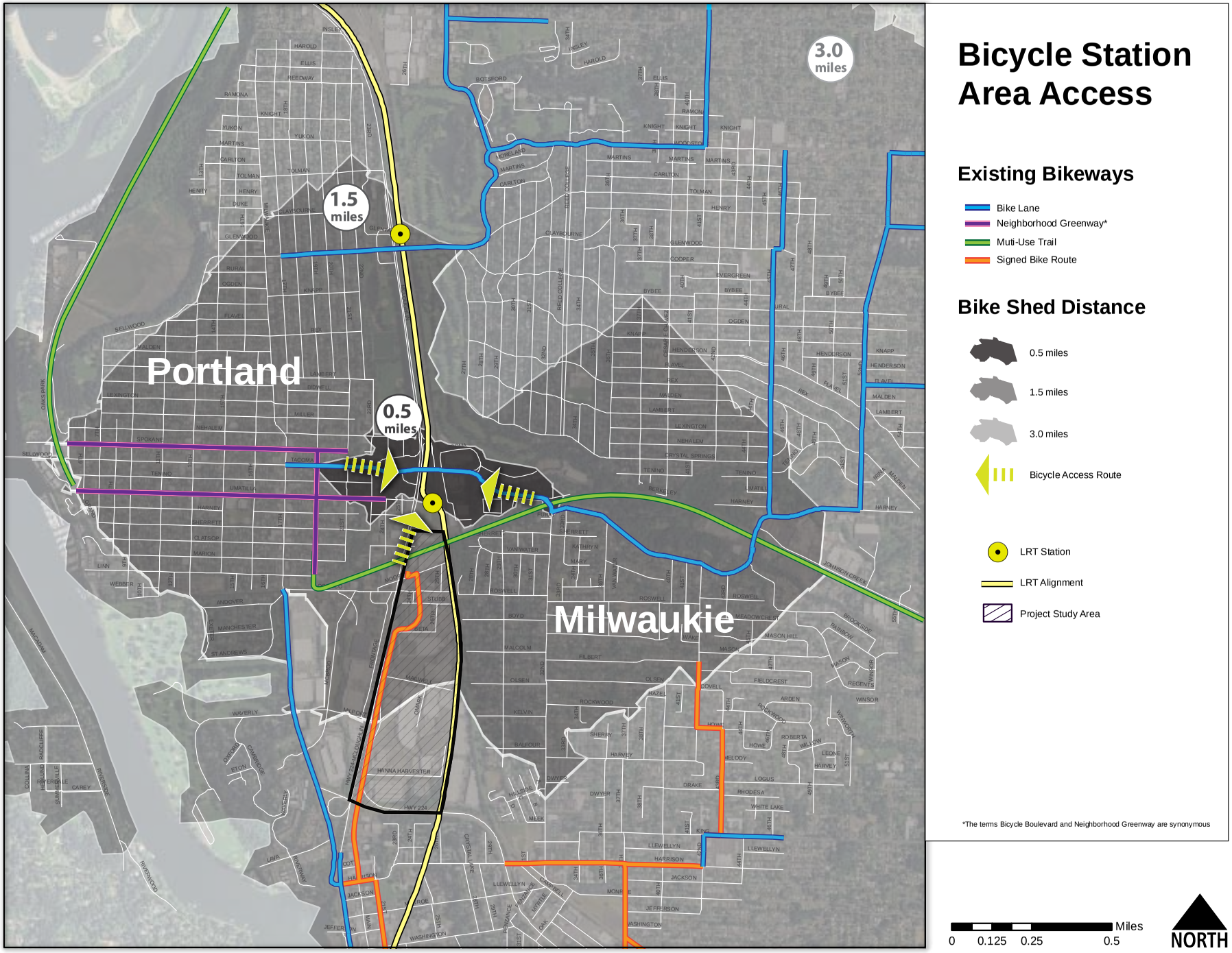


FIgure 10. Existing Station Area Bicycle Access

Bicycle access from downtown Milwaukie to existing transit lines on SE McLoughlin Boulevard is provided via the SE Main Street signed bike route. However, this route may not be comfortable for many bicyclists because it does not include separated bikeway facilities and motor vehicles are commonly parked in the striped wide shoulder. Bicyclists heading west from Milwaukie, or east from Sellwood, are able to use the existing bike lane on SE Tacoma Street or the Springwater Corridor to reach the bus lines operating on SE McLoughlin Boulevard.

Bicycle parking at the existing Milwaukie Park and Ride on SE Main at SE Milport is reported as inadequate in the Milwaukie TSP. TriMet currently plans to remedy the lack of available long-term bike parking with four new bike lockers at an adjacent northbound bus stop. The new Tacoma Station is planned to include a secure enclosure with long-term parking space for 74 bicycles. An additional 22 covered and 12 uncovered bike parking spaces will also be available.

The SE Tacoma Street bike lanes provide good access to the station area for bicyclists traveling from Sellwood and Milwaukie. Existing neighborhood greenways on SE Spokane Street, SE Umatilla Street, and SE 19th Avenue offer a low stress bike route from the Sellwood neighborhood to the bike lane on SE Tacoma Street. The planned bicycle boulevard along SE 32nd Avenue in Milwaukie will help direct bicyclists to the Springwater Trail, which will connect to the future LRT station just north of the trail.

Pedestrian Facilities and Activity

Pedestrian trips were counted and compiled for the AM and PM peak hours at the same intersections evaluated for vehicle traffic. The intersection of SE Johnson Creek Boulevard and SE 42nd Avenue had the highest level of pedestrian activity (six pedestrian crossings) during the AM peak hour. The other study area intersections had five or fewer pedestrian crossings during the AM peak hour. During the PM peak hour, the highest level of activity (nine pedestrian crossings) was observed at the northbound ramps at the intersection of SE Tacoma Street and SE McLoughlin Boulevard. The other study area intersections had five or fewer pedestrian crossings during the PM peak hour.

Within the study area, pedestrian connectivity is currently limited, with nearly all of the area's sidewalks provided on SE Main Street and connecting streets to the west. Where sidewalks are present they generally range in width from five to ten feet. SE Main Street has a curb-tight sidewalk, with no trees or other buffer, along its east side only from the Highway 224 underpass north to SE Beta Street, with no sidewalk on the west side. From SE Beta Street north to SE Moores Street, SE Main Street has sidewalk on both sides. SE Moores Street and SE Ochoco Street feature sidewalks on both sides of the street, providing an east-west pedestrian connection between SE McLoughlin Boulevard and SE Main Street.

SE Ochoco Street also has sidewalks along its north side from SE Main Street to SE 25th Avenue. Other streets running east-west from SE Main Street to the UPRR tracks, including SE Beta Street and SE Mailwell Drive, do not have sidewalks. SE Hanna Harvester Drive has short segments of sidewalk on a few parcel frontages, but these are interspersed with long gaps of unimproved roadway.

Pedestrian access from the Sellwood neighborhood west of SE McLoughlin Boulevard is hampered by long crossing distances (sometimes over 100 feet). Long crossing distances on SE McLoughlin Blvd at SE Ochoco Street and SE Waverly Drive pose a significant challenge to users who require more time to cross the street, such as the elderly, disabled, and people with children. The Union Pacific Railroad (UPRR) tracks running along the east edge of the study area forms a continuous barrier for Milwaukie neighborhoods to the east. Residents in this area can only access transit accessing the Springwater Trail and using the ramp to backtrack to SE McLoughlin Boulevard or SE Main Street, or by taking the most direct route, which is to unsafely trespass across the UPRR tracks. However, these residents may also rely on the bus route 75, which operates on nearby SE 32nd Avenue.

Figure 11, from the 2007 TSP update, shows the most current available map of pedestrian connectivity.

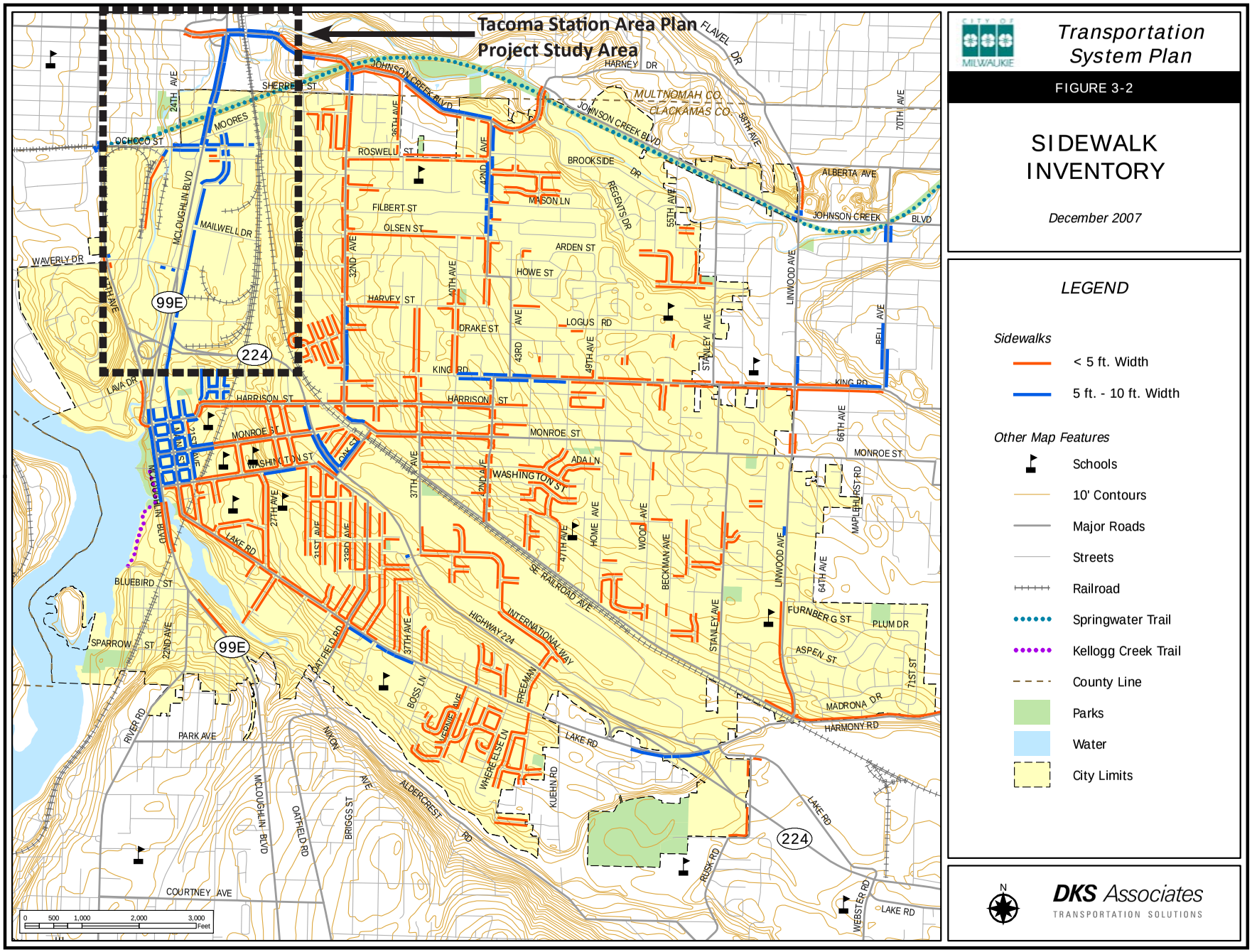


Figure 11. Milwaukie Sidewalk Kinventory (2007)

Transit System

The station area is currently served by eight TriMet bus routes. This includes the lines in operation on SE Main Street and SE McLoughlin Boulevard (TriMet bus routes 31, 32 and high-frequency service line 33). Some of these routes operate up to 20 hours of the day, with approximately 35 transit stops. Each day, there are approximately 1,100 boardings and 1,050 departures for an on/off ridership of approximately 2,150 trips. Table 3 summarizes the existing transit service for this study area.

Two measures are used to describe transit level of service (LOS). The first is headways (time between bus arrivals), and the second is hours of bus operation during the day. The station area (depending on route) has headways that range from 10 minutes (LOS B) to 60 minutes (LOS F), while the hours of service range from as few as three hours (LOS F) for routes that only operate during the peak periods (express routes) up to routes that operate approximately 20 hours per day (LOS A).

The Milwaukie Transportation System Plan (2007) states, "Certain bus stops are perceived as unsafe, either because of their proximity to unpleasant site or traffic conditions, isolated location, low ridership, lack of supporting nearby land uses, or neglected physical condition." The conditions described in this statement are present in the study area. Wide surface parking lots, large building setbacks, industrial land uses, and proximity to high speed, high volume streets at transit stops do not promote a safe and comfortable atmosphere. Information about planned future service in the area is found on pages 38-39.

Vehicle Paths and Mode Split

In order to calculate vehicle trips to and from the study area for 2010, Metro's transportation analysis zones (TAZs) 664, 665, and 667 were selected because they generally represent the station area. The travel distance for all trips for which the origin or destination included one of these TAZs were combined to arrive at an estimate of vehicle miles traveled (VMT). Using this approach, vehicle trips to and from the study area during the two hour PM peak totaled **5,622** vehicle-miles of travel. The general paths of these trips are shown in Figure 12. The model estimates that most trips to and from the study area use Highway 99W, and a significant number of trips use King Road and Highway 224 to the east, and the Sellwood Bridge to the west.

The same three TAZs were analyzed to determine the proportion of trips to and from the study area made by various modes. Table 4 shows the Metro model's estimation of mode split for the study area.

Table 4. Metro Model Assumed Mode Splits

Mode	2010 Total Daily Trips	2010 Mode Split
Single Occupant Vehicle (SOV)	2,216	77%
2+ Occupant Vehicle (HOV)	527	18%
Transit	92	3%
Walk or Bike	61	2%
Source: Metro		

The model assumes a significant increase in the share of transit trips to and from the area between 2005 and 2035, reducing the share of SOV and HOV trips.

Operations

Operations analyses asses the ability of a street network to carry additional traffic or the quality of service provided by street facilities. Intersections are typically the controlling locations for traffic flow, and the ability of a roadway system to carry traffic efficiently is nearly always diminished at intersections.

The station area intersections fall within three jurisdictions (the City of Portland, the City of Milwaukie and ODOT) and two different standards for acceptable intersection operations are applied. The City of

Portland applies LOS D for signalized intersections and LOS E for the minor leg of unsignalized intersections under its Transportation System Plan.[8] The City of Milwaukie has an LOS D standard for all of its intersections. ODOT uses a volume to capacity (V/C) ratio as its performance measure rather than LOS.[9] For SE McLoughlin Boulevard (SE McLoughlin Boulevard), ODOT sets a threshold V/C ratio of 1.10[10].

Based on those criteria, all but two of the sub area intersections currently operate at acceptable levels of service during the AM and PM peak hours. The unsignalized intersections of SE Johnson Creek Boulevard/SE 32nd Avenue (all-way stop control) and SE Johnson Creek Boulevard/SE 42nd Avenue currently operate with LOS F during the AM peak hour. During the PM peak hour, the unsignalized intersection of SE Johnson Creek Boulevard/SE 32nd Avenue and the signalized intersection of SE Johnson Creek Boulevard/SE Harney Drive currently operate at LOS F.

Figure 12. Vehicle paths to and from the study area (2-hour p.m. peak)

8 Based on the City of Portland Transportation System Plan, LOS performance measures, section 11.13.
9 Based on the City of Milwaukie Transportation System Plan, Chapter 8 Auto Street Element.
10 Based on the 1999 Oregon Highway Plan, amended January, 2006.

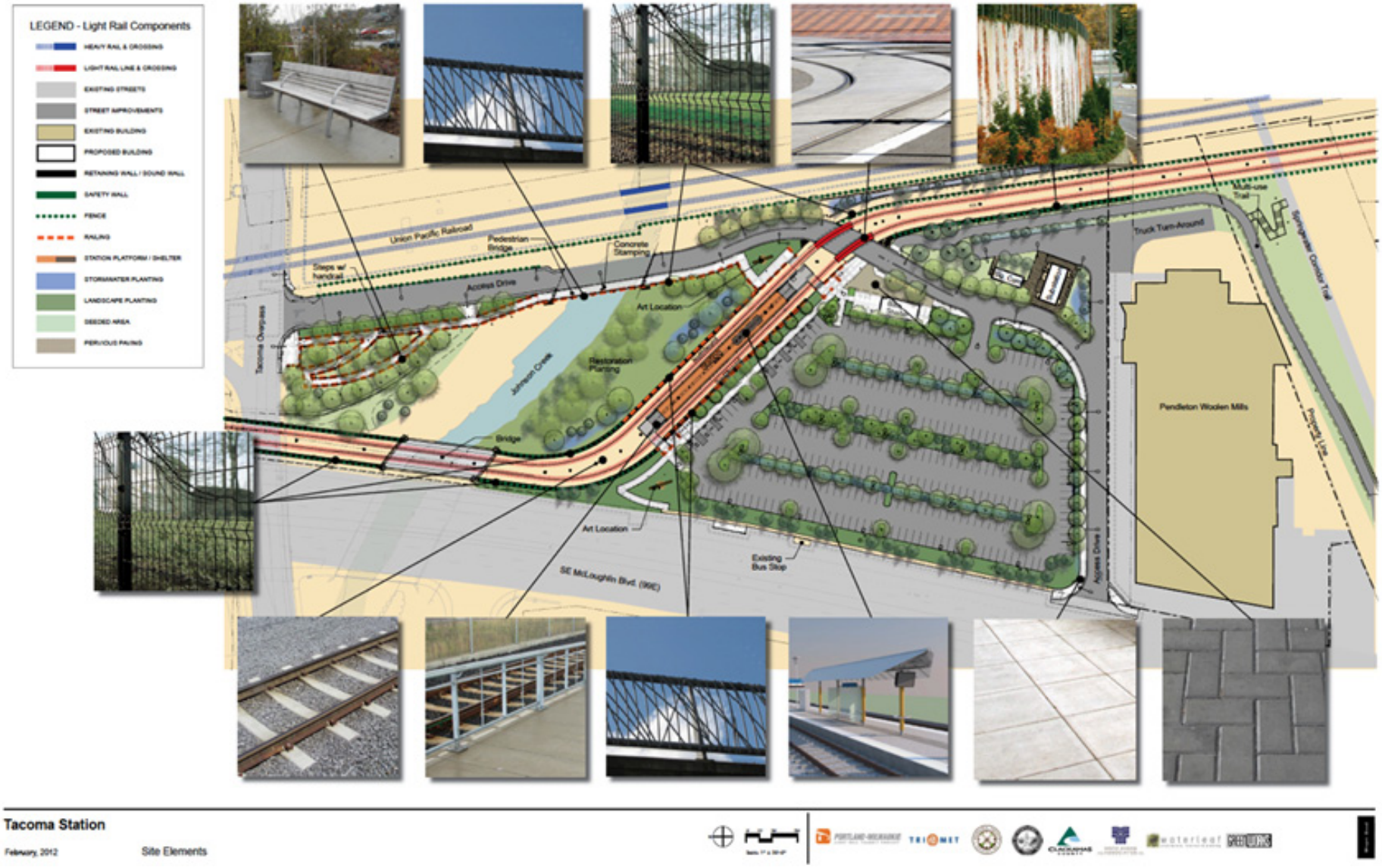


Figure 13. Tacoma Avenue Station Detail Plan

Baseline Conditions

This section describes the light rail alignment, stations, and park-and-ride options that comprise 2030 baseline conditions. The proposed alignment will be located within dedicated right-of-way between the SE Tacoma Street overpass and SE McLoughlin Boulevard, and follow SE McLoughlin Boulevard north/south crossing over (to the east) after the Tacoma station site to run on the east side of the existing Tillamook rail branch track. The alignment will cross over the existing Tillamook rail line via an overpass. The Tacoma Street Station (Figure 13) is the only planned station within the study area.

Tacoma Street Station and Park and Ride

The Tacoma Station park-and-ride includes two vehicular access points: a full access, existing signalized intersection at SE Tacoma Street, and an existing right-in/right-out access on SE McLoughlin Boulevard. The right-in/right-out access point on SE McLoughlin Boulevard is proposed to be a right-in access only, with right-out for emergency vehicles, as well as vehicles from the Pendleton Woolen Mills site. The Pendleton Woolen Mills property, north of the Springwater Trail, has two accesses onto Highway 99E. Both accesses are private, and both are permitted. The future light rail station will have a shared access with Pendleton Woolen Mills, and TriMet has all the necessary permits for this shared access.

Conversion of the access to a right-in-only for motor vehicles minimizes weaving and safety concerns along SE McLoughlin Boulevard within the interchange area. The SE McLoughlin Boulevard access point is 1,375 feet south of the northbound ramps from SE Tacoma Street and 1,100 feet north of the SE Ochoco Street intersection. Tacoma Station site elements, including accesses, are shown in Figure 14.

TriMet's Tacoma Street Station park-and-ride (to be constructed as part of the 2014 PMLR project) will be a 320-space facility and will generate approximately 225 PM peak hour vehicle trips (65 in, 160 out).

Assumed Projects

Mitigation projects within the study area that are assumed with the construction of PMLR include:

- **Tacoma Park-and-Ride south access** – Consolidate business accesses south of park-and-ride (two Pendleton Woolen Mills driveways) with access road. Only allow right-in operations to minimize effects of weaving on SE McLoughlin Boulevard.
- **SE Tacoma St./SE McLoughlin Blvd. SB Off-Ramp** – (1) Restripe for dual stage left turn onto SE Tacoma St. or (2) Modify interchange and signalize intersection or (3) Do nothing and seek a design exception.
- **SE Tacoma St./SE McLoughlin Blvd. NB On /Off- Ramp** - Restripe SE Tacoma Street between park-and-ride access and SE Tenino Drive as two separate left turn lanes, providing increased vehicle queue storage. Seek design exception to allow for operations over 0.85 V/C ratio rather than widen SE Tacoma Street to meet standards.
- **SE Johnson Creek Blvd./SE 32nd Ave** - Add westbound right-turn pocket of 100 feet and signalize intersection.
- **SE 17th Street Sidewalk and Bike Lane improvements** - This project will construct a multi-use regional trail on the west side of SE 17th Avenue within the existing 60-foot right-of-way between the SE Harrison Street/SE McLoughlin Boulevard intersection and SE Ochoco Street in the City of Milwaukie. More information about this project is provided on page 28.

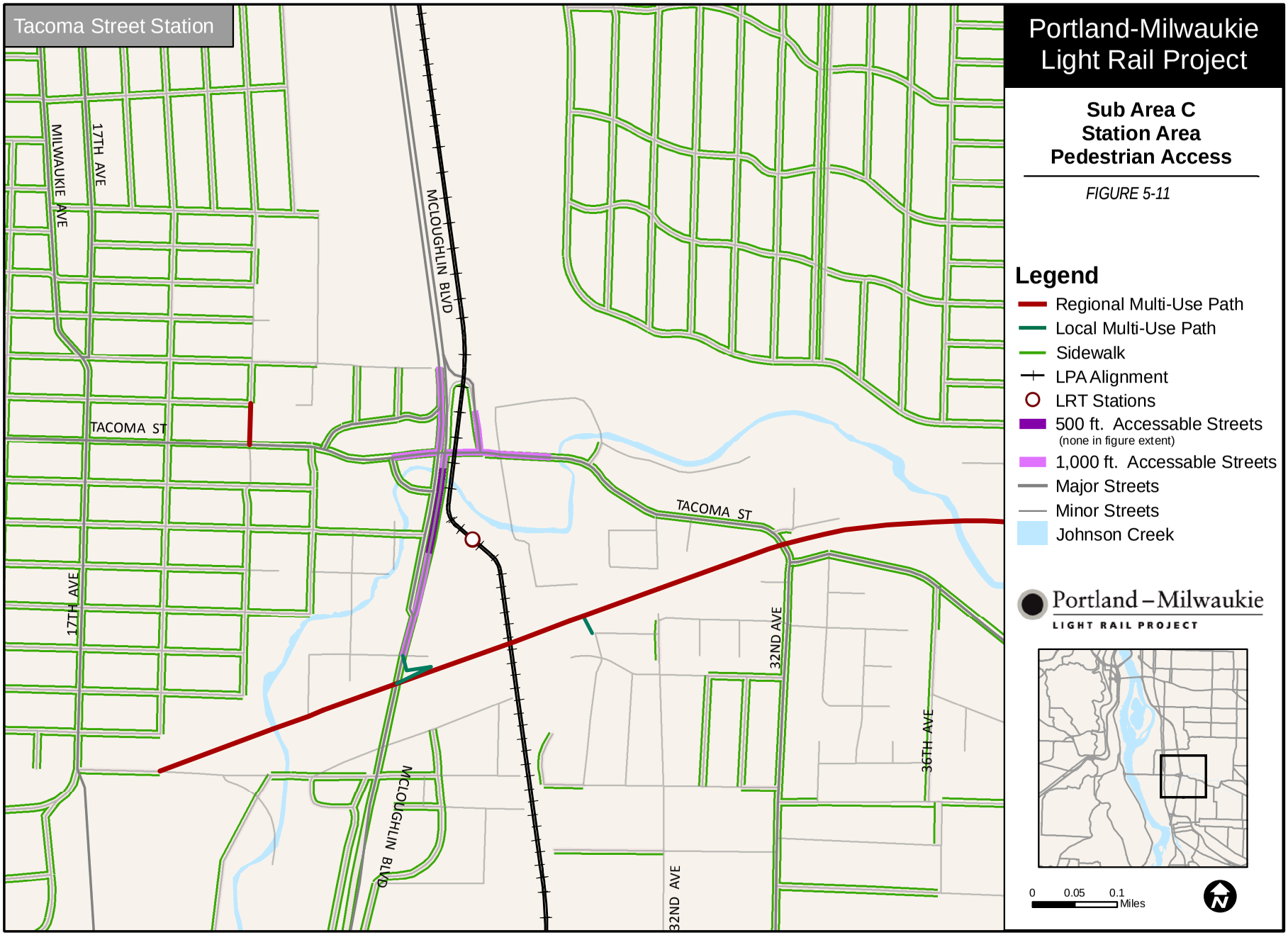
Also, an ODOT restriping project scheduled for summer 2012 will change lane configurations on southbound SE McLoughlin Boulevard near the Tacoma Street interchange. It will shift the start of the third southbound travel lane so it begins at the Tacoma Street on-ramp rather than at Nehalem Street, allowing a dedicated lane for drivers entering from SE McLoughlin from the Tacoma Street ramp. The project will also add a raised pedestrian refuge island at the southbound Tacoma Street ramp.

A project to construct stairs near the Union Pacific rail tracks from the Springwater Trail down to the Tacoma Station area was not included as part of final design for the project. However, the City of Portland continues to pursue potential funding for this project element.

Pedestrian Connectivity

Transit stations generally draw 75 to 85 percent of their pedestrian trips from an area 1/3 of a mile in all directions for the station entrances[11]. Improving connectivity within this catchment area provides potential connectivity for pedestrians. There are only a handful of residential properties within 1/3 of a mile of the station. However, outside this distance, there are several neighborhoods that could access the station from the existing sidewalk network. Figure 14 shows the current and planned provision of sidewalks within approximately 1,000 feet and 500 feet walking distances from the transit stations in this sub area. The sidewalk network is well developed in the station vicinity. However, due to the presence of SE McLoughlin Boulevard to the west of the station and railroad tracks to the east, pedestrian access from the surrounding neighborhoods to either station is limited to SE Tacoma Street and the Springwater multi-use trail. Pedestrian facilities along the Tacoma Street access road currently do not exist, although sidewalks along this ramp are planned as part of the project. Alternately, ramp access to the station is available via the northern leg of this intersection and SE McLoughlin Boulevard northbound on/off-ramp.

The most difficult roadway for pedestrians to safely cross is McLoughlin Boulevard, with high volumes of vehicles travelling at high speeds. It is also a very long crossing that requires pedestrians to cross three to five lanes in each direction. A shared-use overcrossing for the Springwater Trail provides a more comfortable, safer location for pedestrians wishing to cross McLoughlin Boulevard near Ochoco Street.



Source: TriMet & Metro

Figure 14. Station Area Pedestrian Access

Bicycle Connectivity

For this analysis, an approximately 1/3-mile access area surrounding the proposed station was analyzed for bicycle access.

SE Tacoma Street has bike lanes within the sub area, except for a short section east of SE 17th Avenue and second section east of SE McLoughlin Boulevard, where gaps exist. SE 17th Avenue has no bike lanes within the City of Portland. Within the City of Milwaukie, 17th Avenue has bike lanes, but a few gaps are present. The City of Milwaukie's TSP has proposed to build bike lanes along their section of SE 17th Avenue[12], and the City was awarded an MTIP grant in 2012 to design and construct the project. SE Main Street in the study area has bike lanes between downtown Milwaukie on the south and SE Moores Street, near the Springwater Trail, on the north. A connection between the station and the bike lanes on SE Main Street would be needed for this to be a viable bicycle access route. The current connection between SE Main Street and the Springwater Trail features a tight switchback that is difficult to maneuver, and it relies on the east sidewalk of McLoughlin Boulevard between SE Moores Street and the trail access. The sightlines for cyclists in this section are obstructed by the fence and building located between the trail and Moores Street.

Utilizing existing bike facilities, the Tacoma Station would be serviced by bicycle lanes on SE Tacoma Street/ SE Johnson Creek Boulevard, and by the Springwater multi-use trail. The park and ride access roadway to the Tacoma Station from SE Tacoma Street (to the south) would provide direct access to the station as a shared bicycle and motor vehicle facility. Station access could also be provided along SE Main Street.

As part of the PMLR project, the Tacoma Station will include a 112-space bike-and-ride facility. This facility will provide secure parking, and is expected to take advantage of the Springwater Trail connection.

Future Transit Projects and Service

The light rail alternative analyzed in the FEIS assumes the following service characteristics through the study area:

- **LRT:** Light rail service between downtown Portland and the southern terminus station would operate weekdays between approximately 4:30 a.m. and 1:30 a.m., with headways (the frequency of service) of 7.5 minutes in the peak periods from 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m., and approximately 15 minutes in the off-peak periods in 2030. Opening year operations during the peak periods would have headways of 10 minutes and off-peak headways of 15 minutes. Some weekend or late-night service could be less frequent than 15 minutes.
- **Portland-Milwaukie Corridor Bus Transit Service:** The bus service on SE McLoughlin Boulevard north of Milwaukie, which is currently provided by lines #31 Estacada, #32 Oatfield, #33 McLoughlin, #41 Tacoma, and #99X McLoughlin Express, would be restructured to provide better coverage in the area and would no longer provide service north of Milwaukie. The line #32 Oatfield would terminate in Milwaukie, and line #99X McLoughlin Express would terminate at SE Milport Street. Line #31 Estacada would continue to run from Milwaukie, alternating between Damascus and Estacada, and would extend south from Milwaukie to Clackamas Community College to provide service currently provided by line #33 McLoughlin. Line #33 McLoughlin would be restructured to provide service between Milwaukie and Clackamas Community College. Headways on some corridor routes would be adjusted to meet estimated demand. Buses would likely serve all the light rail station locations.

Figure 15 shows these facilities; no other existing map of planned transit with the Project Study Area is available.

11 Information derived from Mode of Access and Catchment Areas of Rail Transit, prepared for the Transit Cooperative Research Program, Transportation Research board and the National Research Council, March 1996. The 1/3 mile radius from rail transit Stations would capture an 85% market share of the area for walking. That corresponds to 85% of the rail transit users at each Station would have walked to the transit station from 1/3 of a mile or less.

12 City of Milwaukie Transportation System Plan, 2007 Update, Figure 6-2, December, 2007

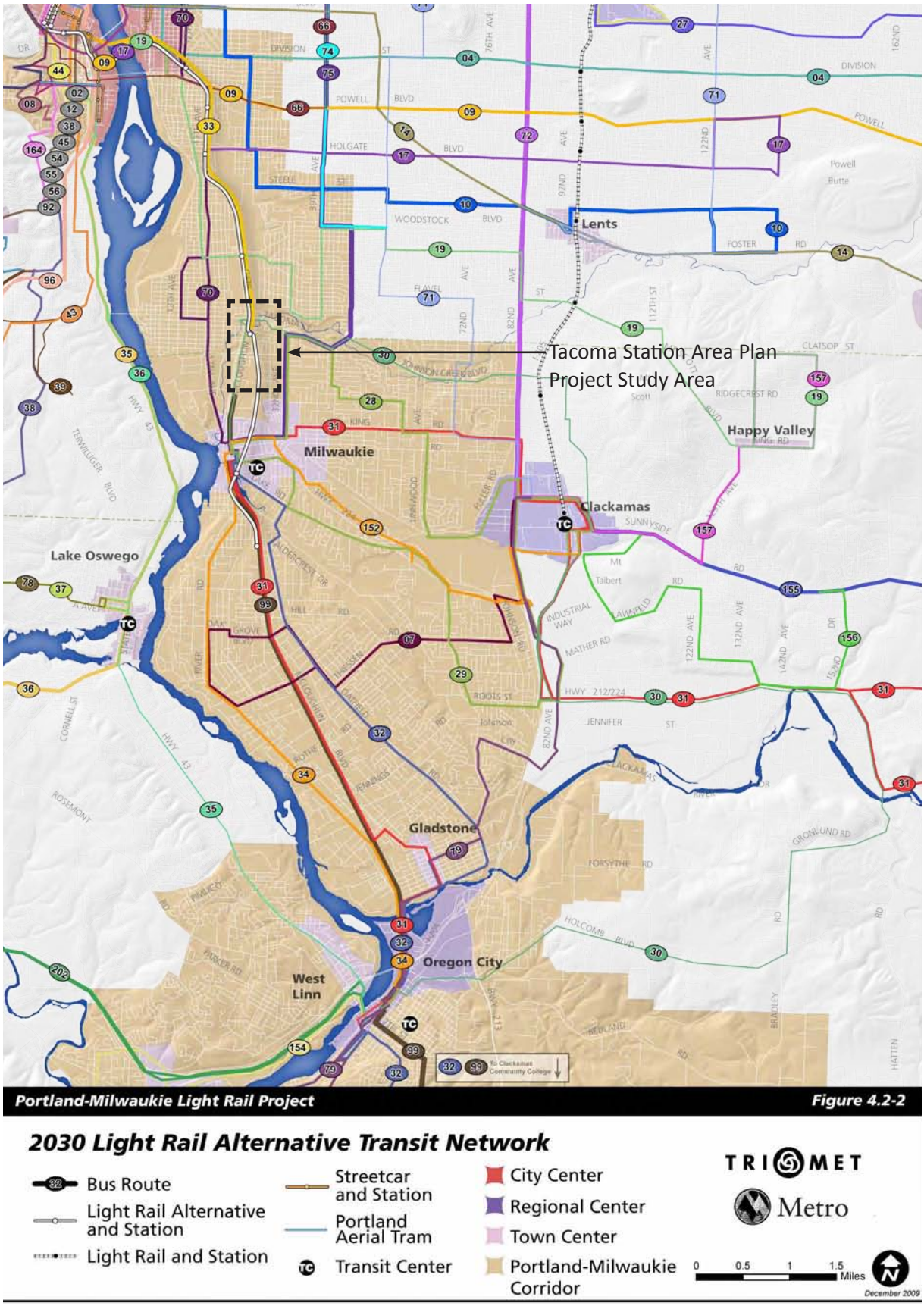


Figure 15. Portland-Milwaukie Light Rail Project map with planned transit routes

Intersection Operations

Under the baseline, three intersections within the station area would not operate within jurisdictional standards during the PM peak hour. Of these three intersections, only one, SE Johnson Creek Boulevard/SE 32nd Avenue, would require additional mitigation to allow for adequate operations during the AM peak hour. Another intersection, SE Tacoma Street/SE McLoughlin Boulevard southbound off-ramp, meets standards in the PM peak hour but not the AM peak hour. These intersections are discussed below.

SE Johnson Creek Boulevard/SE 32nd Avenue

Based on the future forecasts, the intersection of SE Johnson Creek Boulevard/SE 32nd Avenue (unsignalized) would not operate within jurisdictional standards during both the AM and PM peak hours. Signalization of this intersection, along with the construction of a westbound right turn lane, would allow for it to meet jurisdictional operational requirements.

SE Tacoma Street/SE McLoughlin Boulevard southbound off-ramp

Based on the future forecasts, the unsignalized intersection of SE Tacoma Street/SE McLoughlin Boulevard southbound off-ramp would not operate within jurisdictional standards during the AM peak hour. This intersection would not meet signal warrants; however, restriping SE Tacoma Street to allow for dual stage left turns onto the street would allow for adequate operations.

Alternately, constructing a signal at this intersection would allow it to operate within jurisdictional standards. This intersection, however, would not meet signal warrants with the current or projected traffic volume. Modifying the interchange to divert the southbound to eastbound traffic that currently uses the other Tacoma Street ramp would allow this intersection to meet signal preliminary warrants. A third option would be to do nothing and seek a design exception to allow this intersection to operate at a v/c ratio greater than 0.85.

SE Tacoma Street/SE McLoughlin Boulevard northbound on/off-ramp

This intersection could be improved with restriping and modifying the signal, including timing adjustments. Operationally, the most improvement would come from restriping the northern leg of the intersection to have separate left, through, and right turn lanes. However, due to the limiting size of the intersection, restriping could likely only include a combined southbound left/through lane, and a right turn lane. Signal modification to allow for protected/permissive left turns from Tacoma Street onto the ramp and into the park-and-ride would also improve operations. Finally, signal timing adjustments to reflect increased volumes related to background traffic and the park-and-ride garage would further improve the operations at this intersection. Alternately, a design exception could be sought to allow the intersection to operate with a v/c ratio greater than 0.85.

Build-Out Potential

This section describes the reasonable worst-case scenario for vehicle trips under the existing zoning in the Tacoma Station area (see Figure 2 for zoning designations). This establishes the trip threshold under current zoning that would require no mitigation without applying Transportation Planning Rule exceptions under TPR 660-012-0060.

Zoning and Assumed Land Uses

Within the City of Milwaukie, the project area for the Tacoma Station Area Plan is zoned Manufacturing (M). The M zone permits a combination of manufacturing, office, and/or commercial uses. To create a reasonable worst-case scenario, this analysis assigns the highest allowable percentage of floor area, based on Section 19.315 of the City's Zoning Ordinance[13], to the highest trip-generating uses. Table 5 shows two scenarios for proposed land use mix, with percentage allocations based on percent of leasable square feet, not percentage of site acreage:

Table 5. Land Use Mix Scenarios

Scenario 1	Scenario 2
25% Industrial	25% Industrial
65-70% Office	75% Office
5-10% Retail (supportive of primary uses)*	

* Not to exceed the allowable square footages on any parcel per Section 19.315

The Zoning Ordinance requires a minimum of 25 percent of every project consist of Industrial uses, as described under Subsection 19.315.1.B. Both scenarios allocate the maximum amount of land allowed to non-Industrial uses, in or order to create a worst-case scenario. Scenario 2 assumes that any retail is accessory to a permitted office use.

Buildable Acreage

The analysis for reasonable worst-case scenario assumes reductions in buildable lands for significant historic resources and for right-of-way needed for roadway and rail infrastructure.

- 25 percent of the study area is assumed to be devoted to roadway or other infrastructure. Because the project area also includes freight rail spurs, the right-of-way for all existing roadway and rail infrastructure was measured to see if the existing amount of infrastructure is greater than the 25 percent assumption. Measurement showed that existing right-of-way takes up about 20.5 percent (about 23 out of 112 acres) of the study area, so the 25 percent figure will be deducted from the gross acreage to determine the net buildable acreage. This 25 percent figure does not include the landscaping or setback requirements of Zone M.
- Within the station area, a designated Significant Historic Resource, covering approximately 4.5 acres, exists along SE McLoughlin Boulevard between SE Stubb Street and SE Beta Street. This area is not included as part of the Zone M calculations described in this memorandum for a reasonable worst-case scenario, but can be added back as office or retail use, as needed.

Given these considerations, the net buildable acreage is derived as shown in Table 6.

Table 6. Buildable Acreage Calculation

	Acres
Study Area Gross Acreage	111.73
25% Right-of-Way Assumption	(27.93)
Significant Historic Resource	(4.49)
Net Buildable Acreage	79.31

Source: DKS Associates, 2012

13 Milwaukie Municipal Code, Title19

FAR Assumptions

For trip generation purposes, Floor Area Ratio (FAR) refers to total floor area of the structures on a parcel expressed as a percentage of the parcel area. For example, a two-story building with two floors of 3,000 square feet each on a 10,000 square foot lot would have a FAR of:

$$\frac{2 \times 3000}{10{,}000} = 0.6$$

The reasonable worst-case analysis relies on observed FARs for areas with comparable uses and locations within the Portland Region[14]. The analysis uses the following FARs for the assumed land uses, with comparable areas noted:

- Manufacturing: 0.20 (Rivergate Industrial Area, 0.21)
- Office: 0.35 (Tigard Employment Area, 0.33)
- Retail: 0.25 (Division Main Street, 0.26)

When applied to the buildable acreage with leasable square footage in the proportions shown in Table 7, the following square footage totals are derived:

Table 7. Leasable Square Feet by Land Use

Scenario 1	Area (1000 sf)	**Scenario 2**	Area (1000 sf)
Industrial	248.2	Industrial	254.6
Office	670.2	Office	763.8
Retail	74.4		
TOTAL	**992.9**	**TOTAL**	**1,018.2**

14 Metro Employment Density Study, 1999

Land Uses - Institute of Transportation Engineers (ITE) Codes

The following ITE codes were used for estimating reasonable worst-case trip generation for each of the land uses.[15] Trip rates reflect the p.m. peak hour of adjacent street traffic, including General Office, for which the peak hour of the trip generator coincides with the peak hour of adjacent street traffic.

- Manufacturing. ITE Code 110, Light Industrial, 0.97 p.m. peak hour trips per KSF
- Office. ITE Code 710, General Office, 1.49 p.m. peak hour trips per KSF
- Retail. Split between two uses. ITE Code 932, Sit-Down Restaurant, 11.15 p.m. peak hour trips per KSF; ITE Code 492, Health/Fitness Club, 3.53 p.m. peak hour trips per KSF

The General Office (710) use meets ITE guidelines for using the given fitted curve equation rather than rates. All other land uses relied on rates per 1,000 square feet. For the Sit-Down Restaurant (932) use, it is appropriate to apply a reduction for "pass-by" trips (trips attracting motorists who are already on the street). This reduction applied for this land use is 43 percent.[16] Final p.m. peak hour trip generation is shown in Table 8.

Table 8. P.M. Peak Hour Trip Generation

Scenario 1	PM Peak Hour Trips	Scenario 2	PM Peak Hour Trips
Light Industrial	240	Light Industrial	247
General Office	830	General Office	934
Sit-Down Restaurant	237		
Health/Fitness Club	132		
TOTAL	**1,439**	**TOTAL**	**1,181**

15 Trip Generation: An ITE Informational Report. 8th Edition. Institute of Transportation Engineers, 2008.
16 Trip Generation Handbook, Second Edition. Institute of Transportation Engineers, 2004.

4: Opportunities and Constraints

Overview of Opportunities and Constraints related to Land Use, Transportation, and Redevelopment

Following is a map (Figure 16) and summary of opportunities and constraints within both the Project Study Area and larger station area related to transportation (vehicular capacity, safety and access, including transit access) and land use. Opportunities and constraints related to bicycle and pedestrian access and travel are summarized separately following this section.

Transportation and Access

Vehicular access into the station area is somewhat limited, and as such, presents a constraint for future redevelopment of the site. Travelling southbound on McLoughlin, vehicles may access the future Tri Met park and ride from Tacoma Street. However, because the Springwater Trail physically separates this northern portion of the site from the remainder of the station area, vehicles cannot access the majority of the station area from the Tacoma Street entrance. Instead, vehicles must continue travelling southbound on McLoughlin, beyond the Springwater Trail. However, because there are no opportunities for left turn movements for southbound vehicles along McLoughlin Blvd, drivers wishing to access the station area must do so following a somewhat circuitous route. Southbound vehicles must turn right from McLoughlin onto Ochoco Street in order to access the frontage road along the western edge of McLoughlin Blvd. From there vehicles may either travel southbound on the frontage road and then cross McLoughlin and enter the station area via Milport Road, or they may enter the station area by looping onto Ochoco Street eastbound. Another option for southbound vehicles is to completely pass the station area, turn left into Downtown at SE Harrison, and then travel north on Main Street.

Northbound vehicular access along McLoughlin Blvd is less constrained. Right turn movements are not permitted at Milport Road, one of the two signalized intersections along McLoughlin Blvd. However, right turn movements are permitted at Ochoco St., the other signalized intersection along McLoughlin, as well as at SE Moores Street. As the signalized intersection with the greatest degree of access, Ochoco St. may ultimately serve as the primary access into the station area from McLoughlin, and there is an opportunity to create a gateway experience at this location (particularly as two of the three Opportunity Sites lie adjacent to or very near this entrance point).

Physical Conditions and Land Use

Generally speaking, the station area is surrounded by substantial physical barriers, disconnecting it somewhat from the surrounding neighborhoods and commercial and employment areas. The southern boundary of the station area lies along Highway 224, which separates the site from Downtown Milwaukie to the south. The only connection into the station area from the south is Main Street. Despite this constraint, the Main Street access does provide an opportunity to create a strong multi-modal linkage between Downtown and the station area, potentially allowing the station area to capitalize off of the energy of the Downtown. However, the jersey barriers currently separating Main Street from McLoughlin Blvd. do not at present create a strong “sense of place” at this key gateway into the station area, and there may be an opportunity to improve this boundary condition and provide some aesthetic enhancements along this edge.

The eastern boundary of the station area lies along the existing Union Pacific rail line. Though a large single-family neighborhood lies to the east of this rail corridor, there are no vehicular connections (other than Tacoma St.) crossing the railroad tracks to access the site. Despite the physical constraint presented by the railroad tracks, the active Union Pacific freight rail line provides an opportunity for current and future industrial users.

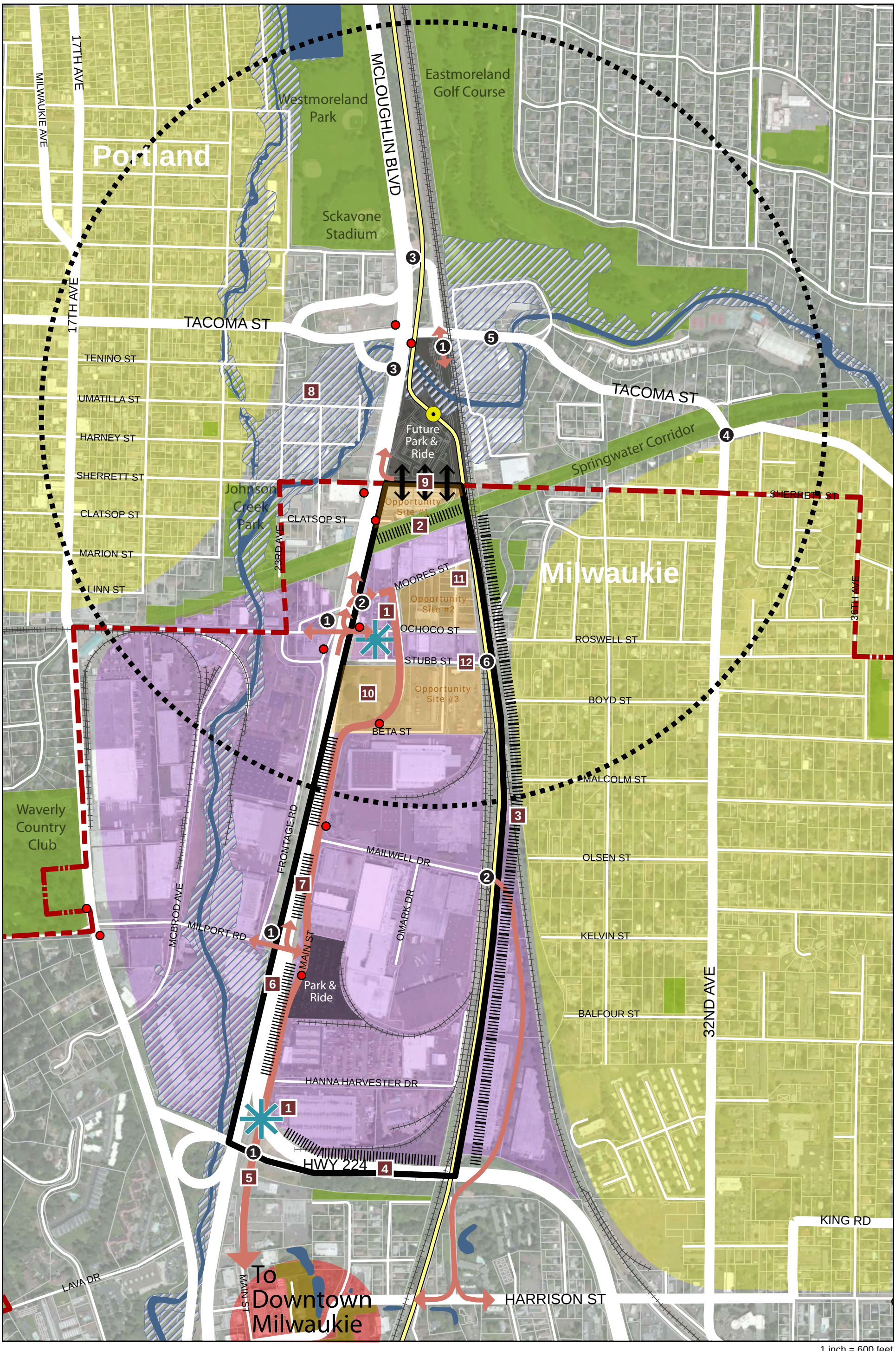
McLoughlin Blvd., which forms the western boundary of the station area, also presents a physical barrier and limits opportunities to connect the station area with the industrial and residential areas to the west. There

are existing east/west connections at the signalized intersections at Ochoco Street and Milport Road, and while these intersections do provide opportunities for vehicular access into the station area from the west, the wide roadway and long crossing distances along McLoughlin Blvd. inhibit pedestrian and bicycle travel from these western areas (see "Opportunities and Constraints Related to Bicycle and Pedestrian Access" for a more detailed discussion of pedestrian and bicycle connectivity).

Because Opportunity Site 1 is located immediately adjacent to the future Tri Met park and ride, this site presents an opportunity to create a direct physical relationship with and maximize access to the future transit stop. Furthermore, this site benefits from direct frontage along McLoughlin Blvd. and the Springwater Corridor, maximizing visibility and access from both of these transportation corridors. However, the Springwater Corridor also presents a constraint, in that the bermed trail physically disconnects Opportunity Site 1 (and the future park and ride) from the majority of the station area that lies to the south.

Opportunity Site 2 lies at the principal vehicular entrance into the station area at Ochoco Street, and future redevelopments may capitalize on this opportunity. However, the site does not have direct frontage along McLoughlin Blvd, and this limited visibility may present a constraint.

Finally, Opportunity Site 3 is also near the signalized Ochoco Street entrance. The large size of the site and its high visibility directly along McLoughlin Blvd potentially increase the redevelopment opportunities for this site.



1 inch = 600 feet

Tacoma Station Area Plan

Opportunities and Constraints

- Project Study Area
- Station Area (1/2 mile radius)
- City Boundary
- Opportunity Sites
- Park / Open Space
- Railroad
- Stream
- 100-Year Floodplain
- LRT Station
- LRT Alignment
- Residential Neighborhoods
- Industrial Uses
- Bus Stop
- Gateway
- Barrier
- Site Access / Circulation

0 200 400 600 800 Feet

NORTH

Transportation and Access

1. Existing/future primary vehicular access into the study area (access at Milport Rd. provides access for eastbound traffic on Milport Rd. only).
2. Secondary vehicular access into the study area (right-in / right-out access only at Moores St.).
3. Crash safety issues (future ODOT projects expected to help address).
4. Unsignalized intersection at SE Johnson Creek and SE 32nd Ave. currently operates at LOS F during AM and PM peak hour and available queuing storage is exceeded.
5. Potential congestion impacts from future park and ride.
6. Active Union Pacific freight rail line an opportunity for industrial users, and a constraint in terms of creating a physical barrier along the eastern edge of the study area.

Physical Conditions and Land Use

1. Opportunity to create “gateways” at key entrances to study area.
2. Springwater Corridar trail creates a physical barrier between the northern and southern portions of the study area.
3. Railroad tracks along eastern edge of the study area and the lack of connections isolates the study area from the adjacent single-family neighborhood.
4. Highway 224 creates a physical barrier between the study area and the Downtown.
5. Main Street provides an opportunity to link the study area to the Downtown; opportunity to create a “gateway” experience at the entrance to the study area.
6. SE McLoughlin creates a physical barrier between the study area and the industrial areas west of McLoughlin. Only crossing opportunities at the signalized intersections of Milport, Ochoco, and Tacoma.
7. Jersey barriers separate Main Street from McLoughlin. Opportunity to provide aesthetic enhancements along this edge of the study area.
8. Existing higher density housing may help provide ridership for park and ride facilties. Some inquiries about developing more housing in this area, though redevelopment will be limited due to floodplain issues.
9. Opportunity Site 1 has opportunity to directly relate to the new park and ride facility.
10. Opportunity Site 3 has opportunity to take advantage of high visibility along SE McLoughlin.
11. Existing lot pattern in some parts of study area is from an old town site (residential lots) that no longer exists requiring use of multiple small parcels for some industrial users.
12. Existing local street system is not well defined. Some buildings are built right up to street right of way, and some have materials/inventory stored up to street right of way.

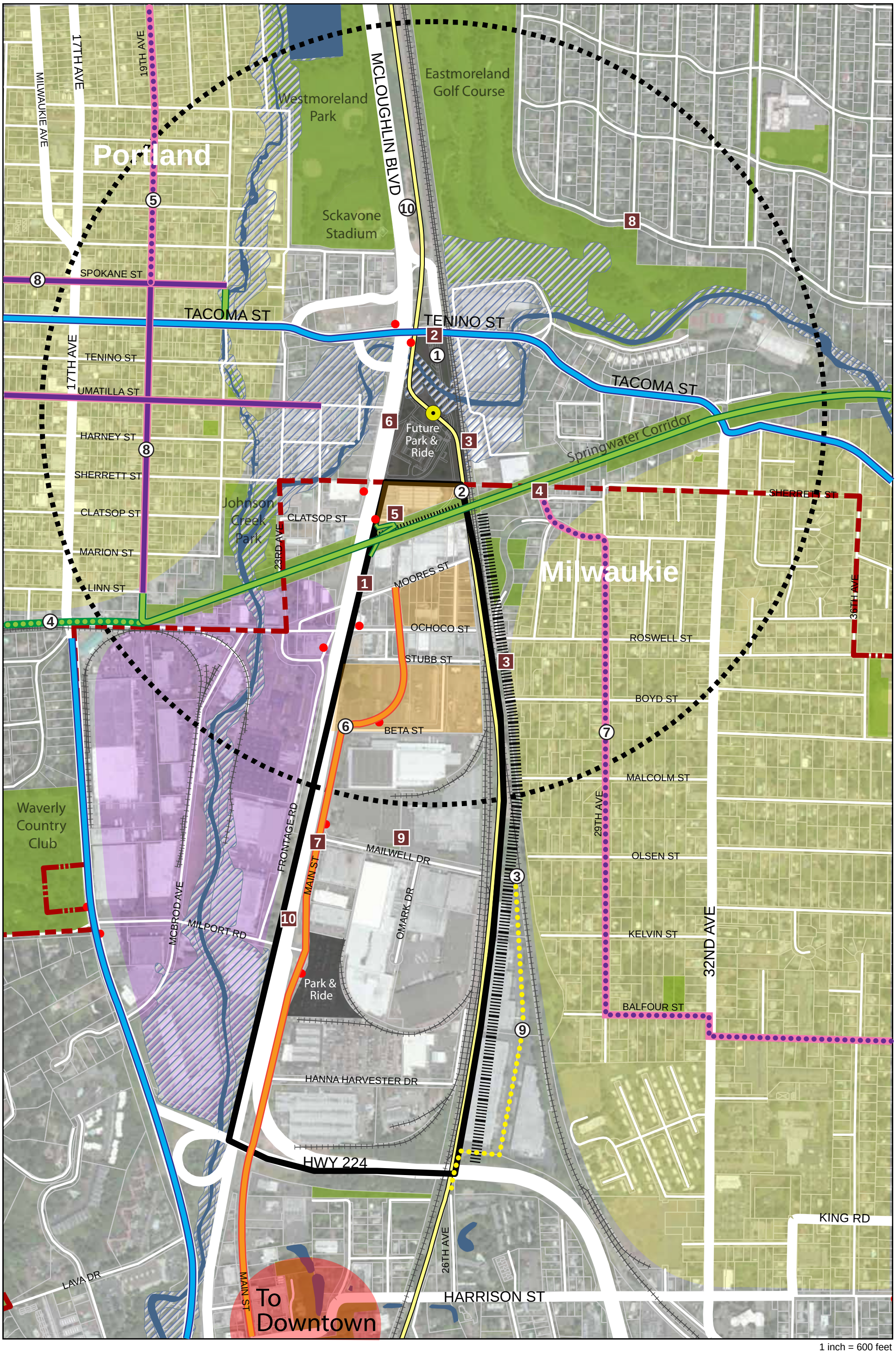
Opportunities and Constraints Related to Bicycle and Pedestrian Connections

Within the station area, few formalized bicycle facilities provide direct connections to the planned LRT station, including SE Tacoma Street to the north and the Springwater Corridor Trail to the south. However, the Springwater Corridor Trail connection presents challenges; the narrow, winding path that links the trail with SE McLoughlin Boulevard includes a steep grade, requiring bicyclists to negotiate tight turns. Despite the lack of direct connections, access to the planned station area from neighborhoods to the east and west is provided by several on-street and off-street facilities. The SE Spokane, SE Umatilla and SE 19th Neighborhood Greenways (also known as Bicycle Boulevards) provide access to the Springwater Corridor Trail from Portland's Sellwood neighborhood. SE McLoughlin Boulevard currently lacks formalized bicycle facilities, though the corridor is identified in Portland's Bicycle Plan for 2030 for the development of a multi-use trail on its eastern edge (north of the station area).

On the northern edge of the station area (at the intersection of SE Tacoma Street and the station access road), an opportunity exists to provide a formal bicycle connection into and out of the station. An on-street facility, coupled with intersection improvements at the existing signal, would enhance access to the existing bike lanes on SE Tacoma Street.

Within the Milwaukie portion of the station area, opportunities exist to improve the visibility and physical infrastructure of a connection linking the Springwater Corridor Trail to the planned Neighborhood Greenway on SE 29th Avenue. An existing signed bicycle route also exists along SE Main Street that provides access to Downtown Milwaukie, though there are opportunities to improve this connection. For example, the roadway includes a striped shoulder where bicyclists may ride outside of the travel lane, but this shoulder is not marked with bike lane symbols. In addition, the shoulders are often occupied with parked vehicles. There is a potential alternate to the Main Street corridor via SE Mailwell Drive and SE 26th Avenue. Though most portions of SE 26th Avenue are privately owned (providing access to several manufacturing and warehouse buildings), there is potential to create a low-stress bicycle and pedestrian connection between the station area and Downtown Milwaukie. At the eastern terminus of SE Mailwell Drive, there is also an opportunity to develop a connection to neighborhoods immediately east of the Union Pacific Railroad tracks. Due to a large earthen embankment supporting the tracks, it may be possible to develop a bicycle and pedestrian undercrossing between SE Mailwell Drive and SE Olsen Street.

An overview of these conditions is shown in Figure 17.



1 inch = 600 feet

Tacoma Station Area Plan

Opportunities and Constraints

Related to Bicycle and Pedestrian Access

- Project Study Area
- Station Area (1/2 mile radius)
- City Boundary
- Opportunity Sites
- Stream
- 100-Year Floodplain
- LRT Station
- LRT Alignment
- Railroad
- Bus Stop
- Park / Open Space
- Existing Bike Lane
- Existing Neighborhood Greenway*
- Planned Neighborhood Greenway*
- Existing Muti-Use Trail
- Planned Multi-Use Trail
- Existing Signed Bike Route
- Private Road Connection

0 200 400 600 800 Feet

NORTH

*The terms Bicycle Boulevard and Neighborhood Greenway are synonymous

Figure 17. Opportunities and Constraints Related to Bicycle and Pedestrian Access

Opportunities

1. Potential to provide bicycle and pedestrian access along existing roadway leading to station area.
2. Potential to provide pedestrian access, via a stairwell, from the Springwater Corridor to the station area.
3. Existing rail grade may allow for an under passage connecting the neighborhood east of the Union Pacific Railroad tracks to Mailwell Dr.
4. Planned and funded Springwater Corridor gap closure will improve access from neighborhoods west of McLoughlin Blvd.
5. Planned 19th Ave Neighborhood Greenway* will improve bike access from neighborhoods NW of the project area.
6. Potential for improving the Main Street bike route to include bike lanes complete with bike lane pavement markings and appropriate striping.
7. The planned and funded 29th Ave Bicycle Boulevard* will provide good access from Milwaukie neighborhoods to the Springwater Corridor.
8. The existing Spokane Street, Umatilla Street and 19th Ave Neighborhood Greenways provide good access from Sellwood neighborhoods to the Springwater Corridor and Tacoma Street.
9. Existing Private Road access could provide a “low stress” route between downtown Milwaukie and Mailwell Dr.
10. Proposed multi-use trail along McLoughlin Blvd (Portland Bicycle Plan for 2030).

Constraints

1. The connection along the existing sidewalk between the Main Street Bike Route and LRT station site is a bicycle pinch point.
2. Intersection is not currently designed to accommodate N/S bicycle access.
3. Existing railroad tracks form a hard barrier between neighborhoods located east of the Union Pacific Railroad tracks and the station area.
4. Poorly defined connection between the Springwater Corridor and the future 29th Ave Bicycle Boulevard.
5. Existing trail alignment requires hairpin turns. This is not comfortable for many bicyclists.
6. McLoughlin Blvd forms a hard barrier between western neighborhoods and the station area. Limited crossing opportunities require out-of-direction travel for bicyclists and pedestrians.
7. Parked cars in the existing roadway shoulders require bicyclists to use the travel lane.
8. Difficult connection between Eastmoreland neighborhood and the station area.
9. Potential for bike, pedestrian and freight conflicts on industrial blocks.
10. No existing bicycle supportive facilities on McLoughlin Blvd/Hwy 99.

**Note: The terms Bicycle Boulevard and Neighborhood Greenway are synonymous*

Opportunities and Constraints Related to Zoning

The project Opportunities Sites are part of the North Milwaukie Industrial area and are zoned Manufacturing (M) by the city (Figure 2). Recent market analyses indicate that manufacturing uses will remain the most appropriate uses for the station area in the foreseeable future; as such, it is likely that the M zone will continue to be applied to this area. However, existing requirements and restrictions in the M zone may present some barriers to developing the Tacoma station area as an active, transit-supportive Station Community. For example, the existing zone does not allow office or commercial uses unless they are accessory to an industrial use. In addition, the M zone has very limited development/design standards and does not adequately address bicycle and pedestrian connectivity or other amenities to support biking and walking to transit. The M zone standards are generally appropriate for an industrial area, but may not be as appropriate for a Station Community area.

This project presents an opportunity for the city to explore zoning amendments that will support and implement the land use and transportation recommendations identified in the Tacoma Station Area Plan. A practical option would be an overlay zone that would apply to the Project Study Area and would contain additional requirements and regulations above the base zone (M zone). The overlay could allow for a broader range of uses appropriate to a Station Community and contain design standards to implement a more connected pedestrian-friendly environment. Further evaluation of potential zoning amendments will occur during the implementation phase of this project.

Summary of Market Opportunity and Constraints

Two studies have been conducted in the last decade to assess market conditions and identify opportunities and barriers to redevelopment in the North Milwaukie Industrial Area (which encompasses the Tacoma station area). The most recent of those studies, conducted in July 2011 by Kidder Mathews[17], focused on a site currently owned by Oregon Department of Transportation (ODOT) and operated as a maintenance facility. This site will soon be available for redevelopment and is considered a key opportunity for development within the Tacoma station area; it is referred to as Opportunity Site 3 for the purposes of this project. The Kidder Mathews study focused on the three parcels that comprise Opportunity Site 3 (approximately 8.72 acres); however, the information provided by the study can be extrapolated to the larger area encompassed by Opportunity Sites 1-3 because of their close proximity to each other and similar characteristics.

The study included an analysis of various market segments to determine their relevance to the subject site. The following is a summary of that analysis.

- Multi-family. Although Milwaukie will likely capture a portion of future demand for multi-family development, the uses in and around the study area are not compatible with residential development.
- Office space. In the next six years, demand for office space in the study area is not likely to increase to the point where lease rates could support new construction. As such, it is anticipated that demand for office space in this vicinity will primarily be to supplement industrial uses.
- Service retail. While the study area has good access to high-volume roads, its lack of residential uses and pedestrian/bicycle connections make it less suitable for service retail uses. While the Kidder Mathews study does not address smaller scale retail, it's important to note that minor retail or personal service uses that would support employees within the Project Study Area could be feasible here and will likely be explored further in considering future redevelopment scenarios.
- Big box retail. There is demand in Milwaukie for big box retail. However, this type of retail typically requires 10-15 acres of land and more convenient access than is currently available in the study area. The Kidder Mathews study notes, "Circulation modifications on SE McLoughlin Boulevard and pedestrian improvements connecting the surrounding neighborhoods would improve the location for retail uses."
- Destination retail. The study failed to identify potential destination retail candidates that may be suitable for this area. The study does note that McMenamins toured the ODOT property and found the building attractive but the character of the surroundings did not meet their site selection criteria.
- Industrial. Generally, the study concludes that Milwaukie's North Industrial Area will continue to be attractive to smaller manufacturing and distribution uses, but is unlikely to draw more modern, large-scale industries. The study also concludes that "demand for space in the subject neighborhood is greatest in the industrial market segment."

Using the results of the market analysis, the study evaluated the highest and best use for the site given market conditions in the foreseeable future (roughly the next five years). Highest and best use is that use that would produce the highest value for a property, regardless of its actual current use. The four criteria that are used to evaluate highest and best use are: legal permissibility, physical feasibility, financial feasibility and maximum productivity. The evaluation using those criteria is summarized below.

- Legal permissibility. The market analysis indicated that the highest demand for the study area will likely be for industrial uses, which are allowed by the existing zoning code.
- Physical feasibility. The study indicated that a broad range of development scenarios would be feasible on the ODOT site. The site is relatively flat, has no soil issues and is already connected to all public utilities. The primary limitation to development on the site is due to its relatively small size.

17 *9002 SE McLoughlin Best Use Study*, Michael George and Blair Howe, Kidder Mathews, July 2011.

- Financial feasibility. The study concludes that, during the next six years, speculative industrial development on the ODOT property is not financially feasible. In addition, the study indicates that demolition of the existing building to make way for other uses is the most financially sound option for this site.
- Maximum productivity. Maximally productive uses are those that produce the highest residual land value. The study determined that two strategies fit this description: a subdivision and sale of land to smaller users, or sale of the entire site to a single, large user.

Based on the criteria above, the Kidder Mathews study concluded that the highest and best use for the ODOT site is for occupancy and redevelopment of the entire property by a single owner/user. This would involve refurbishing or demolishing the existing building for office space needs, and constructing new buildings to support manufacturing and warehousing requirements. Some of the same findings could be extrapolated to other portions of the Project Study Area to the extent that conditions related to access, parcel size, physical and financial feasibility are similar.

A second study, conducted in November 2002 by Hobson Ferrarini Associates[18], evaluated the land use market in the Milwaukie North Industrial Area to identify future potential uses over the next 20 years. The Hobson Ferrarini study focused on the potential market for office and manufacturing uses only; retail was not considered. Although the study is a decade old at this point, some of the findings may still be relevant today. Those findings are summarized below.

- Many buildings in the area are considered obsolete because they are small, lack adequate ceiling height, are difficult to divide, and are designed to accommodate rail instead of trucks.
- Despite potential building issues, the area is a viable location for sub-regional warehouse distribution and manufacturing due to its close proximity to Portland and small business consumers, access to arterials and highways, available labor pool, and the fact that it is an established manufacturing area with clustering of like-businesses.
- The area is also viable for certain types of office uses (not Class A office space) because of its proximity to available housing and labor pool, lack of business taxes, and access to major roads and public transit.
- Current zoning would need to be revised in order to allow more office uses. In addition, to make the area more attractive to office uses, changes would be needed such as visual improvements to the area, development of light rail or bus rapid transit service, and convenient access to support services and commercial retail.

18 *Land Use Analysis for Milwaukie's North Industrial Area*, Steve Ferrarini, Hobson Ferrarini Associates, November 19, 2002.

Summary of Stakeholder Interviews

City of Milwaukie staff interviewed the following individuals to inquire about future property owners plans for the area, as well as other stakeholder ideas or concerns related to future planning:

- Richard Anderson and George Anderson, Anderson Die & Manufacturing
- Charles Bishop, Pendleton Woolen Mills
- Scott Churchill, Milwaukie Planning Commissioner
- Joseph Bradford, Urban Evolution (Multifamily developer in Sellwood)
- Angelene Carpenter, Ardenwald resident
- Gary Hunt, Oregon Transfer Company (Warehousing and distribution)
- Matt Rinker, Co-Chair Ardenwald-Johnson Creek Neighborhood Association

Additional meetings with other property owners may be conducted as the project moved forward.

The following overall themes emerged from the interviews:

- Improve the area around the light rail station (e.g., safety, gateway/appearance, etc.).
- Maintain an industrial base and encourage job creation.
- Support the City's pursuit of baseball.
- Attract complementary commercial uses.
- Improve the transportation network for all: freight, cars, bikes, and pedestrians.

Other comments related to future plans for development or changes to properties within the area included:

- Some individual property owners have visions for their own properties or other parts of the area. Most of the property owners that were interviewed are not planning to redevelop their property in the near future. Some owners have been investing in and/or expanding their operations and expect to continue current use of their property into the future.
- The Pendleton property owner is considering plans for adaptive reuse of the existing structure but plan to do so within the existing building and plan to retain ownership and primary use of the structure.
- The owner of the property adjacent to the light rail station plans to redevelop that property in the future and has previously proposed a large retail or mixed use development on the property.
- The location works well for Oregon Transfer Company, which stores and distributes 3rd party goods. Buildings on this property were constructed in 60s-70s and have low ceiling clearance (20'-24'); they are not considered "great buildings" and are the oldest in property owner's portfolio. However, they have good parking and loading, taxes favorable compared to Portland, fair access and access to rail is a plus. There are no issues with access presently and they stage their operations to work around peak traffic hours. There are no plans to redevelop the site or change the use at this time.

Additional suggestions related to future planning for the area included:

- Remove obstacles to commercial-industrial uses; allow for industrial 'incubators,' vocational schools, manufacturing-related retail (e.g., artisanal uses), and possible community service uses (e.g., Clackamas Community College branch/satellite).
- Continue light industrial and allow commercial; allow as much flexibility as possible for changes of use and adaptive reuse of potentially historic building.
- Preserve access and parking and mitigate impacts of park and ride and light rail station on local parking and access; consider vacating some local streets (e.g., stub of SE Clatsop, 25th and end of Ochoco).
- Consider off-peak/joint use of park-and-ride with redevelopment concepts.
- Address concern about safety/visibility at the backs of buildings, including through more nighttime commercial or residential activity.
- Provide more activity for small scale commercial uses that would support local workers or residents but do not compete with downtown for such uses.
- Improve Main Street and other local streets for auto, bike, transit and pedestrian access, safety and connectivity, including connections to downtown and the Springwater Trail. In doing so, address private property owner concerns about potential adverse impacts.
- Break down barriers between the study area and surrounding areas.

Additional comments can be found in a complete summary of stakeholder interviews available from the City of Milwaukie.

Transit-Oriented Development Opportunities

This section provides a general overview of potential transit-oriented development opportunities that will arise from placement of the Tacoma LRT station in the existing industrial area. Increasingly, planners, developers, and city leaders across the country are focusing on the potential of employment areas (often located outside of city centers) to leverage transit service in such a way as to promote redevelopment and job growth. This focus on employment transit-oriented development (E-TOD) is based on the recognition that increasing the number of people that commute to work by transit is vital in terms of increasing overall transit ridership. Traditional TOD has typically focused on intensifying residential uses at trip origins. However, with work-related trips comprising over half of all transit use nationwide, transit ridership is frequently shown to be more dependent on concentrations of employment than concentrations of residential uses. Employment-based TOD can provide a healthy mix of land uses and make major suburban jobs centers more transit-accessible for people who cannot rely on automobiles for regular trips.

Warehousing and light manufacturing uses often do not provide the density of employees necessary to sustain high transit ridership or a supporting base of service businesses and retail. The strategic introduction of higher density employment uses in industrial areas combined with improved transit access to residential and commercial districts can reduce automobile dependence and support business growth.

In addition to providing adequate employment density, providing a mixture of uses within employment districts is also vital to encouraging commuters to travel to work by transit. If there are no restaurants or services (such as child care facilities, dry cleaners, doctor's offices, etc.) within easy walking distance from jobs, workers are forced to drive in order to access crucial services during the day. In light of this, TOD planners and developers (as well as savvy employers) are increasingly abandoning the notion of single-use employment districts in favor of mixed-use office and industrial workplace districts that provide an array of personal service amenities for nearby employees.

Figure 18. South Lake Union Trolley (Source: Flickr - Sean Marshall)

Finally, improving pedestrian accessibility and comfort within transit station areas will also help encourage trips by transit. Large blocks with few opportunities for street crossings can make walking impractical, time consuming and/or unsafe, and wide, auto-oriented corridors often create challenging conditions for pedestrians. Station areas benefit greatly from pedestrian-friendly environments with clear signage and other way-finding strategies, short blocks, direct connections, and safe streets with calm automobile traffic.

These principles are being implemented throughout the country to leverage transit access and transform auto-oriented office and industrial areas into successful transit-oriented centers. Station area uses as diverse as ballparks and high-technology centers have emerged along transit corridors in industrial areas. In Camden, New Jersey, a 6,000-seat minor league baseball stadium anchors a redevelopment that includes a waterfront park and aquarium along an existing high-capacity transit line. With the advent of modern streetcar service, Seattle's South Lake Union area has transformed from an under-utilized warehouse district into a hub of technology and professional service offices with retail, dining, and housing options located throughout. In both of these examples, focusing on strong destination uses (both recreational and employment), providing an array of services, and improving the pedestrian environment have resulted in new, vibrant districts that create a strong ridership base for transit.

Figure 19. Campbell Field (Source: Flickr - Windwatcher)

Appendix A