



TECHNICAL MEMORANDUM

Pendleton TSP Pedestrian, Bicycle & Transit Update

Existing and Future Transit Operations and Transportation System Assessment

Date: October 7, 2015 Project #:18685
To: Advisory Committee (AC)
From: Matt Hughart (KAI), Sara Muse (KAI), Mathew Berkow (N\N), Stephanie Wright (N\N),
Shayna Reyberg (APG)
cc: Project Management Team (PMT)

This memorandum provides a system inventory and evaluation of the existing/future land use, bicycle, pedestrian, and transit circulation in the City of Pendleton. The inventory was used to evaluate the existing and planned active transportation system and transit conditions. This assessment will be used in the development and evaluation of system wide improvements for the City of Pendleton's transportation system plan update.

EXISTING LAND USES

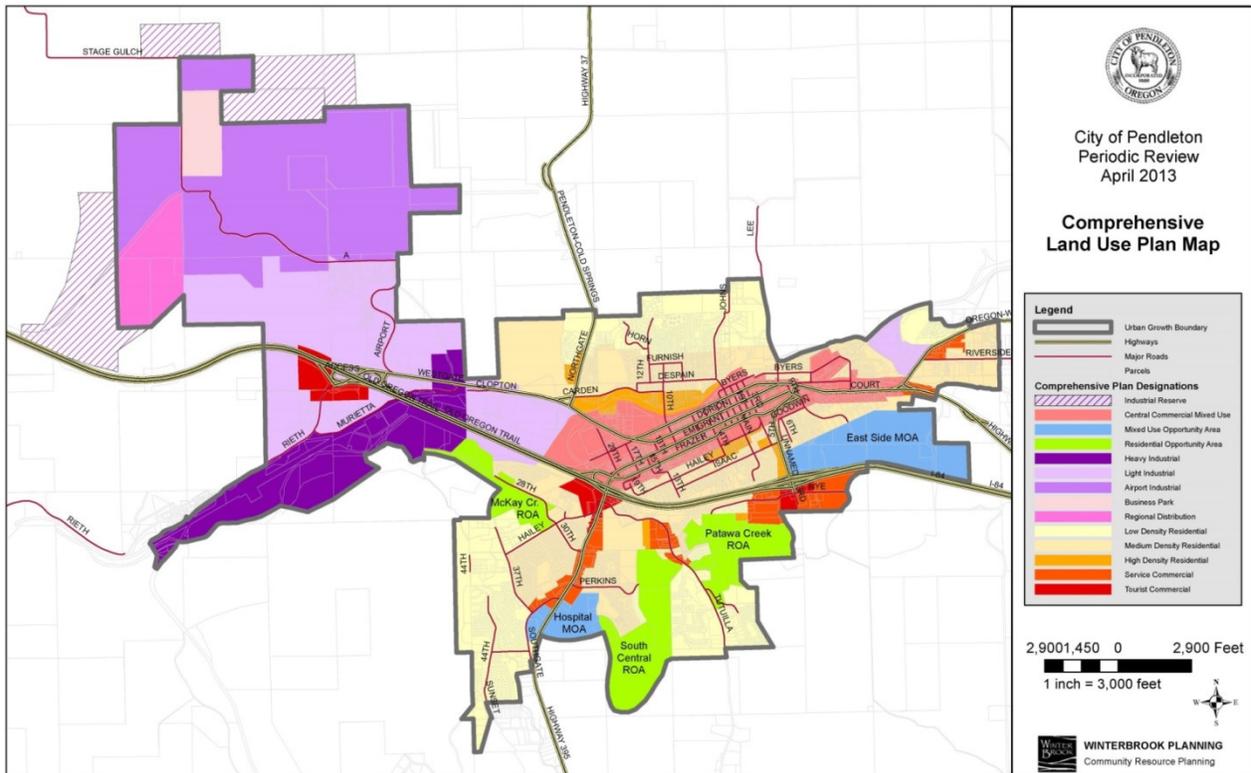
This section of the report provides an overview of land use designations, existing land uses, and areas of potential future development in Pendleton. Existing land uses and land use designations strongly reflect historical development patterns and the influence of topography, the Umatilla River, tributary creeks, and major roadways in the city.

Zoning and Comprehensive Plan Designations

This section of the report provides an overview of land use designations, existing land uses, and areas of potential development in Pendleton. Existing land uses and land use designations strongly reflect historical development patterns and the influence of topography, the Umatilla River, tributary creeks, and major roadways in the city.

Allowed land uses are governed by Comprehensive Plan land use designations and City zoning, as shown in shown in Figure 1 and Exhibit 1 and regulated by Unified Development Code (UDC).

Exhibit 1 - Comprehensive Land Use Plan Map



The designations and corresponding permitted uses provide an indication of the type and intensity of transportation needs to be expected in a given area. Appendix A provides a list of the zones and a summary of their intended purpose, examples of permitted and conditional uses in the zone, and the level of development intensity allowed.¹

The City’s zoning is generally consistent with Comprehensive Plan map land use designations. Notable exceptions are areas that are within the UGB, but outside of the existing city limits. These areas are zoned for farm use but the land use designation is industrial (west of Highway 37) and mixed use (eastern UGB limits, north of I-84). The assumption for these areas is that they will develop with urban uses during the planning horizon, consistent with the Comprehensive Plan.

In addition to base zones, the City has several overlay zones that modify the allowed uses and land use permitting procedures for the underlying zone. The following provides a description of how overlay zone provisions modify uses and development intensity permitted by underlying zoning

¹ Detailed regulations for residential zones, commercial zones, and industrial zones are provided in Articles III, IV, and V (pp. 7-28) of the City of Pendleton Unified Development Code (UDC), available online at: <http://www.pendleton.or.us/sites/pendleton.or.us/files/File/UDC%20-%20adopted%2012-02-2014.pdf>.

- Opportunity Area (OA) Subdistrict, UDC Section 7.01 – The OA Subdistrict was adopted to implement Comprehensive Plan Opportunity Area performance standards. Opportunity Areas (OAs) were developed as part of periodic review in 2011-2013,² and Residential and Mixed Use OAs are shown on the Comprehensive Plan map (Exhibit 1). The OA Subdistrict is essentially a master planning overlay where developers have the choice of meeting existing objective zoning standards, or preparing a master plan for review by the Planning Commission that allows the full range of uses and densities permitted in residential zones and commercial zones, as applicable for a Residential OA or a Mixed Use OA.
- Prison/Hospital Industrial Subdistrict (P/HIS), UDC Section 7.03 – This subdistrict applies to an area that is the site of Eastern Oregon Correctional Facility and a former hospital facility. The subdistrict was adopted in order to protect the specific correctional and mental health uses on the site as well as land surrounding the site; it restricts the industrial and related uses that would otherwise be permitted in an industrial zone. However, the subdistrict no longer has a hospital use and the City would like to support more development in the city. Therefore, this subdistrict and corresponding development code may be considered for repeal.
- River Quarter Overlay, UDC Section 7.04 – The River Quarter is bounded by S Main Street on the east, SW 10th Street on the west, the Umatilla River on the north, and SW Court Street on the south, shown in a map in the UDC. The UDC does not include the development requirements for this district, but rather refers to the River Quarter Enhancement Plan (Ordinance No. 3801). See a review of the River Quarter Enhancement Plan in Technical Memorandum #1.
- Special Flood Hazard Area, UDC Section 7.05 – The Special Flood Hazard Area is regulated by Ordinance No. 3791, adopted in 2010. These regulations are necessary to minimize property damage in areas likely to experience flooding, and so that residents in the city may obtain federally subsidized flood insurance through the National Flood Insurance Program.
- Umatilla River Subdistrict, UDC Section 7.06 – The Umatilla River Subdistrict is comprised of land within 75 feet of the 100 year floodway of the Umatilla River, and adjacent to and within 50 feet of the 100 year floodway of its tributaries. The purpose of the subdistrict is to promote land uses that are “compatible with the existing and potential open-space and recreational utilization of the river system, and to further the development of the Umatilla River Parkway.” Specified types of development of uses that are otherwise permitted outright are subject to discretionary review that requires an economic, social, environmental, and energy (ESEE) analysis and allows for evaluations by other agencies with expertise in potential visual, archaeological, and environmental impacts.

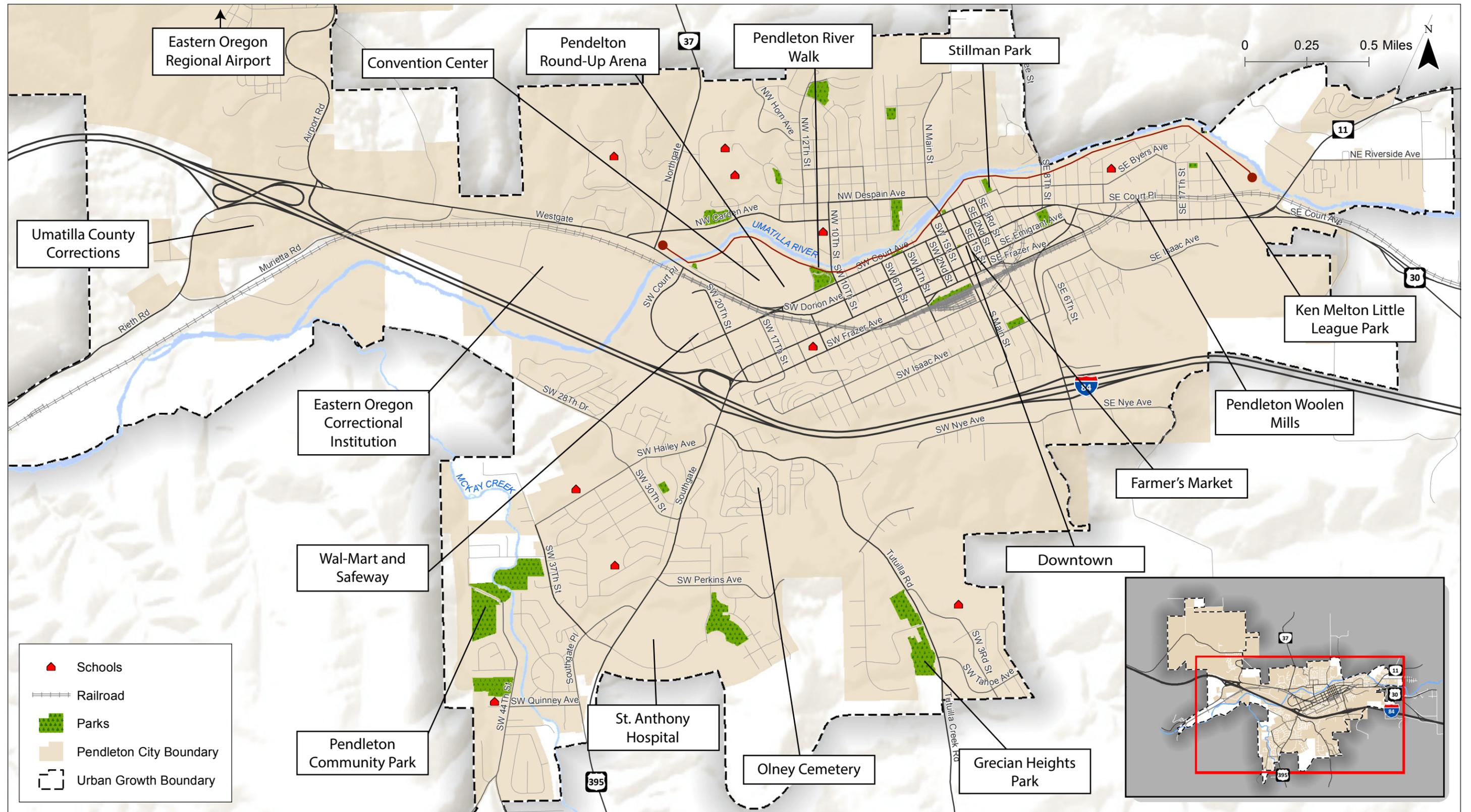
² See additional information on this process and the designation of the Opportunity Areas in the *Potential Development* section of this memorandum.

An examination of existing land uses aids in establishing transportation demand assumptions. A comparison of mapped land uses and the existing built environment was performed as part of the initial tasks for the TSP update project. Existing land uses and development were explored through a bus tour of the city, discussions with City staff, and the use of aerial mapping. This review confirmed that existing uses are generally consistent with underlying land use designations/zoning. A summary of areas of more intensive, and multi-modal, activity is provided below.

Activity Centers

It is important to provide multimodal connections to and between major activity centers in the community. The following activity centers were identified during a tour of the city on August 31, 2015 and in discussions with City staff following the tour. Their general locations are shown in Figure 2.

- Schools – Schools in Pendleton consist of those in the Pendleton School District (an early learning center, four elementary schools- two of which are being re-built, two middle schools, a high school, an alternative high school, and a charter school), a private elementary-middle school, and Blue Mountain Community College (BMCC). Short of having a formal Safe Routes to School program in Pendleton, the City would like to focus on developing/enhancing bicycle/pedestrian routes to each school that are safe and accommodating.
- Parks – High-use parks, as indicated by City staff, include Stillman Park, Little League Park, Grecian Heights Park, Olney Cemetery, Community Park, and Rudy Rada Skate Park/Babe Ruth Ball Park. A Parks Master Plan is expected to kick off soon, using work done for the TSP update as a lead-in to that process.
- River Walk (or River Parkway) – This popular multi-use path extends approximately three miles along the Umatilla River in the center of Pendleton. There are multiple access points and some of the parks along the path, like Stillman Park, are heavily utilized.
- Pendleton Round-Up Arena – While the area is home to Round-Up in mid-September, there are an increasing number of events being hosted at this site, including high school sports and concerts. There is no parking at the Round-Up grounds, which requires patrons to park off-site and walk all around the city during events.
- Pendleton Convention Center – The Convention Center is located directly west of the Round-Up Arena. Weekends at the center are consistently booked.
- Pendleton Woolen Mills – Close to Downtown, the mill and retail facilities are a valuable historic business in the city, and continue to draw a large number of visitors.
- Downtown – There is currently limited storefront vacancy in Downtown Pendleton, which is a popular commercial center and visitor attraction.



Existing Land Uses and Activity Centers
Pendleton, Oregon

Figure
2



- Farmers Market – The market is held on Fridays on S Main Street in Downtown. As an alternative to blocking off Main Street for the market, the possibility of moving to parking lots near the railroad tracks (e.g., between the tracks, S Main Street, SE Frazer Avenue, and SE 3rd Street) is being considered. However, this option is not expected to gain serious traction until these parking lots have more landscaping and shade. (Enhanced landscaping in these parking lots is called for in the Downtown Plan.)
- Walmart/Safeway shopping area – Walmart and Safeway are significant commercial anchors in this commercially zoned area. Other stores and important attractors in this area include Grocery Outlet, Rite Aid, Maurice’s, Walgreen’s, fast food restaurants, and services such as banks and Department of Motor Vehicle (DMV) offices.
- Eastern Oregon Correctional Institution (State) and Umatilla County Corrections – These facilities are major employers. City staff reports that there is also a need to provide better walking, biking, and transit opportunities for inmates once they are released and are seeking to get to Downtown Pendleton.
- Eastern Oregon Regional Airport – As a regional airport, this facility is an important use for residents and businesses in Pendleton as well as from communities around the region. City staff also indicates that there is a need to improve walking, biking, and transit connections between the airport and Downtown.
- St. Anthony Hospital – This hospital relocated from a site east of Downtown. The current site is part of a large area where other medical offices have moved to cluster near the hospital.

Potential Areas for Future Development

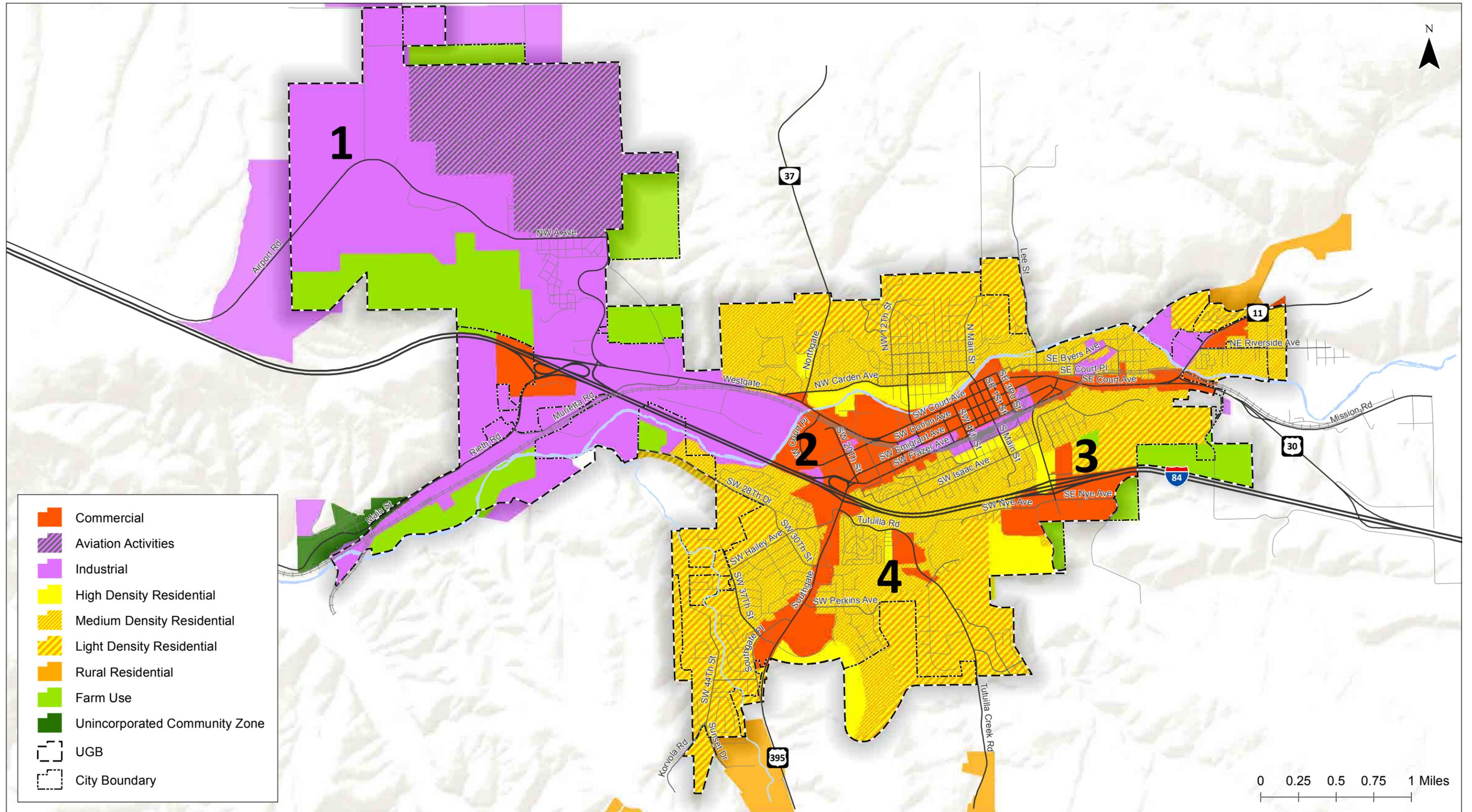
The City commissioned an update of a commercial and residential Buildable Lands Inventory (BLI) in 2012. This work was predicated on the findings of an earlier Economic Opportunity Analysis (2007) and Housing Needs Analysis (2011). The Economic Opportunity Analysis found that there was sufficient commercial land in the city, but the topography, permitted uses, and commercial and mixed-use zone regulations brought into question how much of the inventory could actually be developed. Similarly, the Housing Needs Analysis determined that Pendleton had an adequate overall supply of buildable residential land. However, City staff, Planning Commissioners, and Councilors indicated that Pendleton’s Medium and High Density Residential land supply may not be located in areas most suitable for those uses. Therefore, one of the objectives of the BLI was to create more opportunity and greater development flexibility for residential and commercial uses. Much of the undeveloped land in Pendleton, regardless of location or zone, is constrained by steep slopes, shallow soils, or both.

The primary result of the BLI work was designation of five large Opportunity Areas (OAs) – three residential areas and two mixed-use areas – that would allow for more development flexibility, as described in the summary of Opportunity Area Subdistricts provided earlier in this section of the report.

These areas have some topographic and service provision issues, but developing these areas according to an adopted master plan could capture efficiencies that piecemealed development could not.

City staff provided input regarding potential near-term future development that may need to be considered in multimodal transportation improvements and connections. Consistent with the outcomes of the BLI and the subsequent Comprehensive Plan and zoning amendments, some of these areas are within the designated OAs. Areas of potential development are roughly identified in Figure 3 and are outlined below.

1. Airport Industrial Park (industrial) – A connector road between Exit 202/Barnhart Road and the industrial park was recently constructed, providing more options for access to the airport and industrial park (see a review of the IAMP in Technical Memorandum #1). The City is pursuing State Certification and designation as a Regionally Significant Industrial Area for the undeveloped lands south and west of the airport. Pedestrian, bicycle, and transit improvements between the airport area and Downtown – as well as a park-and-ride/park-and-pool facility at the airport – will be considered as part of this TSP update process.
2. West of Walmart Supercenter (commercial) – This area is adjacent to an existing successful commercial area and is comprised of vacant and relatively unconstrained land. It is visible from and close to I-84, and is also close to Downtown and an established local street system.
3. Eastside Mixed Use Opportunity Area/West (commercial) – There has been interest in commercial development of land in the western part of this Mixed Use OA. The land is adjacent to I-84 and, therefore, has high visibility. It is generally not constrained by high slopes and/or shallow soils. However, access will be restricted from OR 11 just off of the interchange (insufficient spacing from ramps). This reportedly is not currently deterring development interest.
4. South Central Residential Opportunity Area (residential) – The City approved a 12-lot subdivision on nine (highly sloped) acres in 2015. Future development in this area will extend SW Perkins Avenue, and provide a direct connection between Southgate and Tutuilla Road. A phased multi-family project with 72 units is partially completed on land just north of this area, adjacent to Olney Cemetery.



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Areas of Potential Near Term Development Pendleton, Oregon

Figure 3

Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: The City of Pendleton

BICYCLE, PEDESTRIAN, AND MULTI-USE TRAIL NETWORKS

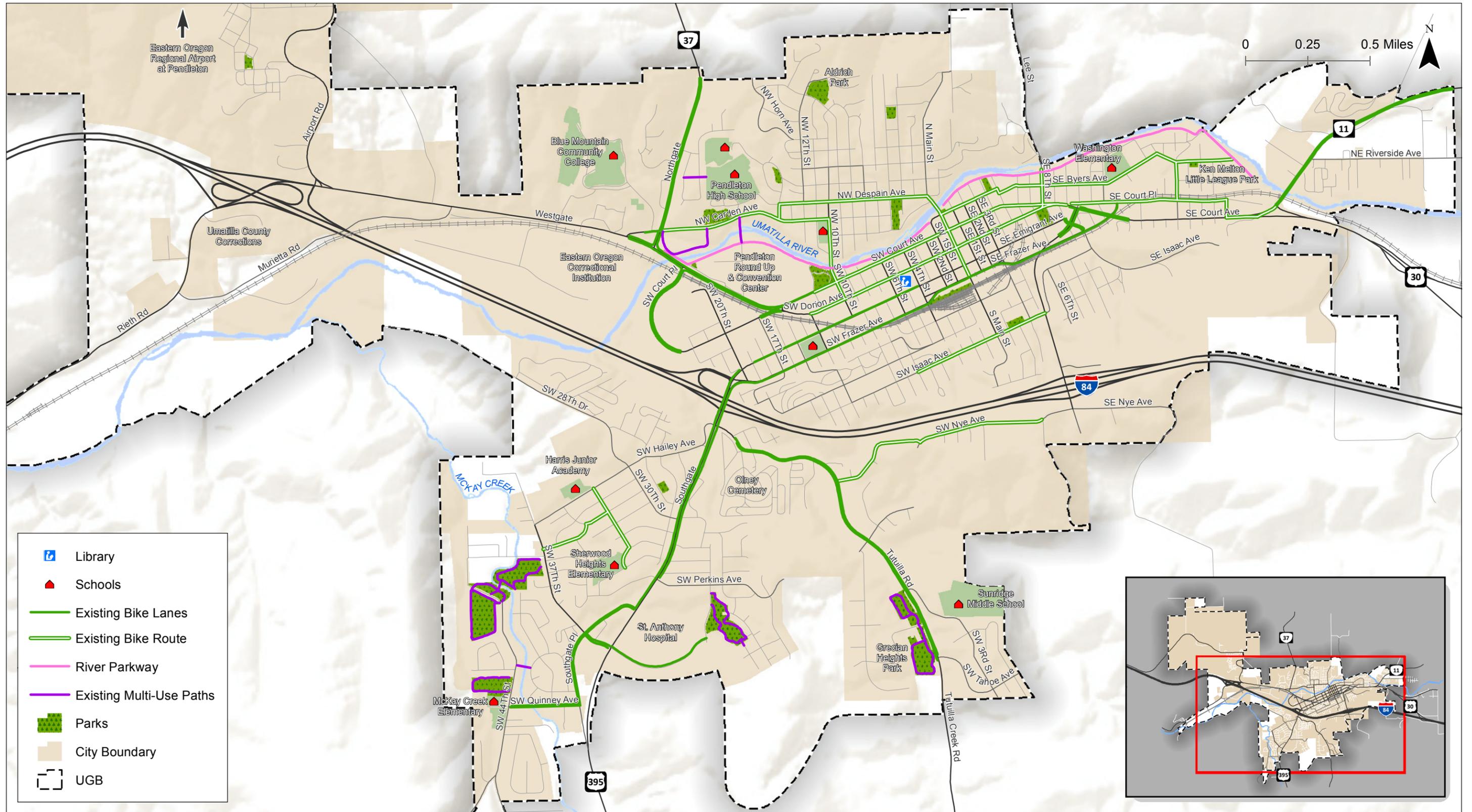
Existing Bicycle Network

Figure 4 illustrates Pendleton's bicycle infrastructure. Key components of this infrastructure include:

- 15.8 miles of dedicated bike lanes on various state highways, arterials, and collectors.
- Formalized/signed bicycle routes.
- Roadways with shared lane markings.
- Roadways with wide shoulders.
- 2.75-mile River Parkway – a multi-use trail that parallels the south side of the Umatilla River.

Bicycle lanes or wide shoulders are present on most State Highway segments and select city arterials; however they are fragmented in a number of key intersections and segments throughout the City. Bicycle lanes are not provided on most collector and local streets. A formal review and assessment of these facilities is provided later on in this document.





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Existing Bicycle Facilities
Pendleton, Oregon

Figure
4

Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: The City of Pendleton

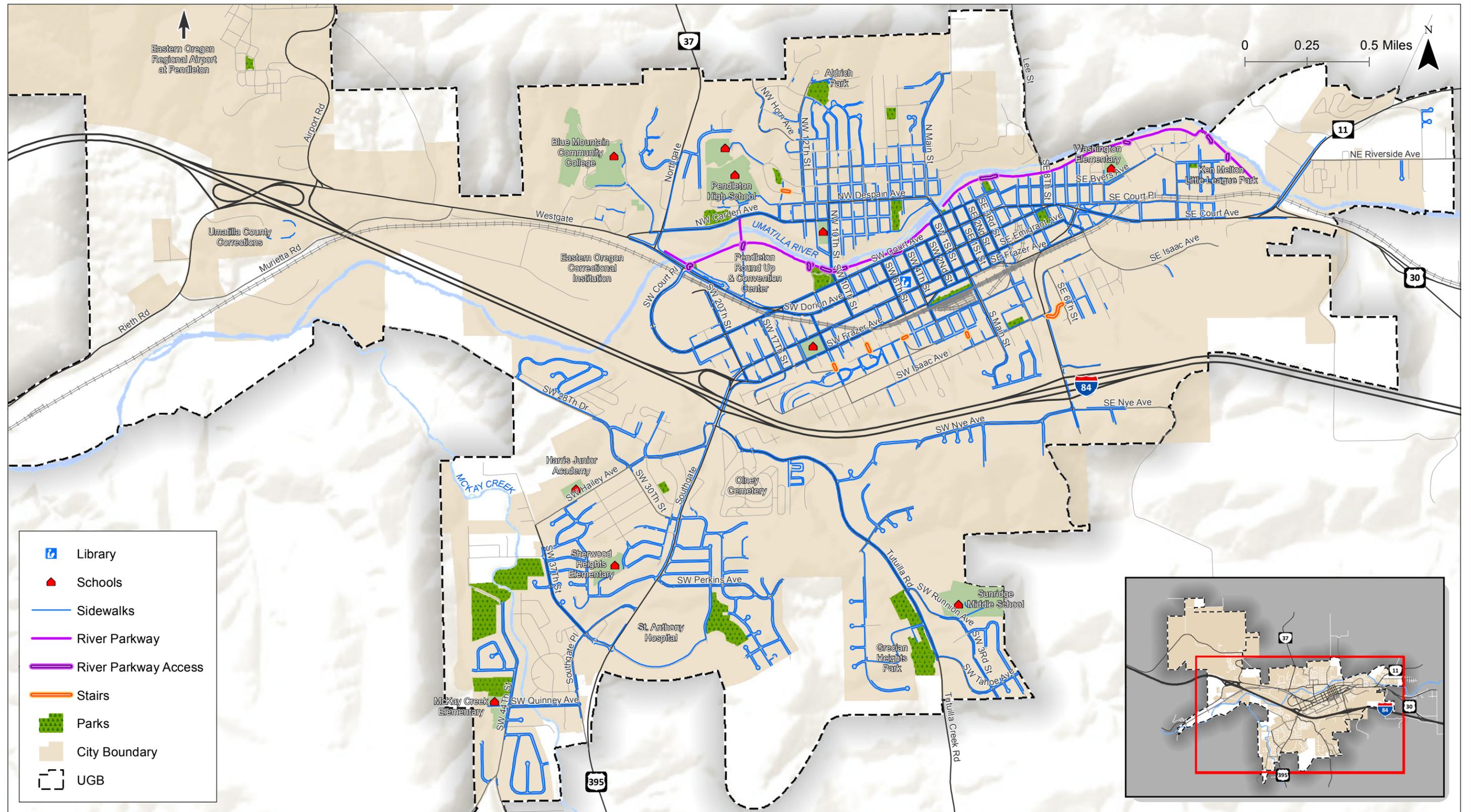
Existing Pedestrian Network

Figure 5 identifies Pendleton’s existing pedestrian infrastructure. Key components of this infrastructure include:

- 95-miles of traditional curb-tight sidewalks ranging in width from 4-6 wide on most local, collector, and arterial segments to 8-10 feet wide on some streets within downtown.
- 2.75-mile River Parkway.
- Multi-use paths are located throughout the city that provide pedestrians with connections from residential neighborhoods to other destinations including parks, schools, and retail establishments in downtown.
- Enhanced pedestrian crossing facilities.
- Six pedestrian stairways which provide pedestrians in topographically constrained areas access to schools and destinations within downtown.
- Informal walking trails.

As shown in Figure 5, sidewalks are present on most streets within the established grid network and most segments of the urbanized state highway network. Some older residential subdivisions were constructed without sidewalks on the south side of town and some older residential areas both north and south of downtown lack sidewalks due to topography constraints. A formal review and assessment of these facilities is provided later on in this document.





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Existing Pedestrian Facilities
Pendleton, Oregon

Figure
5

Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: The City of Pendleton

Bicycle Assessment

The method used for assessing the existing bicycle infrastructure in the Bicycle Level of Traffic Stress (LTS). This methodology was adapted from the 2012 Mineta Transportation Institute (MTI) *Report 11-19: Low-Stress Bicycling and Network Connectivity* and is consistent with ODOT's *Qualitative MMLOS Supplement Addendum G*. The approach outlined in the MTI report uses roadway network data, including posted speed limit, the number of travel lanes, and the presence and character of bicycle lanes, as a proxy for bicyclist comfort and safety level. The analysis framework provides a generalized snapshot of comfort level which can be used to identify areas of deficiency and needed improvements.

In an LTS, road segments are classified into one of four levels of traffic stress based on anticipated user comfort. The lowest level of stress, LTS 1, requires less attention and is suitable for all cyclists. Typical locations include residential local streets and separated bike paths/cycle tracks. LTS 2 and 3 are those that could be comfortably ridden by the mainstream adult population. Typical locations for LTS 2 include collector-level streets with bike lanes. Locations for LTS 3 usually entail low-speed arterials with bike lanes or moderate speed non-multilane roadways. LTS 4 is assigned to segments that are high stress and only suitable for experienced and skilled cyclists.

Both segment and intersection LTS analyses were performed for the City of Pendleton. The LTS segment criteria are broken into three classes: physically separated paths and lanes, standard bike lanes, and without bike lanes (mixed traffic). The criteria are based on through lanes per direction, the sum of the width of the bike and parking lanes, speed limit, and any bike lane blockage (in commercial areas from driveways, loading zones, stopped buses, or parking maneuvers). Intersection approach criteria are based on the presence and type of right- or left-turn lanes. The larger the right-turn lane storage and the more lanes a bicyclist must cross to access the left turn lane, the higher the LTS score.

Pendleton LTS Results

Figure 6 shows the bicycle LTS results. As shown, Downtown Pendleton and the grid network that supports it is indicative of a relatively strong bicycling environment that can accommodate a large range of bicycle skill levels. The grid network of moderate traffic, low speeds streets promotes good connectivity to major destinations, especially for individuals familiar with the area and looking for ways to avoid riding on US 395 and Highway 30.

Major arterials that provide regional access to/from downtown Pendleton achieved the lowest LTS score primarily due to the influence of frequent large multi-lane intersections. For example, bicyclists wanting to make a left turn off of US 395 from SW Hailey Avenue to SW 30th Street are forced to cross an average of two travel lanes on a 30-mph zone. In addition, bicyclists must yield to right turning vehicles at most intersections on US 395, which creates additional stress. This is especially apparent at the US 395 and SW Hailey Avenue intersection where bicyclists traveling southbound must yield to vehicles turning right onto SW Hailey Avenue. The LTS demonstrates that conditions along higher order roadways are indeed more stressful for bicycling and strategies to improve the cycling level of comfort on these and key parallel local access streets will be explored during alternatives development process.

MMLOS ANALYSIS

The methodology for assessing pedestrian, bicycle, and transit level of service in the City of Pendleton is based on ODOT's Analysis Procedure Manual. The current generation of multimodal analysis methodologies are generally a perception-based rating system of the safety, comfort, and convenience of transportation facilities from the perspective of the user. This methodology uses the roadway characteristics and applies a context-based subjective "Good/Fair/Poor" rating.

The segment methodology, which was used for this memorandum, uses the following performance measures to determine an overall rating: the number of travel lanes, bicycle lanes/shoulder width, presence of buffers (landscaped or other), sidewalk/path presence, and lighting. The rating can then be used to compare existing pedestrian gaps and deficiencies to assess the need for improvements.

Pendleton MMLOS Results

The MMLOS analysis for Pendleton analyzed existing traffic conditions for the following corridors: US 395, US 30, Oregon 11, Oregon 37, City arterials, and roadways identified in the 2007 TSP for future bike lanes within the Study Area. Figure 7 shows the results of the MMLOS analysis.

As shown, the gridded street network in and around Downtown Pendleton have a "Good" rating based primarily on the presence of a continuous and buffered sidewalk network. The conditions on streets that failed to achieve the 'Good' rating reflect higher speeds and a fragmented sidewalk network. Local streets with lower automobile speeds that lack sidewalks still fail to achieve 'Good' rating, such as the 'Poor' ranking on SW 30th Street. There are three schools west of Highway 30 with poor pedestrian infrastructure. Many children use SW 30th Street, which doesn't provide sidewalks on either side of the street, to access Sherwood Heights Elementary School. This forces children to walk on the side of the street with heavy vehicular traffic. Similarly, there are no facilities located on nearby routes including SW 27th Street, SW 28th Street, SW 29th Street, SW 31st Street.

Another major deficiency in the existing pedestrian network is apparent on Highway 30 west of NW Carden Avenue. There are continuous sidewalks on the highway through downtown which abruptly end at the NW Carden Avenue intersection, forcing pedestrians into the narrow shoulder. Many pedestrians use this route to access industrial land uses along the corridor, experiencing discomfort with adjacent vehicles traveling 40-mph.

Based on the results of this MMLOS analysis, further analysis on collector and local streets adjacent to schools is recommended. Additionally, this study will identify strategies for major arterials such as US 395 and Highway 30 for improving pedestrian access and comfort on these important travel routes.

Bicycle/Pedestrian Opportunities and Constraints

Based on the assessment of the existing bicycle/pedestrian infrastructure, it is clear that some key pedestrian/bicycle destinations within the City are constrained from an active transportation accessibility standpoint. Table 1 identifies these key destinations and documents how certain existing constraints can potentially be addressed as part of the planning process.

Table 1 - Pedestrian and Bicycle Opportunities and Constraints by Key Destinations

Constrained Pedestrian and Bicycle Destinations	Location	Existing Constraints	Opportunities
Umatilla County Corrections	Far east city limits - Reith Road	<ul style="list-style-type: none"> Isolated location with no pedestrian or bicycle facilities on Highway 30. Generates a fair amount of pedestrian traffic that is primarily destined for Downtown Pendleton. 	<ul style="list-style-type: none"> Implementing the current TSP's proposed bike lanes and multi-use path on Highway 30 will make the facility more accessible from downtown and improve MMLOS score to 'Good'.
Eastern Oregon Correctional Institution	Highway 30	<ul style="list-style-type: none"> No bicycle and pedestrian facilities west of NW Carden Avenue No protected crosswalk for pedestrians at entrance of Correctional Institution 	<ul style="list-style-type: none"> Constructing sidewalks on both sides of the street will improve MMLOS score to 'Good' Implementing the proposed multi-use path on Highway 30 will make the facility more accessible from downtown and improve LTS score to 3.
Blue Mountain Community College	Highway 30/ Highway 37	<ul style="list-style-type: none"> There are only sidewalks on the west side of main access road. No sidewalk connections on NW Carden Avenue between Highway 37 and the main access road. 	<ul style="list-style-type: none"> Adding sidewalks on the north side of NW Carden Avenue between Highway 37 and the main access road would eliminate a significant pedestrian gap and connectivity issue. Potential for a long-term connection directly to Highway 37.
Pendleton High School/ West Hills Intermediate School	NW Carden Avenue	<ul style="list-style-type: none"> High traffic and pedestrian volume area. NW Despain Avenue provides pedestrian and automobile access to Pendleton High School's parking lot and lacks sidewalks on the east side of the street. NW Despain Avenue is narrow and the rolled curbs allow parked cars to block the sidewalk. 	<ul style="list-style-type: none"> Adding bike lanes or formally implementing the proposed bicycle route on NW Carden Avenue will improve bicycle connectivity. Improving NW Despain Avenue to include wider sidewalks on both sides of the street will enhance pedestrian safety and comfort levels.
Harris Junior Academy	SW Hailey Avenue	<ul style="list-style-type: none"> There are no pedestrian or bicycle facilities on SW Hailey west of SW 30th Street. 	<ul style="list-style-type: none"> Providing sidewalks on both sides of the street will improve the MMLOS score to 'Good' west of SW 30th Street.
Sherwood Heights Elementary School	SW Nye Avenue	<ul style="list-style-type: none"> There are no sidewalks on popular walking routes such as SW 31st Street, SW Hailey Avenue, and SW 30th Street. There are no bicycle facilities on routes used to access Sherwood Heights, such as SW 30th Street, SW 28th Street, and SW Nye Avenue. 	<ul style="list-style-type: none"> Providing sidewalks on SW 31st Street will significantly improve the safety and comfort level of pedestrians on this key walking corridor. Implementing the existing TSP identified bike facilities on SW 30th Street, SW Jay Avenue, and SW 37th Street will improve bicycle circulation.
Pendleton Community Park	SW 37 th Street	<ul style="list-style-type: none"> Sidewalks are provided on both sides of the street but end abruptly at SW Jay Avenue. There are no bicycle facilities on SW 37th Street north of Southgate Place. 	<ul style="list-style-type: none"> Implementing the proposed bike lane on SW 37th Street from Southgate Place to SW Jay Avenue will complete the bike infrastructure along SW 37th Street.

Constrained Pedestrian and Bicycle Destinations	Location	Existing Constraints	Opportunities
McKay Elementary School	SW 44 th Street	<ul style="list-style-type: none"> There are no sidewalks on SW 44th Street south of SW Sheridan Avenue. There are no bicycle facilities on SW 44th Street. 	<ul style="list-style-type: none"> Providing sidewalks south of SW Sheridan Avenue would improve the MMLOS score to 'Good'. Although not proposed in the 2007 TSP, providing bike lanes along SW 44th Street would make the environment safer for children using bikes to ride to school and nearby parks.
Sunridge Middle School	SW Runnion Avenue	<ul style="list-style-type: none"> There are sidewalks on the north side of the street from Tutuilla Road to 500 feet west of the middle school. Children use an alternative trail to SW Runnion Avenue to access the middle school from Grecian Heights Park due to inconvenient access. There are no bicycle facilities on SW Runnion Avenue 	<ul style="list-style-type: none"> Providing sidewalks on both sides of the street of SW Runnion Avenue would improve the MMLOS score to 'Good' Although not proposed in the 2007 TSP, reducing the speed limits on Tutuilla Road from 35-mph to 25-mph would improve the LTS score to 2 Providing bike lanes or striped shoulder on SW Runnion Avenue would make the environment more comfortable for children using bikes to ride to school
Washington Elementary School	SE Byers Avenue	<ul style="list-style-type: none"> There are sidewalks located on the west side of SE Byers Avenue but sidewalks on the east side end at SE 12th Street. There are no bicycle facilities on SE Byers Avenue. 	<ul style="list-style-type: none"> Providing sidewalks on both sides of the street would improve the MMLOS score to 'Good'. Consider adding bicycle lanes or striped shoulders on SE Byers Avenue, SE 17th Street, and nearby local roads to provide a safer environment for bicyclists.
Ken Melton Little League Park	SE Byers Avenue	<ul style="list-style-type: none"> There are sidewalks located on SE Byers Avenue; however, there is a gap west of SE 17th Street where no sidewalks are provided 	<ul style="list-style-type: none"> Providing sidewalks west of SE 17th Street bridges the gap along SE Byers Avenue. Look at the potential for adding bicycle lanes or striped shoulders on SE Byers Avenue, SE 17th Street, and nearby local roads to provide a safer environment for bicyclists.
Aldrich Park	King Avenue	<ul style="list-style-type: none"> There is a sidewalk on the south side of King Avenue; however, there are no sidewalks on local streets surrounding Aldrich Park including King Avenue west of NW 12th Street 	<ul style="list-style-type: none"> Providing sidewalks on both sides of the street would improve the MMLOS score to 'Good' Implementing the proposed bike route on King Avenue would improve the overall bicycle environment in the area.

Multi-Use Trail Network

The Pendleton River Walk, also known as the Pendleton River Parkway, is a 2.75 mile paved multi-use trail beside the Umatilla River through the heart of downtown Pendleton. This valuable community asset provides access to the river and serves both recreational and utilitarian trip making purposes. The trail is used for recreational activities such as walking, jogging and bicycle riding, while connecting to a number of destinations allowing for walking and bicycling trips to school (Washington Elementary School and Pendleton High School), parks, ball fields, as well as downtown Pendleton and the Round Up area.

Pendleton River Walk Trail	
Extent	From NW Carden Avenue to Ken Melton Little League Park
Length	2.75 miles
Benefits	Recreational opportunities; access to the Umatilla River and the various destinations in and around downtown Pendleton as described below.
Destinations	Downtown Pendleton, Pendleton High School, Washington Elementary School, Ken Melton Little League Park, Pendleton Round Up area, Convention Center, Riverfront Plaza, Roy Raley Park, Stillman Park, Rudy Rada Skatepark






Amenities that enhance the user experience of the River Walk trail include (clockwise direction): wayfinding signage both along the trail and in downtown Pendleton, attractive entry points along the trail, walking/biking bridges providing access north across the river, and other features such as benches, lighting, and security cameras.

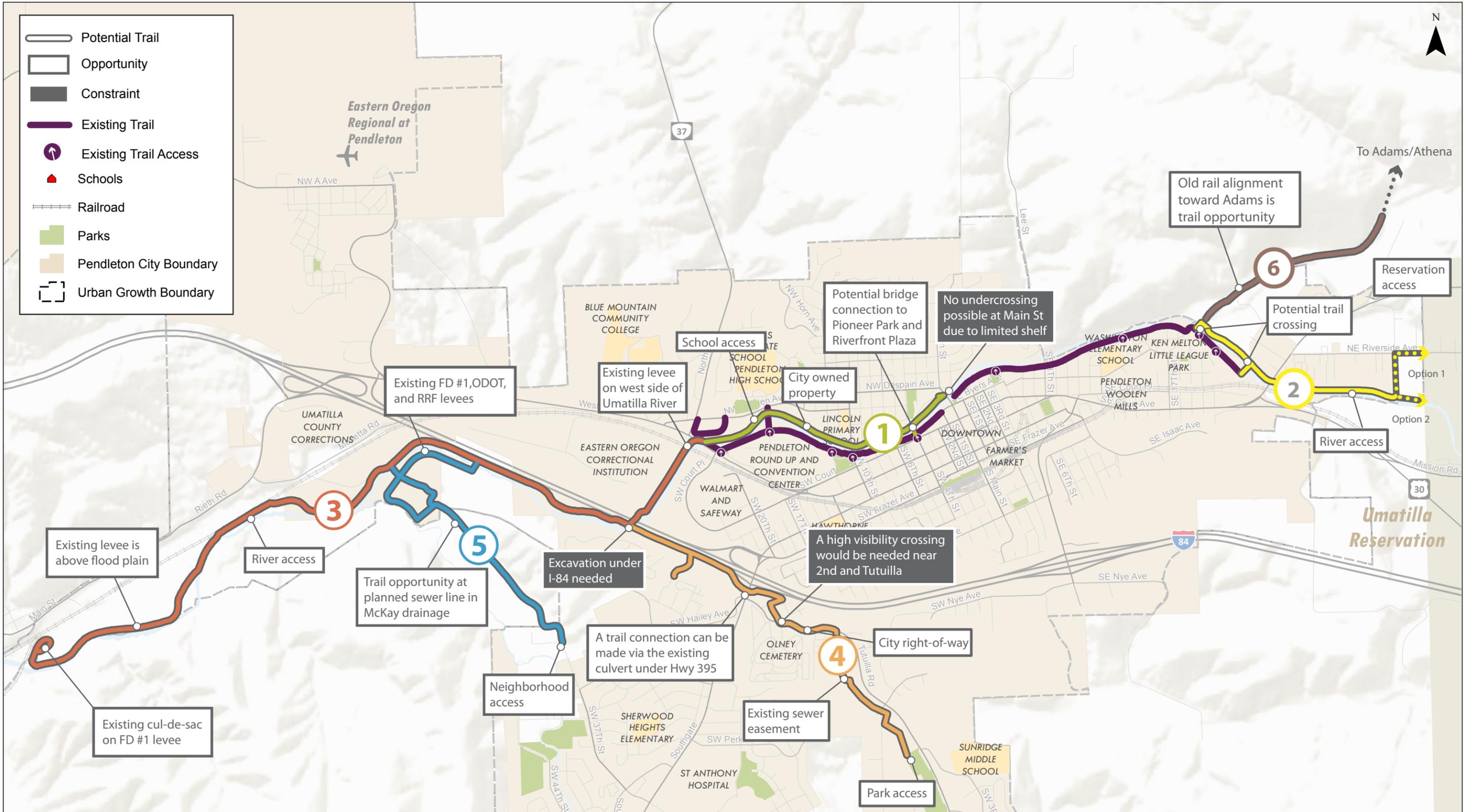
Evaluation of Trail Extension Opportunities

There are a number of places throughout Pendleton where possibilities exist to build off of the success of the River Walk and develop additional trails to create new recreational opportunities as well as connections to community destinations. This section identifies six potential alignments that take advantage of opportunities such as utility easements, city owned property, abandoned rail lines, and levees. The remainder of this section describes the opportunities, constraints and key destinations that could be served by each potential trail alignments to facilitate a conversation around community priorities for different types of transportation investments (e.g., enhancing transit vs. additional investment in multi-use trails) as well as for preferences between each of the following trail alignments:

1. North side of Umatilla River
2. River Walk extension east to City Limits
3. Trail along Flood District #1 Levee
4. Sewer easement to Grecian Heights Park
5. McKay Creek Drainage
6. Trail to Adams/Athena

Figure 8 illustrates each of these potential trail extension alignments.

Considerations for additional trails include the cost of ongoing maintenance, as grant funding that may be available to construct new trails in Pendleton cannot be used to cover the ongoing human resource and capital costs of maintenance. Potential trail alignments also vary in the availability of easements and city owned property, which are noted in the 'opportunities' section of each potential trail. Portions of potential alignments that follow private property where the city does not currently have easements are noted in the 'constraints' section. Alignments that are close to the river, traverse potential wetlands, or include river crossings would need to be studied further for environmental concerns; these items are noted in the 'constraints' section. The relative cost per mile of each potential trail will be assessed later, based on anticipated environmental and right-of-way considerations.



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Potential Trails Opportunities and Constraints Map Pendleton, Oregon

Figure 8

Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl Data Source: The City of Pendleton

Opportunity #1 - North side of Umatilla River

A trail along the northern banks of Umatilla River between the Rudy Rada Skatepark and Main Street would connect with the existing River Walk trail to provide an inner city loop. This potential trail alignment could take advantage of an existing shelf at the Bedford Bridge as well as an old railroad alignment. The majority of river fronting property for this section is city-owned, reducing right-of-way costs. This northern extension of the River Walk would serve a variety of destinations and neighborhoods including: the Aquatic Center, Pendleton High School, and the Pendleton Center for the Arts.

Opportunity #1 - North Side of Umatilla River	
Extent:	From Westgate to S Main Street
Length:	1.2 miles
Potential Benefit:	School connection; recreational opportunities for residences on north side of river; opportunities for loop walks along both sides of the river.
Destinations:	Pendleton High School, Aquatic Center, Pioneer Park, Pendleton Center for the Arts, Rudy Rada Skatepark
Opportunities:	The majority of this alignment is on city owned land, including an abandoned railroad alignment; there is adequate room for a trail to pass under the 10 th Street Bridge; trail could include a new pedestrian and bicycle bridge at 4 th to create a connection to the existing River Walk at Pioneer Park.
Constraints:	A few parcels in this alignment are not owned by the city, necessitating coordination with property owners to identify partnering opportunities; the new potential connection to the River Walk via a new bridge at 4th would require a look at environmental impacts.



Demand for access to the north side of the Umatilla River is evidenced by an informal trail which leads below the Main Street Bridge (left) and an informal parklet, with benches and a picnic table, recently installed by a nearby resident this same area (right).

Opportunity #2 - River Walk extension east to City Limits

An extension of the River Walk east of its existing terminus would potentially connect Umatilla Indian Reservation/Mission and the City of Pendleton. Two alignments are under consideration. The trail could traverse the northern edge of the Umatilla River to NE 35th before turning east at Riverside Avenue. A second potential alignment would keep the trail along the river to the city limits. Both alignments require a crossing to the north side of the river, via either a new non-motorized bridge near the Ken Melton Little League Park or at the end of SE Court Avenue.

Opportunity #2 - River Walk Extension to East City Limits	
Extent:	From eastern extent of River Walk to city limits
Length:	1.4 miles
Potential Benefit:	Provides a comfortable off-street connection between jobs and housing in the Umatilla Indian Reservation/Mission and the City of Pendleton.
Destinations:	Umatilla Indian Reservation/Mission and downtown Pendleton
Opportunities:	Project would come off of the existing levee on the south side of river; there is no levee on north side of river, but the city does have some easements that could be used for public trail access on the north side; there are multiple potential alignments possible for community discussion with regards to the proximity of the trail to the river.
Constraints:	New bridge required to connect with the existing River Walk (impacts cost and need to assess environmental impacts); coordination with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) with regards to a future alignment within the Umatilla Indian Reservation, to inform Pendleton's decision on whether the trail within Pendleton should traverse above the Umatilla River or along it.
 <p>The River Walk could be extended east across the river to the edge of the city limits.</p>	

Opportunity #3 - Trail along Flood District #1 Levee

A western extension of the River Walk from Westgate Place along the Flood District #1 levee would provide for exceptional recreation and nature viewing opportunities as well access to fishing areas along the Umatilla River. Residents would be able to walk or ride the length of the corridor or potentially access the trail from McKennon Station for a shorter trip. By taking advantage of the existing levee adjacent to the Eastern Oregon Correctional Institute and the Umatilla River, this potential trail alignment does not require major land acquisition, but does require coordination with Umatilla County Commissioners which currently owns the levee.

Paving the existing levee up to the cul-de-sac near the railroad tracks has few obstacles to implementation. Once completed, there would be an opportunity to continue the trail across the tracks and connect to Rieth Road. However, this would be a separate project requiring additional planning, as travel across the active railroad will require coordination with Umatilla County and Union Pacific Railroad. This additional trail segment would provide recreational opportunities as well as an off-street connection to downtown for residents living at the west end of Pendleton.

Opportunity #3 - Trail Along District #1 Levee	
Extent:	From Westgate Pl southwest along Flood District #1 levee to cul-de-sac near the train tracks
Length:	3.9 miles
Benefit:	Would provide recreational opportunities and a comfortable facility for kids and other members of the community to access downtown Pendleton.
Destinations:	Eastern Oregon Correctional Institute, Umatilla River
Opportunities:	Opportunity for the city to discuss taking over the Flood District #1 levee from the Umatilla County Commissioners and maintain it at some level of flood protection.
Constraints:	Crossing under the I-84 bridge will require excavation. Extending the trail beyond the existing levee to Rieth Road would be a separate project due to additional coordination needed to cross an active rail line.
	
<p><i>This potential trail would provide seamless walking, biking, and equestrian access to the western reaches of the Umatilla River and out to Rieth Road</i></p>	

Opportunity #4 - Sewer Easement to Grecian Heights Park

A potential trail in the vicinity of Tutuilla Road out to Grecian Heights Park could take advantage of city-owned right-of-way on the edge of the Olney Cemetery property and an existing sewer easement to provide access to Grecian Heights Park, Sunridge Middle School and Pendleton Tennis Center. This trail would offer users a low-stress environment to walk and bike as an alternative to busy Tutuilla Road. It would also enhance the ability of students living in the adjacent residential areas to walk and bike to school. This trail could be connected to the Levee Trail to Rieth Road section, passing through a large culvert under the SW Pendleton-John Day Highway.

Opportunity #4 - Sewer Easement to Grecian Heights Park	
Extent:	From Tutuilla Creek to Grecian Heights Park
Length:	2.0 miles
Benefit:	Opportunity to create a connection that would enhance access to schools and residential walking and biking access to Grecian Heights Park.
Destinations:	Grecian Heights Park, Olney Cemetery, Sunridge Middle School
Opportunities:	City owned right of way along the edge of Olney Cemetery and an existing sewer easement leading to the northwestern edge of Grecian Heights Park reduces right-of-way costs; the low speed, low traffic environment along 2 nd Street represents a potential on-street connection to Hwy 395 at the northern edge of this alignment.
Constraints:	Requires developing a high visibility crossing at or near Tutuilla and 2nd Street to facilitate safe passage to the sewer easement on the south side of Tutuilla. Potential wetland issues near the area of the culvert under Hwy 395.



An existing sewer easement (left) offers the potential for creating a safe and comfortable pedestrian and bicycle connection between Tutuilla Creek and Grecian Heights Park, as an alternative to traveling along busy Tutuilla Road (right)

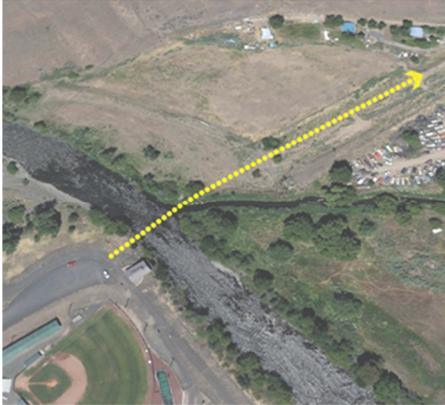
Opportunity #5 - McKay Creek Drainage (which could extend off potential Trail along Flood District #1 Levee)

A potential trail along the McKay Creek drainage would follow an existing sewer easement to provide a connection from the McKay Creek neighborhoods to a potential western extension of the River Walk out the Flood District #1 levee. The trail would provide residents of these neighborhoods between Hwy 395 and McKay Creek with additional opportunities to walk and bike for recreation. If implemented along with the potential trail along the Flood District #1 Levee, a McKay Creek Drainage trail could also connect residents to downtown Pendleton.

Opportunity #5 McKay Creek Drainage	
Extent:	From Umatilla River to SW 37th Street
Length:	1.2 miles
Potential Benefit:	Offers a recreational opportunity in the densely populated area west of Hwy 395; provides off-street trail access to the trail along Flood District #1 Levee (see potential trail #3) and potentially downtown Pendleton.
Destinations:	Umatilla River, downtown Pendleton (with completion of westward River Walk extension); Community Park, McKay Park, Harris Junior Academy, Sherwood Heights Elementary and McKay Creek Elementary
Opportunities:	City-owned property near Umatilla River and a sewer easement to SW 37 th Street reduces right-of-way costs.
Constraints:	Steep grades
	

Opportunity #6 - Trail to Adams/Athena

Another potential extension of the River Walk to the east (in addition to potential trail #2) could make use of an abandoned rail grade out to Adams and Athena. With Adams being over ten miles from Pendleton, this trail connection would allow Pendleton residents to embark on walks, runs and bike rides of varying lengths. This would primarily be a recreational trail, though long bicycle commute trips between these communities would also be possible.

Opportunity #6 - Trail to Adams/Athena	
Extent:	From Pendleton city limits to Adams/Athena
Length:	TBD (~ 12 to 15+ miles to Adams and ~ 17 to 20+ miles to Athena)
Potential Benefit:	Potential for longer walks or bicycle rides, as well as a connection to Adams and Athena for long distance recreational riding and potentially utilitarian trip making such as work commuting.
Destinations:	Adams, Athena
Opportunities:	Old railroad grade that extends from the Pendleton little league parks out to Adams.
Constraints:	New bridge required to connect with existing River Walk (cost and need to assess environmental impacts); Would require partnerships with Umatilla County to develop this project as it is outside of the Pendleton city limits.
	
<p><i>This potential trail could cross the Umatilla River near an old railroad trestle and continue along an abandoned rail alignment towards Adams. This river crossing could also be shared by potential trail #2.</i></p>	

TRANSIT SERVICE

Kayak Public Transit

Kayak Public Transit provides public transportation serving southeastern Washington and northeastern Oregon via fixed route, ADA Paratransit³, and a voucher-based taxi system. CTUIR created and oversees the service. CTUIR is headquartered in Mission, five miles east of Pendleton, and Mission residents often travel to Pendleton for jobs, schools, and other services. CTUIR began public transportation services after observing people walking the distance between Mission and Pendleton. The goal of service lies in connecting towns and getting people to schools and jobs.

Over time, service has grown from one van to a fleet of cutaway vehicles operating seven year-round fixed routes. In 2014, CTUIR rebranded service as Kayak Public Transit to help people understand that service is open to the public, not just tribal members. Currently Kayak contracts with Elite Taxi to provide drivers for fixed route and ADA services. The Tri-City Trolley is contracted to TC Transportation. All transit services are currently free to the general public.

All but one Kayak route runs through Pendleton. According to bus operators, a handful of Pendleton residents use Kayak for in-town trips to Walmart. As observed during fieldwork, Pendleton residents also use Kayak to travel to employment at Cayuse Technologies in Mission.

During the past 12 years, Kayak’s overall ridership has continued to increase. Total annual ridership grew from 46,918 in 2008 to 96,073 in 2013, an average annual growth rate of approximately 9.7%. See Table 2 for an overview of all Kayak fixed route services. Exhibit 2 displays the existing Kayak routes.

Table 2 - Kayak Services Summary

Route Number and Name	Days of operation	Span of Service	Frequency or Number of Daily Trips	Communities Served
Hermiston Hopper	Saturday-Sunday	5:25 a.m. – 7:00 p.m.	6 one-way trips	Pendleton, Hermiston, Umatilla, Irrigon
Mission Metro	Monday-Saturday	6:50 a.m. – 8:30 p.m.	6 one-way trips	Pendleton, Mission
La Grande Arrow	Monday-Friday	5:05 a.m. – 7:30 p.m.	3 one-way trips	Pendleton, Mission, La Grande
Walla Walla Whistler	Monday-Saturday	4:45 a.m. – 7:20 p.m.	4 one-way trips weekdays; 2 one-way trips Saturday	Pendleton, Walla Walla
Pilot Rocket	Monday-Friday	6:15 a.m. – 7:00 p.m.	3 one-way trips	Pendleton, Pilot Rock
Tutilla Tripper	Monday-Friday	7:00 a.m. – 4:20 p.m.	3 one-way trips	Mission, Tutuilla
Tri-City Trolley	Monday-Saturday	5:05 a.m. – 6:15 p.m.	3 one-way trips	Tri-Cities, Hermiston, Irrigon ¹

¹ Service to Irrigon weekdays only.

³ Local fixed-route transit service is required by Federal law to have complementary curb-to-curb service along a ¼ mile buffer of the fixed-route to serve those with certified temporary or permanent disabilities.

Exhibit 2 – Regional Kayak Routes

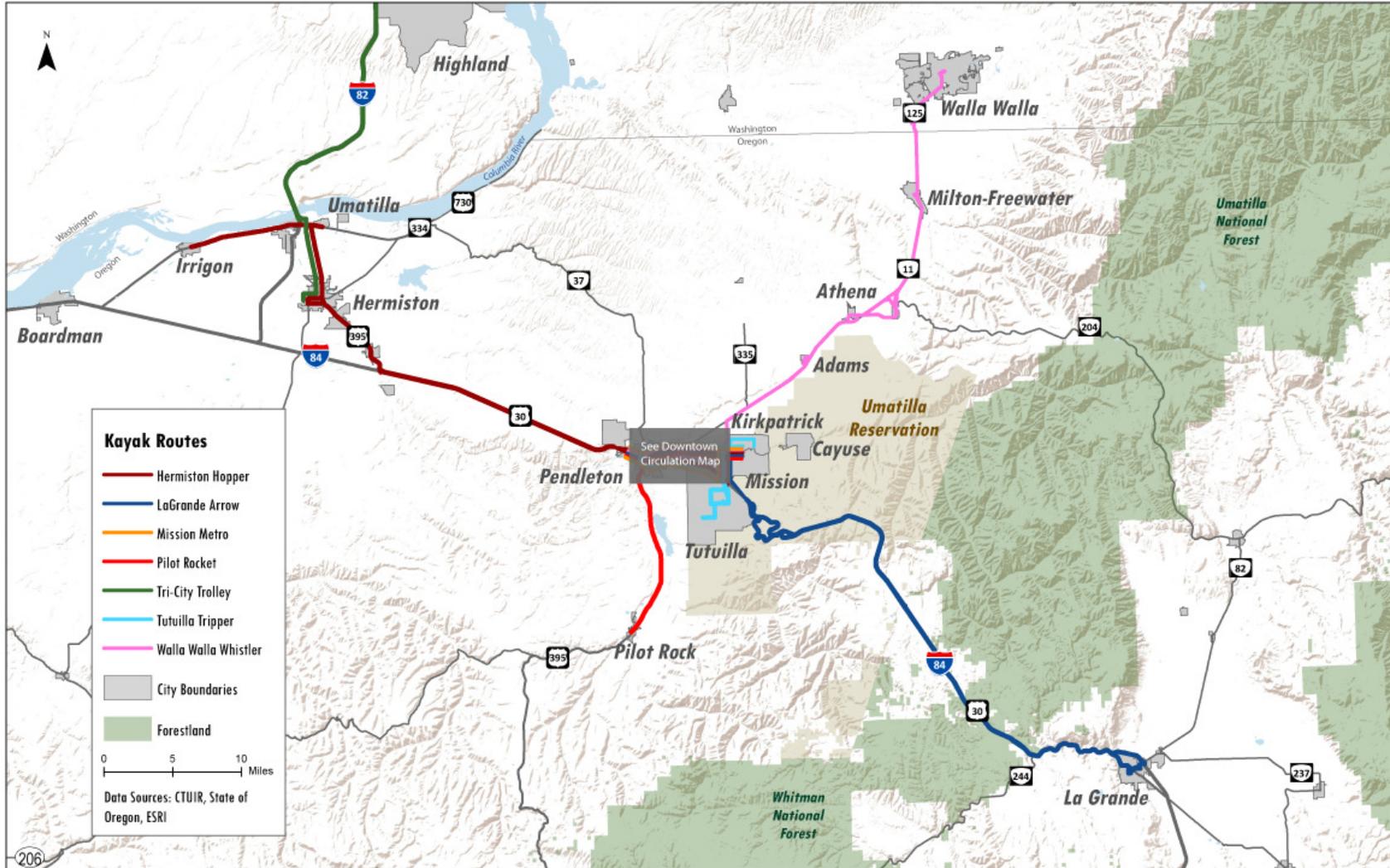
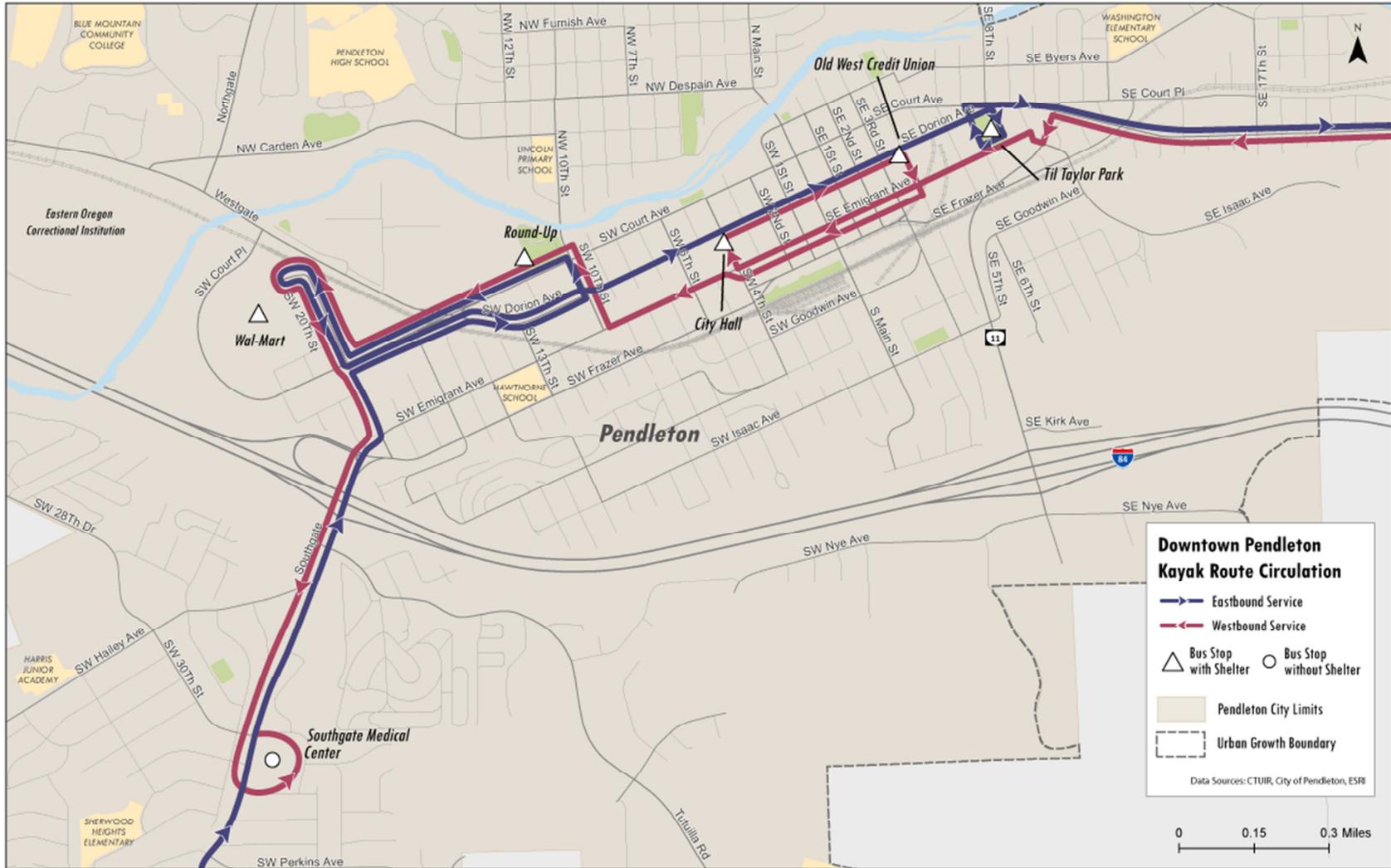


Exhibit 3 shows Kayak route circulation in downtown Pendleton. All routes that serve Pendleton generally make this pattern eastbound and westbound. The bus makes circuitous loops through downtown due to the one-way street network and the location of transit shelters. For example, at Til Taylor Park the bus shelter sits at the southeast corner of Emigrant Avenue and SE 8th Street. Since Emigrant Avenue goes one-way westbound, the eastbound bus operator (heading toward Mission) loops around the park via Dorion Avenue, SE 8th Street, Emigrant Avenue, and SE 7th Street then turns back onto Dorion Avenue to head out of town, since all passengers wait at the bus shelter and there is no designated stop on Dorion Avenue Street at Til Taylor Park. Similarly, bus shelters at City Hall and Old West Credit Union sit on Dorion Avenue, which travels eastbound. Westbound buses make a large loop to serve those shelters. This routing essentially allows riders traveling in both the eastbound and westbound direction to utilize the protection of a single bus shelter provided on one street of the downtown Pendleton couplet.

Kayak has fixed stops but will also pick up “flag stops” or people waiting on the side of the road. The bus will pick up those passengers who wave the bus down as long as the driver can safely pull over. Kayak serves many of the major destinations in Pendleton, including the Airport, Southgate medical facility, Walmart, the downtown core, and BMCC; however, the route schedules do not provide maps specific to Pendleton circulation. Some of the stops are by request only, meaning a passenger already has to be on the bus to get dropped off. On certain trips, for example, the bus serves Walmart at a set time, but on other trips a passenger on board has to request a stop at Walmart for the driver to go there.

Exhibit 3 – Downtown Kayak Circulation



City of Pendleton

The City of Pendleton’s Let’er Bus transportation program provides multiple transportation services available to the general public as well as special needs populations, as summarized in Table 3.

Table 3 - Let'er Bus Service Overview

Program	Days of Operation	Span of Service	Fare	Eligibility	Description
Senior and Disabled Taxi Ticket Vouchers	Monday-Sunday	5:00 a.m. – 3:00 p.m.	\$1.75 one-way	Available to seniors and disabled person who reside within seven driving miles of the City of Pendleton boundary	Limited tickets available depending on grant funding. Tickets are distributed on a semi-annual basis.
Senior Meal Site Transportation Program	Monday-Friday	Pickup by phone request only	Donation-based service	Geared towards seniors	Service to Pendleton Senior Center for lunch.
Daily Van Service	Monday-Sunday	Mon-Fri: 7:00 a.m. to 7:00 p.m. Sat: 8:00 a.m. to 5:00 p.m. Sunday: 8:00 a.m. to 2:00 p.m.	\$1.00 one-way and donations encouraged	General public	Customers can request taxi service a day in advanced or same-day service based on availability via dial-a-ride program.
Elite Transit Tickets	Monday-Sunday	22 hours per day	\$3.00 one-way	General public	Similar to Senior and Disabled Ticket Voucher expect all general public can ride. A limit of six tickets a week can be purchased at City Hall.
Aquatic Center Transportation	Three days per week	Not available	Donation-based service	General public	Seasonal summer service only
Parks and Rec Interpark Transportation	Pre-arranged recreation schedule	Pre-arranged service	Free	Intended for youth but open to general public	Transportation between Pendleton community parks
Care-Ride	Monday-Sunday	By request only	Free	Medical assistance needs	Taxi service for medical assistance. Individual or doctor may call taxi company to schedule a ride. Funding supported by St Anthony’s.

Let’er Bus has grown significantly since its inception in the mid-90s. Total annual ridership grew from 1,500 in Fiscal Year 2000 to 36,600 in Fiscal Year 2015. The program began focusing on seniors, but the city has added programs over the years to serve the general public as well as recreational activities. With the added programs and ridership, the cost to operate the system has increased from \$9,600 in fiscal year 2000 to \$227,000 in fiscal year 2015. Exhibit 4 and Exhibit 5 provide an overview of the historical growth of operational cost and ridership, respectively.

Exhibit 4 - Let'er Bus Operational Cost

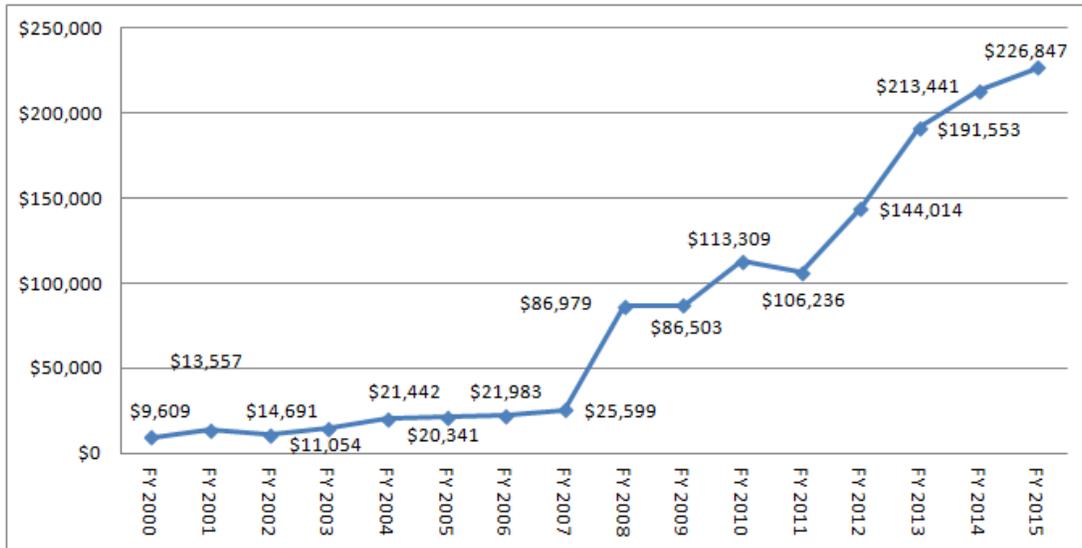
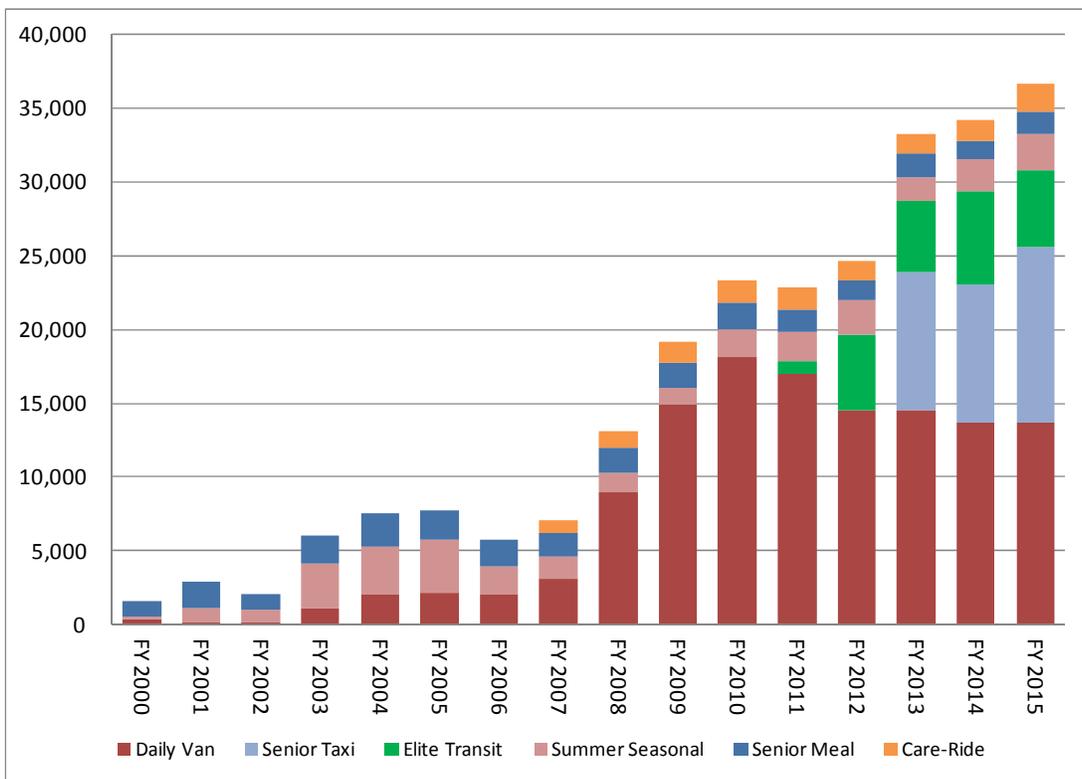


Exhibit 5 - Let'er Bus Ridership



The senior and disabled tax voucher program is primarily funded through ODOT's Special Transportation Fund. Once the city knows how much STF it will get, the finance department determines how many vouchers can be given out to each applicant. Vouchers are distributed each January and July.

Daily Van serves the general public and requires an advance registration for curb-to-curb shared ride service. Most Daily Van users are traveling to work, showing the importance of the service to Pendleton's economy.

Due to high demand for Daily Van, the city began Elite Transit in 2011. This service operates more like a typical taxi – passengers may call and get immediate dispatch – but fares are higher and the number of tickets available is limited.

Care Ride takes people to the hospital no reservation needed. A grant pays for 56% of the service, out of the remaining costs, the city pays 50% and St. Anthony's pays 50%. The city is typically short on funds for at least a month's worth of trips, indicating unmet need.

Let'er Bus will travel seven miles outside the Urban Growth Boundary in directions that are not served by public transportation. For instance, Let'er Bus would not operate east into Kayak territory, but would transport people to the west and south.

The city certifies passengers and provides tickets for the senior and disabled program and Elite Transit. Otherwise, all operations including dispatch and drivers, is contracted to Elite Taxi. Daily Van and Elite Transit are operated on a city van (typically two are out in service at any given time), while other services may be provided using a taxi. The city owns five wheelchair-equipped vans. Two are brand new; the oldest member of the fleet from 2002 is leased to the tribe for \$0. In addition, the city owns two transit vehicles: a 1999 model also leased to the tribe for \$0 and a 2009 Ford bus. Elite Taxi completes day-to-day maintenance on the vehicles and the city has a maintenance grant for major repairs with a 10% local match.

Transportation services are funded through a combination of sources, including ODOT's STF funds, 5310, 5311, and local match from the city. In general, the city provides \$22,000 annually toward transportation. City leaders recognize the importance of transportation and support has remained fairly steady. Funding, financing, and cost efficiency will be detailed further in Technical Memo #4.

Private Providers

Greyhound provides round-trip bus service to the cities of Portland, Seattle, Spokane, Boise, and destinations beyond at least once daily, seven days per week. The Greyhound terminal is located at the Pendleton Market, at the intersection of OR-30 and SE 20th Street near the eastern edge of the city.

Elite Taxi also operates a private taxi service in Pendleton. Taxi vouchers are distributed by the city, Blue Mountain Community College, and other agencies. No other private taxi service in the Pendleton area was identified.

Transit-Supportive Amenities

The five transit shelters in Pendleton are served by Kayak and owned and maintained by the city. Shelters exist at City Hall, Old West Credit Union, Til Taylor Park, Round Up, and Walmart. The shelters include service information (see Exhibit 6). Let'er buses are equipped with bike racks but no bike parking exists at any of the shelters. The transit system currently does not have any park and ride or designated carpool locations. Transit stops with shelters have crosswalks, but some are faded. Outside the central business district (CBD), locations such as Southgate, Keystone, and the Greyhound stop do not have continuous sidewalks or safe crossings.

Exhibit 6 - Let'er Bus Transit Amenities include shelters (top left and right) and information on routes serving each shelter (bottom)



KAYAK PUBLIC TRANSIT	
Free Public Transit Services from City Hall	
To Hermiston (Hermiston Hopper)	
Monday thru Friday	5:47 AM
Monday thru Friday	8:39 AM
Monday thru Friday	12:39 PM
Monday thru Friday	5:17 PM
Saturday	8:45 AM
Saturday	3:53 PM
Connector to Tri-Cities available with Tri-City Trolley	
To Pilot Rock (Pilot Rocket)	
Monday thru Friday	6:08 AM
Monday thru Friday	10:29 AM
Monday thru Friday	5:22 PM
To Mission (Mission Metro)	
Monday thru Saturday	6:57 AM
Monday thru Saturday	9:27 AM
Monday thru Saturday	11:43 AM
Monday thru Saturday	1:43 PM
Monday thru Saturday	3:24 PM
Monday thru Saturday	7:43 PM
To LaGrande (LaGrande Arrow)	
Monday thru Friday	5:15 AM
Monday thru Friday	9:32 AM
Monday thru Friday	4:47 PM
To Tutuilla Vicinity (Tutuilla Tripper)	
Monday thru Friday	11:14 AM
Monday thru Friday	2:58 PM
To Walla Walla (Walla Walla Whistler)	
Monday thru Friday	4:51 AM
Monday thru Friday	8:41 AM
Monday thru Friday	3:34 PM
Monday thru Friday	5:03 PM
Saturday	9:05 AM
Saturday	4:04 PM

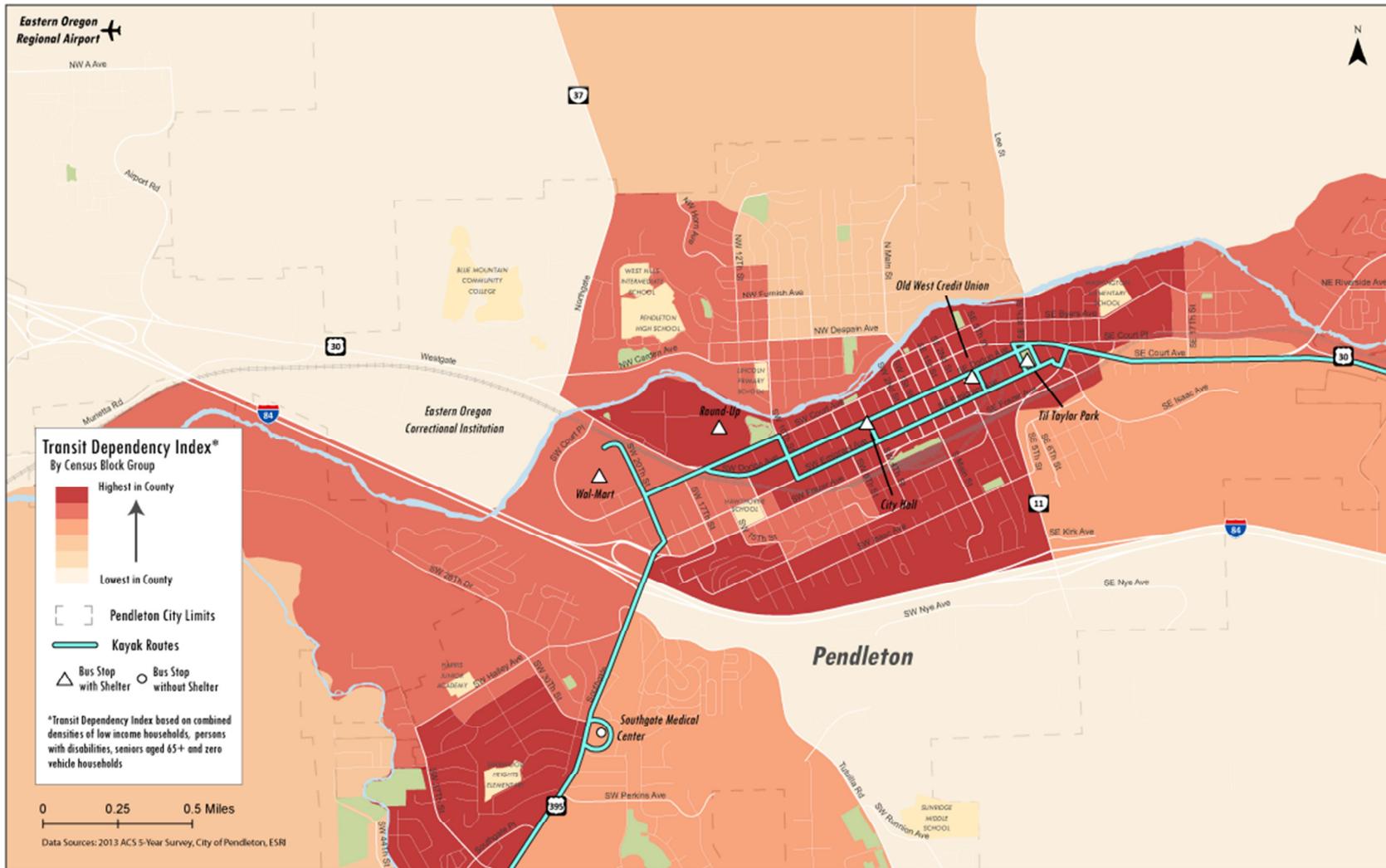
EVALUATION OF GROWTH OPPORTUNITIES

The Pendleton Let'er Bus has experienced continued growth since its inception. Growth opportunities to enhance transit service and coverage are typically based on a number of factors, including but not limited to population and job centers, where growth is expected, and equity considerations.

Population Densities

Pendleton serves as a central population center and work location for Umatilla County. Certain populations tend to rely more heavily on public transportation based on demographic characteristics. These markets include people over age 65, people with disabilities, those with low income, and households without a vehicle. Providing public transportation serving these populations ensures equitable access to jobs, schools, and services. As shown in Exhibit 7, transit propensity is concentrated in two primary sections of Pendleton. Downtown Pendleton has a high concentration of transit dependent populations bordered by the Umatilla River to the north, Interstate 84 to the south, Oregon Route 11 to the east and SW Pendleton-John Day Highway to the west. Parts of this population have convenient access to the existing downtown bus shelters and activity centers. Closer to I-84, people are less connected to existing service. The other concentration of transit dependent users is south of the downtown area, located near South Gate Medical Center. This population has is served by Kayak routes, but there are very few daily trips. Both Mission Metro and Pilot Rocket pass Southgate Medical Center, but stops are by request only.

Exhibit 7 - Transit-Dependent Population Density



Commute Patterns

Per the Longitudinal Employer-Household Dynamics survey administered by the Census Bureau, the vast majority of Pendleton residents who are employed work within Pendleton (Figure 12). A clear relationship exists between Pendleton and Hermiston, with high numbers of people traveling between the two cities. Given the transit focus of this analysis, Table 4 does not include travel to suburban locations that would be difficult to serve with transit, and focuses instead on city-to-city travel.

Table 4 - Table of Intercity Work Travel

Live	Work	Number of People
Pendleton	Pendleton	3,525
Hermiston	Pendleton	316
Pendleton	Hermiston	380
La Grande	Pendleton	170
Pendleton	La Grande	101
Tri-Cities	Pendleton	153
Pendleton	Tri-Cities	110
Walla Walla	Pendleton	56
Pendleton	Walla Walla	60
Milton Freewater	Pendleton	106
Pendleton	Milton Freewater	32

Source: LEHD 2013

Exhibit 8 maps all home and work locations of Umatilla County residents. Home locations generally concentrate in urban areas while work locations extend into Walla Walla Washington.

At the local level, Exhibit 9 shows home and work locations within the City of Pendleton. The largest employers include the Eastern Oregon Correctional Institution, Keystone, and Walmart on the west end of city and Southgate Medical Center on the south side of town.

In general, home locations in Pendleton lie outside the CBD, meaning people must transport themselves from north of the river and south of the CBD and into downtown. The Southgate corridor south of the medical center is primarily residential while the airport area is primarily employment with few residences.

Activity Centers

Activity centers in the community make great transit service locations. These include grocery stores, malls, hospitals, social services, schools, and colleges as shown previously in Figure 3.

The 2007 TSP identified a potential transit route connecting activity centers, shown in Exhibit 10. The need for and resources available to run a city-based transit service will be a key focus of this effort.

Exhibit 8 - Regional Places of Work and Employment

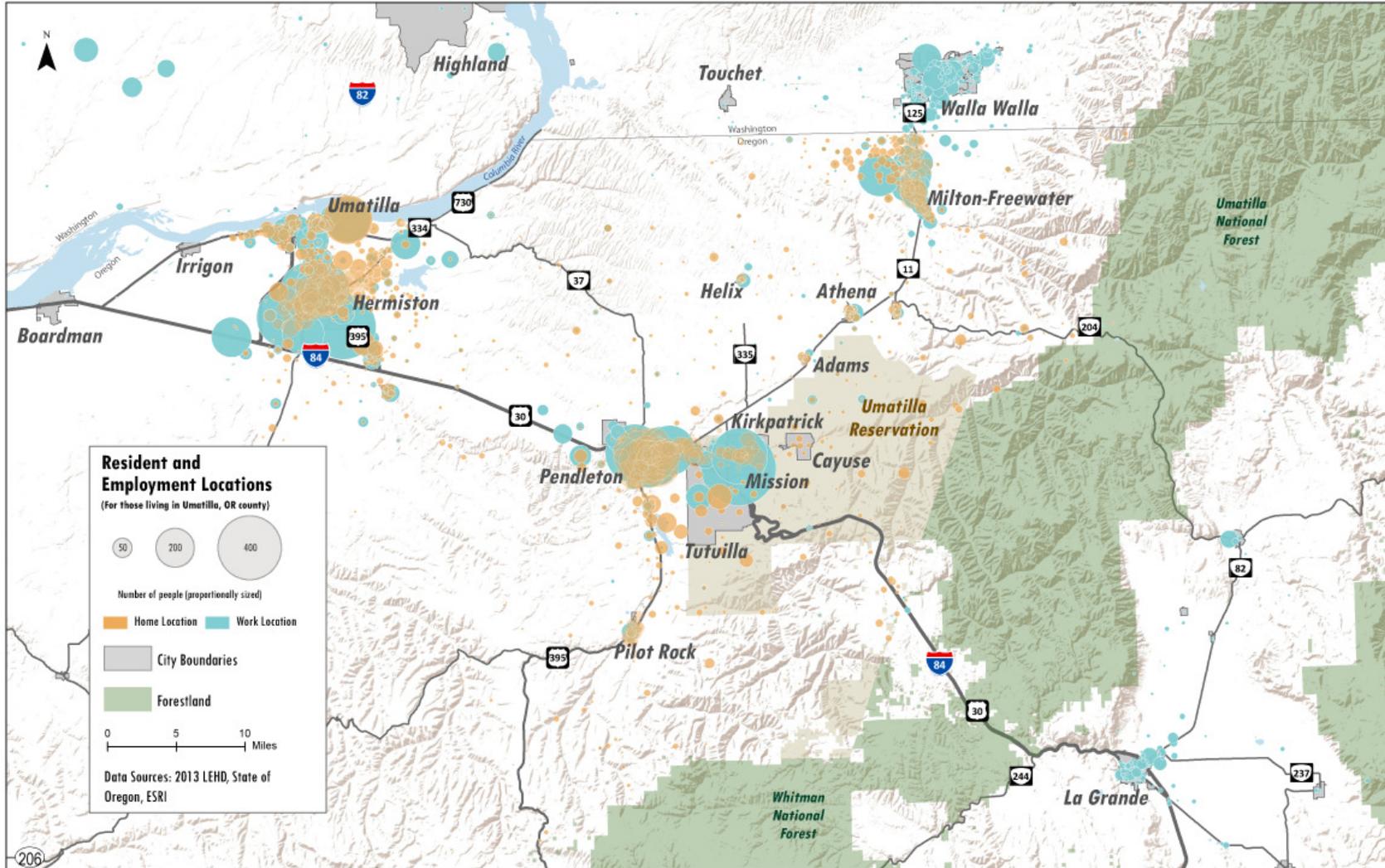


Exhibit 9 - Local Places of Work and Employment

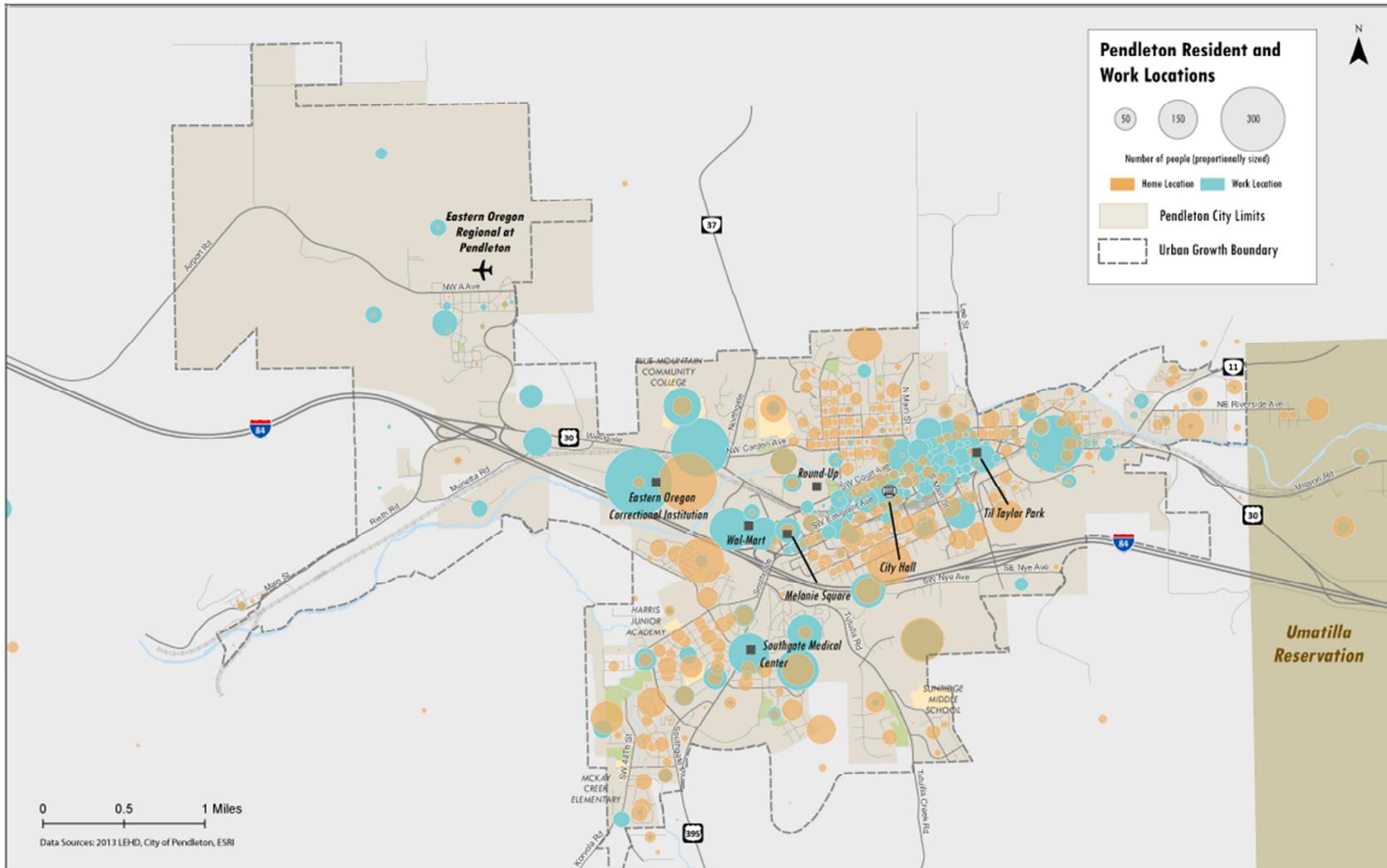
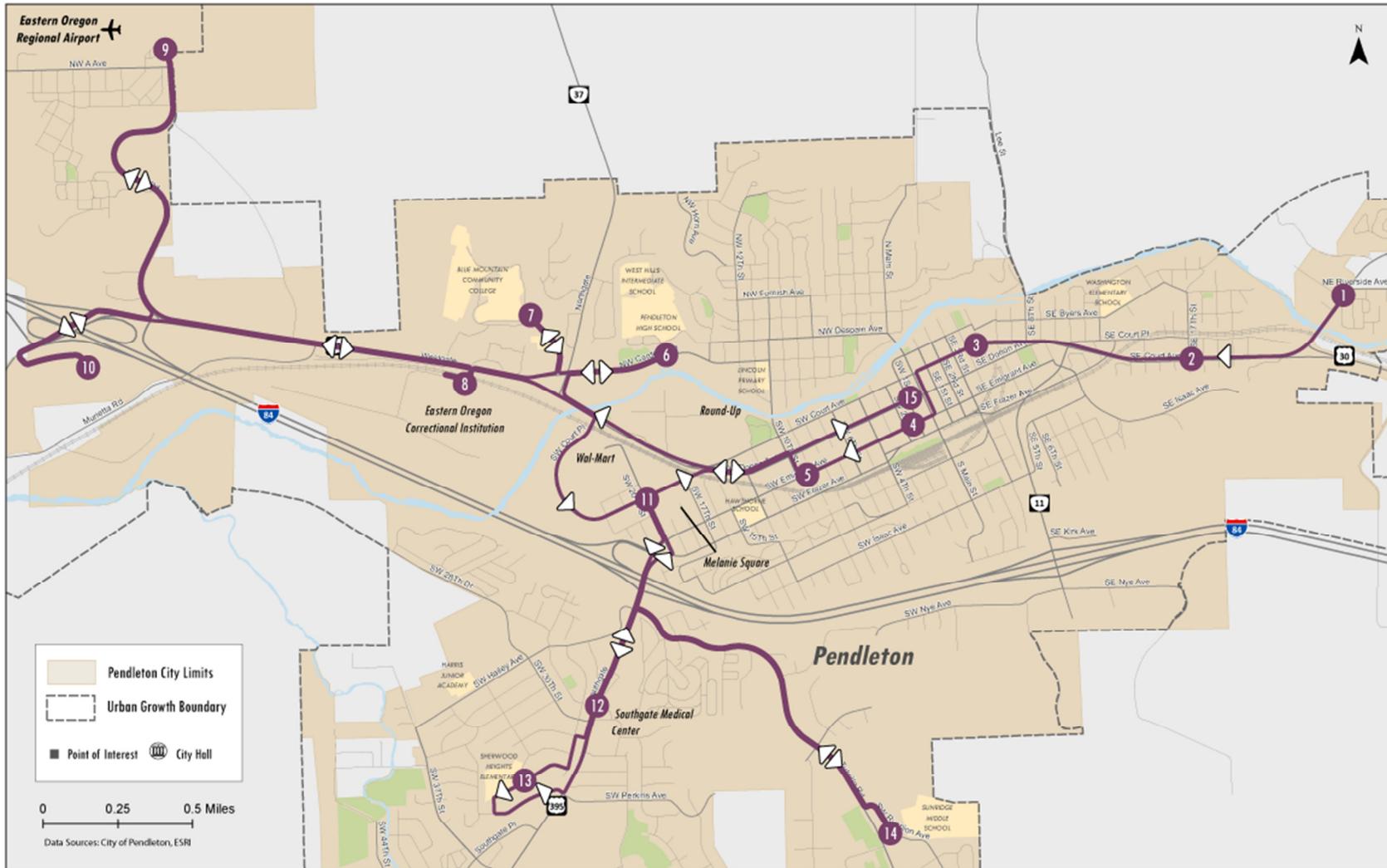


Exhibit 10 - Potential Route Identified in 2007 TSP



Growth Areas

Population projections completed for Pendleton in 2011 used the “safe harbor” method to estimate 2033 population. This methodology assesses what percentage the Pendleton population represents out of the overall county population, determines a growth rate based on county projections from the Office of Economic Analysis, and assigns a percentage increase to Pendleton. This analysis predicts that population in Pendleton will increase by 5,059 people by 2033, requiring 2,071 new housing units. Note that this would represent a fairly significant increase as a percentage of the city’s current population of nearly 17,000 residents and an accelerated rate of growth; the population of Pendleton in 1990 was approximately 15,000 residents.

The current zoning, as shown in Figure 1, will dictate where growth occurs, unless the city undertakes a zoning code change (potentially as part of this Transportation System Plan Update). Denser development is supportive of transit, as described in the Linking Land Use and Transportation section later in this memo. Areas zoned for high-density residential include the Southgate corridor, the area just north of the Umatilla River, and some parcels near the I-84 corridor.

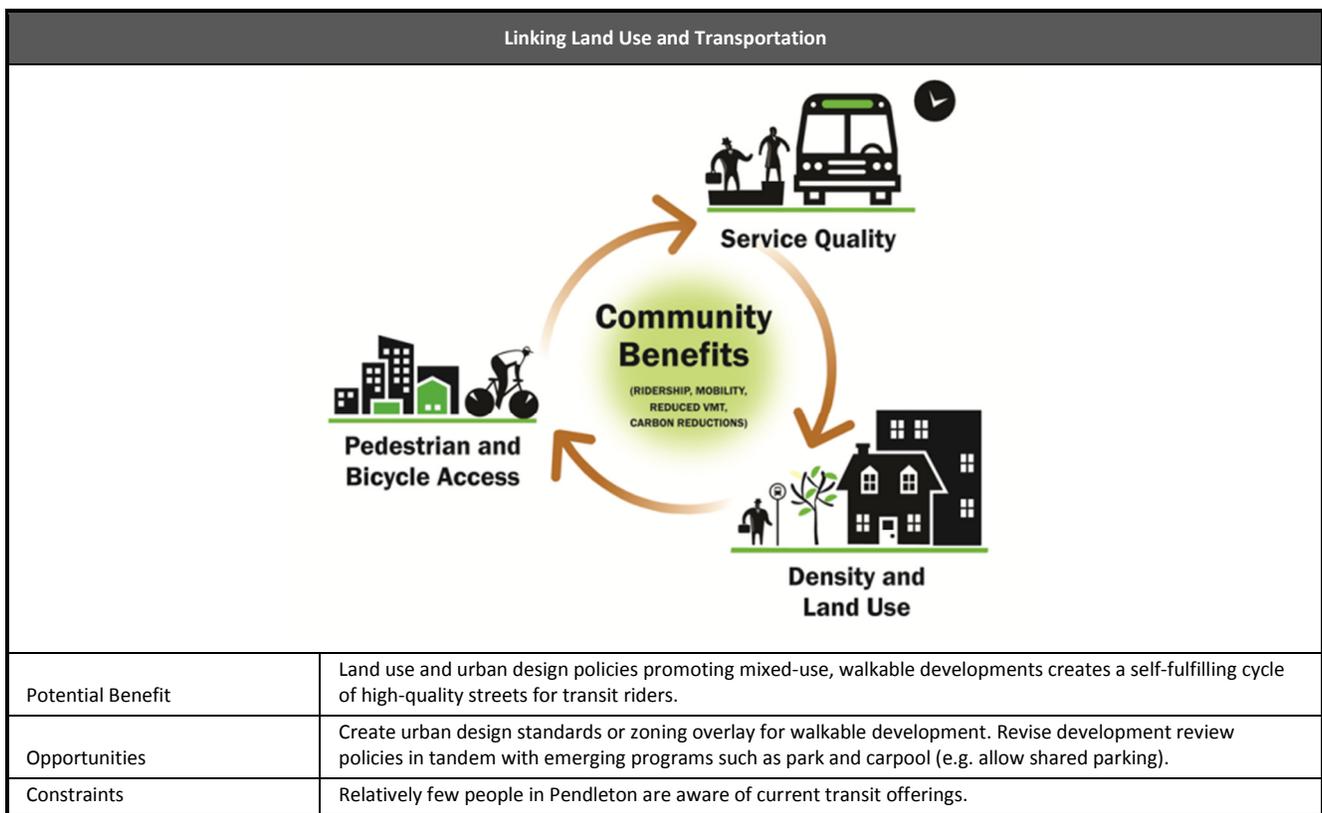
OPPORTUNITIES AND CONSTRAINTS

Transit opportunities strategies, benefits, and the opportunities and constraints to implementation are outlined below.

Linking Land Use and Transportation

The best transportation plan is a land use plan. Transit succeeds in mixed-use areas with densities of people and destinations. As the city grows, targeting growth along corridors that are connected in the street network or are along potential transit routes will encourage transit usage. Streets such as Southgate, Tutuilla Road, Highway 11, Court Avenue, Westgate, Northgate, NW 10th Street, N Main Street, and Emigrant Avenue provide direct and connected links across the river and across town.

Exhibit 11 - Land Use, Urban Design, and Transit Usage Cycle



Street Connectivity

Transit routes function effectively in a gridded street network. Downtown Pendleton has a connected grid, but is cut off from neighborhoods to the north by the Umatilla River and to the south by I-84. As shown in Exhibit 10, connections to St Anthony’s Hospital and Sunridge Middle School would require transit services to double back on themselves because there is no existing street connection between Southgate and Tutuilla Road.

Street Connectivity	
Potential Benefit	Connected streets allow transit to efficiently reach community destinations.
Opportunities	Continue targeting growth along corridors that provide mobility across the city’s boundaries (e.g. Emigrant Avenue, NW 10th Street). Enhance connectivity standards for new development.
Constraints	South of I-84, grade issues and current street patterns make serving certain destinations difficult; may be unlikely that new road links would be built.

Information & Marketing

Kayak currently runs several trips per day through the City of Pendleton; however, it has historically not been clear to residents that the service is open to the general public, can be used to access other locations (stops) in Pendleton, and at what frequency each stop is served. Some Pendleton residents use this service to get around town and were observed using the bus to travel from Pendleton to Cayuse Technologies in Mission. Shelters contain information on which routes serving each stop. However, summary resources such as system maps are not provided at stops to help people understand where routes traverse through the city.

Information & Marketing	
Potential Benefit	Enhanced marketing can make more Pendleton residents aware of existing service and increase ridership.
Opportunities	Create Pendleton-focused marketing materials that show the combined headways through downtown and the schedules to area cities. Post Pendleton specific schedules (i.e. indicating stops in Pendleton) and maps on shelters throughout downtown.
Constraints	Kayak services are limited by available funding and routing circulates through Mission.

Transit Amenities

The Pendleton Downtown Plan (2011) calls for more robust amenities at bus stops. Current shelters are clean and well-proportioned, but do not all contain comfort elements (benches) or multimodal connections (bicycle racks). Additional shelters would reduce the need for Kayak routes to loop throughout the city to serve existing shelters.

Transit Amenities	
Potential Benefit	Transit stop amenities increase system visibility and passenger comfort.
Opportunities	Add shelters in front of City Hall and Til Taylor Park along Dorion Avenue. Add a shelter on the opposite side of the Old West Credit Union along Emigrant Avenue. Create local bus stop standards including specifications for benches, lighting, bicycle parking, and wayfinding.
Constraints	Right-of-Way could be constrained in some places, reducing ability to add shelters. As is the case with the Old West Credit Union shelter, land owners may be willing to grant an easement and build on private property.

Access to Transit

Every transit rider begins his or her trip as a pedestrian. Safe and pleasant walking facilities help not just transit users, but all Pendleton residents and visitors. Key elements of pedestrian access to transit include a connected sidewalk network, curb ramps to facilitate the transition between the sidewalk and the street at intersections and mid-block crossings for users with physical disabilities as well as people pushing strollers, and marked pedestrian crossings to support access to stops from the other side of the street. Downtown Pendleton generally has connected sidewalks and pedestrian amenities at intersections. Some bus stops, however, lack nearby high-visibility crosswalks and/or ADA-compliant curb ramps. Outside of downtown, along corridors such as US 30 and Southgate/US 395, no sidewalks exist and pedestrian crossings are limited or nonexistent.

Access to Transit	
<p>No curb ramps at Til Taylor Park stop</p> 	<p>Crossing & curb ramp at Round Up stop</p> 
<p>No sidewalks or crossings exist at the 76 station (Greyhound station)</p> 	
Potential Benefit	Making transit usage (and walking in general) a safe and comfortable form of transportation attracts users. Having to walk through grass or on a shoulder can send a message that walking is not expected or encouraged.
Opportunities	Create prioritization for walking investments that targets curb ramps, sidewalk links and marked pedestrian crossings along transit routes and in communities with high densities of transit-dependent populations.
Constraints	Sidewalks, which also require curb and gutter, can represent a significant financial investment, with costs further increased in constrained corridors. Curb ramps are a capital element that cities typically invest in as resources are available.

Enhanced Commuter Services

Pendleton residents travel daily throughout the region on long commutes. A goal of the statewide Transportation Planning Rule (TPR) includes reducing Vehicle Miles Traveled while a proposed goal of this TSP includes providing equitable forms of transportation, helping connect people to jobs and reduce transportation costs. On a typical weekday, 683 people travel from Pendleton to La Grande, Hermiston, Walla Walla, Tri-Cities, and Milton-Freewater to Pendleton for work – places already served by Kayak. Yet many commuters do not live along a Kayak route. In addition, many commuters may prefer to carpool rather than take transit. Providing safe and secure parking in existing underutilized parking lots can facilitate carpooling, increase transit ridership, and reduce commuting costs over time.



Collaboration with Kayak

Kayak has the infrastructure in place to run fixed-route service and already serves Pendleton. Key areas identified by the city as unmet needs, such as serving the Westgate corridor, Southgate, the airport, and the Eastern Oregon Correctional Institution, are already served by Kayak. But this service is irregular and infrequent. Regular communication between city staff and Kayak could result in mutual benefits such as jointly pursuing new funding sources and/or providing transit service to more destinations in Pendleton.

Collaboration with Kayak	
Potential Benefit	Collaboration will avoid service duplication and ensure a menu of services is available for different transportation needs.
Opportunities	Establish a working relationship with Kayak and identify activity centers that could be served more directly.
Constraints	If funding is flat, may require shifting resources from existing city programs into fixed route transit service.

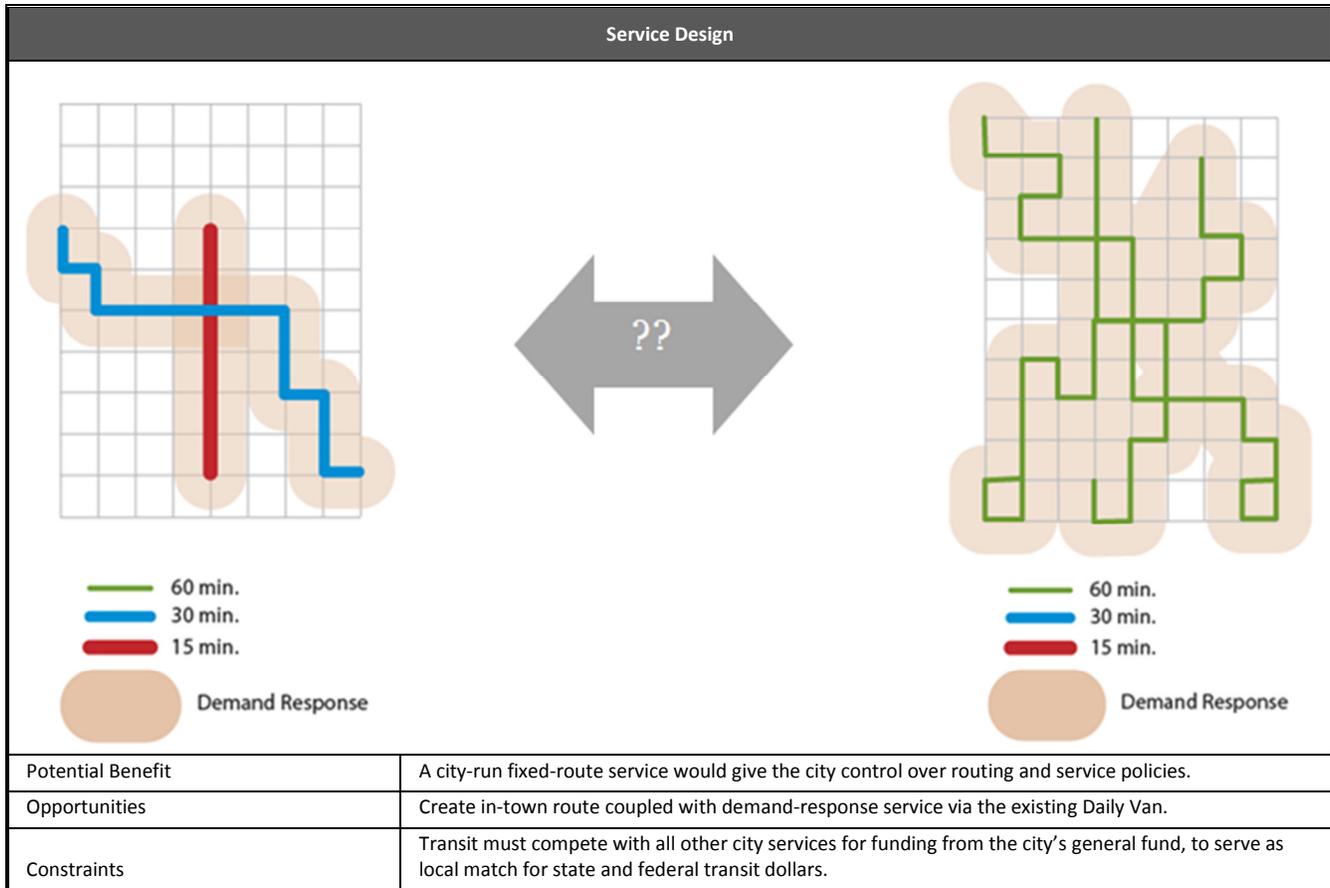
Coordination

The City of Pendleton provides an array of transit services geared toward older adults as well as the general public. Fares are extremely low and demand is high – the city typically runs out of passes in its 6-month distribution period. Streamlining or coordinating city services with Medicaid providers and school bus operators, among others, helps communities across the country provide more transportation without a major increase in resources. At the regional level, the city is involved with the Blue Mountain Inter-Regional Transit Association (BIRTA), a consortium of rural providers geared toward fostering intercity travel.

Coordination	
Potential Benefit	Coordination on human services, marketing, information, and route planning is a low cost strategy to increase ridership.
Opportunities	Participate in ODOT Region 5’s Coordinated Plan update taking place in 2015-2016 to understand human services transportation opportunities. For example, explore opportunities for a franchise agreement for Non-Emergency Medical Transportation (NEMT). Determine if current city programs could be modified to better meet needs through a combination of dial-a-ride, fixed route service, and taxis.
Opportunities	Continue participating with BIRTA to explore regional travel needs.
Constraints	“Turf issues” often arise during coordination efforts.

Service Design

Another option to explore is a city-specific route building upon the potential route identified in the 2007 TSP. Service design will need to operate along corridors with transit-supportive densities and be matched to community context. For example, in some rural communities fixed route is not cost-efficient because people tend to live far from a main street. In these instances, curb-to-curb service makes more sense. The city will need to determine its priorities and which markets it wishes to serve with public transit, as this will inform decisions on service design.



Transportation Hub

Transportation hubs are places where multiple transportation services (e.g. transit, park and ride, information kiosks, etc.) come together; transportation hubs are also often used as placemaking tools. Given current commute patterns and limited transit offerings, a first step could be to identify a parking area where residents can meet to carpool to jobs outside of the city. This could grow over time to include park and ride as well as mixed use developments. A downtown transportation center may be feasible at the parking lot at the southeast corner of Main Street and SE Frazer Avenue. This location sits across from the Chamber of Commerce, making it ideal for a combined tourism / local public space and resource center.

Transportation Hub	
Potential transit center (left) is currently public parking (right)	
	
Potential Benefit	A transit center can become a focal hub for downtown.
Opportunities	Create a phased “transportation hub” – starting as park and pool, then adding park and ride, and eventually new residential or commercial developments.
Constraints	The city owns the parking lot but the railroad owns the right-of-way. A park and ride would require Kayak to modify routing of its intercity services.

Appendix A Pendleton Zones

Pendleton Zoning Regulations

Zone		Purpose	Example of Permitted Uses	Maximum Density/ Intensity
Residential	R-1 Low Density Residential	To provide for the transition of large, sparsely settled areas from rural or ag to urban one-family residential use	<p><u>Uses permitted outright include:</u></p> <p>Duplex, single family home, city park, townhouses, keeping of livestock (except swine)</p> <p><u>Uses permitted conditionally include:</u></p> <p>Animal clinic, kennel or hospital, agricultural production and services, light industrial uses, multi-family dwelling</p>	9 DU/acre
	R-2 Medium Density Residential	To provide areas to be used for dwellings of varying types within a moderate density range, with related uses. Additional flexibility for adaptive Reuse and Mixed Use is provided within the Central Mixed Use Plan designation and Opportunity Area overlays	<p><u>Uses permitted outright include:</u></p> <p>Duplex, single family home, city park, townhouse, adaptive commercial or industrial re-use of historic structure (within Central Mixed Use Plan designation)</p> <p><u>Uses permitted conditionally include:</u></p> <p>Bed and breakfast, multi-family dwelling, day nursery, social services</p>	18 DU/acre
	R-3 High Density Residential	To provide residential development at increased densities, for varying types of urban living in close proximity to jobs, good and services	<p><u>Uses permitted outright include:</u></p> <p>Boarding and lodging house, multi-family dwelling, townhouses, park, adaptive commercial or industrial re-use of historic structure (within Central Mixed Use Plan designation)</p> <p><u>Uses permitted conditionally include:</u></p> <p>Day nursery, neighborhood commercial, business and professional services</p>	35 DU/acre
Commercial	C-MU Central Mixed Use	To provide land areas that preserve and enhance the city's core area and historic structure, where the greatest concentration of retail, business, government and residential activity will occur	<p><u>Uses permitted outright include:</u></p> <p>Automobile and vehicle dealers and services, general business and personal services, light manufacturing and fabrication of goods, commercial amusement and recreation</p> <p><u>Uses permitted conditionally include:</u></p> <p>City park, general building, hospitals, zoos</p>	<p>Maximum lot coverage: none for commercial buildings</p> <p>Maximum building height: none</p>
	C-2 Tourist Commercial	To provide areas for motels, restaurants, service stations and others to accommodate tourists and travelers	<p><u>Uses permitted outright include:</u></p> <p>Eating and drinking establishments, motels, camping and trailer parks, service stations, auto repair and garages,</p>	<p>Maximum lot coverage: none for commercial buildings</p> <p>Maximum building height: 50 feet or 5</p>

Zone		Purpose	Example of Permitted Uses	Maximum Density/ Intensity
			information center <u>Uses permitted conditionally include:</u> Permitted use with gross floor area of more than 25,000, health care services, transit facilities	stories
	C-3 Service Commercial	To provide areas for retail and service uses and housing opportunities which are accessible to the entire community	<u>Uses permitted outright include:</u> Multi-family dwellings, general offices, museums, art galleries, zoos, social service organizations, animal clinics, auto repair <u>Uses permitted conditionally include:</u> Permitted use with gross floor area of more than 25,000 square feet	Maximum lot coverage: none for commercial buildings Maximum building height: 50 feet or 5 stories
Industrial	M-1 Light Industrial	To provide areas to accommodate a range of manufacturing uses that need flat topography and easy access to arterials and intermodal shipping facilities	<u>Uses permitted outright include:</u> Air transportation facilities, general light industrial, solid waste transfer stations, wholesaling, durable and nondurable goods <u>Uses permitted conditionally include:</u> Fuel and ice dealers, hotels and other lodging, junk yard, wrecking yard, petroleum pipeline facilities	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none
	AI Airport Industrial Subdistrict	To reserve designated Light Industrial (M-1) sites near the Pendleton Airport for targeted industrial users as called for in the Pendleton Comprehensive Plan and the Pendleton Economic Opportunities Analysis	<u>Uses permitted outright include:</u> Uses allowed in M-1 Zone and aviation-related industrial uses that are not expressly permitted in M-1 zone <u>Uses permitted conditionally include:</u> Uses allowed conditionally in M-1 Zone except junk yard, wrecking hard, mining or hospital	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none
	BP Business Park Subdistrict	To provide for a mix of light industrial, heavy commercial, office and supporting commercial uses in a master planned setting.	<u>Uses permitted outright include:</u> All uses allowed outright in M-1 Zone, most uses allowed conditionally in M-1 Zone, business and personal services, general offices, health services, and parking areas/garages <u>Uses permitted conditionally include:</u> Educational services, hospitals, museums, art galleries, zoos, social service organizations	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none
	RDC Regional Distribution Center	Provide for a large site for regional distribution center with direct access to Barnhart	<u>Uses permitted outright include:</u> A regional wholesale distribution that	Minimum lot size: .5 acre, 2 acre, 5 acre

Zone	Purpose	Example of Permitted Uses	Maximum Density/ Intensity
Subdistrict	Road Extension	requires a site of at least 50 acres <u>Uses permitted conditionally include:</u> None	(see UDC Figure 5.8) Maximum lot coverage: none
A-A Airport Activities	To protect the lands lying near and around airport facilities from incompatible development, and provide land for airport-related and agricultural uses	<u>Uses permitted outright include:</u> Aviation industries, farming and forestry activities, public service <u>Uses permitted conditionally include:</u> Uses similar to those listed as outright that don't increase the detrimental effects on adjoining uses	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none
AHZ Airport Hazard Subdistrict	Zones created to prevent hazards created in the vicinity of an airport relating to public health, public safety and general welfare	<u>Airport Zones include:</u> Visual runway approach zone, runway larger than utility with a visibility minimum greater than: mile nonprecision instrument approach zone, precision instrument runway approach zone, precision instrument runway approach zone, transitional zones, horizontal zone and conical zone <u>Uses permitted conditionally include:</u> None	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none Height restrictions apply in Airport Zones.
M-2 Heavy Industrial	To provide and protect areas to accommodate a wide range of manufacturing and allied establishments located away from residential and commercial uses to avoid inherent incompatibilities, but near major transportation facilities	<u>Uses permitted outright include:</u> Fuel and ice dealers, light industrial, heavy industrial (paper, machinery, etc.) wholesaling, solid waste transfer stations <u>Uses permitted conditionally include:</u> Heavy industrial (chemicals, mining products etc.), junk yard, mining, animal clinic or hospital	Minimum lot size: .5 acre, 2 acre, 5 acre (see UDC Figure 5.8) Maximum lot coverage: none