Toledo, Oregon

TRANSPORTATION SYSTEM PLAN

PREPARED FOR:
City of Toledo

WITH SUPPORT FROM:
Oregon Department of Transportation

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Acronyms and Abbreviations

CWACT	Cascades West Area Commission on Transportation
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
FTA	Federal Transit Administration
LID	Local Improvement District
LOS	Level of Service
MAP-21	Moving Ahead for Progress in the 21st Century
MNIF	Marine Navigation Improvement Fund
MPH	Miles per hour
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
OPRD	Oregon Parks and Recreation Department
ORS	Oregon Revised Statutes
OTIB	Oregon Transportation Investment Bank
PAC	Project Advisory Committee
PNWR	Portland and Western Railroad
PRLF	Port Revolving Loan Fund
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users
SDC	System Development Charge
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TAP	Transportation Alternatives Program
TE	Transportation Enhancement
TGM	Transportation Growth Management
TIF	Transportation Improvement Fund
TIFIA	Transportation Infrastructure Finance and Innovation Program
TPR	Transportation Planning Rule
TSP	Transportation System Plan
UGB	Urban Growth Boundary
v/c	Volume to capacity

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The contents of this document do not necessarily reflect views or policies of the State of Oregon.

Executive Summary

The City of Toledo initiated the Toledo Transportation System Plan (TSP) in 2012 in partnership with the Oregon Department of Transportation (ODOT). The Toledo TSP will guide the management and development of the City's comprehensive multimodal transportation system for the next 20 years. Within, or just outside of, Toledo's Urban Growth Boundary there are local streets, sidewalks, bikeways, multi-use paths, regional bus service, a freight rail line, a working port, a small airport, a major statewide highway, and a paper mill that attracts freight trucks.

This plan supports Toledo's needs for transportation services and facilities, while remaining consistent with local, county, and state plans. The TSP contains the necessary components to be adopted as the transportation element of the City of Toledo's *Comprehensive Land Use Plan*, first adopted in 2000. This plan also provides ODOT, Lincoln County, and other agencies with projects and objectives that should be acknowledged in their respective planning efforts.

ES.1 TSP Projects

The modal plans within the TSP include objectives and projects to address Toledo's transportation needs, as well as future households and employment centers. The TSP projects are organized by mode and are prioritized based on need, complexity, and funding availability.

ES.1.1 Project Details

The Toledo TSP includes prioritized projects for the City of Toledo. Community preferences, estimated costs, project complexity, and funding availability determine whether a TSP project is identified as a short-term (0-5 years), medium-term (5-10 years), or long-term (10-20 years) priority.

Tables ES-1-4 provide the cost estimates, priority, possible funding sources, and lead agency/ project partners for the TSP road, bicycle/pedestrian, transit, and Port projects. More detailed descriptions of the modal plans (an outlined approach for a specific type of transportation) are included in the Modal Plan Chapter. There are no rail, air, or pipeline projects in the TSP; only objectives are provided for these systems to support the City's goals and to address transportation deficiencies.

Street System

The Street System Modal Plan includes more detail on these projects, in addition to the deficiencies and needs the projects address. The jurisdiction in charge of building or studying a project in the future is listed in the lead agency/project partners column.

TABLE ES-1
Street System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
R1	Freight Route Signage Improvements – Citywide	$12,000	Short-term	Street Fund, STIP, *LID*	City
R2a	Western Junction - One Traffic Signal Option	$7,144,000	Long-term	STIP, Street Fund, OTIB, *Bonds*	ODOT, City Lincoln County
R2b	Western Junction – Two Traffic Signals Option	$8,098,000			
R3	Business Loop 20 - Eastbound Right Turn Pocket at A Street	$449,000	Medium-term	Street Fund, *LID*, STIP	City
R4	Burgess Road Realignment to 90-Degree Intersection at Business Loop 20	$298,000	Medium-term	Street Fund, *LID*, STIP	City
R5	Sturdevant Road – Road Realignment for Siletz Site Freight Access	$595,000	Long-term	Street Fund, STIP *LID*, *SDC, Bonds*	County, City, Siletz Tribe
R6	A Street Railroad Crossing[2]	$176,000	Short-term	Street Fund, Bike/Ped Fund, *LID*, PNWR	City, PNWR, ODOT Rail
R7	Butler Bridge Road and NW 1st Street Intersection changes [2 3]	$51,000	Short-term	Street Fund, *LID*	City
R8	Wayfinding signs	$10,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City

Notes:

1 STIP includes all funded categories.

2 This project is in the adopted *Toledo Waterfront Connectivity Plan* (2009) and is included in the TSP. The project team used the 2009 cost estimates and grew the estimate to 2012 dollars using an ODOT approved annual cost escalation of 4.04 percent.

3 This project from the *Waterfront Connectivity Plan* combines pedestrian, street, and rail improvements into one project. The plan did not break down the cost of each improvement.

Funding sources in *italics* are sources not currently used by the City

LID – Local Improvement District

STIP – Oregon Statewide Transportation Improvement Program

SDC –System Development Charge

OTIB – Oregon Transportation Infrastructure Bank

PNWR – Portland and Western Railroad

Bicycle and Pedestrian System

The following is a summary of the projects identified in the Bicycle and Pedestrian System Modal Plan. More detail on these projects including a discussion of the deficiencies and needs addressed are in the Modal Plan. The jurisdiction in charge of building or studying a project in the future is listed in the lead agency/project partners column.

TABLE ES-2
Bicycle and Pedestrian System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
BP1	Burgess Road – Fill sidewalk gaps	$172,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP2	Business Loop 20 Sidewalk (South/East Side) – East Slope Road to Sturdevant Road	$1,093,000	Medium-term	Bike/Ped Fund, Bonds, *LID*	City, School District
BP3	Douglas Street and 3rd Street near the Community Center – fill sidewalk gaps	$63,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP4	East Slope Road sidewalk extension	$551,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP5	A Street Sidewalk Rebuild – Business Loop 20 to NW 1st Street[2]	$105,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City
BP6	Bay Boulevard Sidewalk – Depot Slough to Business Loop 20[2]	$108,000	Medium- to long-term	Street Fund, Bike/Ped Fund, *LID*	City
BP7	Sturdevant Road High Visibility Crosswalks at Elementary and Junior/Senior High Schools	$68,000	Short-term	County, Bike/Ped Fund, *LID*	City, County, School District
BP8	Railroad Pedestrian Crossing Improvements to Discourage Automobile Use - Butler Bridge Road at SE 2nd Street	$11,000	Short-term	Bike/Ped Fund, *LID*	City
BP9	NW 1st Street Median, Midblock Crosswalk, and North Sidewalk/Grade Crossing Improvements[2 3]	$558,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City
BP10	Butler Bridge Road Railroad Fencing – NW 1st Street to SW 2nd Street[2]	$27,000	Short-term	Bike/Ped Fund, *LID,* PNWR	City
BP11	Trail along Bay Boulevard/Yaquina Bay Road	$817,000	Long-term	STIP, County, Bike/Ped Fund, Bonds, *LID*	County, City
BP12	Multi-Use Trail – Sturdevant Road	$4,227,000	Long-term	Bike/Ped Fund, Bonds, *LID*	City, County, School District

TABLE ES-2
Bicycle and Pedestrian System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
BP13	Business Loop 20 Multi-use Trail (South/West Side) – US 20 to NW 6th Avenue	$2,675,000	Long-term	STIP, Bike/Ped Fund, Bonds, *LID*	City
BP14	Waterfront Path: East Section (between NW 1st Street and Butler Bridge Road)[2]	$278,000	Short-term	STIP, Bike/Ped Fund, Bonds, Port, *LID*	City
BP15	Waterfront Path: West Section between Bay Boulevard and NW 1st Street (Includes NW 1st Street Crossing and Boardwalk)[2]	$872,000	Medium- to long-term	STIP, Bike/Ped Fund, Bonds, Port, *LID*	City
BP16	Bay Boulevard – Depot Slough Bicycle/Pedestrian Crossing	$1,660,000	Medium- to long-term	STIP, Bike/Ped Fund, Bonds, *LID*	City

Notes:

1 STIP includes all funded categories.

2 This project is in the adopted *Toledo Waterfront Connectivity Plan* (2009) and is included in the TSP. The project team used the 2009 cost estimates and grew the estimate to 2012 dollars using an ODOT approved annual cost escalation of 4.04 percent.

3 This project from the *Waterfront Connectivity Plan* combines pedestrian, street, and rail improvements into one project. The plan did not break down the cost of each improvement.

Funding sources in *italics* are sources not currently used by the City

LID – Local Improvement District

STIP – Oregon Statewide Transportation Improvement Program

Transit System

The following is a summary of the project identified in the Transit System Modal Plan. More detail on this project including a discussion of the deficiencies and needs addressed are in the Modal Plan. The jurisdiction in charge of building or studying a project in the future is listed in the lead agency/project partners column.

TABLE ES-3
Transit Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
T1	Add a bus shelter at the Food Fair Stop	$$5,000	Medium-term	FTA 5310	City, Lincoln County Transit

Port and Water System

The Port and Water System Modal Plan includes more detail on these projects, in addition to the deficiencies and needs the projects address. The Port of Toledo would be the lead agency for future projects (shown in the lead agency/project partners column).

TABLE ES-4
Port and Water System Upgrade Cost Estimates and Prioritization

Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source	Lead Agency/ Project Partners
Phase 1 projects – New pier and replace piles for travel lift, construct wash down pad, relocate utilities, purchase travel lift	$3,493,000	Short-term	Port, ConnectOregon, MNIF, PRLF	Port
Phase 2 projects – upgrade site access road, realign utilities, and develop cargo transfer and vessel hard moorage areas	$950,000	Medium-term	Port, ConnectOregon, MNIF, PRLF	Port
Phase 3 projects – construct vessel work building, new boatyard office and restrooms	$2,050,000	Long-term	Port, ConnectOregon, PRLF	Port

Notes:
Port – General Port of Toledo Revenues
MNIF – Marine Navigation Improvement Fund
PRLF – Port Revolving Loan Fund

ES.2 Funding

There are a number of funding sources for transportation projects included in this TSP; for the more expensive or complex projects a number of funding sources could be combined to raise the necessary funds and implement the project. Many funding sources require a project to be in an adopted plan. The TSP once adopted will help the City apply for funding for the various transportation projects. Transportation funding sources include: the federal government, the State of Oregon, and Lincoln County. The City also collects funds locally for transportation projects in the Street Fund.

The project tables above include suggested funding sources for the specific type of project. Funds are available based on the type of project and there are specific funding sources for transportation, street projects, highway projects, and port projects. The most common existing funding sources applicable to TSP projects include the Statewide Transportation Improvement Program (STIP), the Oregon Transportation Improvement Bank (OTIB), the City Street Fund, System Development Charges (SDCs), bonds, and Bicycle and Pedestrian Funds (Oregon requires one percent of state street funds to go towards bicycle and pedestrian projects). In addition, the City could explore new funding sources such as a Local Improvement District (LID), which would capture increases in property values into a fund to help implement projects within a given district.

A more in-depth discussion of funding sources is in Chapter 4 and Appendix B: Transportation Funding.

1. Introduction

The Toledo Transportation System Plan (TSP) establishes a long-range plan for the combination of projects, programs, and objectives that will achieve Toledo's transportation goals. To do this, the TSP looks at the needs of its residents, businesses, employees, and visitors – now (2013) and what is expected for the future (2035). The TSP considers the needs of all users of the City's uniquely diverse transportation network, by including objectives and projects that will serve the needs of drivers, transit riders, bicyclists, pedestrians, freight traffic, rail customers, airport users, and Port customers.

This plan has been prepared in compliance with state, regional, and local plans and policies, including the *Oregon Highway Plan* (OHP); the state *Transportation Planning Rule* (TPR); Lincoln County Transportation System Plan; the Port of Toledo's *Waterfront Connectivity Plan*, *Boatyard Buildout Plan,* and *Waterfront Development Strategic Plan*; and the City of Toledo's *Comprehensive Land Use Plan*. The TSP presents the community's desire for the future transportation system, while remaining consistent with these state, regional, and local plans. Plan elements will be implemented by the City, private developers, and regional or state agencies.

The remainder of this TSP is organized into the following chapters:

- **2. Transportation System Goals and Objectives** lists Goals and Objectives for the City's transportation system.
- **3. Modal Plans** discusses the condition of the City's transportation system and projects to address identified deficiencies and needs. Chapter 3 is organized into sections by transportation mode:
  - Street System Plan
  - Transit Plan
  - Bicycle and Pedestrian Plan
  - Port and Water Transportation Plan
  - Rail Network
  - Air Plan
  - Pipeline Network
- **4. Implementation Measures** includes plan elements necessary to implement the TSP:
  - **Functional Classification Plan** describes the updates to the existing functional classification to ensure consistency between City and state classifications.
  - **Street Design Standards** updates street design standards, including multi-use paths and boardwalks, and establishes standards for the spacing of public streets.

- **Access Management Standards** describes spacing standards for public streets and private accesses based on the functional classification of the streets.
- **Traffic Operations Standards** includes new City operation standards and ODOT's mobility targets.
- **Funding Sources** identifies potential sources of funding for projects in the TSP and a strategy for prioritizing projects and pursuing funding.

The **appendixes** are not part of the TSP document, but contain technical information and documentation supporting the TSP and are organized by technical memoranda produced as part of the TSP process. They are:

- **Appendix A: Plan Assessment** details the policy framework that guided development of the TSP and provides a list of planning documents reviewed and their relevance to the TSP.
- **Appendix B: Transportation Funding and Improvement Costs** summarizes existing transportation funding sources and potential future funding sources that could be considered to fund projects in the TSP. This appendix includes planning-level cost estimates for the TSP projects, with detailed unit cost breakdowns.
- **Appendix C: Transportation Deficiencies and Needs** documents the current and future street conditions and identifies deficiencies in the transportation network. The section also describes the study area, a brief inventory of current land uses, a description of existing transportation facilities within the Urban Growth Boundary, a traffic operations and safety analysis, and a parking study. Existing and future conditions are compared to the appropriate mobility and operations standards.
- **Appendix D: Transportation Alternatives** documents the development and selection of TSP project and program alternatives by mode.
- **Appendix E: Street Standards** documents the street standards for streets and multi-use paths in Toledo.
- **Appendix F: Code Amendments** recommends changes to the Toledo Municipal Code that will help the City implement the TSP.
- **Appendix G: Public Involvement Process** details the public involvement activities that occurred throughout the development of the TSP. It provides details on public outreach through the project website, stakeholder interviews, community open houses, PAC meetings, and briefings.

2. Transportation System Goals and Objectives

The Project Team, with input from the Project Advisory Committee, interested residents and stakeholders developed the following goals and objectives based upon a review of the unadopted 1995 City of Toledo Transportation System Plan and added applicable goals from the City's *Comprehensive Land Use Plan*. These goals and objectives address key transportation issues identified by the community and requirements of the Transportation Planning Rule (TPR). These goals and policies were used during the TSP planning process to evaluate transportation alternatives, select preferred alternatives, and prioritize future transportation improvements

Goals and policies were developed for each of the major transportation modes found in Toledo including the street network, rail, bicycle and pedestrians, and public transit.

2.1 Goals

1. Provide a safe and efficient, multi-modal transportation system which provides linkages in a manner that enhances Toledo's neighborhoods, environment, economy, and social and scenic values.
2. Minimize the adverse social, economic, energy, and environmental impact costs of constructing, maintaining, and using transportation facilities and services in cooperation with county, state, and other public agencies and the private sector.
3. Encourage safe, efficient, convenient, and economic modes of travel that reduce reliance upon one form of transportation, minimize energy consumption and air quality impacts.
4. Develop a safe and efficient street system that will handle the projected needs of the community and provide connections to the region.
5. Provide safe, accessible, and convenient pedestrian and bicycle facilities while taking into account Toledo's topography, current street use and widths, and current funding levels for major improvements.
6. The City of Toledo will seek for all its citizens the maximum level of access to all social, work, and welfare resources.
7. The City of Toledo will seek for all its citizens a customer-based regionally coordinated public transit system that is efficient, effective, and founded on present and future needs.
8. Minimize the negative impact of the rail system on other aspects of the transportation system, adjacent land uses, and quality of life in Toledo.
9. Encourage land use patterns that maximize rail service or preserve the future opportunity to use rail transportation.
10. Support current rail service in Toledo.

2.2 Objectives

2.2.1 Multimodal System Objectives

1. Provide a multi-modal transportation system which provides services for motorized vehicles, bicycles, pedestrians, electronic data transmission, mass transit, and air, rail and water transport (including shipping).
2. Encourage options other than the personal automobile for transportation services through comprehensive land use planning policies that would allow reliance upon the automobile and vehicle trips to be reduced.
    a. Improve and support transit services.
    b. Improve and support ride-sharing opportunities.
    c. Support programs to reduce the single-occupancy trips for commuters to Newport and other Lincoln County and Benton County areas.
    d. Encourage the provision of sidewalks, pedestrian paths, and bicycle paths/lanes.
3. Support the role of Toledo as a regional center for air, water, rail, and roadway transport connections. Within Lincoln County, Toledo has the only sites which provide rail, air, water, and roadway connections for moving goods.
4. Continue to coordinate transportation planning and services with Lincoln County, Oregon Department of Transportation, private industry, and others determining transportation policies, programs, and projects.
5. Maintain a Transportation System Plan which supports and implements these transportation goals and objectives, the Oregon Transportation Goal 12, and the requirements of the Oregon Transportation Planning Rule.

2.2.2 Public Works Objectives

6. Build and maintain roadways and other transportation facilities in a manner that is the most cost effective for the life of the road so as to reduce public maintenance costs.
7. Provide transportation facilities designed to maintain safe conditions over time and in adverse weather conditions.
8. Develop a coordinated approach to the operation, development, and maintenance of transportation facilities by linking the construction and maintenance of roadways to the construction and maintenance of other public services including wastewater, water, storm drainage, public utilities, and public safety vehicle access and to the increased service level demands of new or expanded land within the City and Urban Growth Boundary.
9. Ensure continued, economically viable, and competitive access to electronic data transmission. Maintain the Toledo Public Utilities Commission to provide input to the City Council regarding franchises for the operation of public utilities within Toledo.

2.2.3 Development/Land Use Objectives

10. Assure that minimum, adopted national standards for public safety access are maintained for each property and that access lanes are provided as fire breaks and evacuation routes within the community.
11. Require new development to extend/improve transportation facilities to complete transportation system linkages and to mitigate impacts of additional traffic from new development on the existing transportation system and neighborhoods.
12. Maintain standards and procedures to ensure the provision of the desired transportation system as each property is developed/redeveloped for more intense uses by coordinating development permits with the extension or improvement of streets and other transportation facilities.

13. Develop and maintain a Transportation System Plan and clear and objective local standards for transportation facilities construction and maintenance. Incorporate the use of the TSP and local standards into application reviews and permits for all new developments and construction projects.
14. Minimize disturbances of the natural environment or use of natural resources when locating, constructing, maintaining, and using transportation facilities and services. Encourage land use patterns which minimize environmental impacts from transporting people, goods, and services.

2.2.4 Street System Objectives

15. Provide a system of roadways that maintain vehicle capacity and public safety as the community grows.
16. Provide linkages within the community with a circulation system that is safe and convenient to all areas within the community and that links the community to Highway 20, rail, air, and water shipping facilities.
17. Maintain the character of Toledo's neighborhoods by encouraging local streets that ensure safe and efficient traffic flows but which are designed to encourage low speeds and minimize traffic impacts within the residential neighborhoods.
18. Maintain efficient and safe truck routes to support the transportation of people, goods, and services between major employment centers and markets.
19. Support and work with the Cascades West Area Commission on Transportation (CWACT) to identify funding for Western Junction projects that are in line with Toledo's vision for the intersection.
20. Work with partners to add wayfinding signs to direct visitors to downtown Toledo, the Arts District, and other Toledo attractions for all modes including vehicles, bicyclists, and pedestrians.
21. Continue to support transportation access including freight to industrial sites in the City - including the Siletz Kiln site - to support economic development.
22. Maintain flexibility with street standards for all modes given the existing topographical and right-of-way constraints, provide options to minimum standards that provide safe, feasible streets.
23. The designated Functional Classification of streets in the Toledo TSP will be used to prioritize street maintenance and guide the location and design of new streets.
24. Protect the function of existing and planned roadways by application of appropriate setbacks, land use regulations, exactions, and voluntary dedication.
25. All development proposals, plan amendments, or zone changes will conform with the Toledo Transportation System Plan.
26. Consider impacts on existing or planned transportation facilities in all land use decisions.
27. Coordinate with the Oregon Department of Transportation and Lincoln County Public Works to implement the improvements listed in the Toledo Transportation System Plan.
28. Continue to update capital plans to identify, prioritize, and construct transportation projects giving careful consideration to a constrained budget environment, topographical challenges, and diminishing sources of outside funding.
29. Land uses authorized under Comprehensive Land Use Plan Map and Zoning Map amendments must be consistent with the identified function, capacity, and level of services of transportation facilities.

2.2.5 Bicycle and Pedestrian System Objectives

30. Develop a pedestrian and bikeway system which will provide routes to allow pedestrians and bicyclists to travel to and from residential areas to schools, parks, places of employment, and commercial areas.

a. Action: If there are stakeholders in this area, then every effort should be made to involve these citizens in selecting prioritized routes to be considered for feasibility, safety, and cost versus use practicality.

b. Action: The same stakeholders should also be encouraged to take an active role in determining sources of revenue for funding these improvements above the funds currently being dedicated for bike lanes.

c. Action: Coordinate with Lincoln County and private land owners in the development of bikeways.

31. All new arterial and collector streets and major improvements[1] to arterial and collector streets shall include the pedestrian and bikeway facility specified in the street design standard where feasible.
32. When traffic volume on existing collector streets (speeds <25mph) exceeds 3,000 ADT consider changing the bikeway type from shared roadway to bike lanes.
33. Low curb crosswalks shall be used at all intersections, consistent with ADA guidelines, to facilitate use by all pedestrians.
34. Where feasible, the City shall allow no physical obstruction of sidewalks such as utility poles, sign posts, or guy wires (consistent with ADA guidelines).
35. Provide safe, convenient, and attractive walking environments through the City with a special emphasis in the commercial area.
36. Visibility and unobstructed views shall be promoted for all areas of high pedestrian use.
37. Bicycle traffic on sidewalks shall be prohibited.
38. The City will work with interested landowners to explore local funding options for sidewalk improvements such as Local Improvement Districts.
39. The City supports the development of a well-developed sidewalk system with street trees to link the community to downtown, local parks, and the waterfront.
40. Support efforts by local schools and emergency service organizations to implement a bicycle, pedestrian, and driver safety education program to encourage safe walking, cycling, and driving behavior.
41. Coordinate with rail operators to address rough pavement at railroad crossings to create smooth crossings for bicyclists and pedestrians. (This objective is in conjunction with Rail Objectives 61 and 63 to address railroad crossings).
42. Identify ways to improve wayfinding resources to guide pedestrians and bicyclists to explore Toledo and provides directions to local attractions in downtown and near the waterfront.
43. Work with regional partners to determine the feasibility of building an intercity multi-use trail.
44. Encourage community partners to explore the possibility of instituting a volksmarch[2] route in Toledo for programming events.

2.2.6 Port and Water System Objectives

45. Work with partners to determine the lifespan of Butler Bridge and explore the rebuilding or altering the bridge to accommodate taller barges and boats.

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1 "Major improvement" refers to a construction project where the pavement or asphalt of the street is removed down to the base rock foundation and rebuilt.

2 Volksmarching is a form of personal, non-competitive, fitness walking that originated in Germany and has a popular following in the United States.

46. Support efforts to develop a pier for barge access at the entrance to Depot Slough on Georgia-Pacific property to take advantage of the dredged river channel.
47. Explore the possibility of a recreational (non-motorized) boat launch on the waterfront near downtown.
48. Work with the Port of Toledo and other partners to help identify an appropriate dredge spoils site for Depot Slough.
49. Continue to make the proposed intermodal hub at Tokyo Slough (linking water, rail, and freight truck transportation) a high priority.

2.2.7 Transit Objectives

50. The City will support and promote regional planning for public transportation services that use innovative technology to maximize efficiency of operation, planning, and administration of public transportation.
51. The City encourages the use of car pools and park-and-ride lots in the area and other strategies to reduce the number of single occupant vehicle trips.
52. The City shall support existing public transportation services by improving facilities including adding bus shelters at all stops and promoting public awareness of the services.
53. The City will coordinate with other jurisdictions when park-and-ride facilities are needed.
54. Maintain long-standing partnership with Lincoln County Transit and the North by Northwest Connector to support new investments in transit service and infrastructure, and identify potential new funding sources to implement these improvements.
55. Encourage the Toledo Chamber of Commerce or other organization to explore a citywide transit shuttle or circulator that could meet the demand for improved local service for Toledo residents and employees.
56. Encourage local and regional partners to explore long-term feasibility of water taxi or ferry service to Newport.

2.2.8 Air Objective

57. If the airport closes, work with partners (including emergency service providers) to identify an alternate Life Flight landing site in the City.

2.2.9 Pipeline Objective

58. Continue to support the Georgia-Pacific plant's effluent pipeline and work with partners to maintain applicable environmental permitting.

2.2.10 Rail Objectives

59. Retain existing railroad crossings in Toledo and strive for safety measures that offer the highest level of protection.
60. Work with the railroad to minimize the visual and noise impacts of rail traffic.
61. Continue to work with the railroad to facilitate pedestrian facility installation at all pedestrian crossings.
62. Coordinate with regional organizations to emphasize the importance of the current rail system to the economy of Toledo and Lincoln County.
63. Coordinate regularly with ODOT Rail, Lincoln County, Georgia Pacific, and PNWR to work together to address the conditions of the crossings.
64. Develop evaluation criteria to prioritize public crossing investments and generate a list of improvements in order of greatest priority.

65. Continue to pursue the proposed intermodal hub at Tokyo Slough with the Port of Toledo to add potential freight rail customers.
66. Work with ODOT Rail and PNWR to develop policies to reduce idling train engines near Downtown businesses.
67. Support efforts that will attract new businesses and support existing businesses and industries that will utilize freight and potential passenger rail service between Toledo and the I-5 corridor.

3. Modal Plans

3.1 Street System Plan

The street system in Toledo is constrained by the river, slough, and hills that make up the City of Toledo. Narrow streets and steep slopes restrict the amount and type of traffic on many streets within the City and reduce connectivity on local streets between neighborhoods. The Street System Modal Plan includes projects and objectives that work within these constraints, improving the street network to ensure that it meets Toledo's current and anticipated future needs. Appendix C: Transportation Deficiencies and Needs includes full analyses of existing and future transportation deficiencies and needs.

3.1.1 Street Existing and Future Conditions

Streets

Most streets in Toledo are limited by steep grades and narrow right-of-way; are narrow and winding, with little room for shoulders, sidewalks, or bicycle lanes; and some streets are gravel. Collector streets in Toledo are two lanes with lower speeds that connect the regional system to the local streets. Sections of the current collector and local system are not consistent with the intended use and function of the streets.

Traffic Generators

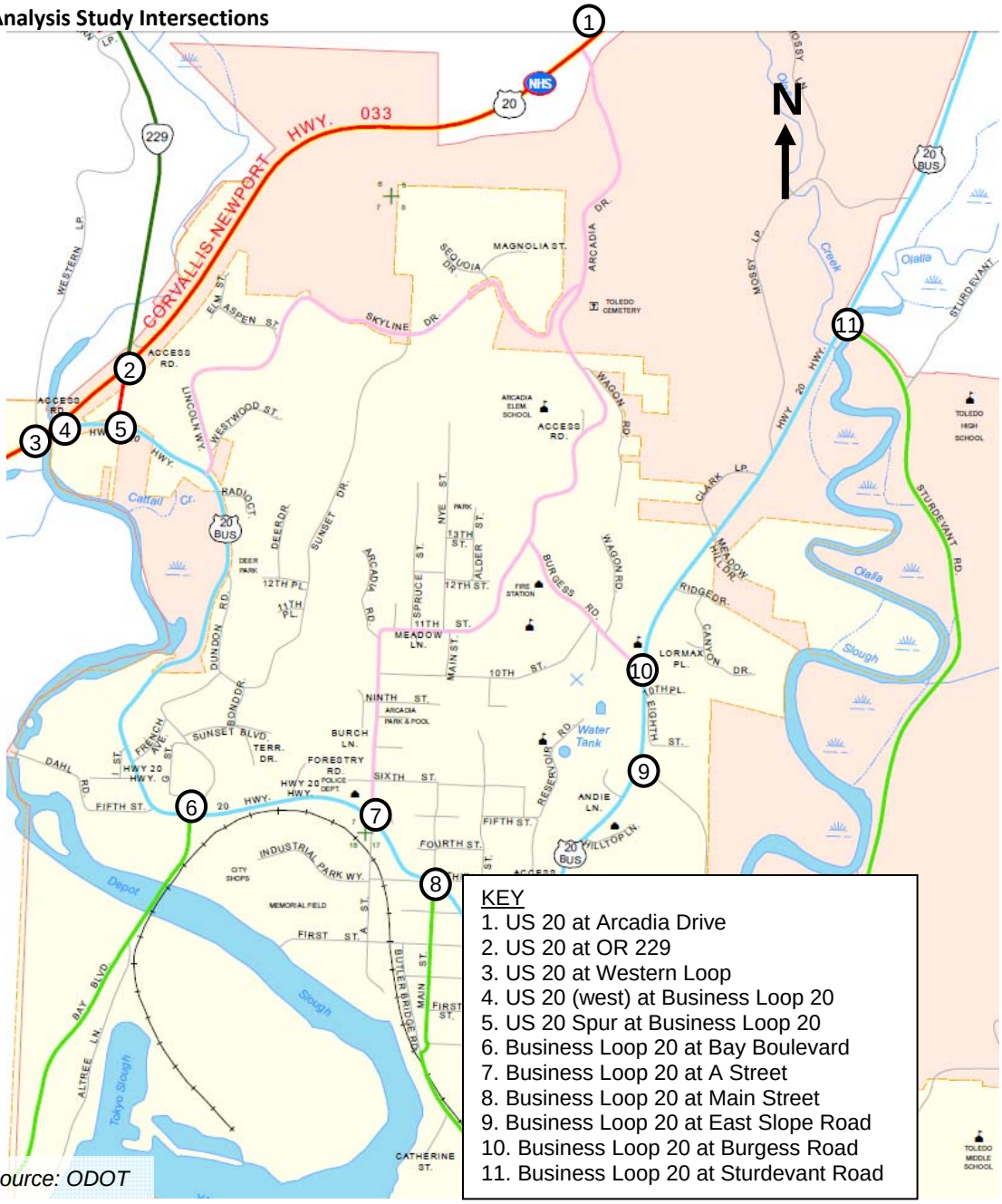
The main traffic generator in Toledo is the Georgia-Pacific Toledo Pulp and Paper Operations facility (Georgia-Pacific) site, though other traffic generators include businesses and services along Main Street, schools and parks, the Library, Police Department, and Fire Station. These traffic generators impact the transportation system in particular ways:

- The Georgia-Pacific site attracts employee trips during shift change hours and freight traffic throughout the day
- City services and businesses attract trips throughout the day, though the grocery store is likely to attract the highest traffic volumes in the afternoon as residents stop at the store on their way home or en route to other activities.

Existing and Future Traffic Conditions

Figure 3-1 shows a map of the Toledo TSP traffic study intersections. The project team analyzed existing and anticipated future traffic levels to determine which intersections are likely to be congested in the 20 year planning horizon. The results from the analysis identified congestion issues at US 20 and Business Loop 20 (west) that do not meet ODOT mobility targets or proposed City mobility standards. Appendix C: Transportation Deficiencies and Needs includes an in-depth analysis of congestion and vehicle backups. Table 4-6 in Chapter 4 includes City mobility standards.

FIGURE 3-1
Traffic Analysis Study Intersections



Map Source: ODOT

In 2035, without projects to improve conditions, the following intersections will not meet ODOT mobility targets or the proposed City mobility standards:

- US 20 at OR 229
- US 20 at Business Loop 20 (west)

There are also a number of places where vehicles back up beyond lanes and start to block driveways and intersections. Currently the following streets experience these backups:

- Business Loop 20 (west) at US 20 – northbound approach
- Business Loop 20 at Business Loop 20 Spur – westbound approach
- Business Loop 20 at A Street – east- and westbound approaches

In 2035, these additional areas will have vehicle backups:

- US 20 at OR 229 – east- and southbound approaches
- Business Loop 20 (west) at US 20 – northbound approach
- Business Loop 20 at Business Loop 20 Spur – westbound approach
- Business Loop 20 at Bay Boulevard – westbound approach
- Business Loop 20 at A Street – north-, east- and westbound approaches

Safety Conditions

Safety conditions at the junction of Business Loop 20 and OR 229 with US 20 were examined in response to community concern about safety at this location, known locally as the "Western Junction." Crash data from 2006-2010 show twelve crashes in the Western Junction study area. The project team identified the following commonalities between these crashes:

- Turning and angle crashes, which may be due to the inability of drivers to find appropriate traffic gaps from the minor (stop controlled) streets onto busier streets.
- Majority of crashes occur during the late afternoon/evening, when traffic volumes are generally highest.
- Crashes associated with behavioral contributing factors, such as "too fast for conditions," "distracted driving," and "careless driving."
- Crashes where an older driver is at fault.

The crash analysis based on available data does not match the magnitude of stakeholder and community safety concerns at the Western Junction. Stakeholder interviews and conversations with the community and PAC indicate that there are daily "near misses" at this intersection and it is important for the TSP to address safety at this location. An analysis of conditions at the Western Junction found that vehicles on Business Loop 20 and OR 229 have difficulty finding gaps in traffic on US 20 during peak periods, and that sight distance is limited by the angle of the intersections and curvature of the highway. Appendix C: Transportation Deficiencies and Needs includes the complete safety analysis at the Western Junction.

Freight Routes

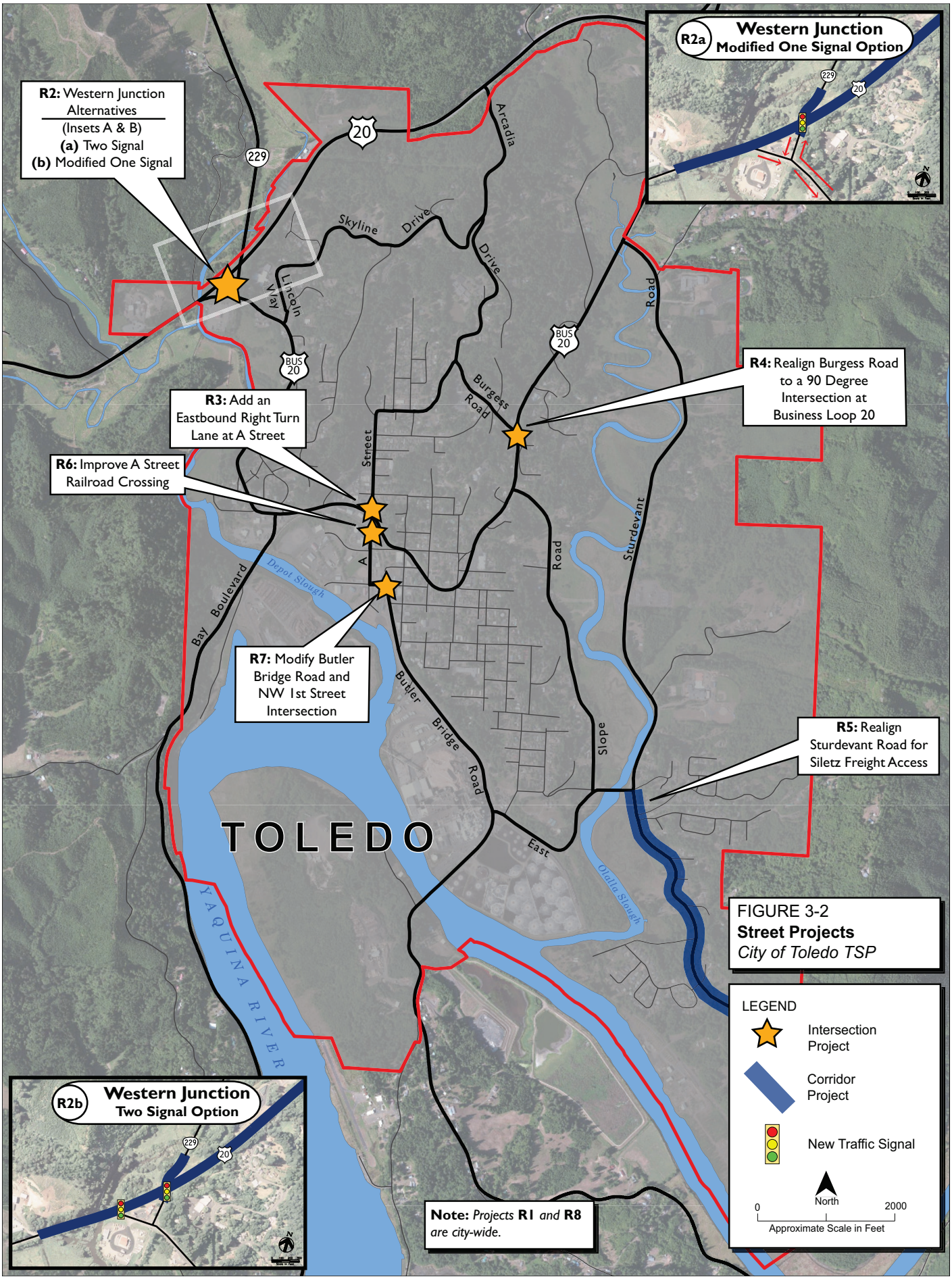
There are a number of freight routes serving industrial land within the City, on both arterial and collector streets. Stakeholders have indicated that trucks occasionally stray from the signed routes and then get stuck on steep or narrow streets not intended for freight traffic.

Freight Truck Operations

Toledo has a higher rate of truck traffic than other comparable cities due to the Georgia-Pacific site and a number of other businesses that serve freight truck customers. Trucks take longer to stop and start at stop signs/traffic signals which can increase congestion; the additional room needed for the vehicle and slower travel speeds, also factor into congestion. Trucks also have an impact on street surfaces and require more room to turn at intersections. Business Loop 20 northeast of Sturdevant Road, Sturdevant Road south of Business Loop 20, and Bay Boulevard had the highest percentages of truck traffic within the City; between 3 and 40 percent based on the street segment and direction.

3.1.2 Street System Projects

The following section documents street projects, including the Western Junction options carried forward into the TSP. Figure 3-2 shows the street network in Toledo with the TSP projects, including projects from the *Waterfront Connectivity Plan*.


R2a Western Junction
Modified One Signal Option
R2: Western Junction Alternatives
(Insets A & B)
(a) Two Signal
(b) Modified One Signal
R3: Add an Eastbound Right Turn Lane at A Street
R4: Realign Burgess Road to a 90 Degree Intersection at Business Loop 20
R6: Improve A Street Railroad Crossing
R7: Modify Butler Bridge Road and NW 1st Street Intersection
R5: Realign Sturdevant Road for Siletz Freight Access
TOLEDO
YAQUINA RIVER
Depot Slough
Olalla Slough
Arcadia Drive
Skyline Drive
Lincoln Way
Burgess Road
A Street
Bay Boulevard
Butler Bridge Road
East Slope Road
Sturdevant Road
20
229
BUS 20
R2b Western Junction
Two Signal Option
FIGURE 3-2
Street Projects
City of Toledo TSP
LEGEND
Intersection Project
Corridor Project
New Traffic Signal
North
0
2000
Approximate Scale in Feet
Note: Projects R1 and R8 are city-wide.

R1: Freight Route Signage

This TSP does not include any modifications to the City's existing freight route. The City recognizes the importance of freight to the community and economic development within the City.

- **Freight Route Signage:** Add signs to reduce the amount of trucks on inappropriate or undesignated routes to help direct freight truck traffic to designated routes. This includes additional signs along US 20 towards Business Loop 20 guiding trucks to the Truck Route and larger signs at the Business Loop 20 and Sturdevant Road intersection to directing truck drivers to turn. This includes adding "No Trucks" signs on streets frequently mistaken by truck drivers, such as Arcadia Drive and in downtown Toledo.

Figure 3-3 shows the freight truck route in Toledo.

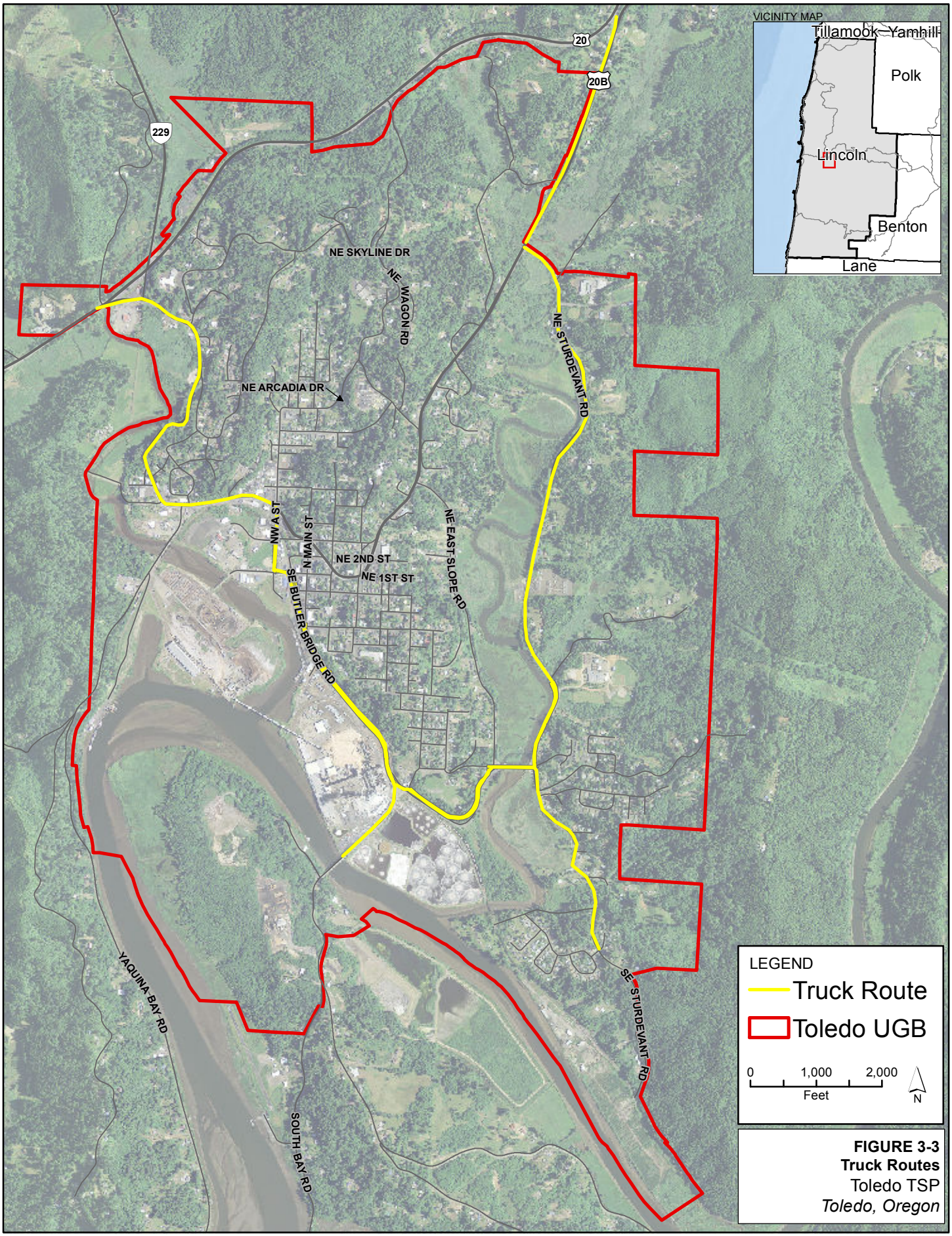


FIGURE 3-3
Truck Routes
Toledo TSP
Toledo, Oregon

R2a and R2b: Western Junction Signalization

The Western Junction refers to the intersection of Oregon Highway (OR) 229 and Business Loop 20 with US Highway (US) 20 within the northwest portion of the Toledo Urban Growth Boundary (UGB). Stakeholders and the existing conditions analysis identified congestion issues, queuing problems, and safety concerns at the group of intersections at the Western Junction. Appendix C: Transportation Deficiencies and Needs includes an in-depth analysis of operations and safety at the Western Junction intersections in their current configuration, as well as alternative improvements considered for the Western Junction during development of this TSP.

US 20, US 20 Spur, and OR 229 are owned and operated by ODOT, while Business Loop 20 is owned by the City. This TSP reflects the City's preferred measures to improve the Western Junction, but further design and analysis will be needed and approval by ODOT will be required to move any project into construction. The City will remain an active participant in developing alternatives to improve congestion and safety at the Western Junction.

Two options for signals at the Western Junction are included for future consideration:

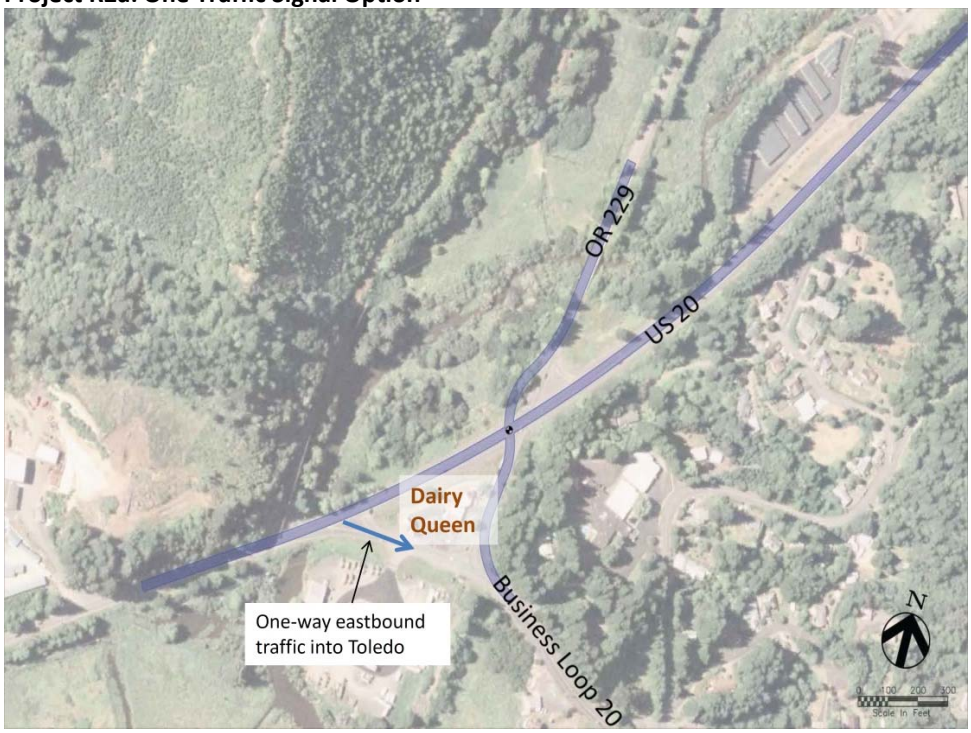
- **R2a:** One Traffic Signal Option (at OR 229/US 20/US 20 Spur)
- **R2b:** Two Traffic Signal Option (at OR 229/US 20 Spur and Business Loop 20/US 20)

Signals and the associated intersection changes would address the existing and future congestion and vehicle backup issues identified in the traffic analysis and would simplify the intersections to reduce driver confusion. These two options were modified from a previous one signal option that realigned OR 229 and Business Loop 20 to one point between the existing OR 229 and Business Loop 20 intersections with US 20. The project team refined signalization options for the Western Junction based on PAC recommendations and community feedback to avoid potential business impacts

Both options for the Western Junction would use existing street connections to minimize access and business impacts and both options require widening US 20 between Arcadia and Western Junction to create a consistent cross-section, as two lanes in each direction are needed at the signals to accommodate expected future traffic volumes. Any new traffic signals will need to meet signal warrant criteria before being implemented. ODOT will conduct additional traffic signal warrant analysis when refining these options for design and construction.

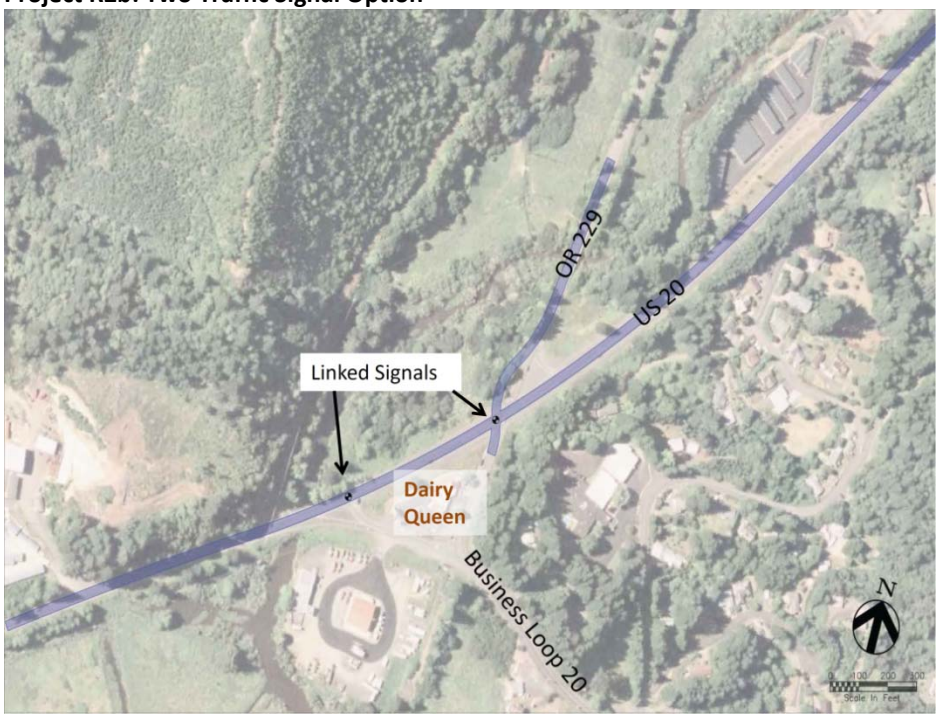
- **R2a:** The one traffic signal option would add a signal at the existing US 20/OR 229/US 20 Spur intersection. The eastbound slip ramp from US 20 to Business Loop 20 would remain, but is modified for one-way traffic while preserving access to the Dairy Queen and trucking business on the south side of Business Loop 20. Vehicles making the westbound left turn from Business Loop 20 to US 20 would use the signal. This option modifies OR 229 to reduce the angle where it meets US 20. Figure 3-4 shows the one traffic signal option at Western Junction.

FIGURE 3-4
Project R2a: One Traffic Signal Option



- **R2b:** The two traffic signal option would install two coordinated signals on US 20, the first at the OR 229/US 20 Spur intersection and the second at the Business Loop 20/US 20 intersection; keeping the connections in the same configuration as today. Figure 3-5 shows the two signal option, which was developed to provide more flexibility in case design of Project R2a negatively affects business access in the vicinity of the Western Junction, as it maintains two-way traffic on the existing Business Loop 20 connection from US 20.

FIGURE 3-5
Project R2b: Two Traffic Signal Option



R3: Business Loop 20 at A Street – Turn Pocket

The eastbound Business Loop 20 leg at A Street will be congested for eastbound lefts and through traffic. The westbound left turn lane will also be congested. The northbound leg will also be mildly congested, though the project team was concerned that backups will extend beyond the railroad crossing south of Business Loop 20.

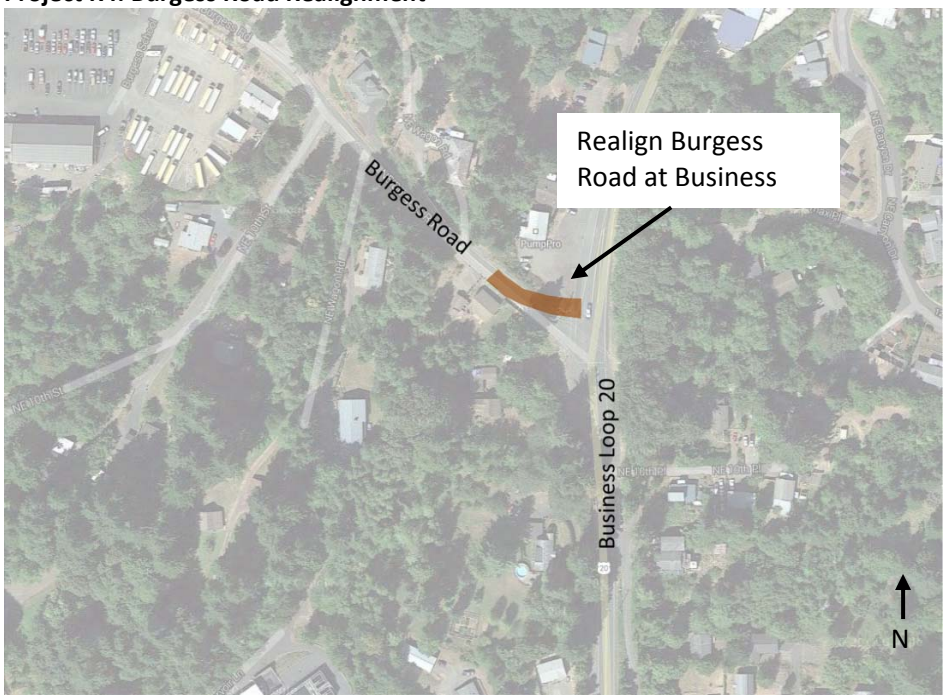
Due to the slopes nearby at this intersection, improvement options are limited. This project lengthens the eastbound left turn lane to 200 feet and adds a 150-foot eastbound right turn lane. Lengthening the left turn lane will provide space for vehicles to line up without blocking the through movement on Business Loop 20. The right turn lane will help vehicles move through the intersection more quickly and allow for some green time to be allocated to other legs. Figure 3-6 shows the location of the new turn lane.

FIGURE 3-6
Project R3: A Street Turn Pocket

R4: Burgess Road Realignment

Burgess Road meets Business Loop 20 at a steep angle, potentially creating a safety issue for vehicles making turns onto Business Loop 20. Realigning Burgess to meet Business Loop 20 at a 90 degree angle would reduce the angle and address potential safety issues. Realigning Burgess could impact nearby properties at the intersection and would require retaining walls or fill because of the hillside and grade of the existing street. This project would have only minor impacts to Business Loop 20. This project modifies Burgess Road as shown in Figure 3-7.

FIGURE 3-7
Project R4: Burgess Road Realignment

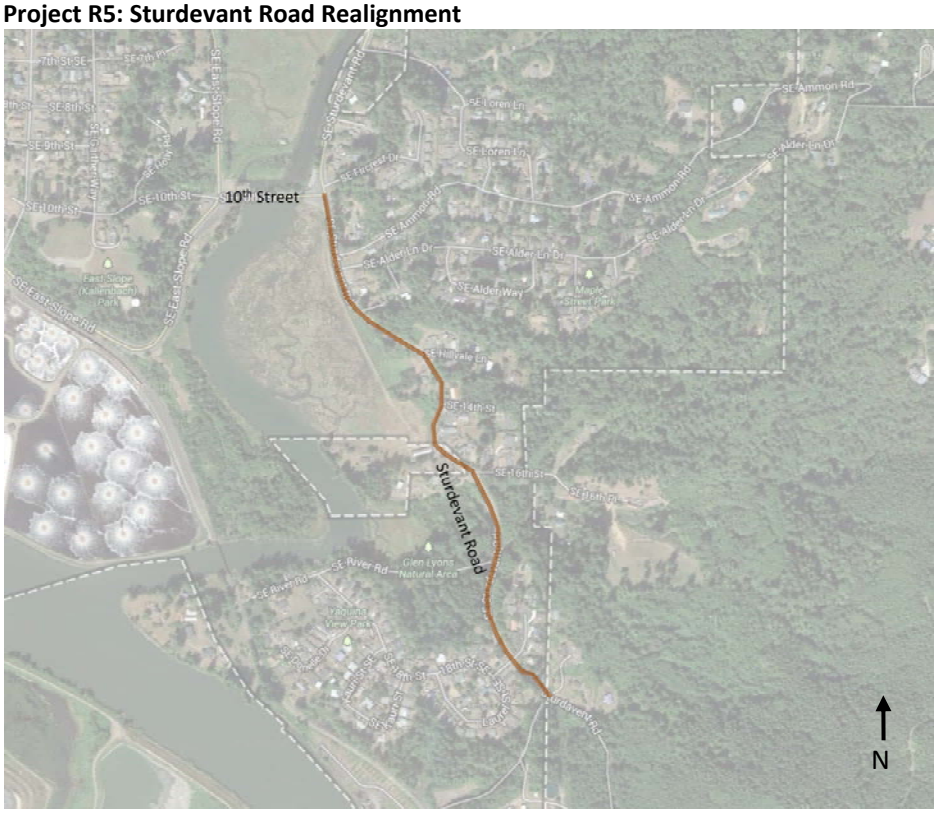


R5: Sturdevant Road Realignment

This project reduces the curves on Sturdevant Road south of SE 10th Street to the Siletz Kiln Site along the river. Realigning the street would allow larger trucks to access the kiln site to move materials and finished products into and out of the site. Currently, Sturdevant Road is narrow and curving; this project would reduce the curves and add shoulders to accommodate freight truck traffic. Figure 3-8 shows the extent of the project along Sturdevant Road south of SE 10th Street.

Reducing curves on Sturdevant Road could have right-of-way impacts to the adjacent neighborhoods. During the design phase of this project, those impacts should be considered, and the project should be designed to mitigate impacts to the neighborhood and maintain or improve the quality of life in the neighborhoods.

FIGURE 3-8
Project R5: Sturdevant Road Realignment



R6: A Street Railroad Crossing Improvements

The *Toledo Waterfront Connectivity Plan* includes a project to improve the railroad crossing pavement surface for motorists, bicyclists, and pedestrians by installing concrete panels on A Street south of Business Loop 20. Figure 3-9 shows the location of the railroad crossing improvements.

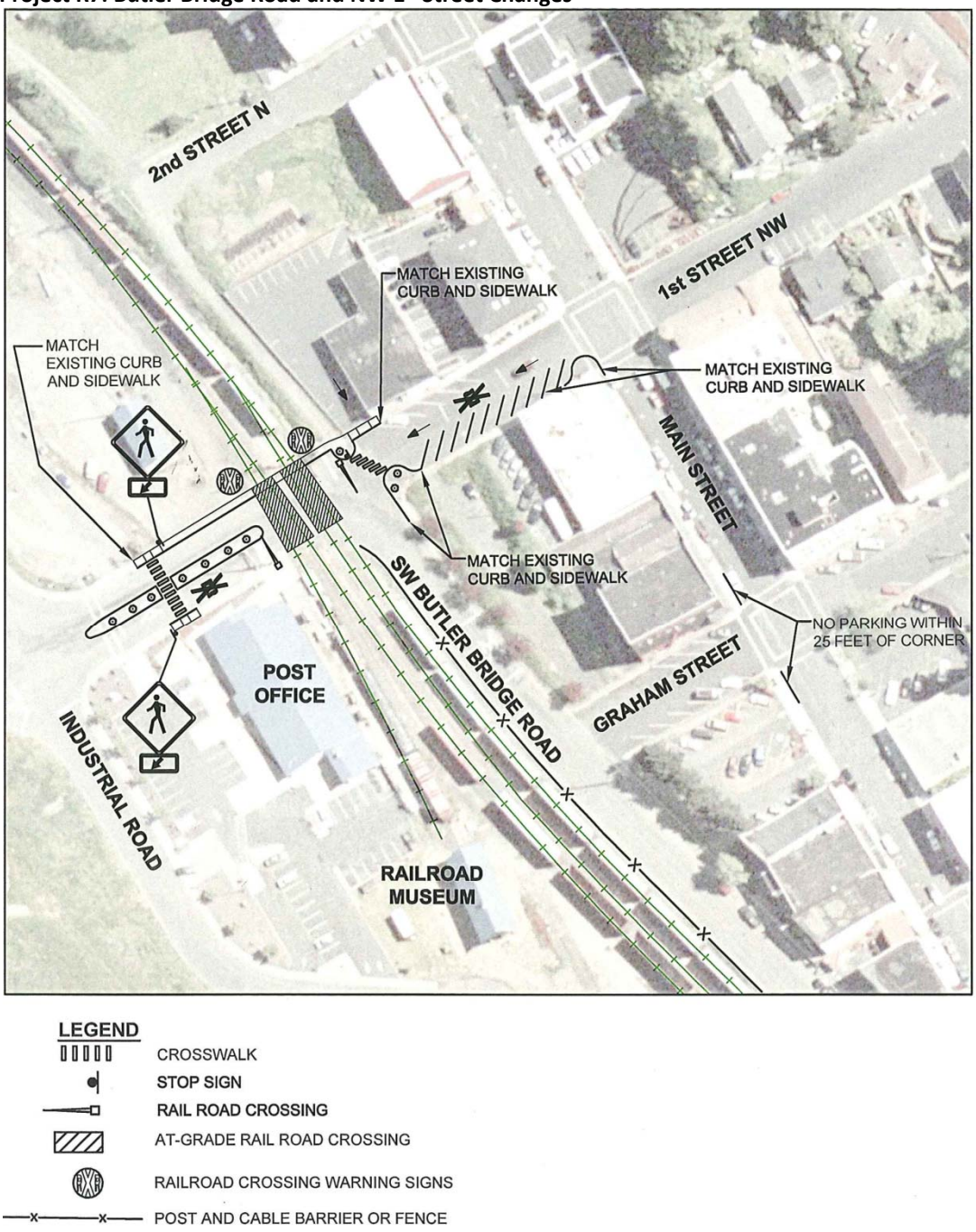
FIGURE 3-9
Project R6: A Street Railroad Crossing Improvements

R7: Butler Bridge Road and NW 1st Street Changes

The *Toledo Waterfront Connectivity Plan* includes a project to improve visibility, increase safety for pedestrians and motorists, and reduce conflict points at this intersection. The project converts NW 1st Street from a two-way to a one-way street westbound between Main Street and Butler Bridge Road. This project removes vehicle conflicts and emphasizes the dominant flow of traffic (turning east on NW 1st from A Street and then south on Butler Bridge Road, then north on Butler Bridge Road onto NW 1st and north onto A Street) and addresses visibility issues for motorists stopped eastbound. Currently rail car storage reduces sight distance at the

intersection. Eastbound drivers would be able to access Main Street one block south at NW Graham Street. The project also includes curb extensions at the intersection, a 10-foot wide ladder style crosswalk across NW 1st Street, and directs pedestrians to and improved crosswalk on the north side of the intersection, deterring them from crossing on the south side. The eastbound stop sign on NW 1st Street at the railroad tracks would be removed, as all traffic would continue south on Butler Bridge Road. Figure 3-10 shows the modifications from the *Waterfront Connectivity Plan*. This project also includes pedestrian elements, described in the sections below.

FIGURE 3-10
Project R7: Butler Bridge Road and NW 1st Street Changes



From the Toledo Waterfront Connectivity Plan 2009. Prepared by Parametrix.

R8: Wayfinding Resources

Downtown Toledo is off of US 20 and visitors are not always certain where the City center or other attractions are located. Wayfinding resources will help visitors traveling by all modes (vehicles, bicycles, and on foot) from Toledo's outer areas into downtown and to other City attractions.

- **Wayfinding signs:** Install wayfinding signs from the edges of the City into downtown and to other areas of interest for all modes including vehicles, bicyclists, and pedestrians.

3.1.3 Street System Project Cost Estimates and Prioritization

Table 3-1 provides cost estimates and priorities for each of the proposed street and freight projects. Several projects are from the *Waterfront Connectivity Plan* adopted in 2009 and their cost estimates are indexed for inflation using ODOT cost escalation rates.

TABLE 3-1
Street System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
R1	Freight Route Signage Improvements – Citywide	$12,000	Short-term	Street Fund, STIP, *LID*	City
R2a	Western Junction - One Traffic Signal Option	$7,144,000	Long-term	STIP, Street Fund, OTIB, *Bonds*	ODOT, City, Lincoln County
R2b	Western Junction – Two Traffic Signals Option	$8,098,000			
R3	Business Loop 20 - Eastbound Right Turn Pocket at A Street	$449,000	Medium-term	Street Fund, *LID*, STIP	City
R4	Burgess Road Realignment to 90-Degree Intersection at Business Loop 20	$298,000	Medium-term	Street Fund, *LID*, STIP	City
R5	Sturdevant Road – Road Realignment for Siletz Site Freight Access	$595,000	Long-term	Street Fund, STIP *LID*, *SDC, Bonds*	County, City, Siletz Tribe
R6	A Street Railroad Crossing[2]	$176,000	Short-term	Street Fund, Bike/Ped Fund, *LID*, PNWR	City, PNWR, ODOT Rail
R7	Butler Bridge Road and NW 1st Street Intersection changes [2 3]	$51,000	Short-term	Street Fund, *LID*	City
R8	Wayfinding signs	$10,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City

Notes:

1 STIP includes all funded categories.

2 This project is in the adopted *Toledo Waterfront Connectivity Plan* (2009) and is included in the TSP. The project team used the 2009 cost estimates and grew the estimate to 2012 dollars using an ODOT approved annual cost escalation of 4.04 percent.

3 This project from the *Waterfront Connectivity Plan* combines pedestrian, street, and rail improvements into one project. The plan did not break down the cost of each improvement.

Funding sources in *italics* are sources not currently used by the City

LID – Local Improvement District

STIP – Oregon Statewide Transportation Improvement Program

SDC –System Development Charge

OTIB – Oregon Transportation Infrastructure Bank

PNWR – Portland and Western Railroad

3.2 Transit Plan

3.2.1 Existing Transit

The City of Toledo has two transit routes, one operated by Lincoln County Transit and the Coast to Valley Express, managed by the Northwest Oregon Transit Alliance, a consortium of transit agencies that includes Lincoln County Transit.

Lincoln County Transit

Lincoln County Transit's East County Route connects to Siletz and Newport through Toledo. The East County Route operates six days a week with five stops westbound and four stops eastbound in Toledo. The service operates six round trips per day.

The stops are located at the following locations in Toledo, from west to east:

A. Food Fair (Business Loop 20 east of NW Forestry Road)

B. NE 1st and Main Street

C. SE 2nd and Main Street (Westbound only)

D. JC Thriftway (Business Loop 20 and NE 2nd Street)

E. Olalla Store (Sturdevant Road and SE 10th Street)

In addition, Lincoln County Transit accommodates "flag stops" where riders are able to flag down the driver and board the bus along the route at safe locations. Riders do not have to be at a stop to be picked up or dropped off by a Lincoln County Transit vehicle. The City has recently improved Toledo bus stops; the Park and Ride has a gazebo, while all of the East County Route stops have bus shelters and benches with the exception of the Food Fair stop on Business Loop 20.

Riders most commonly request later service hours in the evening and more frequent service during the day for riders who work nonstandard hours. Currently, buses arrive an hour and 15 minutes to three hours apart depending on the time of day, with the last bus departing Toledo at 7:30 PM westbound and 8:48 PM eastbound. The East County Route does not operate on Sundays.

Coast to Valley Express

The regional Coast to Valley Express serves the City, connecting Albany, Corvallis, and Newport. The Express runs seven days a week with one stop at the Toledo Park and Ride and operates four round trips per day. There are two bus runs in both the morning and evening peak period; the last bus leaves at 5:40 PM heading eastbound and 7:03 PM heading westbound. Figure 3-11 shows the transit routes within the City.

3.2.2 Transit Projects

There is one transit project in the Toledo TSP. This project would add a bus shelter at the Food Fair Stop, the only stop in Toledo that currently does not have a shelter.

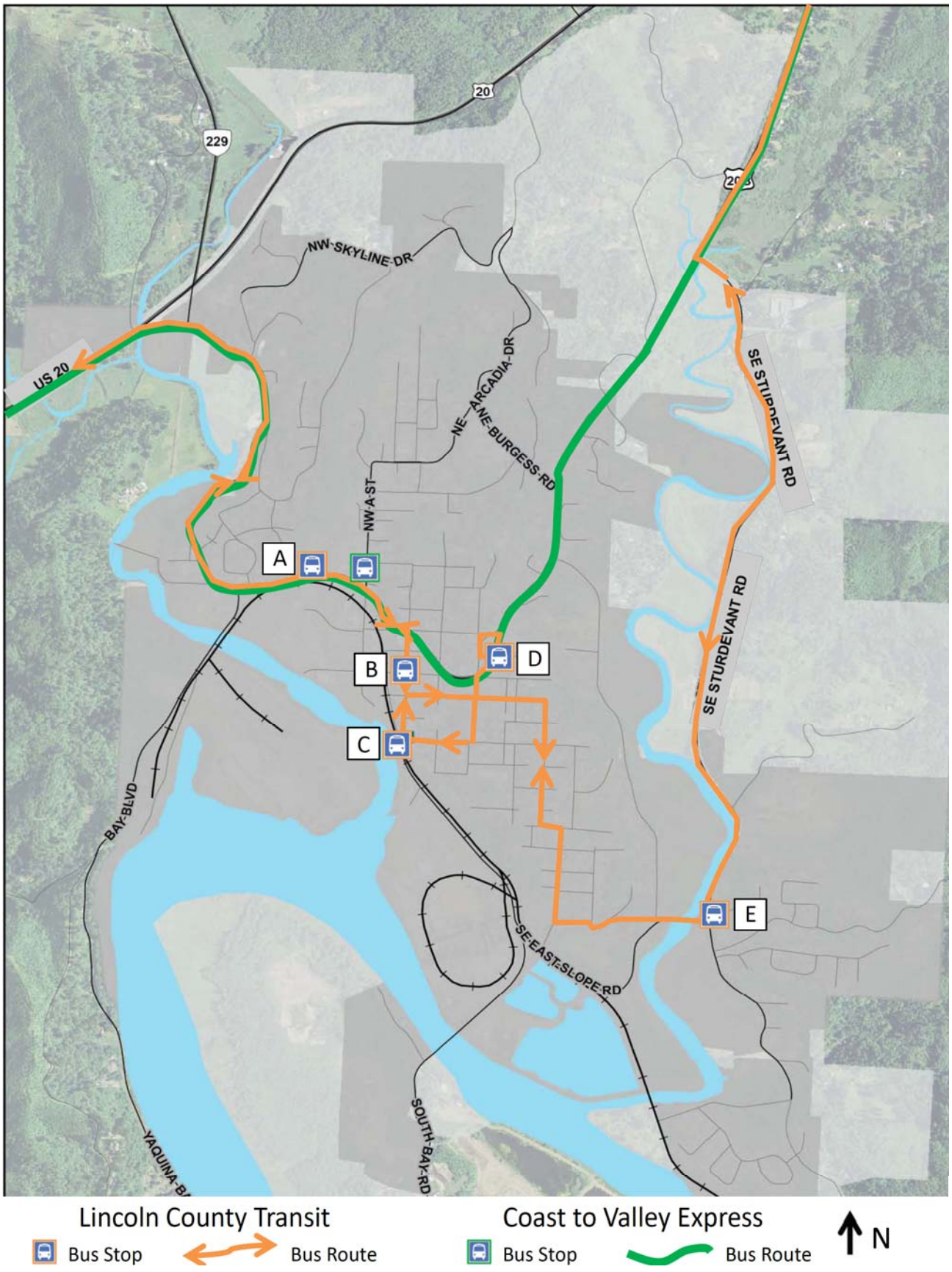
Example of a bus shelter

TABLE 3-2
Transit Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source	Lead Agency/ Project Partners
T1	Add a bus shelter at the Food Fair Stop	$5,000	Medium-term	FTA 5310	City, Lincoln County Transit

FIGURE 3-11

Toledo Transit Routes



3.3 Bicycle and Pedestrian Plan

The City of Toledo has an existing pedestrian and bicycle network that serves local residents and employees, downtown visitors, and long-distance bicyclists. This section describes the potential objectives and projects for the Toledo TSP to address current deficiencies and needs. The project team developed these alternatives with input from stakeholders and community members, as well as including several projects from the *Waterfront Connectivity Plan.* Figure 3-12 shows the map of the bicycle, pedestrian, and multi-use path network.

3.3.1 Bicycle and Pedestrian Existing Conditions

There are two signed bike routes in Toledo and only one street with striped bike lanes. Steep and narrow streets make bicycling and walking difficult, though there are sidewalks in the downtown core and along the central portions of Business Loop 20. Stakeholders indicated that there are gaps in the sidewalks network and a need for a multi-use path along Sturdevant Road to serve both Toledo Elementary and Junior/Senior High Schools. In addition to these gaps, stakeholders identified that railroad crossings are difficult for bicyclists and pedestrians, especially the crossing on NW 1st Street and Butler Bridge Road.

3.3.2 Bicycle and Pedestrian System Needs

Overall, Toledo has a number of challenges to providing comprehensive pedestrian and bicycle connections due to the City's geography. Many streets are narrow and have sharp curves and steep grades because of natural features such as the river, sloughs, and slopes. The sidewalk network in Toledo is most complete in downtown and becomes piecemeal further away from Main Street. Outside of downtown, many arterials and collectors lack sidewalks, such as Business Loop 20 outside of the core commercial areas (east of JC Thriftway and west of NW 6th Street). Some streets have sidewalks on one side of the street. There are few officially striped pedestrian crossings along most streets and the railroad tracks.

Improved pedestrian access to the Toledo Elementary and Junior/Senior High Schools is a community priority. The lack of a path or sidewalk along Sturdevant Road is a major concern due to the 45 MPH speed limit and high truck traffic. There are also limited east-west connections between downtown and Sturdevant Road; some students walk along the shoulder of Business Loop 20 from the central neighborhoods to school. In addition, community members are concerned with the lack of pedestrian facilities near the Flowerree Community Center at SE 3rd and Douglas streets. Another priority for local residents is connecting the existing path along East Slope Road to Butler Bridge Road.

Two bike routes exist in Toledo; Bay Boulevard and East Slope Road between 10th Street and Business Loop 20. However, the routes do not provide a continuous route through the City. Bay Boulevard is popular among bicycle clubs for the route to and from Newport, though the lack of bicycle lanes and steep grades create safety concerns for riders. There are also no wayfinding signs and the steep local streets can also discourage cycling in Toledo.

3.3.3 Bicycle and Pedestrian Projects

The following projects address the following bicycle and pedestrian deficiencies in the City: sidewalk gaps, crosswalks, pedestrian wayfinding signs, trail network, and bicycle wayfinding signs.

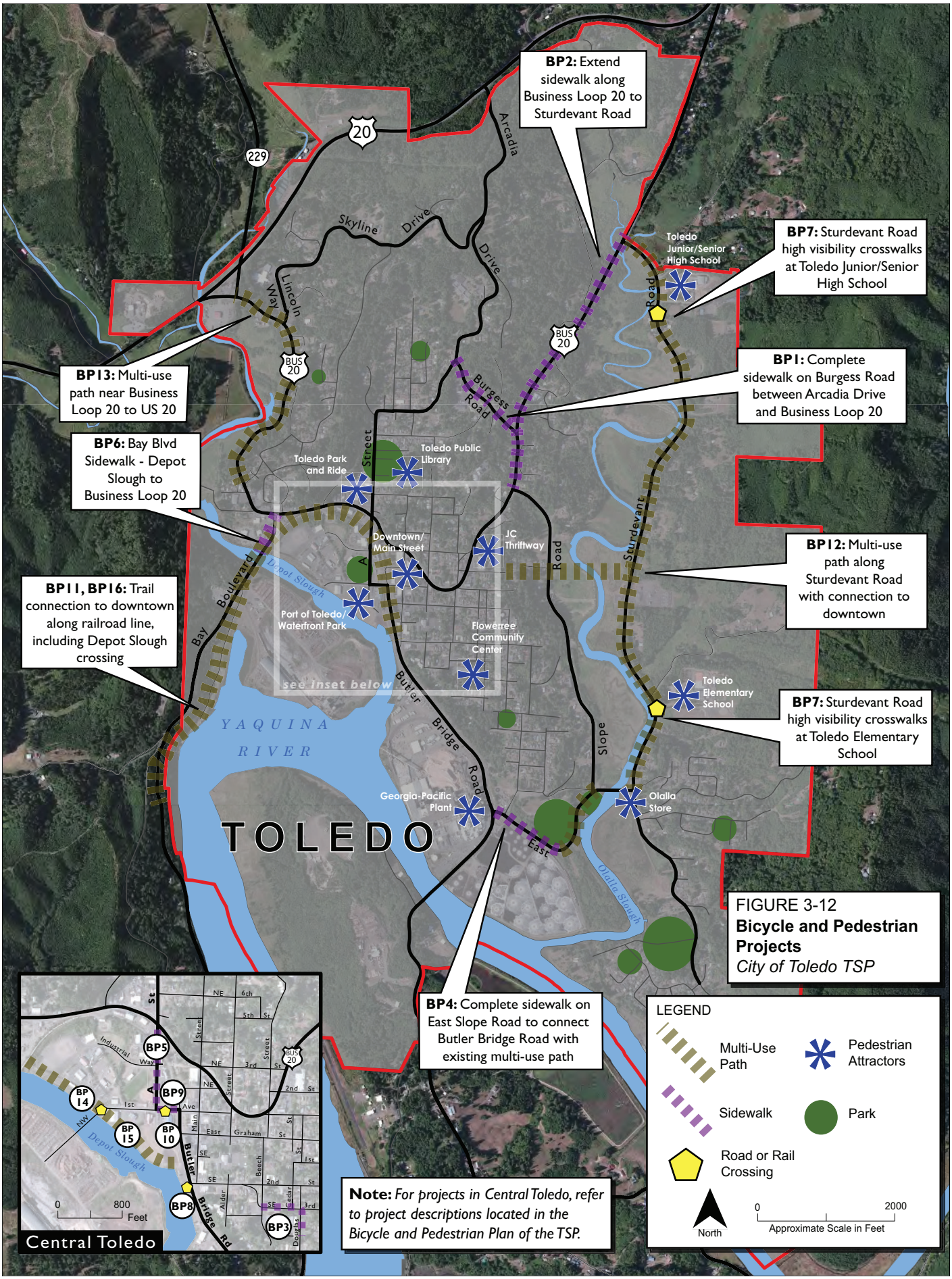
Address Sidewalk Gaps

There are several gaps in the sidewalk network in Toledo that were identified as major community needs. Filling these sidewalks gaps would improve the pedestrian network and enhance access to important destinations.

- **BP1: Burgess Road Sidewalk** between Arcadia Drive and Business Loop 20. There is currently a short sidewalk on the west side of the street in front of the fire station, but the segment does not connect to Arcadia Drive or Business Loop 20. This sidewalk would connect to marked pedestrian crossings on both Arcadia Drive and Business Loop 20.

- **BP2: Business Loop 20 Sidewalk** from East Slope Road to Sturdevant Road. Currently there is a sidewalk on the east side of the street that ends at East Slope Road. Students walk along Business Loop 20 to Sturdevant Road to access Toledo Elementary and Junior/Senior High Schools. Runners, walkers, and the high school cross country team also use this route.
- **BP3: Douglas Street/SE 3rd Street Sidewalk** around Flowerree Community Center. The Community Center is surrounded by Beech, Douglas, SE 3rd, and SE 4th Streets in southeast Toledo. This block does not have sidewalks except along SE 3rd Street. However, SE 3rd and Douglas Streets both have sidewalks on the opposite side of the street.
- **BP4: East Slope Road Sidewalk**. Currently, the East Slope Road trail ends at East Slope Park. This project would extend a sidewalk on one side of the street to Butler Bridge Road at the Georgia-Pacific site and would improve connections between east Toledo and the downtown waterfront. The current path starts at the intersection of SE 10th Street and East Slope Road and runs along the east side of East Slope Road. However, the trail does not connect to Butler Bridge Road, ending at the sharp curve near the railroad.

  In January 2013, the Public Works Department received approval from the Toledo City Council to apply for a state grant to construct a sidewalk to Butler Bridge Road. This sidewalk could eventually connect to the planned Sturdevant Road Trail to create a continuous link on the east side of Toledo for commuting and recreational purposes.
- **BP5: A Street Sidewalk** between Business Loop 20 and NW 1st Street. The existing sidewalk on the west side of the street is narrow and in poor condition. This project would replace and repair existing sidewalk with an 8-foot concrete sidewalk to accommodate higher traffic near Memorial Park. This project is from the *Toledo Waterfront Connectivity Plan*.
- **BP6: Bay Boulevard Sidewalk** between Depot Slough Bridge and Business Loop 20. Currently Bay Boulevard lacks pedestrian facilities along this section. This project would construct a new 8-foot sidewalk on the east side of Bay Boulevard to provide greater pedestrian access. This project does not include a new at-grade railroad crossing that would connect the sidewalk with a new bicycle/pedestrian bridge at Depot Slough and to the Waterfront Path. This project is from the *Waterfront Connectivity Plan*.


BP2: Extend sidewalk along Business Loop 20 to Sturdevant Road
BP7: Sturdevant Road high visibility crosswalks at Toledo Junior/Senior High School
BP1: Complete sidewalk on Burgess Road between Arcadia Drive and Business Loop 20
BP13: Multi-use path near Business Loop 20 to US 20
BP6: Bay Blvd Sidewalk - Depot Slough to Business Loop 20
BP12: Multi-use path along Sturdevant Road with connection to downtown
BP11, BP16: Trail connection to downtown along railroad line, including Depot Slough crossing
BP7: Sturdevant Road high visibility crosswalks at Toledo Elementary School
BP4: Complete sidewalk on East Slope Road to connect Butler Bridge Road with existing multi-use path
Toledo Junior/Senior High School
Toledo Park and Ride
Toledo Public Library
Downtown/ Main Street
JC Thriftway
Port of Toledo/ Waterfront Park
Flowerree Community Center
Toledo Elementary School
Georgia-Pacific Plant
Olalla Store
see inset below
TOLEDO
YAQUINA RIVER
Depot Slough
Olalla Slough
Arcadia Drive
Skyline Drive
Lincoln Way
Burgess Road
Bay Boulevard
Butler Bridge Road
Sturdevant Road
Slope Road
East
20
229
BUS 20
Central Toledo
BP3
BP5
BP8
BP9
BP10
BP14
BP15
0 800 Feet
FIGURE 3-12
Bicycle and Pedestrian Projects
City of Toledo TSP
LEGEND
Multi-Use Path
Pedestrian Attractors
Sidewalk
Park
Road or Rail Crossing
North
0 2000
Approximate Scale in Feet
Note: For projects in Central Toledo, refer to project descriptions located in the Bicycle and Pedestrian Plan of the TSP.

Crosswalks

Targeted crosswalk improvements help increase pedestrian visibility and safety. The following projects would include advisory and warning signage, crosswalk markings, and in some cases, flashing lights.

Example of a high visibility pedestrian crossing (FHWA)

- **BP7: School Pedestrian Crossings.** Add high visibility crosswalks at the entrance to Toledo Elementary and Junior/Senior High Schools. These crossings would be built together with the proposed multi-use path or boardwalk trail along Sturdevant Road (described in the Trail Network section below).
- **BP8: Vehicle signs and markings.** Discourage vehicles from using the pedestrian crossing at 2nd Street and Butler Bridge. The new railroad pedestrian crossing can be confusing for drivers; adding signage and pavement markings to discourage vehicles from using the pedestrian-only railroad crossing would reduce confusion and maintain the crossing for pedestrians only.
- **BP9: NW 1st Street Crosswalk.** Install a 10-foot wide, mid-block crosswalk on NW 1st Street between A Street and Butler Bridge Road. This project was included in the *Toledo Waterfront Connectivity Plan* and includes a new 8-foot wide median with vegetation on NW 1st Street, a rebuilt 6-foot sidewalk on the north side of NW 1st Street, and new concrete rail panels at the railroad crossing. The project includes adding crosswalk and railroad crossing warning signs along NW 1st Street. The project would also close the south crosswalk at NW 1st Street and Butler Bridge Road to reduce traffic conflicts and safety issues. The new median and crosswalk would create a more visible crossing and would reduce overall crossing distance.
- **BP10: Fencing to direct pedestrian traffic.** This project would install a 4-foot cyclone fence on the west side of Butler Bridge Road from NW 1st Street to SW 2nd Street. This project, from the *Toledo Waterfront Connectivity Plan* would channel pedestrian traffic to designated railroad crossings to prevent unauthorized track crossing.

3.3.4 Trail Network

The following is an overview of projects and objectives for a multi-use path system in Toledo. These trail projects will accommodate both bicyclists and pedestrians; bicycle-specific projects and objectives are included in the next section. Trails are shared-use paths designed for both transportation and recreation purposes and are typically between 8 to 14 feet wide.

Example of a paved multi-use path

- **BP11: Construct a trail along Bay Boulevard/Yaquina Bay Road.** In 2012, Lincoln County submitted a grant application to the Oregon Department of Transportation for a new multi-use trail that bypasses the steep and narrow section of Bay Boulevard in Toledo. The proposed trail uses the nearby former rail bed and would travel through the Port of Toledo's boatyard facility. The project included a new trail along Altree Lane with improvements to a nearby railroad crossing before rejoining with Bay Boulevard. The Port of Toledo does not support the current trail route, due to safety concerns with bicyclists and pedestrians passing through the active boatyard. The narrow property and high traffic area for trucks and heavy machinery create safety concerns for trail users and potential impacts to boatyard operations. The City will need to work with Lincoln County and Port of Toledo to consider alternatives to the proposed trail that does not impact boatyard operations and addresses the safety concerns with the existing proposed route.

- **BP12: Construct a multi-use trail along Sturdevant Road.** A sidewalk or trail would address the lack of pedestrian connections between downtown and the Toledo Elementary and Junior/High Schools. The freight route designation and the location of the two schools attract a number of different street users such as freight trucks, bicyclists, and pedestrians, many of whom are school children. In addition, there is little room next to the street to build sidewalks.

  
  Example of a boardwalk

  This project includes a multi-use path and/or boardwalk along the west side of Sturdevant Road. This path may be constructed as a boardwalk near Olalla Slough in areas where there is not enough room to build next to the street. The trail would include multiple connections to Sturdevant Road including marked crosswalks with signage and lights (the school pedestrian crossing project) at the local schools. An east-west connection across Olalla Slough to NE 2nd Street would be included to allow access between Sturdevant Road and downtown. The trail could be designed as a nature walk with interpretive signs and displays to educate users about the wildlife and habitat of the Olalla Slough, serving both a transportation and education purpose.

  Boardwalks require more funding for maintenance and upkeep than regular asphalt or concrete paths. The wood surface and support beams need replacing more often, and the surface will need to be cleaned to ensure that it does not get too slippery. The City could work with a volunteer group to help with regular maintenance and upkeep to help reduce costs.

- **BP13: Business Loop 20 Trail.** Create a continuous bicycle and pedestrian connection along Business Loop 20 from US 20 to NW 6th Street. Business Loop 20 does not have room to construct a sidewalk for the entire length between NW 6th Street and US 20, this project includes constructing a sidewalk where possible and a separate multi-use trail or boardwalk facility on the west side of the street where there is no room for a sidewalk. The trail would be on boardwalk where there are wetlands concerns or near Depot Slough and would provide a dedicated facility for bicycles and pedestrians. See Project BP12 for information about maintenance and upkeep on boardwalks.

- **BP14: Waterfront Path.** The Waterfront Path is a 10- to 12-foot shared-use asphalt trail that would provide a recreational connection from the Butler Bridge Road parking lot to NW 1st Street and then from NW 1st Street to the railroad tracks next to Bay Boulevard. The path would provide continuous pedestrian and bicycle connections, improve access to the waterfront and downtown from surrounding neighborhoods, and provide connections to and from regional bicycle touring routes. The section of the path from the railroad/Bay Boulevard east to a point just west of NW 1st Street near of the waterfront pavilion is complete. The section between NW 1st Street and the pavilion still needs to be finished. There are challenges to connecting to Bay Boulevard, including how to cross the railroad tracks – an at-grade railroad crossing would conflict with railroad operations, and the Waterfront Connectivity Plan recommends a bridge or exploring an at-grade crossing

- **BP15: NW 1st Street and Waterfront Path Crossing.** This project is included in the *Waterfront Connectivity Plan* and would cross NW 1st Street at the planned Waterfront Path. The project includes a 10-foot wide crosswalk across NW 1st Street, removable bollards at the path/boardwalk intersection at NW 1st Street, and a 14-foot wide boardwalk west of NW 1st Street near the electrical substation with metal decking, asphalt surfacing, and railings. The project also includes a 6-foot wide sidewalk on the south/east side of NW 1st Street from the crosswalk to the Port of Toledo office. In addition, the project would install speed humps and warning signage in advance of the crosswalk on NW 1st Street.

- **BP16: Depot Slough Crossing.** Currently, there are no dedicated bicycle and pedestrian facilities across Depot Slough on Bay Boulevard, which is a signed bicycle route. The *Toledo Waterfront Connectivity* Plan includes a project to construct a new bicycle/pedestrian bridge immediately to the east of the railroad bridge. The timber-framed crossing would be 14 feet wide and would connect with the future Waterfront Path. The project also includes a new 6-foot concrete sidewalk on the east side of Bay Boulevard south from Depot Slough and an 8-foot asphalt shared use path south of the new bicycle/pedestrian crossing to Altree Lane and could also connect with the planned Bay Boulevard trail. The project includes a fence to separate the path from the railroad tracks, and a new pedestrian crossing with concrete panels and signage.

3.3.5 Bicycle and Pedestrian Project Cost Estimates and Prioritization

Table 3-3 provides cost estimates and priorities for each of the proposed bicycle, pedestrian, and multi-use path projects. Several projects are from the *Waterfront Connectivity Plan* adopted in 2009 and their cost estimates are indexed for inflation using ODOT cost escalation rates.

TABLE 3-3
Bicycle and Pedestrian System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
BP1	Burgess Road – Fill sidewalk gaps	$172,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP2	Business Loop 20 Sidewalk (South/East Side) – East Slope Road to Sturdevant Road	$1,093,000	Medium-term	Bike/Ped Fund, Bonds, *LID*	City, School District
BP3	Douglas Street and 3rd Street near the Community Center – fill sidewalk gaps	$63,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP4	East Slope Road sidewalk extension	$551,000	Medium-term	Street Fund, Bike/Ped Fund, *LID*	City
BP5	A Street Sidewalk Rebuild – Business Loop 20 to NW 1st Street[2]	$105,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City
BP6	Bay Boulevard Sidewalk – Depot Slough to Business Loop 20[2]	$108,000	Medium- to long-term	Street Fund, Bike/Ped Fund, *LID*	City
BP7	Sturdevant Road High Visibility Crosswalks at Elementary and Junior/Senior High Schools	$68,000	Short-term	County, Bike/Ped Fund, *LID*	City, County, School District
BP8	Railroad Pedestrian Crossing Improvements to Discourage Automobile Use - Butler Bridge Road at SE 2nd Street	$11,000	Short-term	Bike/Ped Fund, *LID*	City
BP9	NW 1st Street Median, Midblock Crosswalk, and North Sidewalk/Grade Crossing Improvements[2 3]	$558,000	Short-term	Street Fund, Bike/Ped Fund, *LID*	City
BP10	Butler Bridge Road Railroad Fencing – NW 1st Street to SW 2nd Street[2]	$27,000	Short-term	Bike/Ped Fund, *LID,* PNWR	City

TABLE 3-3
Bicycle and Pedestrian System Project Cost Estimates and Prioritization

Project No.	Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source[1]	Lead Agency/ Project Partners
BP11	Trail along Bay Boulevard/Yaquina Bay Road	$817,000	Long-term	STIP, County, Bike/Ped Fund, Bonds, *LID*	County, City
BP12	Multi-Use Trail – Sturdevant Road	$4,227,000	Long-term	Bike/Ped Fund, Bonds, *LID*	City, County, School District
BP13	Business Loop 20 Multi-use Trail (South/West Side) – US 20 to NW 6th Avenue	$2,675,000	Long-term	STIP, Bike/Ped Fund, Bonds, *LID*	City
BP14	Waterfront Path: East Section (between NW 1st Street and Butler Bridge Road)[2]	$278,000	Short-term	STIP, Bike/Ped Fund, Bonds, Port, *LID*	City
BP15	Waterfront Path: West Section between Bay Boulevard and NW 1st Street (Includes NW 1st Street Crossing and Boardwalk)[2]	$872,000	Medium- to long-term	STIP, Bike/Ped Fund, Bonds, Port, *LID*	City
BP16	Bay Boulevard – Depot Slough Bicycle/Pedestrian Crossing	$1,660,000	Medium- to long-term	STIP, Bike/Ped Fund, Bonds, *LID*	City

Notes:

1 STIP includes all funded categories.

2 This project is in the adopted *Toledo Waterfront Connectivity Plan* (2009) and is included in the TSP. The project team used the 2009 cost estimates and grew the estimate to 2012 dollars using an ODOT approved annual cost escalation of 4.04 percent.

3 This project from the *Waterfront Connectivity Plan* combines pedestrian, street, and rail improvements into one project. The plan did not break down the cost of each improvement.

Funding sources in *italics* are sources not currently used by the City

LID – Local Improvement District

STIP – Oregon Statewide Transportation Improvement Program

3.4 Port and Water Transportation Plan

The City of Toledo's multimodal transportation system features water transportation facilities including a functional port. The Port of Toledo operates west of downtown and provides moorage, ship repair facilities, and industrial space to businesses. The Port currently has an 85-ton travel lift and 200-ton floating drydock on site at the Sturgeon Bend boatyard facility. There is also a boat launch near the Toledo Airport. No freight is unloaded or offloaded at the Port, although the Yaquina River is a navigable and dredged waterway. The Port has recently completed a transient dock and has just adopted its *Boatyard Buildout Plan*, which includes a number of projects described below.

3.4.1 Port Projects

Support efforts by the Port of Toledo to implement elements of the Port 2012 *Strategic Business Plan* including:

- A new 300 ton travel lift
- Construct a new mobile lift pier, replacing the current drydock pier
- Construct a wash-down pad
- Relocate Utilities: move street, power poles, and connect to city sewer
- Establish Tokyo Slough upland area for hard moorage
- Construct a vessel sandblast and paint building, to allow year-round work
- A rail cargo transfer area adjacent to railroad

These projects would be implemented in three phases:

Phase 1

- Replace piles and construct new pier for travel lift
- Construct a wash-down pad
- Relocate utilities/site preparation
- Purchase travel lift

Phase 2

- Upgrade site access street, realign utilities, and develop cargo transfer and vessel hard moorage areas

Phase 3

- Construct vessel work building
- New boatyard office and restrooms

Benefits of these upgrades include increased environmental stewardship through new efficient equipment and infrastructure improvements, the ability to lift and service larger boats, the ability to handle more than two large boats at once, and year-round ability to sandblast and paint. Table 3-4 includes the cost estimates and prioritization for Port projects.

3.4.2 Port Project Cost Estimates and Prioritization

The following is the list of cost estimates, prioritization, and potential funding sources for Port of Toledo projects as included in the *Boatyard Buildout Plan.* The Port has a number of different funding sources beyond transportation funding sources. The Port receives and is eligible for a variety of economic development, marine, and Army Corps of Engineers funding sources that are not available for street or bicycle and pedestrian projects. The Port also has a budget of its own that it can use to fund projects.

TABLE 3-4
Port and Water System Upgrade Cost Estimates and Prioritization

Project Description	Cost Estimate (in 2012 $)	Priority	Funding Source	Lead Agency/ Project Partners
Phase 1 projects – New pier and replace piles for travel lift, construct wash down pad, relocate utilities, purchase travel lift	$3,493,000	Short-term	Port, ConnectOregon, MNIF, PRLF	Port
Phase 2 projects – upgrade site access road, realign utilities, and develop cargo transfer and vessel hard moorage areas	$950,000	Medium-term	Port, ConnectOregon, MNIF, PRLF	Port
Phase 3 projects – construct vessel work building, new boatyard office and restrooms	$2,050,000	Long-term	Port, ConnectOregon, PRLF	Port

Notes:
Port – General Port of Toledo Revenues
MNIF – Marine Navigation Improvement Fund
PRLF – Port Revolving Loan Fund

3.4.3 Water Projects

There are no projects for water transportation.

3.5 Rail Network

3.5.1 Freight Rail Conditions

Portland and Western Railroad operates the short-line track in Toledo, serving the Georgia-Pacific site which is currently the sole customer along the line. Within the City, there are four public crossings of the railroad tracks, all of which are rough with degraded pavement and potholes between the rails and the street surface. These rough crossings make it difficult for pedestrians and bicyclists, cause damage to vehicles including freight trucks, and on occasion cause trains to derail due to the condition of the rails. The derailments could potentially impact plant operations by delaying material shipments into and out of the facility. There is also an unprotected crossing at Butler Bridge Road where a spur track enters the Georgia-Pacific site. Train engineers are required to use signal flares when using this crossing. The crossing has an advance warning sign, pavement markings, and a roadside "Yield" and railroad crossing signs. However, unlike the other rail crossings in Toledo there are no flashing lights, bells, and gates.

There is one roundtrip train per day, and an average of six to 12 switching movements along the track near Butler Bridge Road downtown. Most railroad crossings are gated; however, it is possible to cross with a train on the tracks from SE 2nd Street onto Butler Bridge Road. Multiple stakeholders indicated that improving rough railroad crossings should be a high priority. Motorists, bicyclists, and pedestrians have submitted multiple complaints that the crossings are not well maintained and pose a safety hazard. Two crashes were reported by stakeholders at crossings; a bicycle crash and a vehicle/train crash.

Since the rails are owned by the railroad, the City is not able to address deficiencies directly. However, the City recognizes that freight rail is important to sustaining the local economy and is interested in preserving or increasing the amount of traffic using the rail line to access the I-5 corridor while improving crossing conditions. Chapter 2 includes goals and policies to address the rail network within Toledo.

3.5.2 Rail Projects

There are no projects for the rail network.

3.6 Air Plan

3.6.1 Airport Conditions

The airport in Toledo accommodates about 22 takeoffs and landings a week for private aircraft (ultralight and single-engine planes) and there are no commercial passenger services. It is also used when foggy weather conditions preclude aircraft landings at Newport Municipal Airport. During emergencies, Coast Guard helicopters and Life Flight air ambulances use the airport to transport people and supplies. There are no plans to expand the airport and no plans to change the amount of aircraft using the facility.

The state has expressed the desire to sell the airport to the Port of Toledo numerous times in the last 30 years, most recently in 2005.[3] However, the airport remains in State ownership as the Port is not interested in purchasing the airport. The State has no changes planned for the airport within the planning horizon of the TSP, with the possible exception of the sale and potential closure if the State is successful. If the airport closes, the City will need to determine an alternate site for emergency response aircraft to continue serving Toledo.

3.6.2 Air Projects

There are no projects for the airport.

3 Hitchman, James. 2010. The Port of Toledo, Oregon, 1910-2010. Toledo, OR. p. 57; available online at http://www.portoftoledo.org/Hitchman%20History%20for%20Website%20PDF.pdf

3.7 Pipeline Network

Water and sewer lines in Toledo are co-located with City-owned streets. The Georgia-Pacific site has a large pipeline connecting two activity areas, as well as a pipeline used to discharge effluent in the Pacific Ocean west of Newport. Northwest Natural operates a high-pressure gas transmission pipeline northeast of the City. There are no plans to expand any pipelines in the City.

There are no plans and no need to expand the gas pipeline into Toledo within the 20 year planning horizon of the TSP.

3.7.1 Pipeline Projects

There are no proposed projects for the pipeline network.

4. Implementation Measures

TSP project implementation will depend on funding and community priorities. There are a variety of funding sources available at the City, County, and State level and each project table above includes applicable funding sources. Additionally, the relative importance of TSP projects are identified in the project tables, based on community goals, the magnitude of the deficiency or issue that the project addresses, and the ability to secure funding, conduct engineering, and build a project. Appendix B: Transportation Funding provides a detailed description of transportation funding and improvement costs for all of the TSP's projects.

4.1 Street Standards

The following sections describe the various streets within Toledo and provide standards for traffic operations, access management and spacing standards, and street cross sections.

4.1.1 Functional Classification Plan

The City's functional classification plan defines the intended operations and character of streets within the overall transportation system, including standards for street and right-of-way width, access spacing, and pedestrian and bicycle facilities. Streets within the City are classified appropriately for consistency and reflect the current and anticipated future function, use, and traffic volumes. The City of Toledo's functional classification system applies to streets owned by the City, the County, and the State; it also includes principal arterials, arterials, collectors, commercial, and local streets. Figure 4-1 presents the functional classification plan for the City of Toledo. Table 4-1 describes the functional classifications and the purpose they are intended to serve.

TABLE 4-1
Functional Classification Definitions

Functional Classification	Definition
Principal Arterial	High traffic volume and limited access street that accommodates long-distance trips between and through urban areas. Principal arterials have little to no local residential and commercial access and prioritize through movement, connecting mainly to arterials and collectors. US 20 is the only principal arterial in Toledo and is owned and maintained by the Oregon Department of Transportation (ODOT).
Arterial	High traffic volume street that accommodates longer-distance trips and prioritizes mobility over local access. In Toledo, no streets are designated as an arterial street.
Collector	Moderate traffic volume street that accommodates shorter local trips and balances the need for local property access and through traffic. Collector streets connect residential traffic on local streets with other collector and arterial streets. Within the City of Toledo, collector streets include Business Loop 20, Arcadia Drive, Skyline Road, Sturdevant Road, East Slope Road, Butler Bridge Road, and Yaquina Bay Road.
Commercial	Low speed, low traffic volume street that is within or adjacent to land zoned commercial or industrial with a high percentage of freight truck traffic. Commercial streets provide frontage and direct access for commercial and industrial uses.
Main Street	Low speed, moderate traffic volume local street that serves the downtown retail district and has an attractive, pedestrian-oriented streetscape with landscaping, wider sidewalks, and on-street parking. Main Street accommodates local and freight traffic associated with the downtown business district. This designation is specific to Main Street in downtown Toledo.
Local	Low speed, low traffic volume street that connects local traffic to collector and arterial streets and prioritizes local access to residences and businesses over through traffic.

Business Loop 20 is an important part of the Toledo street network, as it is one of the only connections to US 20 besides Arcadia Drive, and provides access into the downtown core, carrying the most traffic in the City. Business Loop 20 is currently classified as an arterial street. However, though between A Street and NE 3rd Street, Business Loop 20 has lower speeds, a number of driveways and local street access. This segment of Business Loop 20 prioritizes local access over higher-speed through traffic. For this reason, the TSP reclassifies Business Loop 20 as a collector street. This designation acknowledges that the priority for Business Loop 20 in Toledo is business and local street access and rather than through mobility for vehicles.

To ensure consistency and a logical functional classification system, the TSP reclassifies five streets within the Toledo Urban Growth Boundary (UGB). Reclassification does not require upgrades to meet the cross section standards of the new classification designations until new development occurs (described in the Street Design Standards section below). Reclassifications are based on the current and expected use of the street and to create consistency among the City and State Functional Classification. Table 4-2 summarizes the functional classification changes.

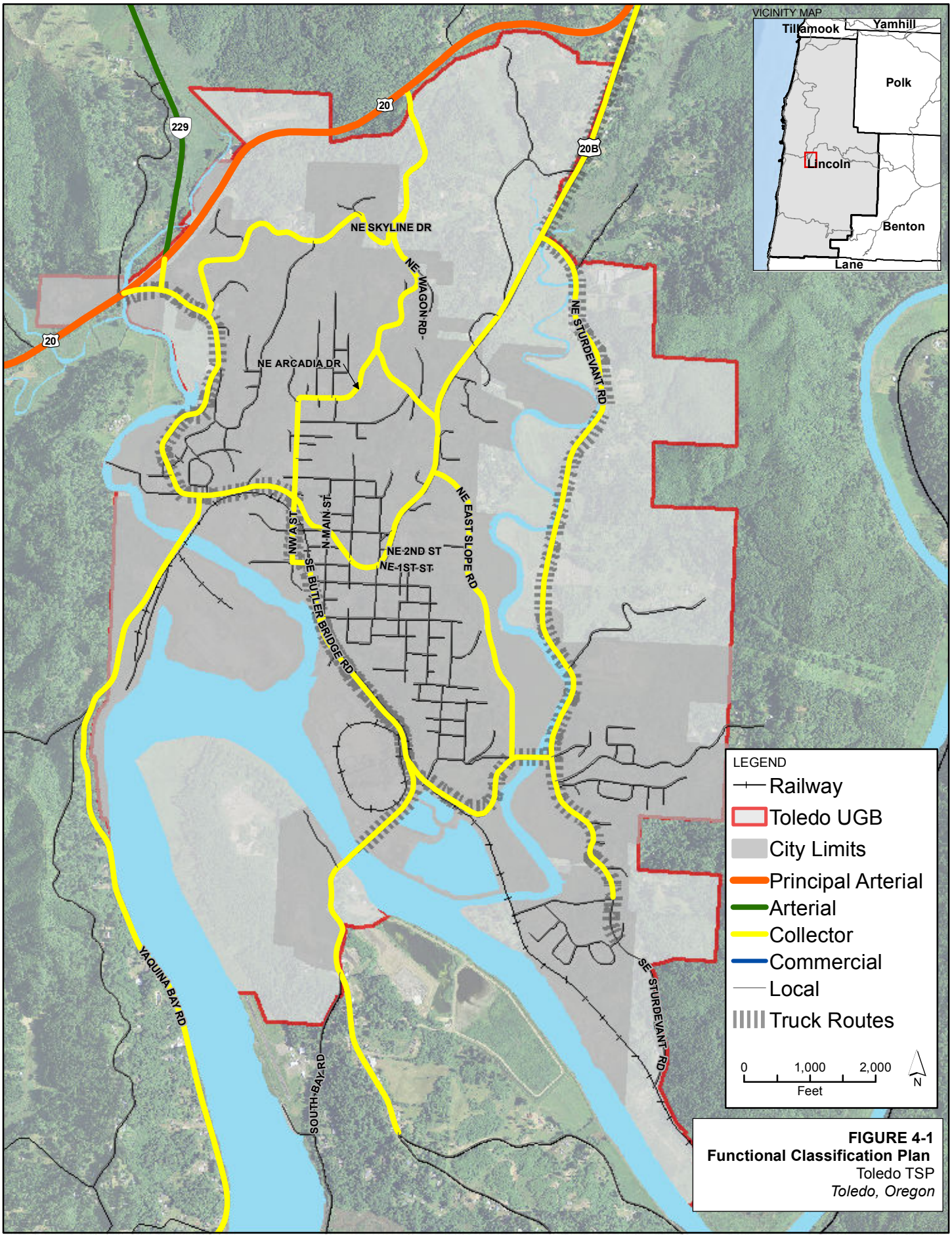


FIGURE 4-1
Functional Classification Plan
Toledo TSP
Toledo, Oregon

TABLE 4-2
Functional Classification Modifications

Street	Current Classification	New Classification	Justification
Business Loop 20	Arterial	Collector	The priority for Business Loop 20 is access to local businesses and streets, not through traffic
A Street (south of Business Loop 20)/1st Street/Butler Bridge Road	Local	Collector	This is the main truck route within the City, and provides access to GP Mill sites
Arcadia Drive (north of Skyline Drive to UGB)	Local	Collector	Makes Arcadia Drive a collector from US 20 to the City limits
Lincoln Way	Local	Collector	Provides a connection to Skyline Drive, an existing collector to Business Loop 20
Main Street	Collector	Local	Does not collect through traffic – provides local access to the City's commercial core
East Slope Road (north of SE 10th Street to Business Loop 20)	Local	Collector	Is one of the few connections between Sturdevant Road and Business Loop 20

Notes:
Current classification is based on the City's existing classification

4.1.2 Street Design Standards

Table 4-3 lists the standards for arterial, collector, commercial, Main Street, and local streets. These standards are based on the City of Toledo *Division 3: Street and Transportation System Design Standards Manual* (2009).

TABLE 4-3
Street Design Standards

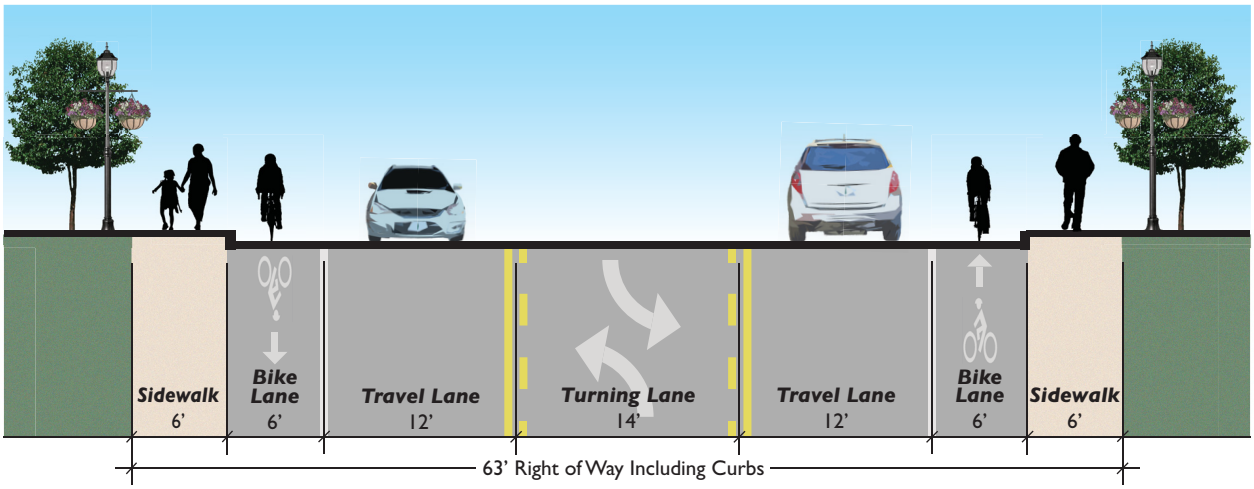
Type of Street	Street Width with Curbs[1]	Travel Lane	Center Median or Center Turn Lane	On-Street Parking	Bike Lane[2]	Sidewalk
Arterial: 3 lane	63’	Two 12’ travel lanes	14’	None	6’ on both sides	6’ on both sides
Arterial: 2 lane	49’	Two 12’ travel lanes	None	None	6’ on both sides	6’ on both sides
Collector	45’	Two 12’ travel lanes	None	None	5’ on both sides	5’ on both sides
Commercial	77’	Two 12’ travel lanes	14’	8’ on both sides	5’ on both sides	6’ on both sides
Local: Preferred	55’	Two 14’ travel lanes	None	8’ on both sides	Cyclists share the travel lane	5’ on both sides
Local: Minimum	39’	Two 14’ travel lanes	None	None	Cyclists share the travel lane	5’ on both sides
Main Street	61’	Two 12’ travel lanes	None	8’ on both sides	None	10’ on both sides
Multi-Use Path	-	-	-	-	12’ total width (10’ trail with 1’ shoulders)	
Boardwalk	-	-	-	-	12’ total width with side railings; 10’ if no rails are used	

Notes:
[1]Includes six inch curbs on either side

[2]Bike lanes could be substituted for a 4’ shared use shoulder where topography or other right-of-way constraints exist, at the discretion of the Planning Commission.

Figures 4-2 to 4-4 show the cross sections for each of the street classifications.

3-LANE **ARTERIAL** ROAD



2-LANE **ARTERIAL** ROAD

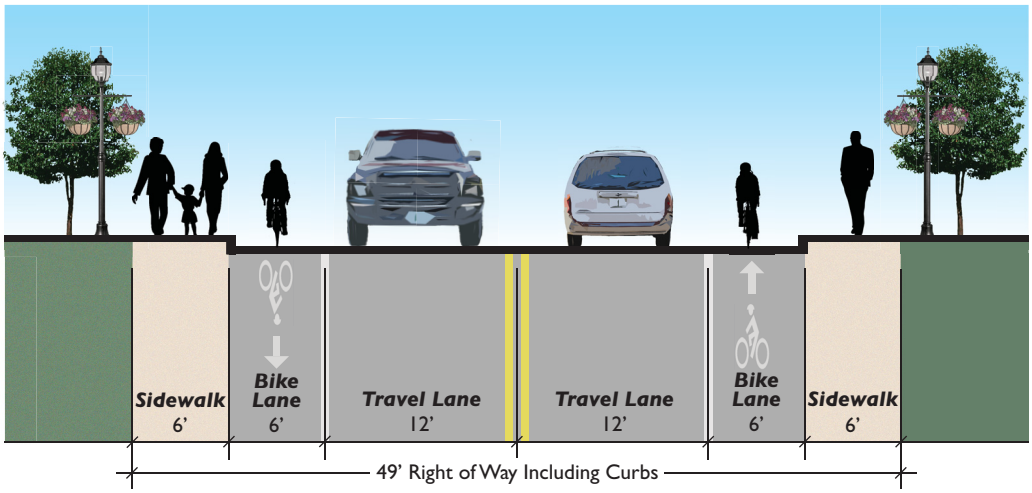
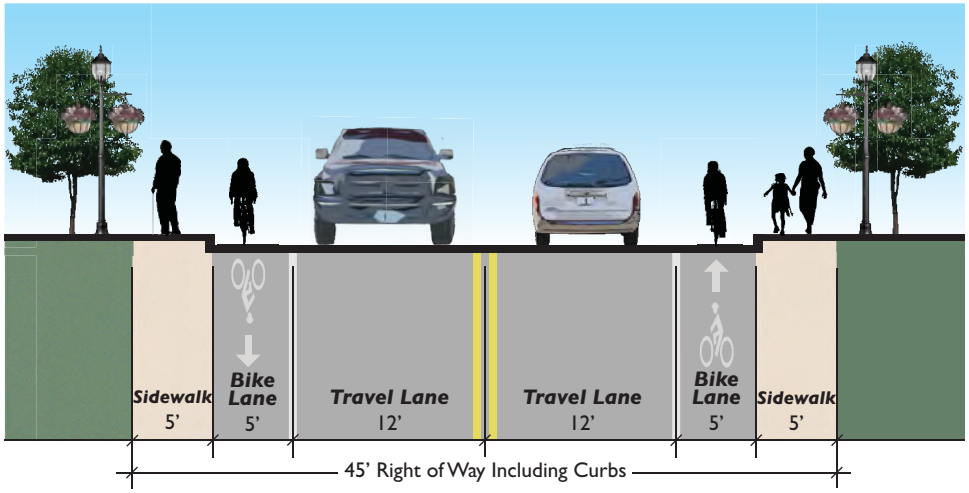


FIGURE 4-2
Arterial Road Standards
City of Toledo TSP

COLLECTOR ROAD



COMMERCIAL ROAD

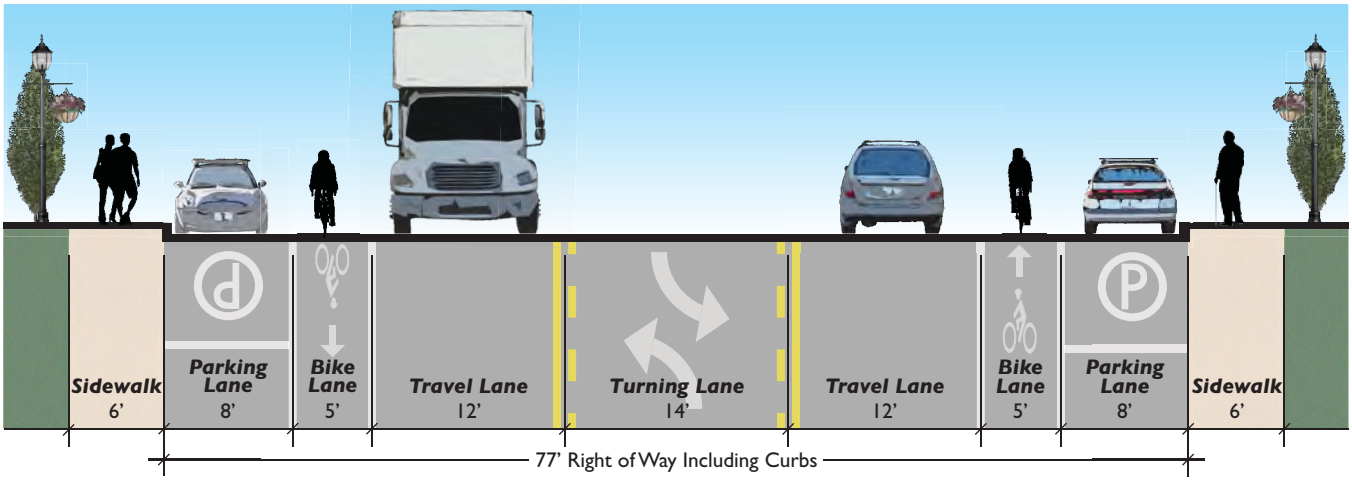
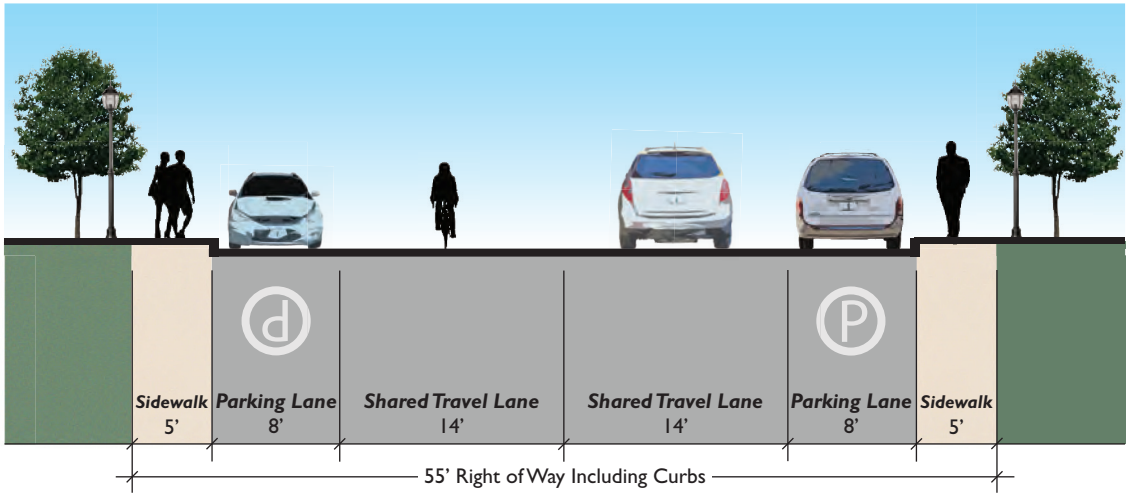
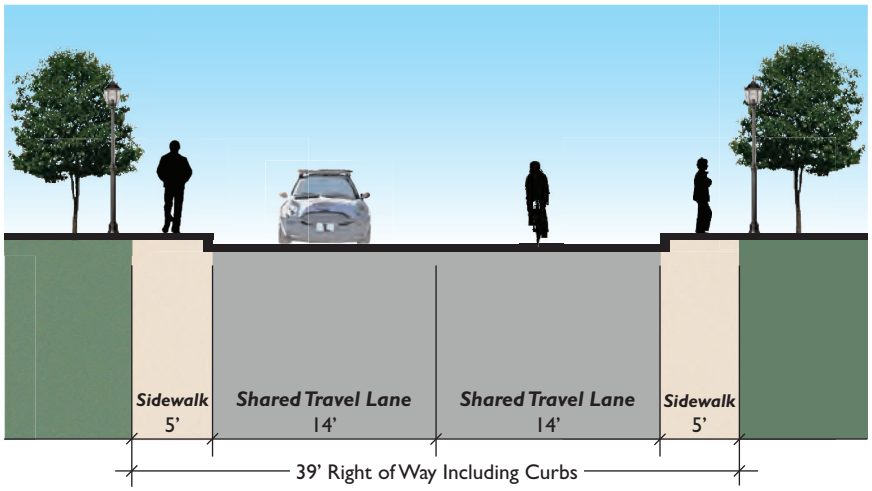


FIGURE 4-3
Collector and Commercial Road Standards
City of Toledo TSP

PREFERRED **LOCAL** ROAD



MINIMUM **LOCAL** ROAD



DOWNTOWN **MAIN STREET**

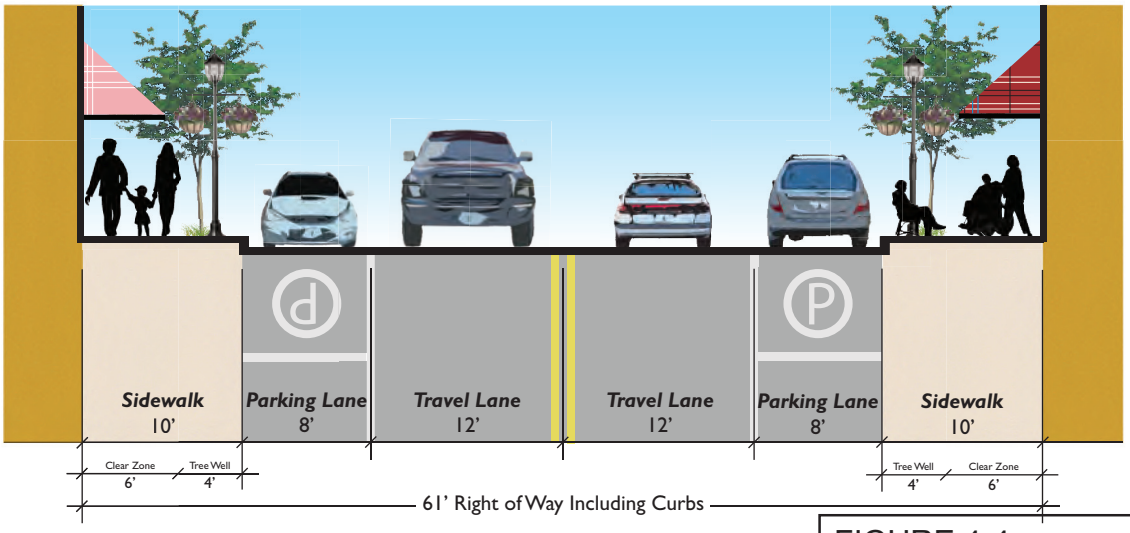


FIGURE 4-4
Local Road and Downtown Main Street Standards
City of Toledo TSP

4.1.3 Access Management Standards

Access management is important to maintain traffic flow and ensure safety on the City's street network, including Business Loop 20, Sturdevant Road, and other higher-traffic routes. Limiting the number of points where traffic can enter and exit reduces potential safety concerns and improves traffic flow. These standards are for both public streets and private driveway accesses onto public streets. Toledo must coordinate with Lincoln County and ODOT to manage access on roads the City does not own, including parts of Sturdevant Road, Bay Boulevard, and US 20. Existing streets and driveways are not subject to these standards, only new streets and driveways or streets and driveways significantly modified by a new development or redevelopment would be subject to these standards.

Table 4-4 shows the standards for public intersections are based on the functional classification of the street.

TABLE 4-4
Public Street Intersection Spacing Standards

Functional Classification	Public Intersection Spacing
Arterial	100 feet
Collector†	100 feet
Local Street*	50 feet

† Collector street standards will be applied to Commercial Streets
* Local Street standards will be applied to Main Street

Table 4-5 shows the spacing standards for private driveways that intersect with public streets.

TABLE 4-5
Private Access Driveway Spacing Standards

Functional Classification	Driveway Spacing
Arterial	40 feet
Collector†	20 feet
Local Street*	10 feet

† Collector street standards will be applied to Commercial Streets
* Local Street standards will be applied to Main Street

4.1.4 Traffic Operations Standards

For intersections under City jurisdiction, there are currently no adopted mobility standards. Typically cities use a volume to capacity (v/c) standard and a level-of-service (LOS) standard. The LOS helps quantify the degree of comfort for drivers, through elements such as travel time, number of stops, amount of time spent stopped (delay), and impediments caused by other vehicles. Examining both measures is useful since the v/c will indicate if there is enough room at the intersection for all the vehicles while the LOS will denote whether those cars are moving through the intersection in a reasonable amount of time. Table 4-6 lists the breakdown of the LOS in reference to delay for the City.

TABLE 4-6
Toledo TSP: Level-of-Service Criteria

Level-of-Service	Average Vehicle Delay (seconds/vehicle)		General Description
	Signalized Intersections	Stop-Controlled Intersections	
A	0-10	0-10	Few or no traffic delays – individual users are virtually unaffected by the presence of other vehicles
B	10-20	10-15	Short traffic delays – traffic flow is stable, but the presence of other users begins to be noticeable
C	20-35	16-25	Average traffic delays – traffic flow is stable, but other traffic begins to significantly affect individual users
D	35-55	26-35	Long traffic delays – traffic flow is dense but stable. Other users restrict individual driver maneuverability
E	55-80	36-50	Very long traffic delays – operations are at or near capacity levels and unstable. Freedom to maneuver is difficult
F	>80	>50	Extreme traffic delays – operates are at breakdown where demand exceeds capacity. Delays and queuing may cause severe congestion.

Notes:
Source: 2010 Highway Capacity Manual

For two-way stop controlled intersections in Toledo, the standard is an LOS E. For volume to capacity measures, in all cases, the standard is a v/c ratio of 1.0 or lower.

4.2 Funding Sources

A variety of established and potential federal, state, and local funding sources are available to fund future transportation projects in the Toledo TSP, depending on the eligibility requirements.

4.2.1 Established Federal Funding Sources

Federal funding currently accounts for approximately 20 percent of total funding for transportation projects in Oregon. Toledo is not located within a Metropolitan Planning Organization (MPO) and federal funding is instead made available through state or county programs via the Cascades West Area Commission on Transportation (CWACT). CWACT generally programs federal funding for regional and local projects that affect the state transportation system, though some funds are made available directly for local projects.

Most federal funding is available through the federal surface transportation program, supported by tax revenue to the Highway Trust Fund (HTF).

Federal Highway Trust Fund

Revenues to the HTF are comprised of motor vehicle fuel taxes, sales taxes on heavy trucks and trailers, tire taxes, annual heavy truck use fees, and revenue from the general fund. The fund is split into two accounts – the highway account and transit account. Funds are appropriated to individual states on an annual basis. The 2005 legislation for the federal surface transportation program (Safe, Accountable, Flexible and Efficient Transportation Equity Act – A Legacy for Users, referred to as SAFETEA-LU) was replaced in July 2012 with Moving Ahead for Progress in the 21st Century (MAP-21). This new 2-year program keeps total federal funding at the SAFETEA-LU rate, consolidates the 90 current programs under SAFETEA-LU into 30, eliminates transportation earmarks, and increases funding for the Transportation Infrastructure Finance and Innovation Program (TIFIA). The TIFIA program provides loans to finance transportation projects of regional or national significance, and seeks to leverage federal transportation dollars with local funds and private investment. Toledo may be eligible to receive funding under the expanded TIFIA program.

The HTF is used to finance the Surface Transportation Program (STP), among other formula programs, which is the primary program that funds local government and non-highway projects. Projects that receive federal funding must be included in the four-year Statewide Transportation Improvement Program (STIP) and are usually required to be matched with state or local funding. The CWACT is responsible for allocating funding for counties and cities under its jurisdiction and will play a central role in prioritizing projects for funding through the Enhance-It STIP.

Federal Transit Administration grants

The Federal Transit Administration (FTA) manages a number of grants available to transit agencies nationwide. The City of Toledo could work with Lincoln County Transit to fund transit projects serving the City.

- **Transit Expansion and Livable Communities Grants.** Approximately $2.4 billion in funds was appropriated for this program in the current budget year. The goal of this initiative from the Federal Transit Administration is to advocate for and support projects and programs that improve the link between public transit and communities. Several formula and competitive grant programs are available through this initiative. Policy goals include better integrating transportation and land use planning, fostering multimodal systems, providing transportation options and improving access, reducing emissions, and increasing public participation in transportation decision-making.

Toledo and Lincoln County Transit may be eligible for grant funding under this program.

- **Formula Grants for Other than Urbanized Areas (5311).** These grants are given to the states for distribution to rural (fewer than 50,000 people) communities. This program is intended to enhance access to services, assist in development or maintenance of public transportation systems, and assist in development of intercity bus service.

Lincoln County Transit currently receives operating funds of approximately $350,000 per year from this source.

- **Transportation for Elderly Persons and Persons with Disabilities (5310).** This formula grant program is managed by the state, with funds provided for capital projects that enhance the accessibility of older adults and those with disabilities. This funding source could be used to support constructing a transit shelter at the Food Fair Stop.

Lincoln County Transit will receive $660,000 in capital grant through this FTA program this year.

- **Section 319 Non-Point Source Implementation Grants.** Transportation projects that integrate stormwater treatment may be eligible to receive federal funding through Section 319 grants. This program, administered by the Oregon Department of Environmental Quality (DEQ), provides federal funds to address non-point pollution, including stormwater improvement projects. Funding is very competitive, with less than $500,000 available statewide in the most recent grant cycle. Projects that could be eligible for funding include applications of pervious pavements, stormwater detention and retention, and other low impact stormwater development tactics. Funds can be used for all or a portion of a project, but require a minimum 40 percent match.

The Yaquina River is on the Clean Water Act 303(d) list for a number of pollutants and projects within the river basin may be attractive for funding.

4.2.2 Established State Funding Sources

State funds are distributed via the Oregon Transportation Commission (OTC). The State Highway Fund is the most significant source of funding for the programs described below. To be eligible for funding, projects must be programmed through the STIP.

State Highway Fund

State Highway Fund Revenues are received from a combination of fuel taxes, vehicle registration and title fees, driver's license fees, the truck weight-mile tax and federal monies. Fund revenues may only be used for construction and maintenance of state and local highways, bridges, and roadside rest areas. State law (ORS 366.514) specifies that a reasonable amount of highway funds must be spent on walkways and bikeways and that in any given fiscal year, a minimum of 1 percent of State Highway Funds must be spent on these projects by funding recipients. However, cities and counties receiving funds may allocate them to a reserve fund, which they must expend within a period not to exceed 10 years. All funds must be expended on projects within street or highway rights-of-way.

Statewide Transportation Improvement Program (STIP)

The STIP is the 4-year capital improvement program for the State of Oregon. It provides a schedule and identifies funding for projects throughout the state. Projects included in the STIP are generally "regionally significant" and are prioritized by CWACT. Continuing involvement with the CWACT will ensure the City's priorities, especially the improvements at the Western Junction, are considered in the next few funding cycles.

All regionally significant state and local projects, as well as all federally-funded projects and programs, must be included in the STIP. About 80 percent of STIP projects use federal funds, most of which will originate from MAP-21 programs. This includes the STP, TAP, and National Highway Performance Program funding for preservation and improvement of the National Highway System. In addition, Regional Flexible Funds competitive grants awarded every two years towards bicycle, pedestrian, transit, and Transportation Demand Management (TDM) projects are now included in the STIP.

Beginning with the 2015-18 STIP, the process will be reorganized into two broad categories: "Fix-it" and "Enhance" that encompass the previous funding categories detailed in the 2012-2015 STIP. "Fix-it" projects are those that fix or preserve the current transportation system; "Enhance" projects are those that enhance, expand, or improve the transportation system. The main purpose of this reorganization is to allow maximum

flexibility to fund projects that reflect community and state values, rather than those that fit best into prescriptive programs.

Applicable "Fix-it" activities will include:

- Bridges (state owned)
- High Risk Rural Streets
- Illumination, signs and signals
- Safety

Applicable "Enhance" activities will include:

- Bicycle and/or Pedestrian facilities on or off the highway right-of-way
- Most projects previously eligible for Transportation Enhancement funds
- Bike/Ped, Transit, TDM projects eligible for Flexible Funds (using federal STP and CMAQ funds)
- Safe Routes to School (infrastructure projects)
- Transportation Alternatives (new with MAP-21)

Under this new STIP organization, there will be one application for all projects eligible under the "Enhance" program. Communities will apply for the "Enhance" projects that best serve their community and ODOT will determine the appropriate funding mechanism. The OTC will select "Enhance" projects based on recommendations developed by local governments, public agencies, and citizen representatives through the ACTs. "Fix-it" projects will be selected with input from infrastructure management systems, supported by consultations with the ACTs. This new organization is primarily intended to increase funding flexibility and does not represent a fundamental change in the type of projects that will be funded through the STIP. Seventy-six percent of the STIP funding will go to "Fix-it" projects, while 24 percent will go to "Enhance" projects.

Federal active transportation funding is now incorporated into the Transportation Alternatives Program (TAP) in MAP-21, replacing the separate Recreational Trails, Safe Routes to Schools, and Transportation Enhancement (TE) Programs from the previous surface transportation program. TAP funds are eligible for a wide variety of transportation projects that improve aesthetics, improve safety, and add value to the transportation system, and can be used for Recreational Trails, Safe Routes to School, and those projects previously eligible for TE including bicycle and pedestrian projects, landscaping, historic preservation, and other projects. However, the amount of funding allocated to TAP is significantly reduced from the three previous programs added together.

Non-STIP State Funding Sources

Other sources of funding are available that are not part of the STIP process. This section describes those programs that may be applicable to projects in the Toledo TSP.

- **Public Transit Programs**: ODOT manages a number of state and federal transit programs. While the City does not manage transit service, Toledo could work with Lincoln County Transit to fund transit projects important to the City.
- **ODOT Bicycle and Pedestrian Program Grants:** Most funds in this program are distributed through competitive grants to local governments. A minimum of one percent of annual state highway revenues are devoted to this program, with about $5 million in funding available every two years. All projects must be within public rights-of-way; recreational trails outside of the right-of-way are not eligible. Grant cycles occur every two years and local match is generally expected. Pedestrian and bicycle projects in Toledo within the public right-of-way are eligible to apply for grants from this program.
- **Immediate Opportunity Fund**: This fund is discretionary, and provides funding for transportation projects essential for supporting site-specific economic development projects. These funds are distributed on a case-by-case basis in cooperation with the Oregon Economic and Community Development Department. These funds can only be used when other sources of financial support are insufficient or unavailable. These funds are reserved for projects where a document transportation problem exists, or where private firm location

decisions hinge on the immediate commitment of road construction. A minimum 50 percent match is required from project applications.

- ***Connect*Oregon**: *Connect*Oregon funds are lottery-backed bonds distributed to air, marine, rail, transit, and other multimodal projects statewide. No less than 10 percent of *Connect*Oregon IV funds must be distributed to each of the five regions of the state, provided that there are qualified projects in the region. The objective is to improve the connections between the highway system and other modes of transportation.
- **Oregon Infrastructure Authority programs**: Grant and loan programs such as the Marine Navigation Improvement Fund (MNIF) and Port Revolving Loan Fund (PRLF) are managed by the Infrastructure Finance Authority (IFA). These programs help ports develop infrastructure and public facilities, as well as address their utility and economic needs. The MNIF can be used on federally authorized projects designed and operated by the U.S. Army Corps of Engineers to improve the Port of Toledo. The PRLF is a loan program to assist Oregon ports in the planning and construction of facilities and infrastructure or to assist port-related private business development projects.
- **Special City Allotment Grant:** Special City Allotment Grants are made up of $1 million in state gas taxes distributed annually among cities with population of less than 5,000. ODOT sets the distribution and dollar amount by agreement with the League of Oregon Cities. Half of the funds come from the cities' share of gas tax revenues and half comes from ODOT's share of the State Highway Fund. Cities can receive half of the maximum $25,000 grant amount at the beginning of the project, with the final payment due upon completing of the project.

Oregon Parks and Recreation Local Government Grants

The Oregon Parks and Recreation Department (OPRD) administers this program using Oregon Lottery revenues. These grants can fund acquisition, development and major rehabilitation of public outdoor parks and recreation facilities. OPRD has distributed $4 million annually under this program through a competitive grant process. A match of at least 20 percent is required.

Oregon Transportation Infrastructure Bank (OTIB)

The OTIB is a statewide revolving loan fund available to local governments for many transportation infrastructure improvements, including highway, transit, and non-motorized projects. Most funds made available through this program are federal; streets must be functionally classified as a major collector or higher to be eligible for loan funding.

4.2.3 Established Local Funding Sources

This section describes existing local funding sources for the City of Toledo. Major local funding sources include general fund revenues, road maintenance fees, and system development charges, plus the City's share of State Highway Fund revenue.

Road Maintenance Fees

This fee is assessed to all residential and non-residential properties in the City of Toledo to fund upkeep of the City's street system. Approximately $110,000 in fee revenue was forecast for the fiscal year of 2011. These revenues are made available exclusively for street maintenance (TCC 13.40.040). These fees represent a significant source of funding for maintenance of existing streets, but are unavailable for new capital improvement projects.

System Development Charges

System development charges (SDCs) are one-time fees on new development that compensate for the increased traffic associated with new development. The City authorized the collection of system development charges (SDCs) for all infrastructure categories in 2010. SDCs cannot be expended on transportation operations or maintenance projects, and may be used exclusively for capital improvement projects. These charges are payable

to the City when a building or other development permit is issued. In 2011, no transportation SDCs were collected and the 2012 budget forecasts approximately $2,000 in SDC revenue. The outlook for SDC revenue is very uncertain, given limited development during the current economic downturn.

Public Utility District Franchise Revenue

Forty percent of this revenue source is transferred to the streets fund; monies are available for transportation capital improvements, maintenance, and operations. Approximately $350,000 in revenue was forecast for the 2012 budget year from this source, representing a significant share of total local transportation resources.

4.2.4 Potential Other Funding Sources for Future Projects

The following funding sources and strategies may be available to the City in addition to the established programs listed above.

Department of Energy: Energy Efficiency and Conservation Block Grants (EECBG)

This program was initially funded through the American Recovery and Reinvestment Act of 2009. The current funding authorization expired in April 2012. Future funding for this program is currently uncertain. The program provided formula grants to states and competitive grants for projects that reduce fossil fuel emissions, reduce total energy use of eligible grantees, and improve energy efficiency of transportation and other sectors.

Toledo may be eligible for competitive grants if this program is funded in future federal budgets.

Increased State Highway Fund revenues

Gas tax revenue to the State Highway Fund has not kept pace with inflation or demands of the state's transportation system. ODOT is exploring new revenue models to meet state transportation needs, which may result in increased funds for state transportation programs in coming years. Oregon is actively exploring a vehicle miles travelled (VMT) tax to replace the current gas tax, with full implementation of any VMT program expected to take up to 20 years.

Local Improvement Districts (LID)

LIDs are created by property owners within a district of a city to raise revenues for constructing improvements within the district boundaries. LIDs may be used to assess property owners for improvements that benefit properties and are secured by property liens. Property owners typically enter into LIDs because of the economic or personal advantages of the improvements. The City would work with property owners to acquire financing at lower interest rates than under typical financing methods. The formation of LIDs is governed by state law and local jurisdictional development codes. LID revenues can only be used on capital projects. LID revenues can be combined with other revenue sources to fully fund projects.

Streets District

A Streets District is essentially a type of limited LID. Oregon state law (ORS 371) allows for the formation of special streets taxing districts for purposes of constructing and maintaining streets within the taxing district boundaries. A streets district would be a separate entity from the City of Toledo, with its own property tax levy rate and an elected board of commissioners. The creation of a streets district must be voted on by those within the potential district boundaries.

Tax Increment Financing (TIF)

The City of Toledo must first designate an urban renewal area within the City to implement TIF. The county assessor "freezes" the assessed value of properties within the urban renewal area and the property taxes collected above those that were collected when the property values were frozen are used to pay for improvements within the urban renewal area. TIF assumes that property values within the urban renewal area will increase over time. TIF is primarily an economic development tool, but may be useful for targeting areas in the City with serious improvement needs.

Revenue and General Obligation Bonds

Bonding allows municipal and county government to finance construction projects by borrowing money and paying it back over time, with interest. Financing requires smaller regular payments over time compared to paying the full cost at once, but financing increases the total cost of the project by adding interest. General Obligation Bonds are often used to pay for construction of large capital improvements and must be approved by a vote of the public. These bonds add the cost of the improvement to property taxes over a period of time.

Toledo could consider issuing a General Obligation Bond to pay for significant transportation improvement projects identified within the City.

Parking Fees

The City does not currently charge for parking. Income generated by charging parking fees could be used to implement a variety of transportation projects. The collection system would require purchase of parking meter infrastructure, careful study of where to install meters, and analysis of the appropriate fee amount to charge drivers.

4.2.5 Prioritization

Prioritization of projects within this TSP is separated into three categories: short-term, medium-term, and long-term. Short-term projects are expected to be built within 0-5 years, while medium-term projects are 5-10 years, and long-term projects are expected to be built in the 10-20 year time frame. Prioritization is determined based on a combination of the most important projects to implement first, the ease of implementation, and the potential cost – some projects will take a number of years to identify and secure funding. Some projects will also need regional coordination and support, which may take time to secure an agreement. Prioritization is an estimate: long-term projects may be implemented sooner than 10-20 years due to funding becoming available, a high degree of community support, or other factors. The suggested priority for projects in this TSP is a general guide and not a required timeframe (see tables in Executive Summary).

4.3 Recommended Code Language

In preparing implementation measures for the TSP, the project team evaluated the City's development code for compliance with the TPR. These state regulations are intended to increase the amount of coordination between public agencies, protect transportation investments, support efficient urban development, and promote the use of modes other than single-occupancy vehicles. The project team found that the TSP and development code were largely in compliance with the TPR, but that some updates to objective and code would be needed for full compliance. The evaluation findings are included in the TSP as Appendix E: Street Standards.

The following represent the types of amendments proposed to implement the TSP and comply with state regulations:

- Identifying the development of transportation facilities as appropriate in the land use zones, in order to streamline the permitting process.
- Establishing bicycle parking standards.
- Providing safe and convenient pedestrian and bicycle access from within new developments.
- Transportation facility standards that specify requirements for lane width, sidewalks, bicycle facilities, and other right-of-way elements.

These proposed amendments will be carried through the hearings and adoption process after the TSP document is adopted. Language for proposed code changes can be found in Appendix F of this TSP.

4.3.1 Comprehensive Land Use Plan Amendments

The goals and objectives in Chapter 2 of this TSP will be included in Article 12 of the *Toledo Comprehensive Land Use Plan* upon adoption of this TSP by the City, and minor changes are included in Article 14 to incorporate references to the Transportation System Plan.