



Moving Ahead

STREETS AND PLACES REIMAGINED

**DRAFT FINAL Parklands,
Recreation Areas, and
Section 6(f) Technical Report**

Lane Transit District
City of Eugene

In cooperation with
Lane Council of Governments
Lane County
Oregon Department of Transportation

July 7, 2017

DRAFT FINAL Parklands, Recreation Areas, and Section 6(f) Technical Report

MovingAhead Project

Prepared in accordance with the
National Environmental Policy Act of 1969, as amended 42 U.S.C. 4322
and the
Federal Transit Act of 1964, as amended 49 U.S.C. 1601 et seq.

July 7, 2017

Prepared for
Federal Transit Administration
Lane Transit District
City of Eugene

Prepared by
CH2M HILL, Inc.

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Acronyms, Abbreviations, and Terms

Acronyms and Abbreviations	Definitions
AA	Alternatives Analysis
API	Area of Potential Impact
BAT	business access and transit
BRT	bus rapid transit
CFR	Code of Federal Regulations
CH2M	CH2M HILL, Inc.
City	City of Eugene
Draft Envision Eugene	<i>Draft Envision Eugene Comprehensive Plan</i> (Envision Eugene, 2016, July)
Draft Eugene 2035 TSP	<i>DRAFT Eugene 2035 Transportation System Plan</i> (City of Eugene, 2016)
EmX	Emerald Express, Lane Transit District's Bus Rapid Transit System
FTA	Federal Transit Administration
FTN	Frequent Transit Network
GIS	geographic information system
I-5	Interstate 5
I-105	Interstate 105
LCC	Lane Community College
LCOG	Lane Council of Governments
LOS	level of service
LTD	Lane Transit District
LWCF	Land and Water Conservation Fund
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NPS	Department of Interior's National Park Service
ODOT	Oregon Department of Transportation
OPRD	Oregon Parks and Recreation Department
ROW	right of way
RTP	<i>Central Lane Metropolitan Planning Organization Regional Transportation Plan</i> (LCOG, adopted 2007, November; 2011, December). (The RTP includes the Financially Constrained Roadway Projects List)

Acronyms and Abbreviations	Definitions
SCORP	Statewide Comprehensive Outdoor Recreation Plan
TSP	Transportation System Plan
U.S.C.	United States Code
WEEE	West Eugene EmX Extension

Terms	Definitions
Accessibility	The extent to which facilities are barrier free and useable for all persons with or without disabilities.
Alignment	Alignment is the street or corridor that the transit project would be located within.
Alternatives Analysis	The process of evaluating the costs, benefits and impacts of a range of transportation alternatives designed to address mobility problems and other locally-defined objectives in a defined transportation corridor, and for determining which particular investment strategy should be advanced for more focused study and development. The Alternatives Analysis (AA) process provides a foundation for effective decision making.
Area of Potential Impact	An assessment's Area of Potential Impact for the project is defined separately for each discipline.
Base Period	The period between the morning and evening peak periods when transit service is generally scheduled on a constant interval. Also known as "off-peak period."
Boarding	Boarding is a term used in transit to account for passengers of public transit systems. One person getting on a transit vehicle equals one boarding. In many cases individuals will have to transfer to an additional transit vehicle to reach their destination and may well use transit for the return trip. Therefore, a single rider may account for several transit boardings in one day.
Bus Rapid Transit (BRT)	A transit mode that combines the quality of rail transit and the flexibility of buses. It can operate on bus lanes, HOV lanes, expressways, or ordinary streets. The vehicles are designed to allow rapid passenger loading and unloading, with more doors than ordinary buses.
Business Access and Transit Lane (BAT)	In general, a BAT lane is a concrete lane, separated from general-purpose lanes by a paint stripe and signage. A BAT lane provides BRT priority operations, but general-purpose traffic is allowed to travel within the lane to make a turn into or out of a driveway or at an intersecting street. However, only the BRT vehicle is allowed to use the lane to cross an intersecting street.
Capital Improvements Program	A Capital Improvement Plan or Program (CIP) is a short-range plan, usually four to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for funding projects in the program.

Terms	Definitions
Categorical Exclusion	A Categorical Exclusion (CE) means a category of actions which do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.
Collector Streets	Collector streets provide a balance of both access and circulation within and between residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access and are located in residential neighborhoods, distributing trips from the neighborhood and local street system.
Corridor	A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways and transit route alignments.
Documented Categorical Exclusion (DCE)	<p>A Documented Categorical Exclusion (DCE) means a group of actions that may also qualify as CEs if it can be demonstrated that the context in which the action is taken warrants a CE exclusion; i.e., that no significant environmental impact will occur. Thus, these actions are referred to as Documented Categorical Exclusions. Such actions require some NEPA documentation, but not an Environmental Assessment or a full-scale Environmental Impact Statement.</p> <p>DCEs documentation must demonstrate that in the context(s) in which these actions are to be performed, they will have no significant environmental impact or that such impacts will be mitigated.</p>
Effects	<p>Effects include ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.</p> <p>Effects include: (1) direct effects that are caused by the action and occur at the same time and place, and (2) indirect effects that are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).</p>
EmX	Lane Transit District’s Bus Rapid Transit System, pronounced “MX,” short for Emerald Express.
Envision Eugene	The City of Eugene’s Comprehensive Plan (latest draft or as adopted). Envision Eugene includes a determination of the best way to accommodate the community’s projected needs over the next 20 years.

Terms	Definitions
Environmental Justice	<p>A formal federal policy on environmental justice was established in February 1994, with Executive Order 12898 (EO 12898), "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations." There are three fundamental environmental justice principles:</p> <p>To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.</p> <p>To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.</p> <p>To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.</p>
Evaluation Criteria	<p>Evaluation criteria are the factors used to determine how well each of the proposed multimodal alternatives would meet the project's Goals and Objectives. The Evaluation Criteria require a mix of quantitative data and qualitative assessment. The resulting data are used to measure the effectiveness of proposed multimodal alternatives and to assist in comparing and contrasting each of the alternatives to select a preferred alternative.</p>
Fatal Flaw Screening	<p>The purpose of a Fatal Flaw Screening is to identify alternatives that will not work for one reason or another (e.g., environmental, economic, community) By using a Fatal Flaw Screening process to eliminate alternatives that are not likely to be viable, a project can avoid wasting time or money studying options that are not viable and focus on alternatives and solutions that have the greatest probability of meeting the community's needs (e.g., environmentally acceptable, economically efficient, implementable).</p>
Fixed Route	<p>Service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers at set stops and stations; each fixed-route trip serves the same origins and destinations, unlike demand responsive and taxicabs.</p>
Geographic Information System (GIS)	<p>Data management software tool that enables data to be displayed geographically (i.e., as maps).</p>
Goals and Objectives	<p>Goals and objectives define the project's desired outcome and reflect community values. Goals and objectives build from the project's Purpose and Need Statement.</p> <p>Goals are overarching principles that guide decision making. Goals are broad statements.</p> <p>Objectives define strategies or implementation steps to attain the goals. Unlike goals, objectives are specific and measurable.</p>
Guideway	<p>A transit right of way separated from general purpose vehicles.</p>
Headway	<p>Time interval between vehicles passing the same point while moving in the same direction on a particular route.</p>
Hydrology	<p>Refers to the flow of water including its volume, where it drains and how quickly it flows.</p>
Impacts	<p>A term to describe the positive or negative effects upon the natural or built environments as a result of an action (i.e., project).</p>

Terms	Definitions
Key Transit Corridors	Key Transit Corridors are mapped in Envision Eugene and are anticipated to be significant transit corridors for the City and the region
Land and Water Conservation Fund (LWCF) Act of 1965	16 U.S.C. 4601-4 et seq. The Land and Water Conservation Fund State Assistance Program was established by the LWCF Act of 1965 to stimulate a nationwide action program to assist in preserving, developing, and providing assurance to all citizens of the United States (of present and future generations) such quality and quantity of outdoor recreation resources as may be available, necessary, and desirable for individual active participation. The program provides matching grants to states and through states to local units of government, for the acquisition and development of public outdoor recreation sites and facilities.
Level of Service (LOS)	Level of service (LOS) is a measure used by traffic engineers to determine the effectiveness of elements of transportation infrastructure. LOS is most commonly used to analyze highways, but the concept has also been applied to intersections, transit, and water supply.
Local Streets	Local streets have the sole function of providing direct access to adjacent land. Local streets are deliberately designed to discourage through traffic movements.
Metropolitan Planning Organization (MPO)	The organization designated by local elected officials as being responsible for carrying out the urban transportation and other planning processes for an area.
Mitigation	A means to avoid, minimize, rectify, or reduce an impact, and in some cases, to compensate for an impact.
Mode	A particular form or method of travel distinguished by vehicle type, operation technology and right of way separation from other traffic.
MovingAhead Project	<p>The City of Eugene and LTD are working with regional partners and the community to determine which improvements are needed on some of our most important transportation corridors for people using transit, and facilities for people walking and biking. MovingAhead will prioritize transit, walking and biking projects along these corridors so that they can be funded and built in the near-term.</p> <p>The project will focus on creating active, vibrant places that serve the community and accommodate future growth. During Phase 1, currently underway, the community will weigh in on preferred transportation solutions for each corridor and help prioritize corridors for implementation. When thinking about these important streets, LTD and the City of Eugene refer to them as corridors because several streets may work as a system to serve transportation needs.</p>
Multimodal	Multimodal refers to various modes. For the MovingAhead project, multimodal refers to Corridors that support various transportation modes including vehicles, buses, walking and cycling.
National Environmental Policy Act of 1969 (NEPA)	A comprehensive federal law requiring analysis of the environmental impacts of federal actions such as the approval of grants; also requiring preparation of an Environmental Impact Statement (EIS) for every major federal action significantly affecting the quality of the human environment.

Terms	Definitions
No Action or No-Build Alternative	An alternative that is used as the basis to measure the impacts and benefits of the other alternative(s) in an environmental assessment or other National Environmental Policy Act (NEPA) action. The No-Build alternative consists of the existing conditions, plus any improvements which have been identified in the Statewide Transportation Improvement Program (STIP).
Off-Peak Period	Non-rush periods of the day when travel activity is generally lower and less transit service is scheduled. Also called "base period."
Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP)	The 2013-2017 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP), entitled <i>Ensuring Oregon's Outdoor Legacy</i> (OPRD, No Date), constitutes Oregon's basic 5-year plan for outdoor recreation. The plan guides the use of LWCF funds that come into the state; provides guidance for other OPRD-administered grant programs; and provides recommendations to guide federal, state, and local units of government, as well as the private sector, in making policy and planning decisions.
Oregon Statewide Planning Goals, Oregon Administrative Rule 660-15-0000 (1-15)	Oregon's land use planning program is a set of 19 Statewide Planning Goals. The goals express the state's policies on land use and related topics, such as citizen involvement, housing, and natural resources, and are achieved through local comprehensive planning.
Park and Ride	Designated parking areas for automobile drivers who then board transit vehicles from these locations.
Peak Hour	The hour of the day in which the maximum demand for transportation service is experienced (refers to private automobiles and transit vehicles).
Peak Period	Morning and afternoon time periods when transit riding is heaviest.
Preferred Alternative	An alternative that includes a major capital improvement project to address the problem under investigation. As part of the decision-making process, the Preferred Alternative is compared against the No Action or No-Build Alternative from the standpoints of transportation performance, environmental consequences, cost-effectiveness, and funding considerations.
Purpose and Need	The project Purpose and Need provides a framework for developing and screening alternatives. The purpose is a broad statement of the project's transportation objectives. The need is a detailed explanation of existing conditions that need to be changed or problems that need to be fixed.
Ridership	The number of people using a public transportation system in a given time period.
Right of Way	Publicly owned land that can be acquired and used for transportation purposes.
Scoping	A formal coordination process used to determine the scope of the project and the major issues likely to be related to the proposed action (i.e., project).
Screening Criteria	Criteria used to compare alternatives.
Section 4(f) of the Department of Transportation Act of 1966	23 U.S.C. 138 and 49 U.S.C. 303. Parks are subject to evaluation in the context of Section 4(f) of the Department of Transportation Act of 1966, which governs the use of publicly-owned/open to the public park and recreation lands, government-owned wildlife lands, and historic resources.

Terms	Definitions
Section 4(f) resources	(i) any publicly owned land in a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or (ii) any land from a historic site of national, state, or local significance
Section 6(f) of the LWCF Act of 1965	The LWCF’s most important tool for ensuring long-term stewardship is its “conversion protection” requirement. Section 6(f)(3) strongly discourages conversions of state and local park, and recreational facilities to other uses. Conversion of property acquired or developed with assistance under the program requires approval of the Department of Interior’s National Park Service (NPS) and substitution of other recreational properties of at least equal fair market value, and of reasonably equivalent usefulness and location.
Study Area	The area within which evaluation of impacts is conducted. The study area for particular resources will vary based on the decisions being made and the type of resource(s) being evaluated.
Title VI	This title declares it to be the policy of the United States that discrimination on the ground of race, color, or national origin shall not occur in connection with programs and activities receiving Federal financial assistance and authorizes and directs the appropriate Federal departments and agencies to take action to carry out this policy.
Transit System	An organization (public or private) providing local or regional multi-occupancy-vehicle passenger service. Organizations that provide service under contract to another agency are generally not counted as separate systems.
urban plaza	An urban plaza is a place that can be used for socializing, relaxation, and/or events.
Water Quality	Refers to the characteristics of the water, such as its temperature and oxygen levels, how clear it is, and whether it contains pollutants.

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Parklands, Recreation Areas, and Section 6(f) Summary

This Parklands, Recreation Areas, and Section 6(f) Report presents results for the parklands, recreation areas, and Section 6(f) assessment for the Lane Transit District (LTD) and City of Eugene's MovingAhead Project in Eugene, Oregon.

Section 6(f) properties are recreation resources funded by the Land and Water Conservation Fund Act. Land purchased with these funds cannot be converted to a nonrecreation use without coordination with the Department of Interior's National Park Service (NPS) and mitigation that includes replacing the quality and quantity of land used. Converting any portion of these lands follows Title 36, *Code of Federal Regulations* (CFR), Section 59.3 of the Land and Water Conservation Fund Program.

The purpose of the MovingAhead Project is to determine which high-capacity transit corridors identified in the adopted Emerald Express (EmX) System Plan, *Lane Transit District Long-Range Transit Plan* (LTD, 2014) and the Frequent Transit Network (FTN) are ready to advance to capital improvements programming in the near term. LTD and the City of Eugene (City) initiated the MovingAhead Project in 2014 to identify and examine alternatives for improving multimodal safety, mobility, and accessibility in key transit corridors in the City. A main theme of the City's vision is to concentrate new growth along and near the City's key transit corridors and core commercial areas while protecting neighborhoods and increasing access to services for everyone. LTD and the City are jointly conducting the project to facilitate a more streamlined and cost-efficient process through concurrent planning, environmental review, and design and construction of multiple corridors.

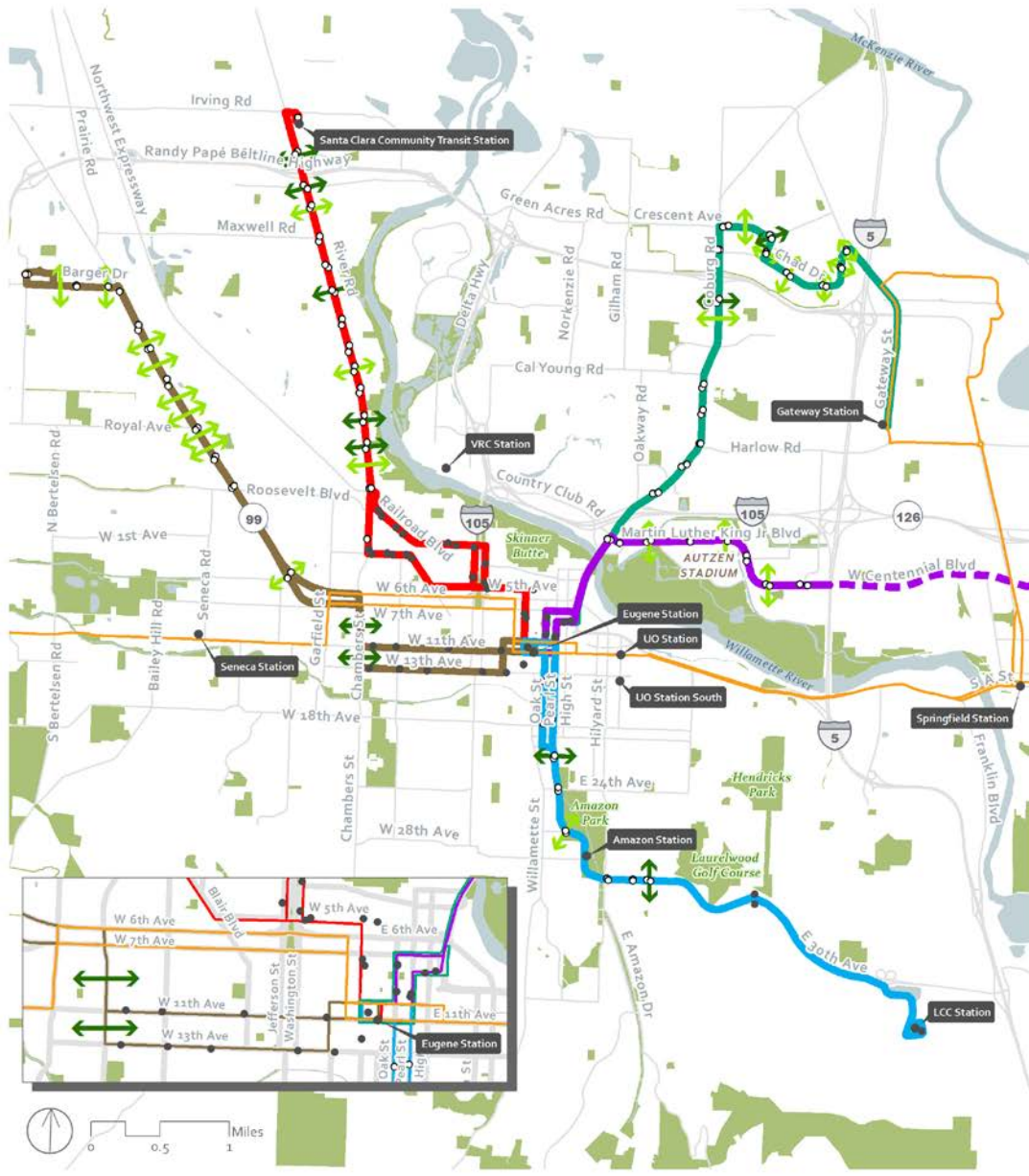
LTD and the City of Eugene examined multimodal transit alternatives in five key transit corridors identified in the *Draft Envision Eugene Comprehensive Plan* (Envision Eugene, 2016, July) and the *DRAFT Eugene 2035 Transportation System Plan* (City of Eugene, 2016; Draft Eugene 2035 TSP), the region's highest growth centers, and Downtown Eugene:

- Highway 99 Corridor
- River Road Corridor
- 30th Avenue to Lane Community College (LCC) Corridor
- Coburg Road Corridor
- Martin Luther King, Jr. Boulevard Corridor

No-Build, Enhanced Corridor, and EmX Alternatives were developed for each corridor, except the Martin Luther King, Jr. Boulevard Corridor, for which only No-Build and Enhanced Corridor Alternatives were developed. Each corridor location is shown on Figures S.1-1 and S.1-2 for the Enhanced Corridor Alternatives and the EmX Alternatives, respectively. The *Moving Ahead Level 2 Definition of Alternatives* (CH2M HILL, Inc. [CH2M] et al., 2016) contains a detailed description of the project alternatives. The following is a summary of the project alternatives evaluated.

- **The No-Build Alternatives** serve as a reference point to gauge the benefits, costs, and effects of the Enhanced Corridor and EmX Alternatives in each corridor. Each No-Build Alternative is based on the projected conditions in 2035. Capital projects are derived from the financially constrained project lists in the Draft Eugene 2035 TSP, *Lane County Transportation System Plan* (Lane County Public Works, Engineering Division Transportation Planning, 2004, update in progress), the *Lane Transit District Capital Improvement Plan* (LTD, 2015), and the *Lane Transit District Long-Range Transit Plan* (LTD, 2014).

Figure S.1-1. Enhanced Corridor Alternatives Overview



Locator Map



Legend

- 30th Avenue to Lane Community College Corridor
- Coburg Road Corridor
- Highway 99 Corridor
- River Road Corridor
- Martin Luther King Jr Blvd Corridor
- Martin Luther King, Jr Blvd Corridor continues east of I-5 as existing route #13
- 2035 No-Build EmX
- Road
- Park
- Water
- Existing Without Improvements
- Proposed or Existing with Improvements
- ↔ New Pedestrian Crossing
- ↔ Enhanced Existing Pedestrian Crossing

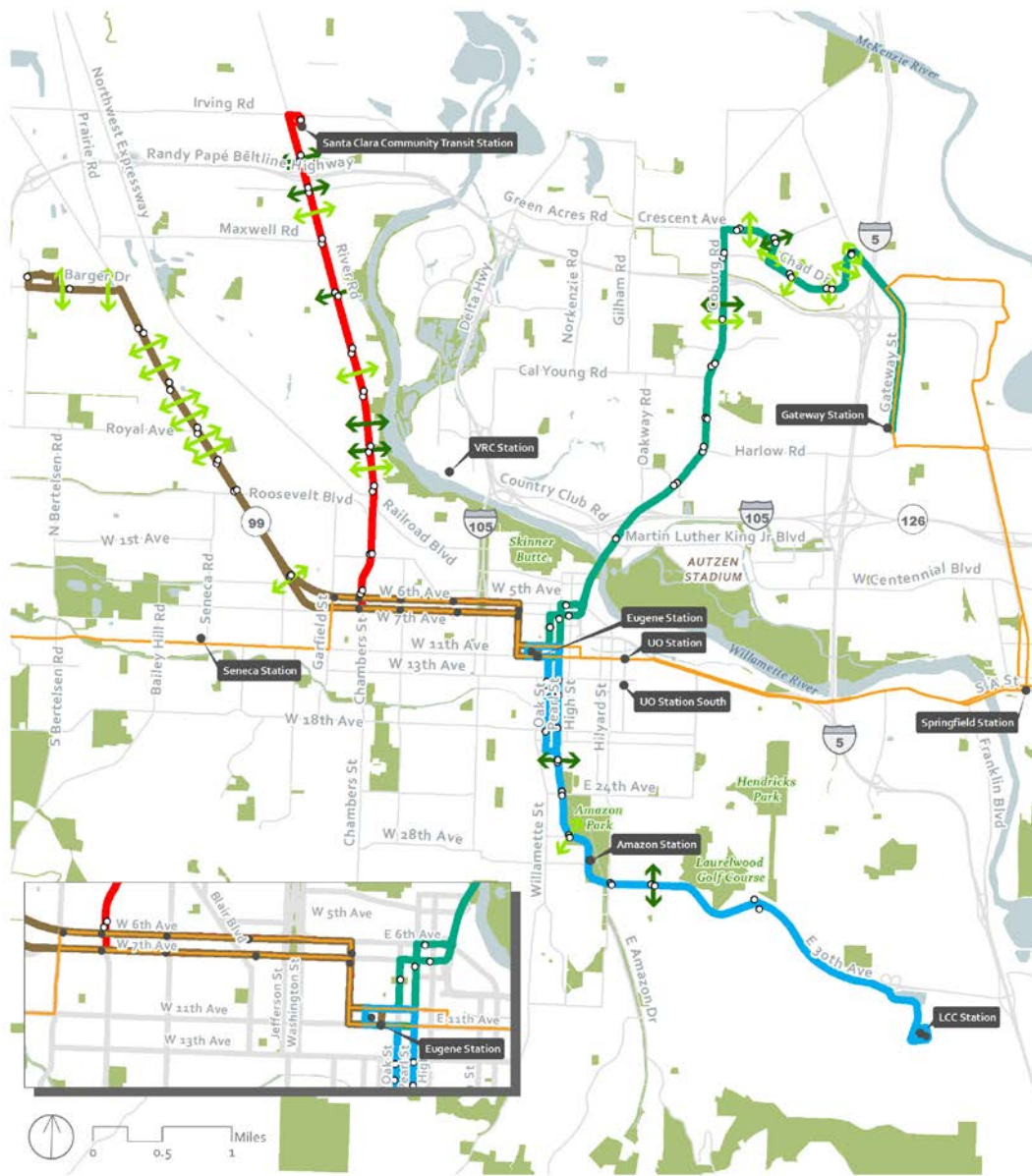
Enhanced Corridor Alternatives Overview

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Figure S.1-2. EmX Alternatives Overview



Locator Map



Legend

- 30th Avenue to Lane
 - Community College Corridor
 - Coburg Road Corridor
 - Highway 99 Corridor
 - River Road Corridor
 - Road
 - Park
 - Water
- Stop/Station Locations**
- Existing Without Improvements
 - Proposed or Existing with Improvements
 - ↔ New Pedestrian Crossing
 - ↔ Enhanced Existing Pedestrian Crossing
 - 2035 No-Build EmX

EmX Alternatives Overview



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- **Enhanced Corridor Alternatives** are intended to address the project’s Purpose, Need, Goals, and Objectives without major transit capital investments, instead focusing on lower-cost capital improvements, operational improvements, and transit service refinements, including 15-minute service frequency. Features can include transit queue jumps (lanes for buses that allow the bus to “jump” ahead of other traffic at intersections using a separate signal phase), stop consolidation, and enhanced shelters. These features can improve reliability, reduce transit travel time, and increase passenger comfort, making transit service along the corridor more attractive.
- **EmX Alternatives** are characterized by sections of exclusive guideway, branded, multi-door, 60-foot-long bus rapid transit (BRT) vehicles, and enhanced stations with level boarding platforms instead of bus stops; off-board fare collection; transit signal priority; wider stop spacing; and 10-minute service frequencies. In general, EmX is a transit mode positioned between fixed-route bus service operating in mixed traffic and urban rail service operating in a separate right of way. EmX service is intended to improve transit speed, reliability, and ridership.

Figure S.1-1 shows the proposed corridors for the Enhanced Corridor Alternatives and Figure S.1-2 shows the proposed corridors for the EmX Alternatives.

This report, prepared to support the MovingAhead Project Alternatives Analysis (AA), addresses potential adverse and beneficial effects that the project alternatives would have on parklands, recreation areas, and Section 6(f) resources. It describes how the proposed project alternatives would change the parklands, recreation areas, and Section 6(f) conditions of the five study corridors. It bases the assessments on how the alternatives would have potential adverse impacts to parklands, recreation areas, and Section 6(f) resources in the area of potential impact (API); how adverse impacts to parklands, recreation areas, and Section 6(f) resources and introduced project components would impact the existing parklands, recreation areas, and Section 6(f) character of areas along the corridors; identifies potential mitigation measures to reduce impacts to parklands, recreation areas, and Section 6(f) resources; and describes beneficial effects to the parklands, recreation areas, and Section 6(f) conditions found along the corridors.

This report was prepared in compliance with the National Environmental Policy Act (NEPA) and applicable state environmental policy legislation, as well as local and state planning and land use policies and design standards.

S.1. Affected Environment

The MovingAhead Project’s five corridors are primarily located within the City of Eugene, with a portion of the River Road and 30th Avenue to LCC Corridors located within unincorporated Lane County, and a portion of the Coburg Road Corridor located in the City of Springfield.

Within the Highway 99 Corridor API, there are two community parks, seven neighborhood parks, two urban plazas, a special use facility, and the Amazon Active Transportation Corridor (Figure 4.1-1). Of the parks and recreation resources within 0.25 mile of the Highway 99 Corridor, only 3 are within 200 feet of the Highway 99 Corridor: Washington Jefferson Park, McNail-Riley House, and Lincoln School Park.

Within the River Road Corridor API, there are two community/metropolitan parks, three neighborhood parks, two urban plazas), and multiple public open space properties that are part of the Willamette River Natural Area (Figure 5.1-1). Of the parks and recreation resources within 0.25 mile of the River Road Corridor, only 5 are within 200 feet of the corridor: Washington Jefferson Park, Scobert Gardens, West Bank Park, Razor Park, and the River Road Park Annex.

Within the 30th Avenue to LCC Corridor API, there is one community park, one neighborhood park, two urban plazas, the Proposed Civic Stadium Park, and two special facilities (Figure 6.1-1). Of the parks and recreation resources within 0.25 mile of the 30th Avenue to LCC Corridor, only four are within 200 feet of the corridor – the Proposed Civic Stadium Park (owned and managed by Eugene Civic Alliance), a plaza on Willamette Street, Amazon Park, and Laurelwood Golf Course.

Within the Coburg Road Corridor API, there are two metropolitan parks, one community park, two neighborhood parks, two urban plazas (Broadway Plaza and Park Blocks), and one natural area (Figure 7.1-1). Of the parks and recreation resources within 0.25 mile of the Coburg Corridor, only 3 are within 200 feet of the corridor: Park Blocks, Skinner Butte Park, and Alton Baker Park.

Within the Martin Luther King, Jr. Boulevard Corridor API, there are two metropolitan parks, two urban plazas, and one natural area (Figure 8.1-1). Of the parks and recreation resources within 0.25 mile of the Martin Luther King, Jr. Boulevard Corridor, only 3 are within 200 feet of the corridor: Park Blocks, Alton Baker Park, and Skinner Butte Park.

S.2. Environmental Consequences

Table S.2-1 summarizes the Parklands, Recreation Areas, and Section 6(f) environmental consequences by corridor and alternative. The following sections provide additional details.

S.2.1. No-Build Alternative – All Corridors

Under the No-Build Alternative in each corridor, the existing transportation system would continue to operate, and other committed transportation and development projects would be implemented as separate actions from the MovingAhead Project. The No-Build Alternatives would not impact parklands, recreation areas, or Section 6(f) resources related to construction, operation, or maintenance of the MovingAhead Project.

S.2.2. Highway 99 Corridor

S.2.2.1. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, transit accessibility would improve with the nine new and two enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit service related to parks and recreation resources would be as follows:

- Transit service to the Washington Jefferson Park would not change.
- Transit service to the McNail-Riley House and Lincoln School Park would be more frequent than the fixed-route service under the No-Build Alternative.
- The proposed Trainsong Bridge would provide new access to Enhanced Corridor transit service on Highway 99 from Trainsong Park, which does not exist under the No-Build Alternative.

No adverse impacts to the McNail-Riley House or Lincoln School Park are anticipated because there would be no roadway construction near any of the facilities. A traffic signal would be reconfigured at the intersection of Jefferson Street/W. 13th Avenue near the McNail-Riley House. However, any construction would be limited to within the road right-of-way.

Table S.2-1. Summary of Parklands, Recreation Areas, and Section 6(f) Environmental Consequences by Corridor and Alternative

Impacts/Effects	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Highway 99 Corridor			
Parks within 200 feet	<ul style="list-style-type: none"> Washington Jefferson Park, McNail-Riley House, Lincoln School Park, and Trainsong Park 	<ul style="list-style-type: none"> McNail-Riley House, Lincoln School Park, and Trainsong Park 	<ul style="list-style-type: none"> Washington Jefferson Park and Trainsong Park
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 41 (15/30/15) New Route 44 (30/30/30) 48 bus stops 	<ul style="list-style-type: none"> Highway 99 (15/15/15) New Route 44 (30/30/30) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> Highway 99 (10/10/10) New Route 44 (30/30/30) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Nine new crossings and two enhanced crossings New bus stops and pedestrian crossings would enhance access across Highway 99 and a new bicycle/pedestrian bridge across the rail facilities would enhance access to Trainsong Park 	<ul style="list-style-type: none"> Eight new crossings and two enhanced crossings New EmX stations and pedestrian crossings would enhance access across Highway 99 and a new pedestrian bridge across the rail facilities would enhance access to Trainsong Park
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Construction of the bicycle/pedestrian bridge would impact approximately, 0.15 acre of property along the outer edges of the western boundary of Trainsong Park. No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> Construction of the pedestrian bridge would impact approximately, 0.15 acre of property along the outer edges of the western boundary of Trainsong Park No anticipated impacts that could lead to a Section 6(f) conversion

Table S.2-1. Summary of Parklands, Recreation Areas, and Section 6(f) Environmental Consequences by Corridor and Alternative

Impacts/Effects	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
River Road Corridor			
Parks within 200 feet	<ul style="list-style-type: none"> Washington Jefferson Park, Scobert Gardens, West Bank Park, Razor Park, and the River Road Park Annex 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Routes 51/52 (30/30/30) Route 40 (30/30/30) 	<ul style="list-style-type: none"> River Road (30/30/30) Route 40 (30/30/30) 	<ul style="list-style-type: none"> River Road (10/10/10) Route 40 (15/30/15) New Route 50 (30/30/30)
	<ul style="list-style-type: none"> 64 bus stops 	<ul style="list-style-type: none"> Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Three new crossings and five enhanced crossings 	<ul style="list-style-type: none"> One new crossing and five enhanced crossings Protected bike lane on both sides of River Road
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Approximately 0.03 acre of West Bank Park property is located within the construction footprint The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to West Bank Park 	<ul style="list-style-type: none"> Approximately 0.06 acre of West Bank Park property is located within the construction footprint Approximately 0.09 acre of Razor Park property is located within the construction footprint The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to West Bank Park
30th Avenue to Lane Community College Corridor			
Parks within 200 feet	<ul style="list-style-type: none"> Proposed Civic Stadium Park, Amazon Park, and Laurelwood Golf Course 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 81 (30/30/30) Route 82 (10/15/20) 	<ul style="list-style-type: none"> 30th Avenue to Lane Community College (15/15/15) 	<ul style="list-style-type: none"> 30th Avenue to Lane Community College (10/10/10)
	<ul style="list-style-type: none"> 51 bus stops 	<ul style="list-style-type: none"> Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> One new crossings and two enhanced crossings 	<ul style="list-style-type: none"> Eight new crossings and two enhanced crossings

Table S.2-1. Summary of Parklands, Recreation Areas, and Section 6(f) Environmental Consequences by Corridor and Alternative

Impacts/Effects	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> A minor sliver of 0.26-acre property impact on the Proposed Civic Stadium Park may be avoidable in future design phase The improvements at E. 27th Avenue and Amazon Parkway (new signalized pedestrian crossing, sidewalks, and bus shelter) would impact approximately 0.29 acre of Amazon Park property No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> A minor sliver of 0.3-acre property impact on the Proposed Civic Stadium Park may be avoidable in future design phase The improvements at E. 27th Avenue and Amazon Parkway (new signalized pedestrian crossing, sidewalks, and EmX station) would impact approximately 1.0 acre of Amazon Park property No anticipated impacts that could lead to a Section 6(f) conversion
Coburg Road Corridor			
Parks within 200 feet	<ul style="list-style-type: none"> Park Blocks, Skinner Butte Park, and Alton Baker Park 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 66 (15/15/15) Route 67 (15/15/15) 43 bus stops 	<ul style="list-style-type: none"> Coburg Road (15/15/15) New Route 60 (15/15/15) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> Highway 99 (10/10/10) New Route 60 (15/15/15) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Seven new crossings and two enhanced crossings 	<ul style="list-style-type: none"> Seven new crossings and two enhanced crossings
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> None No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> Minor property acquisitions would occur along Oak Street to accommodate a new EmX station; the improvements would impact approximately 0.5 acre of the Park Blocks property No anticipated impacts that could lead to a Section 6(f) conversion

Table S.2-1. Summary of Parklands, Recreation Areas, and Section 6(f) Environmental Consequences by Corridor and Alternative

Impacts/Effects	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Martin Luther King, Jr. Boulevard Corridor			
Parks within 200 feet	<ul style="list-style-type: none"> Park Blocks, Skinner Butte Park, and Alton Baker Park 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 13 (30/30/30) 20 bus stops 	<ul style="list-style-type: none"> Martin Luther King, Jr. Boulevard (15/15/15) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Seven new crossings and two enhanced crossings 	
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Construction of the BAT lane and the new signal at Martin Luther King, Jr. Boulevard and Leo Harris Parkway could affect 0.13 acre of the Alton Baker Park property The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to Alton Baker Park 	Not applicable

OPRD = Oregon Parks and Recreation Department

Construction of the proposed bicycle/pedestrian bridge over the rail facilities would require conversion of approximately 0.15 acre of parkland along the outer edge of the western boundary of the 5-acre Trainsong Park. This grassed area would no longer be available for recreational purposes. However, the bridge would provide new access between the park and the proposed high capacity transit service in the Highway 99 Corridor.

S.2.2.2. EmX Alternative

Under the EmX Alternative, transit accessibility would improve with the construction of 8 new and 1 enhanced pedestrian and bicycle crossings, new sidewalks, and 14 new EmX stations. Transit service related to parks and recreation resources would be as follows:

- Transit service to the Washington Jefferson Park would not change.

New EmX stations and pedestrian crossings would be constructed across Highway 99 near the proposed bridge to Trainsong Park. These would provide new, safe access to Trainsong Park, which does not exist under the No-Build Alternative. EmX service would include business access and transit (BAT) lanes and transit queue jumps to improve transit reliability. No adverse impacts to the Washington Jefferson Park are anticipated because there would be no roadway improvements near any of the facilities.

Under the EmX Alternative, effects at Trainsong Park would be the same as those described for the Enhanced Corridor Alternative. Construction of the bicycle/pedestrian bridge would impact approximately 0.15 acre of park property along the outer edge of the western boundary of the 5-acre Trainsong Park. This grassed area would no longer be available for recreational purposes. The new bridge would provide new direct access between the park and the proposed high capacity transit service in the Highway 99 Corridor.

S.2.3. River Road Corridor

S.2.3.1. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, transit accessibility would improve with the three new and five enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit service related to parks and recreation resources would be as follows:

- Enhanced Corridor service would replace Routes 51 and 52 with similar service but longer hours of service, and would serve the Washington Jefferson Park from the existing bus stop locations near the park.
- Enhanced Corridor service along Blair Avenue would replace Routes 51 and 52 with more frequent service, and would serve the Scobert Gardens from the existing bus stop locations near the park.
- Enhanced Corridor service to the West Bank Park, Razor Park, and River Road Park Annex along River Road would provide longer hours of frequent service than under the No-Build Alternative. New bus stops would be constructed near all three facilities, and pedestrian access to West Bank Park and Razor Park would improve with the enhanced bicycle/pedestrian crossings at Hansen Lane and Knoop Lane. These improvements would enhance bicycle and pedestrian connectivity from the bus stops to the parks.

No adverse impacts to the Washington Jefferson Park, Scobert Gardens, River Road Park Annex, or Razor Park are anticipated because there would be no roadway improvements near any of the facilities.

Construction of an enhanced shelter and sidewalk could affect approximately 0.03 acre of the 50.4-acre West Bank Park property that is located within the construction footprint. The impact on this Section 6(f) resource could be avoided during design refinement.

S.2.3.2. EmX Alternative

Under the EmX Alternative, transit accessibility would improve with the construction of one new and five enhanced pedestrian and bicycle crossings, with improving some existing stops as EmX stations, and with constructing new stations. Transit service related to parks and recreation resources would be as follows:

- The fixed-route service to Washington Jefferson Park and Scobert Gardens would be replaced with a new route providing comparable frequencies.
- EmX service to the West Bank Park, Razor Park, and River Road Park Annex along River Road would be more frequent than under the No-Build and Enhanced Corridor Alternatives. New stations would be constructed near all three facilities, and pedestrian access to West Bank Park and Razor Park would improve with the enhanced bicycle and pedestrian crossings.

No adverse impacts to the Washington Jefferson Park or Scobert Gardens are anticipated because there would be no roadway improvements near any of the facilities.

The construction footprint for an EmX Station and bike lane could encroach upon a 0.06-acre portion of the 50.4-acre West Bank Park property (which is a Section 6(f) resource). This impact could be avoided during design refinement. Razor Park property could also be affected by the proposed bike lane; approximately 0.09 acre of construction footprint is located on this 10-acre park property.

S.2.4. 30th Avenue to Lane Community College Corridor

S.2.4.1. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, transit accessibility would improve with the new bike facilities on Oak and Pearl Streets and one new and two enhanced bicycle/pedestrian crossings near Amazon Park, along with improvements to existing bus stops and the construction of new stops. Transit service related to parks and recreation resources would be as follows:

- Enhanced Corridor service along Amazon Parkway and at the Amazon Station would have periods of reduced frequency over the fixed-route service under the No-Build Alternative. However, it would result in 160 additional bus vehicle miles traveled and 4 additional bus revenue hours, as compared with the No-Build Alternative (The Enhanced Corridor service adds connectivity from more destinations that enhance connection for users with parks and recreation resources). Pedestrian access to the park would also improve with the new crossing at Amazon Parkway and E. 27th Avenue.
- There would be no changes in transit accessibility to the Laurelwood Golf Course.

A minor sliver of 0.26-acre property impact on the Proposed Civic Stadium Park may be avoidable in future design phase. Proposed improvements at E. 27th Avenue and Amazon Parkway (new signalized pedestrian crossing, sidewalks, and bus shelter) would impact approximately 0.29 acre of the 99-acre Amazon Park property, but would not displace any park amenities.

S.2.4.2. EmX Alternative

Under the EmX Alternative, transit accessibility would improve with the 1 new and 10 enhanced bicycle/pedestrian crossings, the addition of a new cycle track on High Street connecting to the Amazon Park multi-use trail, new sidewalks, and replacing 30 existing bus stops with 19 new EmX stations, Eugene Station, and construction of 28 new EmX stations. Transit service related to parks and recreation resources would be as follows:

- Park Blocks users who travel by transit would benefit from the more frequent transit service offered under the EmX Alternative. EmX stations along Pearl and Oak Streets would continue to serve the resource.
- Skinner Butte Park users would benefit from more frequent transit service. However, the closest bus stops (on E. 2nd and 3rd Avenues) would no longer be used. Park users would have to walk to the EmX stations along Pearl and Oak Streets.
- Alton Baker Park users would benefit from more frequent transit service. A new EmX station would be constructed at the northbound and southbound stops at Coburg Road and Country Club Road.

No adverse impacts to Skinner Butte Park or Alton Baker Park are anticipated because the existing road width near these resources would be maintained.

The improvements along Oak Street to accommodate a new EmX station would impact approximately 0.05 acre of the 1.1-acre Park Blocks property.

S.2.5. Coburg Road Corridor

S.2.5.1. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, accessibility would improve with the new and enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit reliability would also improve with the construction of new traffic signals, intersection improvements at several locations on Coburg Road, the addition of queue jumps, and the addition of BAT lanes south of the I-105 interchange. Beneficial effects would include increased access and more frequent service to the following resources:

- Park Blocks users who travel by transit would benefit from the more frequent bus service offered under the Enhanced Corridor Alternative. Bus stops along Pearl and Oak Streets would continue to serve the resource.
- Skinner Butte Park users would benefit from more frequent bus service. However, the closest bus stops (on E. 2nd and E. 3rd Avenues) would no longer be used. Park users would have to walk to the bus stops along Pearl and Oak Streets near E. 7th and E. 8th Avenues.
- Alton Baker Park users would benefit from more frequent bus service. An enhanced shelter would be constructed at the northbound and southbound stops at Coburg Road and Country Club Road.

No adverse impacts to the Park Blocks, Skinner Butte Park, or Alton Baker Park are anticipated because the existing road width near these resources would be maintained.

S.2.5.2. EmX Alternative

Under the EmX Alternative, accessibility would improve with new and enhanced bicycle and pedestrian crossings, improvements to one existing bus stop, and construction of new EmX stations. Transit reliability would also improve with the construction of exclusive transit lanes at several locations on

Coburg Road and intersection reconstruction at multiple locations in the corridor. Beneficial effects would include increased access and more frequent service to the following resources:

- Park Blocks users who travel by transit would benefit from the more frequent bus service offered under the EmX Alternative. Bus stops along Pearl and Oak Streets would continue to serve the resource.
- Skinner Butte Park users would benefit from more frequent transit service. However, the closest bus stops (on E. 2nd and E. 3rd Avenues) would no longer be used. Park users would have to walk to the EmX stations along Pearl and Oak Streets near E. 7th and E. 8th Avenues.
- Alton Baker Park users would benefit from more frequent transit service. A new EmX station would be constructed at the northbound and southbound stops at Coburg Road and Country Club Road.

No adverse impacts to Skinner Butte Park or Alton Baker Park are anticipated as the existing road width near these resources would be maintained. Minor property acquisitions would occur along Oak Street to accommodate a new EmX station. The improvements would impact approximately 0.05 acre of Park Blocks property.

S.2.6. Martin Luther King, Jr. Boulevard Corridor

S.2.6.1. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, transit accessibility related to parks and recreation resources would improve with the three new bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Bus operations under the Enhanced Corridor Alternative would provide higher frequency than under the No-Build Alternative. Route 13 would be eliminated and replaced with Enhanced Corridor service. No impacts on accessibility to the Park Blocks, Skinner Butte Park, or Alton Baker Park are anticipated because transit service would be enhanced and the existing road width near these resources would be maintained. However, an adverse impact would occur at Alton Baker Park to accommodate capital improvements. Alton Baker Park is a Section 6(f) resource. Construction of the BAT lane and the new signal at Martin Luther King, Jr. Boulevard and Leo Harris Parkway could affect 0.13 acre of the 373-acre Alton Baker Park property.

S.3. Mitigation Options

LTD would mitigate short-term minor impacts from construction through coordination of construction timing with the City of Eugene Parks and Open Space Division to avoid or reduce disruptive activities for users of parks and recreation resources. LTD would provide adequate barriers and flagging for construction near any park or recreation resource.

During final design, additional refinements will consider further avoidance and minimizations through design modifications. If potential impacts to park property could not be avoided through design refinement, then the permanent loss of park property could be mitigated by compensation or enhancing the remaining park property. Enhancement measures would be determined through coordination with the Eugene Parks and Open Space Division. In addition, any property proposed to be acquired from a park resource that received federal funds granted through the Land and Water Conservation Fund to acquire or develop recreational facilities would be subject to the provisions of Section 6(f), including preparation of a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3. This concerns the West Bank Park potentially affected by the River Road Corridor under both the Enhanced Corridor and the EmX Alternatives, as well as the Alton Baker Park under the Martin Luther King, Jr. Boulevard Corridor for the Enhanced Corridor Alternative. The conversion proposal would need to demonstrate

that no practical alternative to the impact exists and the proposed strategy for replacing existing protected Section 6(f) land with new land was in full accordance with both the prerequisites for conversion approval and the criteria for determining “equivalent usefulness and location” of a replacement property, as described in 36 CFR 59.3. Approvals would be required from the Eugene Parks and Open Space Division, OPRD, and NPS.

S.4. Conclusions

All build alternatives would provide beneficial effects including improved transit reliability and, in most cases, an increased service frequency to park and recreational areas within their respective corridor API. The service under EmX Alternatives in all corridors would be more frequent than that under the Enhanced Corridor Alternatives.

Both the Enhanced Corridor and EmX Alternatives provide new and enhanced bicycle and pedestrian crossings that would also benefit parks and recreation resources. The Highway 99 Corridor build alternatives provide a new bicycle/pedestrian bridge across the rail line, from Highway 99 to Trainsong Park, which is a neighborhood park.

The River Road Corridor, the 30th Avenue to LCC Corridor, and the Martin Luther King, Jr. Boulevard Corridor build alternatives would all enhance access to a number of community parks that generally attract users from the entire Eugene-Springfield metropolitan area. Because of its proximity to West Bank and Razor Parks along the Willamette River, the River Road Corridor build alternatives have the potential to enhance access to a larger area of parkland than the other alternatives. The 30th Avenue to LCC Corridor build alternatives would enhance access to the 100-acre Amazon Park. Pedestrian and bicycle access to the park would improve with the new crossing at Amazon Parkway and E. 27th Avenue. The new sidewalk facilities and crosswalk would connect to the multi-use path in Amazon Park. The Martin Luther King, Jr. Boulevard Enhanced Corridor Alternative would provide new crossings near Alton Baker Park.

Within all corridors, both the Enhanced Corridor and EmX Alternatives would result in minor property acquisitions from park facilities for capital improvements, such as station development and/or pedestrian and bicycle cross over. The River Road Corridor build alternatives and the Coburg Road Enhanced Corridor Alternative would result in the least amount of park acquisitions – less than 0.1 acre of parkland. At up to approximately 1.0 acre, the 30th Avenue to LCC Corridor EmX Alternative would result in the greatest amount of property acquisitions due to the improvements at E. 27th Avenue and Amazon Parkway. Property acquisitions under any of the alternatives would be minor in the context of overall park sizes, amenities, and recreational amenities. Such acquisitions would not affect the continued viability, integrity, usage, or value of the park, nor would they degrade the recreational experience.

If further design development for River Road Corridor (under both the Enhanced Corridor and EmX Alternatives) cannot avoid West Bank Park, then a park conversion would need to be coordinated with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to West Bank Park. Similarly, if the Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Alternative cannot feasibly avoid Alton Baker Park, then conversion would require coordination with the Eugene Parks and Open Space Division and the NPS to develop a Section 6(f) conversion proposal.

1. Introduction

1.1. MovingAhead Technical Reports

A total of 20 technical reports have been prepared for the MovingAhead Project. The technical reports have been prepared to support the selection of preferred alternatives for the MovingAhead Project and subsequent environmental documentation. The technical reports assume that any corridors advanced for environmental review will require a documented categorical exclusion under the National Environmental Policy Act (NEPA). Any corridors requiring a higher level of environmental review would be supported by the technical evaluation but might not be fully covered by the technical evaluation.

Technical reports have been prepared for the following disciplines:

- Acquisitions and Displacements
- Air Quality
- Capital Cost Estimating
- Community Involvement, Agency and Tribal Coordination
- Community, Neighborhood, and Environmental Justice
- Cultural Resources
- Ecosystems (Biological, Fish Ecology, Threatened and Endangered Species, Wetlands and Waters of the U.S. and State)
- Energy and Sustainability
- Geology and Seismic
- Hazardous Materials
- Land Use and Prime Farmlands
- Noise and Vibration
- Operating and Maintenance Costs
- Parklands, Recreation Areas, and Section 6(f)
- Section 4(f)
- Street and Landscape Trees
- Transportation
- Utilities
- Visual and Aesthetic Resources
- Water Quality, Floodplain, and Hydrology

In general, each technical report includes the following information for identifying effects:

- Relevant laws and regulations
- Contacts and coordination
- Summary of data sources and analysis methods described in the *MovingAhead Environmental Disciplines Methods and Data Report* (CH2M HILL, Inc. [CH2M] et al., 2015)
- Affected environment
- Adverse and beneficial effects including short-term, direct, indirect and cumulative
- Mitigation measures
- Permits and approvals
- References

1.2. Parklands, Recreation Areas, and Section 6(f) Technical Report and Purpose

This technical report presents the results of the parklands, recreation areas, and Section 6(f) assessment for the MovingAhead corridor alternatives. It provides detailed discussions on existing parklands and recreational areas that could be affected by the operation and construction of the Lane Transit District (LTD) and City of Eugene’s (City’s) MovingAhead Project.

1.3. Discipline Experts

Table 1.3-1 identifies discipline experts who contributed to the preparation of this report. This table includes their areas of expertise, affiliated organizations, titles, and years of experience.

Table 1.3-1. Discipline Experts

Discipline	Technical Expert	Affiliated Organization	Title/Years of Experience
Parklands, Recreation Areas, and Section 6(f)	Karin Fusetti	CH2M	Senior Planner/25 years
Editors	Scott Richman	CH2M	Senior Project Manager/24 years
	Zach Galloway	City of Eugene	Senior Planner/10 years
	Lynda Wannamaker	Wannamaker Consulting	President/33 years
	Ryan Farncomb	CH2M	Senior Planner/7 years
	Jodi Ketelsen	CH2M	Senior Project Manager/20 years
	Michael Hoffmann	CH2M	Senior Planner/14 years
	Sasha Luftig	LTD	Senior Project Manager/9 years

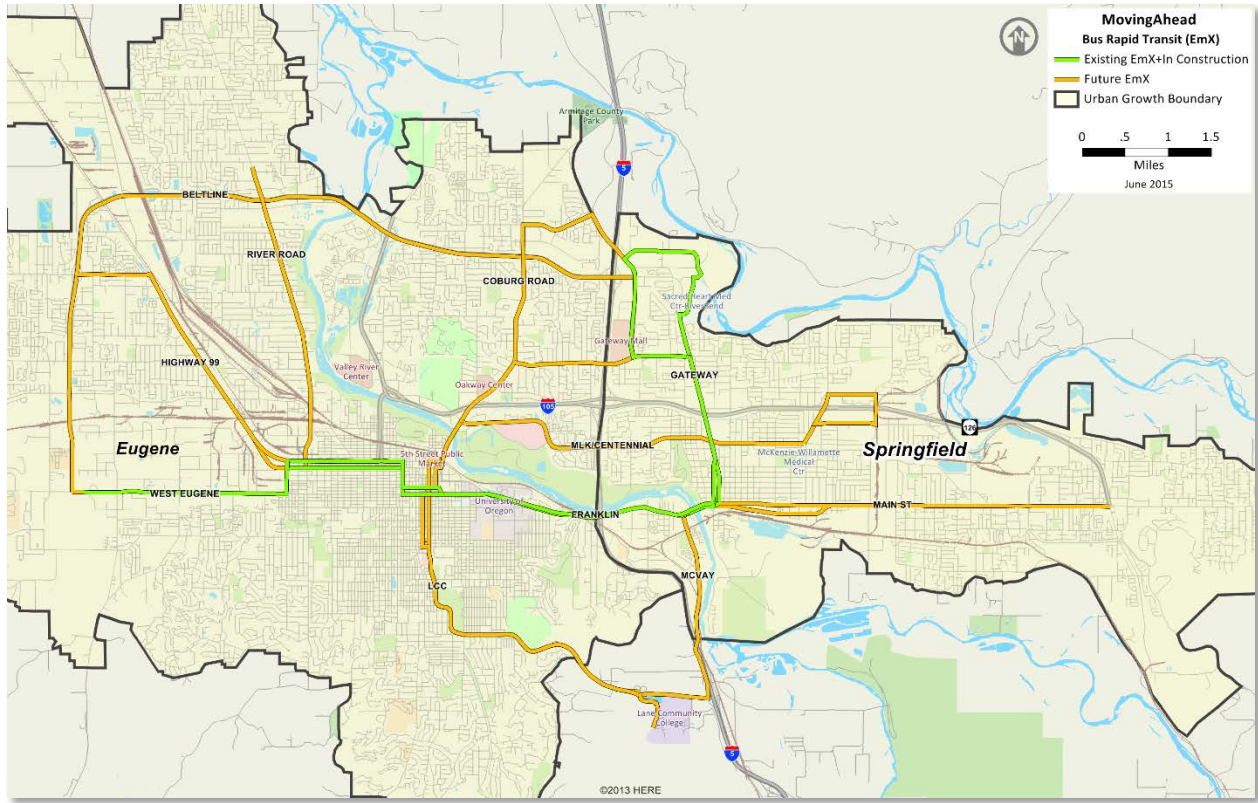
Source: MovingAhead Project Team. (2017).

1.4. Study Background

The purpose of the MovingAhead Project is to determine which high-capacity transit corridors identified in the adopted *Central Lane Metropolitan Planning Organization Regional Transportation Plan* (Lane Council of Governments [LCOG], 2011, December; RTP) and the *Lane Transit District Long-Range Transit Plan* (LTD, 2014) as part of the Frequent Transit Network (FTN) are ready to advance to capital improvements programming in the near term. The study is being conducted jointly with the City of Eugene and LTD to facilitate a streamlined and cost-efficient process through concurrent planning, environmental review, and design and construction of multiple corridors. The study area includes Eugene and portions of unincorporated Lane County.

The *Lane Transit District Long-Range Transit Plan* (LTD, 2014) identifies the full Martin Luther King, Jr. Boulevard/Centennial Boulevard Corridor as a future part of the FTN. Initially, MovingAhead considered options on Centennial Boulevard to serve Springfield as part of this corridor. Because Springfield does not have the resources available to consider transit enhancements on Centennial Boulevard at this time, MovingAhead will only develop Emerald Express (EmX) and Enhanced Corridor Alternatives within Eugene. Figure 1.4-1 presents LTD’s existing and future bus rapid transit (BRT) system.

Figure 1.4-1. Lane Transit District's Bus Rapid Transit (BRT) System



Source: LTD. (2015).

1.5. Screening and Evaluation of Multimodal Options

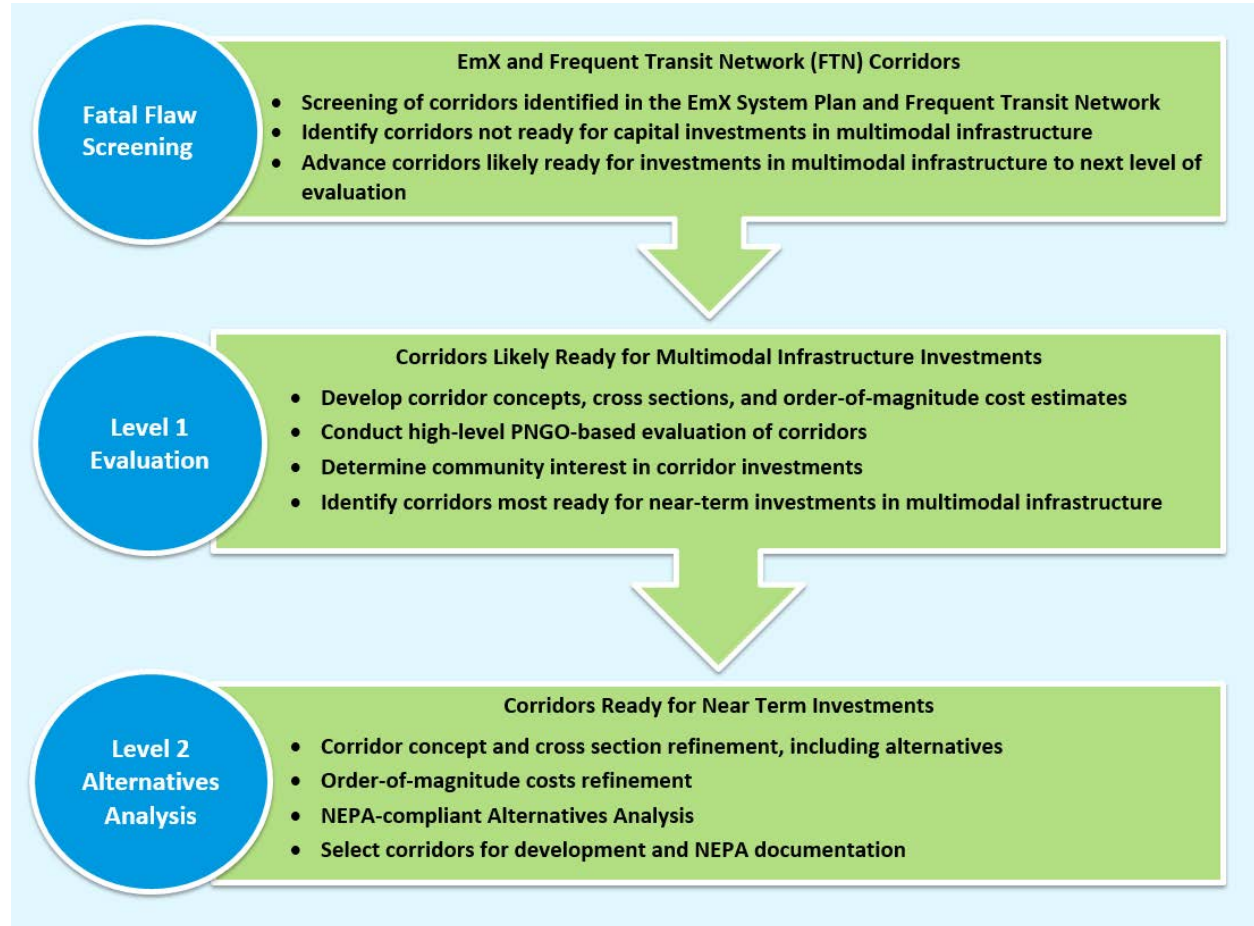
The MovingAhead Project process includes two phases. This first phase has three discrete but closely related tasks: identifying transit improvements; identifying improvements for bicyclists, pedestrians, and users of mobility devices; and preparing a NEPA-compliant evaluation of alternatives focused on the region's transportation system. Corridor options identified as part of the first phase were developed using multimodal cross sections that include variations on automobile, truck, and bus travel lanes; bicycle lanes; landscaping strips; and sidewalks. At the end of the first phase, the City of Eugene and LTD will select the corridors that are most ready for near-term capital improvements and prioritize improvements for funding. The selected corridors will be advanced to the second phase, which will focus on preparing NEPA environmental reviews (Documented Categorical Exclusions), and initiating the Federal Transit Administration (FTA) project development process.

1.5.1. Fatal Flaw Screening

The project team conducted a fatal flaw screening in February 2015 to identify which of the 10 corridors should not move forward to the Level 1 Screening Evaluation (Figure 1.5-1). This high-level evaluation used criteria based on MovingAhead's Purpose, Need, Goals, and Objectives (LTD, 2015) and existing data to determine which corridors were not ready for capital investment in BRT or multimodal infrastructure in the next 10 years. The screening was conducted with local, regional, and state agency staff. Of the 10 corridors identified, the following three corridors were not advanced from the fatal flaw

screening to the Level 1 Screening Evaluation: 18th Avenue, Bob Straub Parkway, and Randy Papé Beltline Highway. Table 1.5-1 shows the results of the fatal flaw screening.

Figure 1.5-1. MovingAhead Phase 1 Steps



Source: Wannamaker Consulting. (2015).

Although originally advanced from the fatal flaw screening, the Main Street-McVay Highway Corridor was also not advanced to the Level 1 Screening Evaluation because the Springfield City Council (on May 18, 2015) and LTD Board (on May 20, 2015) determined that the corridor is ready to advance to a study to select a locally preferred transit solution. At the time (May 2015), the Main Street-McVay Highway Corridor was on a schedule ahead of the MovingAhead Project schedule. If the Main Street-McVay Highway Corridor study schedule is delayed and its progress coincides with this project, the corridor could be reincorporated back into MovingAhead.

Table 1.5-1. Results of the Fatal Flaw Screening

Corridor	Advanced to Level 1	Consider Later
Highway 99	✓	
River Road	✓	
Randy Papé Beltline		✓
18th Avenue		✓
Coburg Road	✓	
Martin Luther King, Jr. Boulevard/Centennial Boulevard	✓	
30th Avenue to LCC	✓	
Main Street-McVay Highway	✓	
Valley River Center	✓	
Bob Straub Parkway		✓

Source: LTD and City of Eugene. (2015).

The six remaining multimodal corridors were advanced to the Level 1 Screening Evaluation to determine how they compared with each other in meeting the Purpose, Need, Goals, and Objectives.

1.5.2. Level 1 Screening Evaluation

The Level 1 Screening Evaluation assessed how each corridor would perform according to the Purpose, Need, Goals, and Objectives of MovingAhead. The Level 1 Screening Evaluation used existing studies and readily available data to evaluate each corridor. Based on community input and technical analysis, the following corridors and alternatives were advanced from the Level 1 Screening Evaluation to the Level 2 Alternatives Analysis (AA) (Table 1.5-2):

- No-Build Alternatives: all corridors
- Enhanced Corridor and EmX Alternatives:
 - Highway 99 Corridor
 - River Road Corridor
 - 30th Avenue to Lane Community College (LCC) Corridor
 - Coburg Road Corridor
- Enhanced Corridor Alternative:
 - Martin Luther King Jr. Boulevard Corridor

Table 1.5-2. Corridors and Transit Alternatives Advanced to the Level 2 Alternatives Analysis

Corridor	EmX	Enhanced Corridor	No-Build
Highway 99	✓	✓	✓
River Road	✓	✓	✓
30th Avenue to LCC	✓	✓	✓
Coburg Road	✓	✓	✓
Martin Luther King, Jr. Boulevard		✓	✓

The Valley River Center Corridor received the least public support during public outreach and was not carried forward to the Level 2 AA.

For a detailed discussion of alternatives and design options considered for each corridor, but not carried forward to the Level 2 AA, refer to the *Alternatives and Design Options Considered but Eliminated Technical Memorandum* (CH2M, 2016a).

1.5.3. Level 2 Alternatives Analysis

To guide the Level 2 AA, LTD prepared new ridership forecasts and related evaluation measures using the LCOG regional model. Base-year and future-year forecasts were prepared for corridor alternatives based upon updated inputs and transit networks specific to each corridor. The planning horizon year used for the Level 2 AA is 2035. The built and natural environments, transit operations, traffic, finance, historical resources, and other areas were also evaluated as part of the Level 2 AA. The findings from the Level 2 AA will aid LTD and the City of Eugene in determining how corridors should be prioritized for capital investments over the next 5 years. Selected corridors will be advanced to Phase 2.

1.6. Purpose and Need

The prioritization of capital investments in multimodal transit corridors is a powerful tool for implementing local and regional comprehensive land use and transportation plans, agency strategic plans, and other community planning documents. Capital investments in multimodal transit corridors can have a substantial impact on patterns of growth and development. By coordinating the timing of, and prioritizing the funding for, strategic multimodal capital investments, the MovingAhead Project (a multimodal transit corridor study) helps ensure that future development is consistent with our region's plans and vision.

The Purpose and Need Statement was refined based on public and agency input.

1.6.1. Purpose

The purpose of the MovingAhead Project is to:

- Develop a Capital Improvements Program that forecasts and matches projected revenues and capital needs over a 10-year period
 - Balance desired multimodal transit corridor improvements with the community's financial resources
 - Ensure the timely and coordinated construction of multimodal transit corridor infrastructure
 - Eliminate unanticipated, poorly planned, or unnecessary capital expenditures
- Identify the most economical means of financing multimodal transit corridor capital improvements
- Establish partnerships between LTD, City of Eugene, and other local agencies that prioritize multimodal transit infrastructure needs and promote interagency cooperation
- Ensure that multimodal transit corridor investments are consistent with local comprehensive land use and transportation plans

1.6.2. Need

The need for the MovingAhead Project is based on the following factors:

- LTD's and the region's commitment to implementing the region's vision for BRT in the next 20 years consistent with the RTP that provides the best level of transit service in a cost-effective and sustainable manner.
- Need for streamlined environmental reviews to leverage systemwide analysis.
- Need to build public support for implementation of the systemwide vision.
- Selection of the next EmX/FTN corridors is based on long-range operational and financial planning for LTD's service.

1.6.3. Goals and Objectives

Goal 1: Improve multimodal transit corridor service

- Objective 1.1: Improve transit travel time and reliability
- Objective 1.2: Provide convenient transit connections that minimize the need to transfer
- Objective 1.3: Increase transit ridership and mode share in the corridor
- Objective 1.4: Improve access for people walking and bicycling, and to transit
- Objective 1.5: Improve the safety of pedestrians and bicyclists accessing transit, traveling in and along the corridor, and crossing the corridor

Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner

- Objective 2.1: Control the increase in transit operating cost to serve the corridor
- Objective 2.2: Increase transit capacity to meet current and projected ridership demand
- Objective 2.3: Implement corridor improvements that provide an acceptable return on investment
- Objective 2.4: Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment
- Objective 2.5: Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars

Goal 3: Support economic development, revitalization, and land use redevelopment opportunities for the corridor

- Objective 3.1: Support development and redevelopment as planned in other adopted documents
- Objective 3.2: Coordinate transit improvements with other planned and programmed pedestrian and bicycle projects
- Objective 3.3: Coordinate transit improvements with other planned and programmed roadway projects
- Objective 3.4: Minimize adverse impacts to existing businesses and industry
- Objective 3.5: Support community vision for high capacity transit in each corridor
- Objective 3.6: Improve transit operations on state facilities in a manner that is mutually beneficial to vehicular and freight traffic flow around transit stops and throughout the corridor
- Objective 3.7: Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles

1.6.4. Evaluation Criteria

Evaluation criteria will be used during the Trade-off Analysis, which is part of the Level 2 AA, to aid in determining how well each of the corridor alternatives would meet the project's Purpose, Need, Goals, and Objectives. The evaluation criteria require a mix of quantitative data and qualitative assessment. The resulting data will be used to measure the effectiveness of each proposed corridor alternative and to assist in comparing and contrasting the alternatives and options. In Table 1.6-1, evaluation criteria are

listed for each of the project’s objectives. Some objectives have only one criterion for measuring effectiveness, while others require several criteria.

Table 1.6-1. Evaluation Criteria

Goals and Objectives	Evaluation Criteria
Goal 1: Improve multimodal transit corridor service	
Objective 1.1: Improve transit travel time and reliability	<ul style="list-style-type: none"> • Round-trip p.m. peak transit travel time between select origins and destinations • On-time performance (no more than 4 minutes late) of transit service
Objective 1.2: Provide convenient transit connections that minimizes the need to transfer	<ul style="list-style-type: none"> • Number of transfers required between heavily used origin-destination pairs
Objective 1.3: Increase transit ridership and mode share in the corridor	<ul style="list-style-type: none"> • Average weekday boardings on corridor routes • Transit mode share along the corridor • Population within 0.5 mile of transit stop • Employment within 0.5 mile of transit stop
Objective 1.4: Improve access for people walking and bicycling, and to transit	<ul style="list-style-type: none"> • Connectivity to existing pedestrian facilities • Connectivity to existing bicycle facilities
Objective 1.5: Improve the safety of pedestrians and bicyclists accessing transit, traveling in and along the corridor, and crossing the corridor	<ul style="list-style-type: none"> • Opportunity to provide a safe and comfortable environment for pedestrians and bicyclists in the corridor
Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner	
Objective 2.1: Control the increase in transit operating cost to serve the corridor	<ul style="list-style-type: none"> • Cost per trip • Impact on LTD operating cost • Cost to local taxpayers
Objective 2.2: Increase transit capacity to meet current and projected ridership demand	<ul style="list-style-type: none"> • Capacity of transit service relative to the current and projected ridership
Objective 2.3: Implement corridor improvements that provide an acceptable return on investment	<ul style="list-style-type: none"> • Benefit/cost assessment of planned improvements
Objective 2.4: Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment	<ul style="list-style-type: none"> • Results of screening-level assessment of environmental impacts of transit solutions
Objective 2.5: Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars	<ul style="list-style-type: none"> • Number and dollar amount of funding opportunities that could be leveraged • Meet the FTA’s Small Starts funding requirements

Table 1.6-1. Evaluation Criteria

Goals and Objectives	Evaluation Criteria
Goal 3: Support economic development, revitalization and land use redevelopment opportunities for the corridor	
Objective 3.1: Support development and redevelopment as planned in other adopted documents	<ul style="list-style-type: none"> • Consistent with the BRT System Plan and FTN concept • Consistent with the <i>Regional Transportation System Plan</i> (Central Lane Metropolitan Planning Organization [MPO], 2007) • Consistent with local comprehensive land use plans
Objective 3.2: Coordinate transit improvements with other planned and programmed pedestrian and bicycle projects	<ul style="list-style-type: none"> • Capability of transit improvement to coordinate with other planned and programmed pedestrian and bicycle projects identified in adopted plans and Capital Improvements Programs
Objective 3.3: Coordinate transit improvements with other planned and programmed roadway projects	<ul style="list-style-type: none"> • Capability of transit improvement to coordinate with other planned and programmed roadway projects identified in adopted plans and Capital Improvements Programs
Objective 3.4: Minimize adverse impacts to existing businesses and industry	<ul style="list-style-type: none"> • Impacts to businesses along the Corridor measured in number and total acres of properties acquired, parking displacements, and access impacts. • Impact on freight and delivery operations for Corridor businesses
Objective 3.5: Support community vision for high capacity transit in corridor	<ul style="list-style-type: none"> • Community vision includes high capacity transit in corridor
Objective 3.6: Improve transit operations on state facilities in a manner that is mutually beneficial to vehicular and freight traffic flow around transit stops and throughout the corridor	<ul style="list-style-type: none"> • Impact on current and future year intersection LOS on state facilities • Impact on current and future year p.m. peak hour auto/truck travel times on state facilities
Objective 3.7: Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles	<ul style="list-style-type: none"> • Qualitative assessment of potential impacts to emergency service vehicle traffic flow and access

Source: LTD and City of Eugene. (2015).

BRT = bus rapid transit

FTA = Federal Transit Administration

LOS = level of service

LTD = Lane Transit District

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2. Alternatives Considered

This section briefly reviews the major features of the alternatives considered in the Level 2 AA. For full details on each alternative and the five corridors described in this technical report – Highway 99, River Road, 30th Avenue to LCC, Coburg Road, and Martin Luther King, Jr. Boulevard – refer to the *MovingAhead Level 2 Definition of Alternatives* (CH2M et al., 2016). Each corridor location is shown on Figures 2.1-1 and 2.1-2 for the Enhanced Corridor Alternatives and the EmX Alternatives, respectively.

Figure 2.1-1. Enhanced Corridor Alternatives Overview

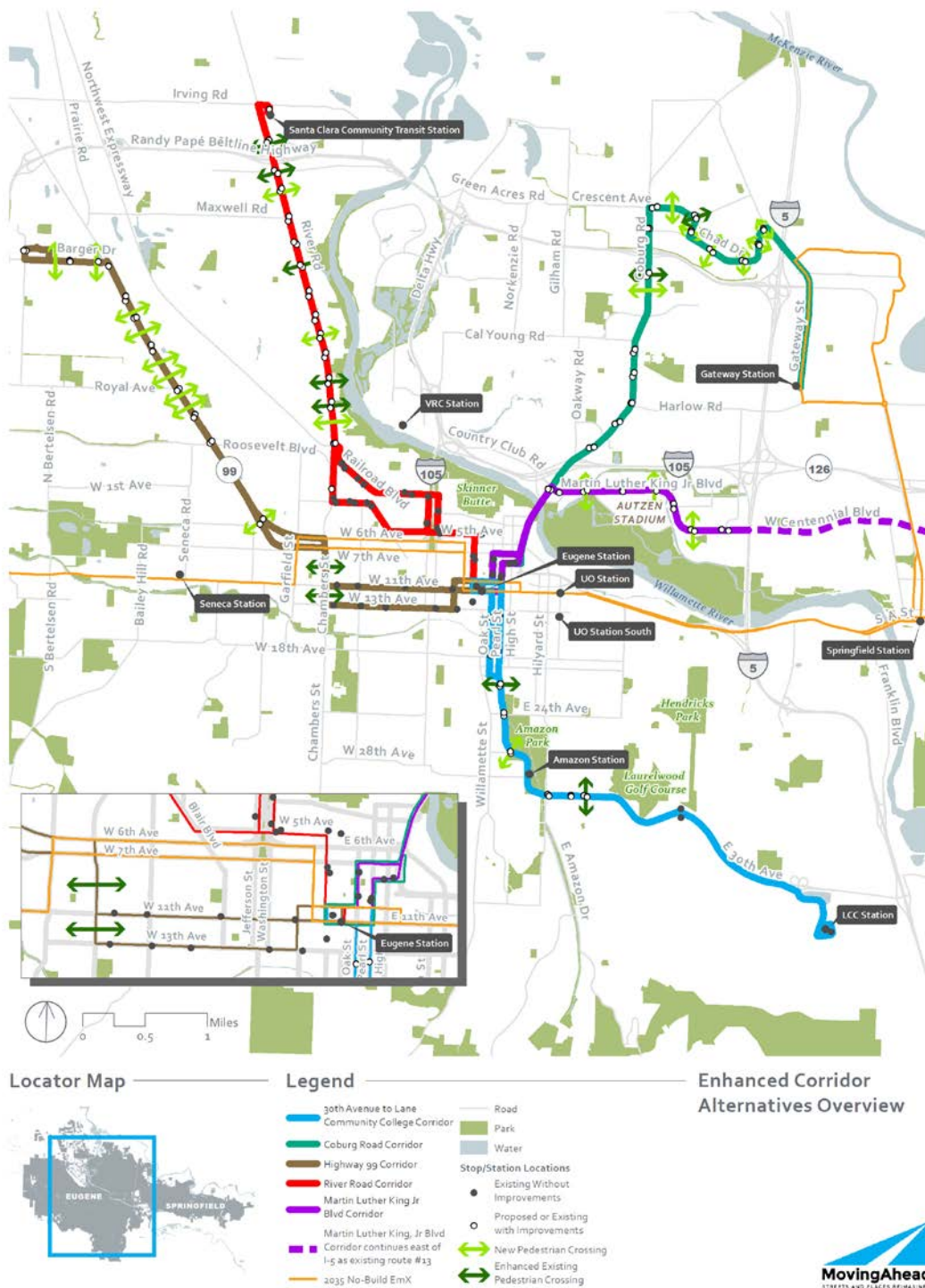
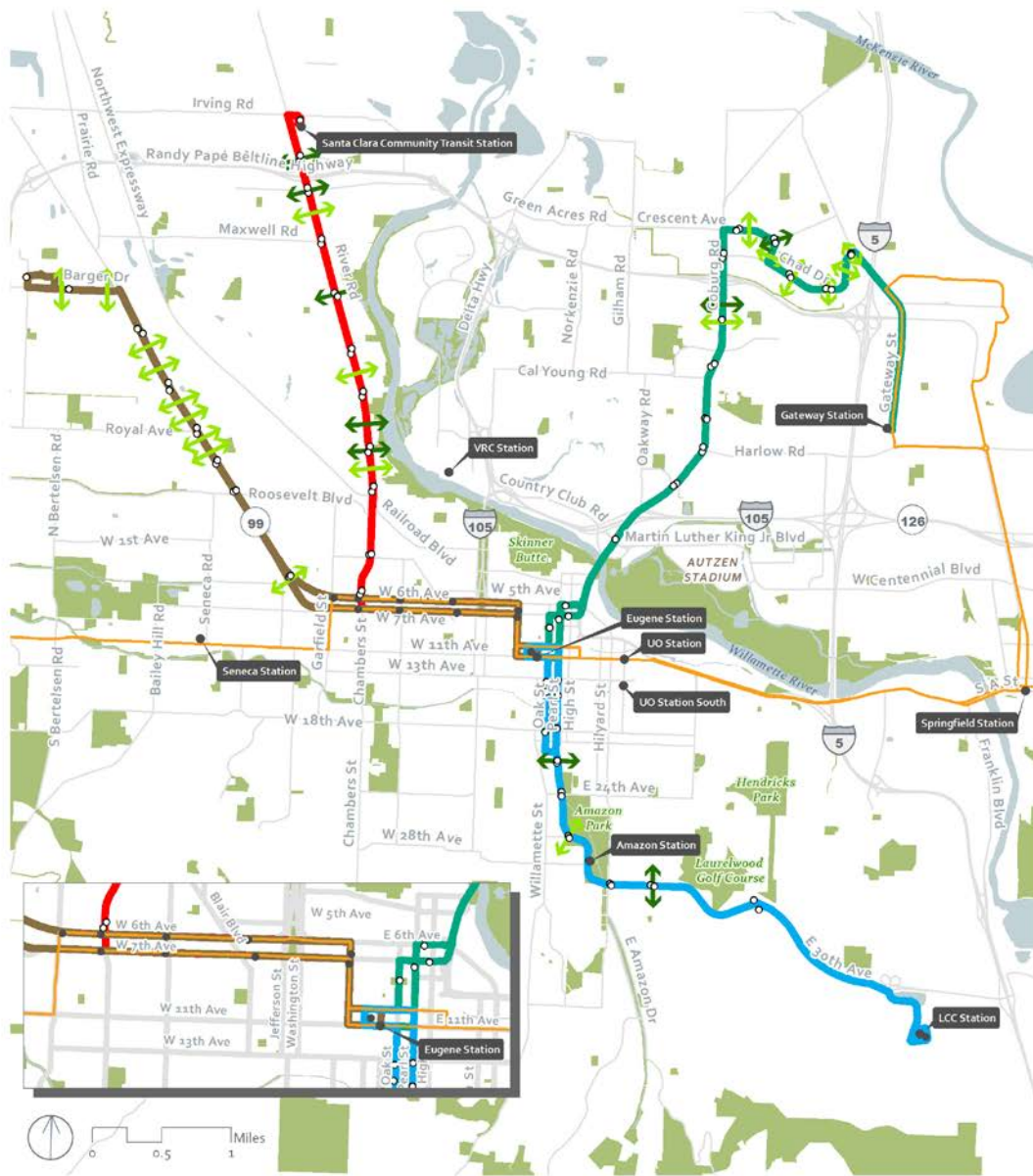


Figure 2.1-2. EmX Alternatives Overview



Locator Map

Legend

EmX Alternatives Overview



- | | |
|---|---|
| <ul style="list-style-type: none"> — 30th Avenue to Lane Community College Corridor — Coburg Road Corridor — Highway 99 Corridor — River Road Corridor — Road ■ Park ■ Water | <p>Stop/Station Locations</p> <ul style="list-style-type: none"> ● Existing Without Improvements ○ Proposed or Existing with Improvements ↔ New Pedestrian Crossing ↔ Enhanced Existing Pedestrian Crossing — 2035 No-Build EmX |
|---|---|



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2.1. No-Build Alternative Transit Network

This section describes the No-Build Alternative transit network, which is based on projected conditions in the year 2035, the project's environmental forecast year. For each corridor, the No-Build Alternative serves as a reference point to gauge the benefits, costs, and effects of the build alternatives.

2.1.1. Capital Improvements

Under the No-Build Alternative, the following capital improvements are anticipated by 2035:

- **West Eugene EmX Extension.** Currently under construction, the West Eugene EmX Extension (WEEE) project and its associated capital improvements will be completed in 2017.
- **Santa Clara Community Transit Center.** The existing River Road Station is located at the southeast corner of the River Road/Randy Papé Beltline Highway interchange between the eastbound on-ramp and River Avenue. To meet growing demand and avoid the impacts of increasing congestion, LTD plans to relocate the River Road Station to a site north of the Randy Papé Beltline Highway at the southeast corner of River Road and Hunsaker Lane. Once relocated to the new site, the River Road Station would be renamed the Santa Clara Community Transit Center. This new transit center is planned to include a mix of uses including a park and ride lot, residential housing, community space, and commercial uses. The River Road Station relocation to the new site is anticipated to be completed by the end of 2018.
- **Main Street EmX Extension.** Included in the RTP and currently under study, the extension of the existing Franklin EmX line on Main Street from Springfield Station to Thurston Station and associated capital improvements (e.g., stations, bicycle and pedestrian facilities, and signal modifications) is anticipated to be completed within the 20-year planning horizon (2035). The No-Build Alternative transit network assumes EmX service on Main Street. However, the outcome of this study, and the ultimate improvements chosen, are uncertain at this time.
- **McVay Highway Enhanced Corridor.** Included in the RTP and currently under study, Enhanced Corridor service from Springfield Station on McVay Highway to LCC and associated capital improvements (e.g., improved stops, transit queue jumps, and improved bicycle and pedestrian crossings) is anticipated to be completed within the 20-year planning horizon (2035).

2.1.2. Transit Operations

The No-Build Alternatives for each corridor include changes to transit service anticipated as a result of the WEEE project, Main Street EmX Extension project, development of the Santa Clara Community Transit Center, and other changes to fixed route service. The following changes to the existing 2016 fixed route services are anticipated by 2035:

- Eliminated routes:
 - Route 11 (replaced by Main Street EmX service)
 - Route 32 (replaced by WEEE service)
 - Route 76 (replaced by WEEE service)
 - Route 85 (replaced by Enhanced Corridor service on the McVay Highway)
 - Route 43 (replaced by WEEE service)
- Other route modifications:
 - Add WEEE service (replaces Route 43 service on W. 11th Avenue) as extension of existing EmX service
 - Add Main Street EmX service from Springfield Station to Thurston Station
 - Add Route 2 with service from Barger Drive/Echo Hollow Road to Eugene Airport

- Add Route 16 to connect north and south of Main Street with EmX service
- Add Enhanced Corridor service on McVay Highway from Springfield Station to LCC (replaces Route 85)
- Reroute Route 33 and extend to Amazon Parkway
- Reroute Route 36 to extend north of W. 11th Avenue to Barger Drive (replaces Route 43)
- Reroute Route 41 via Highway 99/Royal Avenue/W. 11th Avenue
- Reroute Route 40 via Royal Avenue/Elmira Road/Roosevelt Boulevard/Chambers Street/W. 2nd Avenue/Oak and Pearl Streets
- Add Route 44 paralleling Route 40 above to serve West Eugene
- Reroute Route 55 to extend to Santa Clara Community Transit Center
- Reroute Route 93 with service continuing to Eugene Station via Seneca Station and service terminating at the WEEE terminus
- Change in service frequencies:
 - Increase service on Route 24 from 30-minute peak frequencies to 15-minute peak frequencies
 - Increase service on Route 28 from approximately 30-minute peak frequencies (varying 20- to 30-minute intervals) to 15-minute peak frequencies
 - Increase service on Route 41 from 30- and 15-minute peak frequencies to 15-minute peak frequencies
 - Increase service on Route 51 from 60-minute off-peak frequencies to 30-minute off-peak frequencies
 - Increase service on Route 52 from 60-minute off-peak frequencies to 30-minute off-peak frequencies
 - Increase service on Route 66 from 30- and 15-minute weekday a.m. peak, off-peak, and p.m. peak frequencies to 15-minute weekday a.m. peak, off-peak, and p.m. peak frequencies
 - Increase service on Route 67 from approximately 30-minute weekday a.m. peak, off-peak, and p.m. peak frequencies to 15-minute weekday a.m. peak, off-peak, and p.m. peak frequencies
 - Increase service on Route 78 from approximately 60-minute frequencies from 8 a.m. to 6 p.m. to 30-minute weekday a.m. peak, off-peak, and p.m. peak frequencies
 - Increase service on Route 79x from 30-minute peak frequencies to 10-minute peak frequencies, and modify off peak frequencies to 15 minutes from between 10 and 30 minutes currently
 - Decrease a.m. peak service on Route 93 from 60-minute frequencies to 120-minute frequencies during a.m. peak hours, and increase from no service between Veneta and the WEEE terminus to 120-minute frequencies during p.m. peak hours (off-peak service is 120-minute frequencies between Veneta and the WEEE terminus)
 - Decrease a.m. peak service on Route 96 from 30-minute frequencies to 60-minute frequencies, and increase off-peak service from no service between 8:20 a.m. and 3:40 p.m. to 60-minute off-peak frequencies

Key transportation improvements specific to each corridor are described under each corridor’s No-Build Alternative.

2.2. Enhanced Corridor Alternatives

Enhanced Corridor Alternatives are intended to address the project’s Purpose, Need, Goals, and Objectives without major transit capital investments, instead focusing on lower-cost capital improvements, operational improvements, and transit service refinements. Features could include transit queue jumps (lanes for buses that allow the bus to “jump” ahead of other traffic at intersections using a separate signal phase), stop consolidation, enhanced shelters, and redesigned service to improve

cross-town connectivity. These features improve reliability, reduce transit travel time, and increase passenger comfort.

Enhanced Corridor service would run from 6:45 a.m. to 11:30 p.m. weekdays, 7 a.m. to 11 p.m. Saturdays, and 8 a.m. to 8 p.m. Sundays. Service frequencies are assumed to be 15 minutes during all periods.

2.3. EmX Alternatives

EmX (BRT) Alternatives are characterized by exclusive guideways (business access and transit lanes [BAT] or bus-only lanes); branded, multi-door 60-foot-long BRT vehicles; enhanced stations with level boarding platforms instead of stops; off-board fare collection; signal priority; wider stop spacing; and frequent and redesigned service to improve cross-town connectivity.

EmX service is assumed to run from 6:45 a.m. to 11:30 p.m. weekdays, 7 a.m. to 11 p.m. Saturdays, and 8 a.m. to 8 p.m. Sundays. Service frequencies are assumed to be 10 minutes during all periods.

2.4. Highway 99 Corridor

The Highway 99 Corridor begins at the Eugene Station, travels through downtown, then extends northwest along Highway 99 to Barger Drive, turning west at Barger Drive to terminate on Cubit Street north of the intersection of Barger Drive and Cubit Street east of the Randy Papé Beltline Highway. This corridor is approximately 10.5 round-trip miles.

2.4.1. No-Build Alternative

The Highway 99 Corridor No-Build Alternative includes existing roadway, bicycle, pedestrian, and transit facilities in the corridor, as well as planned improvements in the *DRAFT Eugene 2035 Transportation System Plan* (City of Eugene, 2016; Draft Eugene 2035 TSP). The No-Build Alternative would not include capital improvements on Highway 99. As part of the Draft Eugene 2035 TSP, the following transportation improvements are planned along or adjacent to the corridor:

- Upgrade Bethel Drive, from Highway 99 to Roosevelt Boulevard, to a two-lane urban facility with sidewalks on both sides of the road, bicycle lanes, and planting strips
- Widen Barger Drive immediately west of the Randy Papé Beltline Highway interchange to include an additional travel lane in each direction
- Add a shared-use path on the west side of Highway 99 from Roosevelt Boulevard south to the intersection of W. 7th Avenue and Garfield Street (the section of this project from Roosevelt to W. 5th Avenue has been completed)
- Add bicycle lanes on Garfield Street from Roosevelt Boulevard south to W. 6th Avenue
- Add a bicycle lane on W. 6th Avenue from Garfield Street to W. 5th Avenue
- Complete the sidewalk network on Highway 99 from Roosevelt Boulevard south to Garfield Street
- Add a shared-use path on Roosevelt Boulevard from Maple Street to Highway 99
- Add a bicycle lane on Roosevelt Boulevard from Highway 99 east to railroad tracks

Under the No-Build Alternative, Highway 99 Corridor service would remain at 15-minute headways during peak periods and 30-minute headways during off-peak periods and evenings. Under the No-Build Alternative, a slight change is also made to Route 93, which would stop at the Pearl Buck Center in the absence of Route 44.

2.4.2. Enhanced Corridor Alternative

Capital improvements under the Highway 99 Corridor Enhanced Corridor Alternative would include enhanced bicycle and pedestrian crossings; improvements to existing bus stops and the construction of new stops; construction of queue jumps at some intersections; traffic signal reconstruction; construction of bus-only left turn lanes; and roadway widening at some locations in the corridor.

Existing conventional fixed-service routes would remain the same as with the No-Build Alternative, with the exception of the elimination of Route 41. Service west of WinCo would also remain the same or be improved.

2.4.3. EmX Alternative

The Highway 99 Corridor EmX Alternative would include creating BAT lanes on segments of W. 7th Avenue and Highway 99; reconstructing the Highway 99/Roosevelt Boulevard intersection (traffic signal, turn lanes, and queue jump); completing other intersection modifications in the corridor; roadway widening at some locations; and constructing nine new enhanced pedestrian and bicycle crossings, new sidewalks, and a pedestrian bridge across the railroad line from Highway 99 to the Trainsong neighborhood. Four existing bus stop locations would be improved to EmX stations, in addition to constructing new stations. Some existing EmX stations would be used for the Highway 99 Corridor EmX service.

Route 44 is a conventional service line added to this alternative only, providing coverage on 11th and 13th Avenues as well as service to the Pearl Buck Center on W. 1st Avenue, with 30-minute headways during all periods. This would be a decrease in service for the 11th and 13th Avenue corridors that currently have 15-minute peak service. Route 44 is primarily intended to replace conventional service lost with the removal of the existing Route 41. Route 41 would be replaced with the Highway 99 Corridor EmX service described in this alternative.

2.5. River Road Corridor

The River Road Corridor begins at the Eugene Transit Center, travels through downtown and then north to the Santa Clara Community Transit Center (intersection of Hunsaker Lane and River Road). This corridor is approximately 10.3 round-trip miles.

2.5.1. No-Build Alternative

The River Road Corridor No-Build Alternative would include existing roadway, bicycle, pedestrian, and transit facilities in the corridor, as well as planned improvements in the Draft Eugene 2035 TSP. There would be no additional major bus capital improvements under the No-Build Alternative.

As part of the Draft Eugene 2035 TSP, the following transportation improvements are planned adjacent to and along the River Road Corridor:

- Upgrade the Hunsaker Lane/Beaver Street intersection to urban collector standards, including two travel lanes, a center turn lane, bicycle lanes, sidewalks on both sides of the road, and planting strips from River Road to Division Avenue
- Provide bicycle boulevards on Ruby Avenue, Horn Lane, Arbor Drive, and Park Avenue
- Include sidewalks on Hunsaker Lane, Howard Avenue, and Hilliard Lane
- Provide protected bicycle lanes on River Road from the Northwest Expressway to Division Avenue

Under the No-Build Alternative, River Road Corridor service would remain at 30-minute headways for both Routes 51 and 52 (which together effectively provide 15-minute service during peak periods) and off-peak periods. After 6:15 p.m., there is no longer a combined 15-minute frequency, and headways return to 30 minutes.

2.5.2. Enhanced Corridor Alternative

Capital improvements constructed as part of the River Road Corridor Enhanced Corridor Alternative would include BAT lanes on River Road approaching the Randy Papé Beltline Highway and other roadway improvements, like traffic signal reconstruction at certain locations along the corridor. Improvements to existing bus stops and the construction of new stops would also occur.

Routes 51 and 52 would be eliminated, and Enhanced Corridor service for River Road includes a split alignment in order to serve portions covered by those routes at 30-minute headways. In this arrangement, the area from Railroad Boulevard to W. 1st Avenue is served by one Enhanced Corridor service as a replacement for the Route 51 service, while the area along Blair Boulevard and W. 2nd Avenue is served by the other alignment to replace service lost with removal of Route 52. Those alignments meet at Railroad Boulevard and River Road to serve the River Road Corridor with consistent 15-minute headways.

2.5.3. EmX Alternative

New construction under the River Road Corridor EmX Alternative would include lane repurposing on River Road for BAT lanes, constructing short sections of exclusive bus lanes near the Randy Papé Beltline Highway, reconstructing traffic signals and intersections at several locations, constructing new bicycle and pedestrian crossings, improving existing stops to EmX stations, and constructing new stations. Some existing EmX stations would be used with the River Road EmX service.

Transit service changes would also include modifying headways on Route 40 during the a.m. and p.m. peak hours to 15 minutes, developing a new Route 50 “River Road Connector” with 30-minute headways all day, and eliminating Routes 51, 52, and 55. These replacements ensure no loss in existing coverage or service.

2.6. 30th Avenue – Lane Community College Corridor

The 30th Avenue to LCC Corridor begins at Eugene Station and travels south along Pearl Street (outbound) to Amazon Parkway, then on E. 30th Avenue to its terminus at the LCC Station. The return trip travels on Oak Street (inbound), which is the northbound couplet to Pearl Street. This corridor is approximately 10.2 round-trip miles.

2.6.1. No-Build Alternative

The 30th Avenue to LCC Corridor No-Build Alternative would include existing roadway, bicycle, pedestrian, and transit facilities in the corridor, as well as planned improvements in the Draft Eugene 2035 TSP. There would be no additional major bus capital improvements to the 30th Avenue to LCC Corridor under the No-Build Alternative.

The Draft Eugene 2035 TSP identifies the following transportation improvements along or adjacent to the corridor:

- Bicycle boulevard on Alder Drive

For the portion of E. 30th Avenue in unincorporated Lane County, Lane County does not plan to improve bicycle facilities along the road.

Under the No-Build Alternative, 30th Avenue to LCC Corridor service would remain at 30-minute headways on Route 81. The Route 82 service would remain at 10-minute headways during the a.m. peak, 15-minute headways during off-peak periods, and 20-minute headways during the p.m. peak, with no weekend service.

2.6.2. Enhanced Corridor Alternative

Capital improvements as part of the 30th Avenue to LCC Corridor Enhanced Corridor Alternative would include the construction of new bus stops, capital improvements to some existing bus stops, a new traffic signal on Amazon Parkway at E. 20th Avenue, and new bike facilities on Oak and Pearl Streets.

Under the 30th Avenue to LCC Corridor Enhanced Corridor Alternative, service to LCC provided by Routes 81 and 82 would be eliminated and replaced by Enhanced Corridor service. The direct connection between LCC and the University of Oregon Station along Route 81 would be eliminated. It would be replaced by connecting the 30th Avenue to LCC Corridor Enhanced Corridor Alternative to the Franklin EmX line with a transfer at Eugene Station.

2.6.3. EmX Alternative

The 30th Avenue to LCC Corridor EmX Alternative would include repurposing parking and general-purpose lanes to BAT lanes on Oak and Pearl Streets, constructing queue jumps, extending E. 20th Avenue, adding a new traffic signal on Amazon Parkway, and adding a new cycle track on High Street. In addition to constructing new EmX stations, existing bus stops would be improved to EmX stations in certain locations.

Service to LCC provided by Routes 81 and 82 would be replaced with EmX service. The direct connection between LCC and the University of Oregon Station along Route 81 would be eliminated. It would be replaced by connecting the 30th Avenue to LCC Corridor EmX Alternative to the Franklin EmX line with a transfer at Eugene Station.

2.7. Coburg Road Corridor

The Coburg Road Corridor begins at Eugene Station and continues to Coburg Road using the Ferry Street Bridge. The corridor continues north on Coburg Road to Crescent Avenue, east on Crescent Avenue and Chad Drive to N. Game Farm Road, and south on N. Game Farm Road and Gateway Street to the existing Gateway Station at the Gateway Mall. Although service extends from N. Game Farm Road to the Gateway Station, capital improvements for the corridor terminate at Interstate 5 (I-5). This corridor is approximately 11.2 round-trip miles.

2.7.1. No-Build Alternative

The Coburg Road Corridor Enhanced Corridor Alternative would include new traffic signal construction, intersection reconstruction at several locations on Coburg Road, the addition of queue jumps, and the addition of BAT lanes south of the Interstate 105 (I-105) interchange. New crossings for bicyclists and pedestrians would be constructed. Existing bus stops would be improved and new stops would also be constructed.

Route 12 would be altered to serve Valley River Center and Marcola Road. A new route (Route 60) would be added to serve Valley River Center, and Routes 66 and 67 would be eliminated. This change would provide new service and coverage to the Cal Young neighborhood and along Hayden Bridge Way in Springfield. It would require current passengers along Harlow Road to transfer in order to get downtown.

2.7.2. Enhanced Corridor Alternative

The Coburg Road Corridor Enhanced Corridor Alternative would include new traffic signal construction, intersection reconstruction at several locations on Coburg Road, the addition of queue jumps, and the addition of BAT lanes south of the Interstate 105 (I-105) interchange. New crossings for bicyclists and pedestrians would be constructed. Existing bus stops would be improved and new stops would also be constructed.

Route 12 would be altered to serve Valley River Center and Marcola Road, with Route 60 altered to serve Valley River Center. In addition, Routes 66 and 67 would be eliminated.

2.7.3. EmX Alternative

Improvements to the corridor under the Coburg Road Corridor EmX Alternative would include construction of exclusive transit lanes at several locations on Coburg Road and intersection reconstruction at multiple locations. New bicycle and pedestrian crossings and EmX stations would be constructed, and some existing bus stops would be improved to EmX stations.

As in the Coburg Road Corridor Enhanced Corridor Alternative, Route 12 would be altered to serve Valley River Center and Marcola Road, and Route 60 would be added to serve Valley River Center, while Routes 66 and 67 would be eliminated. This change would provide new service and coverage to the Cal Young neighborhood and along Hayden Bridge Way in Springfield. It would require current passengers along Harlow Road to transfer in order to get downtown.

2.8. Martin Luther King, Jr. Boulevard Corridor

The Martin Luther King, Jr. Boulevard Corridor begins at Eugene Station and travels through downtown Eugene on Oak and Pearl Streets and on 7th and 8th Avenues. The corridor uses the Ferry Street Bridge to reach Martin Luther King, Jr. Boulevard and continues east on Martin Luther King, Jr. Boulevard past Autzen Stadium to Centennial Boulevard. Although transit service continues along Centennial Boulevard, capital improvements for the corridor terminate at I-5. The corridor is approximately 6.0 round-trip miles.

2.8.1. No-Build Alternative

The Martin Luther King, Jr. Boulevard Corridor No-Build Alternative includes existing roadway, bicycle, pedestrian, and transit facilities in the corridor, as well as planned improvements in the Draft Eugene 2035 TSP. The Draft Eugene 2035 TSP identifies the following transportation improvements along or adjacent to the Martin Luther King, Jr. Corridor:

- Add a center turn lane along sections of Martin Luther King, Jr. Boulevard from Club Road to Leo Harris Parkway

Under the No-Build Alternative, the Martin Luther King, Jr. Boulevard Corridor service would remain at 30-minute headways.

2.8.2. Enhanced Corridor Alternative

Capital improvements associated with the Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Alternative would include reconstructing traffic signals at the intersections of Coburg Road and Martin Luther King, Jr. Boulevard and of Martin Luther King, Jr. Boulevard and Centennial Loop; repurposing existing outside general-purpose lanes to BAT lanes on Martin Luther King, Jr. Boulevard; adding a new traffic signal at the intersection of Martin Luther King, Jr. Boulevard and Leo Harris Parkway; enhancing pedestrian crossings; constructing new bus stops; and improving existing bus stops. Existing Route 13 would be eliminated.

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3. Methods and Data

This report summarizes the methods and data that are used to assess potential direct and indirect long-term effects of the alternatives under study in the MovingAhead Project.

3.1. Relevant Laws and Regulations

3.1.1. Federal

- National Environmental Policy Act, 42 United States Code (U.S.C.) 4321-4347
- **Section 4(f) of the Department of Transportation Act of 1966 (23 U.S.C. 138 and 49 U.S.C. 303).** Parks are subject to evaluation in the context of Section 4(f) of the Department of Transportation Act of 1966, which governs the use of publicly-owned/open-to-the-public park and recreation lands, government-owned wildlife lands, and historic resources. Section 4(f) is specifically addressed in a stand-alone report completed for the MovingAhead project.
- **Section 6(f) of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-4 et seq.).** The Land and Water Conservation Fund (LWCF) State Assistance Program was established by the LWCF Act of 1965 to stimulate a nationwide action program to assist in preserving, developing, and providing assurance to all citizens of the United States (of present and future generations) such quality and quantity of outdoor recreation resources as may be available, necessary, and desirable for individual active participation. The program provides matching grants to states and through states to local units of government, for the acquisition and development of public outdoor recreation sites and facilities.

The purpose of the LWCF Act is to assist in preserving, developing, and ensuring accessibility to outdoor recreation resources and to strengthen the health and vitality of the citizens of the United States by providing funds, planning, acquisition, and development of facilities. Recreation facilities awarded such funds are subject to the provisions of this Act. The LWCF's most important tool for ensuring long-term stewardship is its "conversion protection" requirement. Section 6(f)(3) strongly discourages conversions of state and local park and recreational facilities to other uses. Conversion of property acquired or developed with assistance under the program requires approval of the Department of Interior's National Park Service (NPS) and substitution of other recreational properties of at least equal fair market value, and of reasonably equivalent usefulness and location.

Section 6(f)(3) of the LWCF Act requires that no property acquired or developed with LWCF assistance be converted to other-than-public outdoor recreational uses without the approval of the Secretary of the Interior, only if the Secretary finds it to be in accord with the then existing Statewide Comprehensive Outdoor Recreation Plan, and only upon such conditions as the Secretary deems necessary to ensure the substitution of other recreational properties of at least equal fair market value and of reasonably equivalent usefulness and location (pursuant to 36 *Code of Federal Regulations* [CFR] 59). Section 6(f) conversion would require additional coordination with the agency of jurisdiction and the Oregon Parks and Recreation Department (OPRD), which oversees the LWCF program for the NPS, and the NPS regarding the project effects and conversion area and replacement property.

3.1.2. State

- **Oregon Statewide Planning Goals, Oregon Administrative Rule 660-15-0000 (1-15)** (http://www.lcd.state.or.us/LCD/goals.shtml#Statewide_Planning_Goals). The foundation of Oregon's land use planning program is a set of 19 Statewide Planning Goals. The goals express the state's policies on land use and related topics (such as citizen involvement, housing, and natural resources) and are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan, and the zoning and land-division ordinances needed to put the plan into effect. Therefore, the Statewide Planning Goals are the foundation of locally adopted plans, which are approved if they are consistent with statewide goals. Statewide Goals specifically relevant to the assessment of Parks and Recreation area impacts are: Goal-5 Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal-8 Recreational Needs; and Goal-15 Willamette River Greenway. No data collection or analysis were conducted specifically for these statewide goals, because they are implemented through local codes and plans, which directed the data gathering and analysis.
- **Oregon Statewide Comprehensive Outdoor Recreation Plan.** The 2013-2017 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP), *Ensuring Oregon's Outdoor Legacy* (OPRD, No Date), constitutes Oregon's basic 5-year plan for outdoor recreation. The plan guides the use of LWCF funds that come into the state; provides guidance for other OPRD-administered grant programs; and provides recommendations to guide federal, state, and local units of government, as well as the private sector, in making policy and planning decisions. No data collection or analysis was conducted specifically for the items in this plan, because they are implemented through local codes and plans, which directed the data gathering and analysis.

3.1.3. Local

At the local level, the City and the City of Springfield are the agencies that regulate parklands and recreational areas. The following documents outline relevant regulations:

- Metro Plan: Eugene-Springfield Metropolitan General Area Plan (City of Eugene, et al., 2004 Update)
- Draft Envision Eugene (*Envision Eugene Comprehensive Plan*, Envision Eugene, 2016, July)
- Draft *Springfield 2030 Comprehensive Plan* (City of Springfield, No Date)
- *City of Eugene Parks, Recreation and Open Space Comprehensive Plan* (City of Eugene, 2006, February), and applicable local park master plans
- *Park and Recreation Comprehensive Plan* (Willamalane Park and Recreation District, 2012, October)

3.2. Analysis Area

The parklands, recreation areas, and Section 6(f) analysis area for the MovingAhead Project is based on the corridor alternatives selected for further analysis in the Level 2 AA. The study area includes all parks and recreation resources within 200 feet of the selected alternatives. For purposes of evaluating the effects of the project, recreation resources in the project area are defined as those within 200 feet of the proposed footprint and any proposed construction activities. The presumption is that a 200-foot radius is an adequate distance in which to capture potential effects to recreation resources, whether parks or other facilities. This distance would be adequate to identify resources that could potentially be affected by acquisition and construction activities, or effects related to proximity to the project (such as noise), which could impair the use and function of the facility.

3.3. Contacts and Coordination

Project staff used previous planning efforts as guiding documents for regulatory agencies to help scale the level of analysis. Information sources used include those listed in the following subsections.

3.3.1. Federal

- NPS

3.3.2. State

- OPRD

3.3.3. Local

- City of Eugene Parks and Open Space Division
- City of Springfield
- Lane County Parks Department
- Willamalane Park and Recreation District
- Lane Council of Governments

3.4. Level 1 Screening

No data were collected, nor analysis conducted, for the Level 1 Screening.

3.5. Level 2 Alternatives Analysis – Parks and Recreation Areas

3.5.1. Data Collection

The project's geographic information system (GIS) database was used to identify and describe all park and recreation properties located within 200 feet of potential Enhanced Corridor and EmX Alternatives. GIS data layers were obtained from the City of Eugene, City of Springfield, Lane County, and state parks and trails. The team collected site-specific information about the type and function of each potentially affected recreation resource in the project vicinity and conducted a visual scan of the study area using Google Earth™. The team also reviewed current park plans and maps to identify plans for proposed property acquisitions, expansions, and improvements. Park/recreational trail maps were obtained from applicable state and jurisdictional web sites, comprehensive plans, and/or parks master plans.

The unique characteristics of each park include the following:

- Physical description (location/address, size of resource, and setting)
- Ownership
- Activities, features, and attributes of the resource
- Access to the resource
- Planned uses

3.6. Significance Thresholds

Pursuant to NEPA regulations (40 CFR 1500-1508), project effects are evaluated based on the criteria of context and intensity. Context means the affected environment in which a proposed project occurs. Intensity refers to the severity of the effect, which is examined in terms of the type, quality, and

sensitivity of the resource involved, location and extent of the effect, duration of the effect (short- or long-term), and other considerations. Beneficial effects are identified and described. When there is no measurable effect, an impact is found not to occur. The intensity of adverse effects is the degree or magnitude of a potential adverse effect, described as negligible, moderate, or substantial. Context and intensity are considered together when determining whether an impact is significant under NEPA. Thus, it is possible that a significant adverse effect may still exist when the intensity of the impact is determined to be negligible, or even if the impact is beneficial. For parks, recreational areas, and open space, impacts with a negligible intensity are defined as indirect impacts that would be measurable but not perceptible to park users. Impacts with moderate intensity are defined as indirect impacts on parks that would not change the overall character and/or setting. Impacts with substantial intensity result in one or more of the following impacts: park acquisition; indirect impacts (that is, noise and visual) that change the character and/or setting of the park; and closure of all or part of the park during construction.

3.6.1. Impact Analysis

3.6.1.1. Long-Term Impacts Analysis Approach

Possible long-term effects that were considered include the following:

- Acquisition or physical use of all or a portion of parks or recreational areas to accommodate additional rights of way (ROWs) for highway improvements (this does not include other areas considered to be conversion of recreation facilities, as defined under Section 6[f] of the LWCF Act)
- Proximity effects, including: increased levels of traffic noise or air pollution; changed, reduced, or lost access; degradation of the visual setting; or changes in the nature of the surrounding land use that could affect the continued viability, integrity, usage, or value of the recreation resource and that could degrade the overall recreational experience
- Addition of new pedestrian and bicycle connections

GIS was used to assess whether there would be any direct impacts to park/recreational properties and, if so, the size of the area that would be permanently or temporarily affected. This assessment was based on the proposed footprint of the project. In the case of any direct impacts, the analysis specifies the features, attributes, and amenities of the impacted area of the park/recreational property.

3.6.1.2. Short-Term Impacts Approach

Construction effects are defined as those that would not permanently alter recreational facilities or change them to another use. Construction effects may include the following:

- Construction-generated noise or air pollution and traffic detours, and closures that change access and add visual clutter
- Periodic and temporary closures of access to park/recreational properties

GIS was used to assess whether there would be any construction-related impacts to park/recreational properties. The assessment was based on the proposed footprint of the project. In the case of any short-term construction impacts, the analysis specifies the features, attributes, and amenities of the impacted area of the park/recreational property.

3.6.1.3. Indirect Impact Analysis Approach

The assessment of indirect impacts will consider whether the proximity effects of the project results in substantial impairment to a park/recreational property's activities, features, or attributes. An impact will be found to have a substantial impairment if the recreational value of the property will be meaningfully

reduced or lost. Such an impact could be the result of a variety of project related-effects, such as impacts to park access (from delays or closures), visual impacts, or increases in noise.

3.6.1.4. Cumulative Impact Analysis Approach

Cumulative impacts result from the combined impacts of the proposed project with those occurring in the past, present, and reasonably foreseeable future. A cumulative impact is the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. As part of the park and recreational area analysis effort, a list of reasonably foreseeable planned park and recreational projects have been compiled.

Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. Cumulative impacts may include the effects of natural processes and events, depending on the specific resource in question. Cumulative impacts include the totality of all impacts to a particular resource that have occurred, are occurring, and will likely occur as a result of any action or influence. The cumulative impact analysis for parks and recreation is a comparison of the past, present, and reasonably foreseeable energy consumption impacts within a larger Area of Potential Impact (API). The analysis establishes a temporal frame of reference, and geographic frame of reference.

Cumulative impacts were qualitatively analyzed and based on comprehensive land use and transportation elements that are components of all build alternatives. This contextual analysis considered whether the residual effects of the project when combined with past, present, and reasonably foreseeable future projects or actions would lead to significant increases or changes in park use or conflicts with adopted parks-related policies.

The analysis reviewed other transportation and land development projects in the area and considered whether these projects may have similar impacts on parks and recreation resources.

3.6.1.5. Mitigation Measures Approach

Measures to avoid or minimize potential impacts to park/recreational properties were developed based on the magnitude of the impact.

3.7. Level 2 Alternatives Analysis – Section 6(f)

3.7.1. Data Collection

The LWCF *Detailed Listing of Grants with County Totals* datasets website (<http://waso-lwcf.nrcr.nps.gov/public/index.cfm>) for Lane County was used to identify if any parks in the analysis area received LWCF grants in the past.

3.7.2. Significance Thresholds

For the Section 6(f) assessment, a significant impact would be defined as one in which property from a Section 6(f) property would need to be acquired by the project and converted to transportation use.

3.7.3. Impact Analysis

GIS spatial analysis was used to determine whether the project would result in the conversion of a Section 6(f) property. This assessment was based on the proposed footprint of the project. In the case of

any permanent incorporation of property, the analysis specified the features, attributes, and amenities of the area of the park/recreational property that would be converted to transportation use.

3.7.3.1. Mitigation Measures Approach

The LWCF Act requires that, before Section 6(f) properties are converted, the agency proposing the conversion must ensure that “all practical alternatives” to converting Section 6(f) properties have been evaluated. Therefore, the first measure would be to further explore design modifications to avoid the Section 6(f) resource.

If no other practical avoidance is possible and a proposed alternative would result in the need to convert parkland from a Section 6(f) resource, and that alternative is subsequently selected as a preferred alternative, then the project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal, in accordance with Title 36 CFR 59.3 of the Land and Water Conservation Fund Program. Title 36 CFR 59.3 instructs the following:

- (1) The fair market value of the property to be converted has been established and the property proposed for substitution is of at least equal fair market value as established by an approved appraisal (prepared in accordance with uniform Federal appraisal standards) excluding the value of structures or facilities that will not serve a recreation purpose.
- (2) The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted. Dependent upon the situation and at the discretion of the Regional Director, the replacement property need not provide identical recreation experiences or be located at the same site, provided it is in a reasonably equivalent location.

4. Highway 99 Corridor Environmental Consequences

The Highway 99 Corridor begins at the Eugene Station, travels through downtown, then extends northwest along Highway 99 to Barger Drive, turning west at Barger Drive to terminate on Cubit Street north of the intersection of Barger Drive and Cubit Street, east of the Randy Papé Beltline Highway. This corridor is approximately 10.5 round-trip miles.

4.1. Affected Environment

Table 4.1-1 identifies parks within 0.25 mile of the Highway 99 Corridor. There are two community parks, eight neighborhood parks, a special use facility, and the Amazon Active Transportation Corridor. Parks and recreational resources are shown on Figure 4.1-1. Of the parks and recreation resources within 0.25 mile of the Highway 99 Corridor, only 4 park resources are within 200 feet of the Highway 99 Corridor: Washington Jefferson Park, McNail-Riley House, Lincoln School Park and Trainsong Park (Table 4.1-1). All other park and open space resources are at a greater distance and sufficiently screened from any potential adverse project effects.

Table 4.1-1. Highway 99 Corridor Parks and Recreation Resources within 0.25 mile

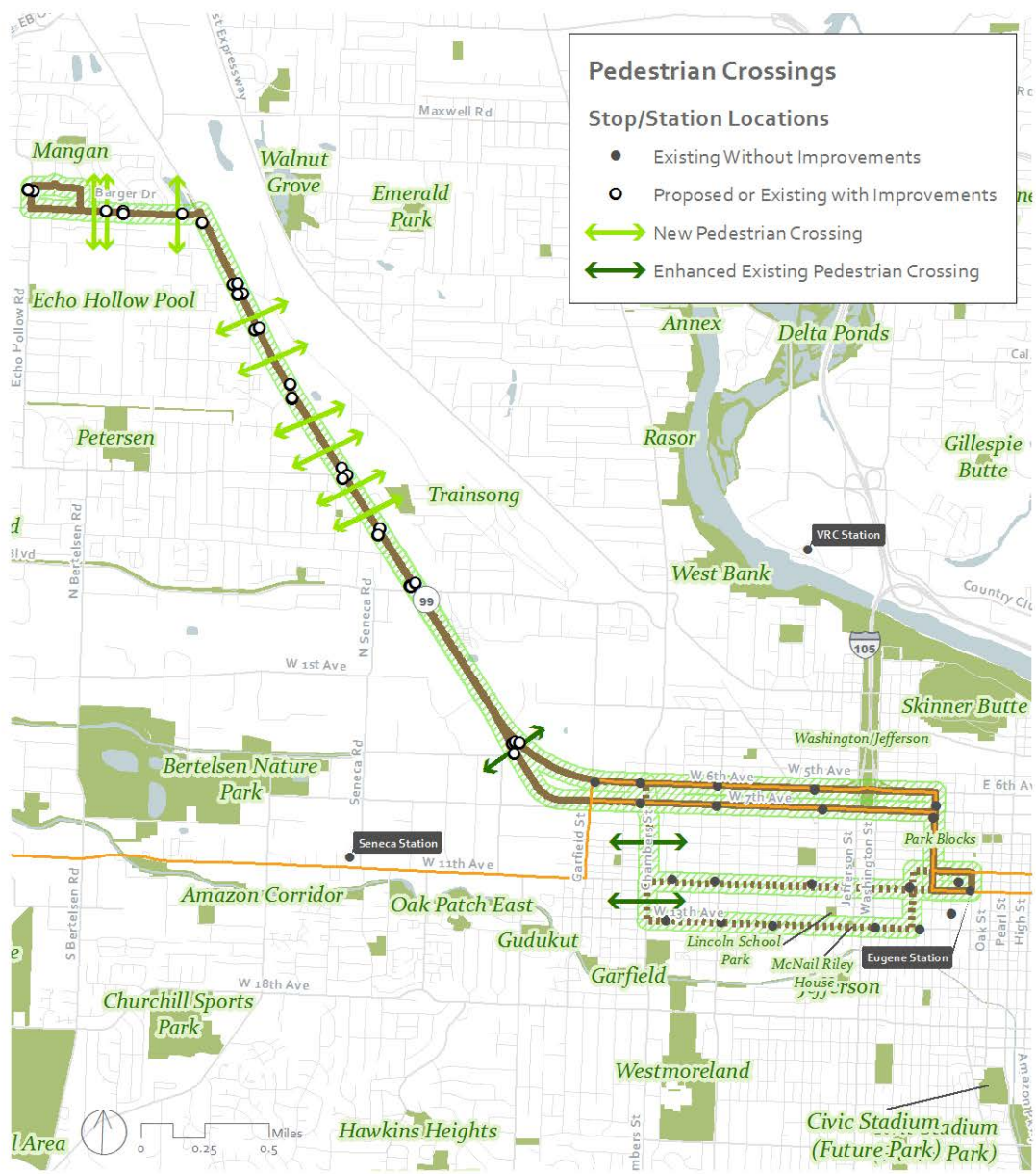
Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
McNail-Riley House	Special Use	Within 200 feet	City of Eugene	Large main room, parlor, kitchen	Yes	No
Lincoln School Park	Neighborhood Pocket Park	Within 200 feet	City of Eugene	Basketball, picnic tables, play area, sand volleyball	No	No
Washington Jefferson	Community/Metropolitan Park	Within 200 feet	Oregon Department of Transportation /City of Eugene	Basketball, shelter, picnic tables, play area, restrooms	Yes	Yes
Trainsong	Neighborhood Park	Within 200 feet	City of Eugene	Ball fields, basketball, picnic tables, play area, skatepark	No	No
Monroe	Neighborhood Park	0.08 mile	City of Eugene	Basketball, picnic tables, play field	No	No
Gilbert	Neighborhood Park	0.09 mile	City of Eugene	Picnic tables, play area	No	No
Broadway Plaza	Urban Plaza	0.10 mile	City of Eugene	Performance space, public art	No	No
Scobert Gardens	Neighborhood Park	0.11 mile	City of Eugene	Play area	No	No

Table 4.1-1. Highway 99 Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Martin Luther King, Jr.	Neighborhood Park	0.11 mile	City of Eugene	Basketball, play area, playfield	No	No
Park Blocks	Urban Plaza	0.14 mile	City of Eugene	Picnic tables, public art, performance space	No	No
Mangan	Neighborhood Park	0.18 mile	City of Eugene	Basketball, play area	No	No
Jefferson	Neighborhood Park	0.20 mile	City of Eugene	Undeveloped	No	No
Amazon Active Transportation Corridor	Greenway/Multi-use Trail	0.22 mile	City of Eugene/private property	Fern Ridge Path (multi-use recreational path)	No	No

The Washington Jefferson Park, McNail-Riley House, and Lincoln School Park are located within the *Parks and RECreate: System Plan Update, Research and Studies, Draft Planning SubArea Report; City Central Parks and Recreation* (City of Eugene, 2016, July). Trainsong Park is located in the Bethel Subarea. Most of the streets along and adjacent to the corridor have sidewalks. Bicycle lanes are also present on Highway 99 and Barger Drive within the corridor, except for a bicycle lane and sidewalk gap on Highway 99 south of Roosevelt Boulevard.

Figure 4.1-1. Highway 99 Corridor Parks and Recreation Resources



Locator Map



Legend

- Highway 99 Corridor EmX Alternative
- Highway 99 Corridor Enhanced Corridor Alternative
- Highway 99 Corridor 200 ft Buffer
- 2035 No-Build EmX
- Water
- Park

Parks & Recreation Areas Highway 99 Corridor

Note: Both EmX and Enhanced Corridor Alternatives Shown



Document Path: \\PD\XFP\01\Proj\LaneTransit\District6\57958\Eugene\BRT\GIS\MapFiles\Level_2\Environmental_Analysis\Parks-Recreation\Level2_Corridor_EnviroAnalysis_Base\map_Corridor\External\Bart2209_Study99 (2).mxd

4.1.1. McNail-Riley House and Lincoln School Park

The McNail-Riley House and Lincoln School Park are located along the Enhanced Corridor route. The McNail-Riley House is a special use facility situated on a 0.2-acre property located at the northwestern corner of Jefferson Street and W. 13th Avenue. The McNail-Riley House is used for community meetings and offers a large main room, a parlor, and a full kitchen. Access and parking are provided off W. 13th Avenue and Jefferson Street. Lincoln School Park is a 0.8-acre neighborhood pocket park located at W. 12th Avenue and Madison Street near the county fairgrounds. Lincoln Park provides a variety of recreational opportunities, including basketball, picnic tables, a play area, and sand volleyball. Access and street parking are provided off W. 12th Avenue.

LTD bus service currently runs along W. 13th Avenue, with a bus stop near the McNail-Riley House and Lincoln School Park just west of Jackson Street.

4.1.2. Washington Jefferson Park

The southern blocks of the Washington Jefferson Park are adjacent to the Highway 99 Corridor EmX Alternative, as it moves along W. 6th and W. 7th Avenues. The City of Eugene manages this 24.6-acre park located on Oregon Department of Transportation (ODOT)-owned properties at the I-105 terminus. The land's primary purpose is as ROW for the I-105 freeway structures. A portion of the park (including a stage, a 23,000-square-foot skatepark, a basketball court, and horseshoe pits) is covered by the I-105 bridge, creating a dry and lit place for recreation year-round. ODOT leases the land to the City to operate the park as a secondary use. Park amenities include active and passive recreational facilities with year-round restrooms, which were developed using an LWCF grant.

Pedestrian access into the park is provided at several locations. Crosswalks through Washington and Jefferson Streets are provided at W. 6th Avenue. A limited number of parking stalls are provided along Washington and Jefferson Streets, with pay parking lots at W. 3rd Avenue and W. 4th Avenue. A designated bike lane exists along a portion of Washington Street and Jefferson Street. *Parks and RECreate: System Plan Update, Research and Studies, Draft Planning SubArea Report; City Central Parks and Recreation* (City of Eugene, 2016, July), includes a recommendation to develop a master plan for the Washington Jefferson Park.

LTD bus service currently runs along Jefferson and Washington Streets, and W. 5th, W. 6th, and W. 7th Avenues, with several bus stops near the Washington Jefferson Park.

4.1.3. Trainsong Park

Trainsong Park is located east of the Highway 99 Corridor and the railroad tracks that parallel the freeway with no direct access to Highway 99. The neighborhood park is five acres in size and includes a small skatepark, lighting, landscaping, ball field, children's playground, and walkways. Access and street parking are provided off Bell Avenue and Edison Street, which are both local neighborhood roads.

LTD bus service currently runs along Highway 99 with the bus stops closest to pedestrian access to Trainsong Park at Roosevelt Boulevard.

4.2. Effects Common to Most or All Build Alternatives

Beneficial effects would include increased access to the parks within the API and along the corridor through more frequent and reliable transit service (Table 4.2-1). In addition, pedestrian connectivity would be enhanced with the new or enhanced bicycle/pedestrian crossings along the corridor. Both the

Enhanced Corridor and the EmX Alternatives would construct a bicycle/pedestrian bridge that would provide more direct access to the park, which would impact approximately 0.15 acre of property along the outer edges of the western boundary of Trainsong Park.

Table 4.2-1. Highway 99 Corridor – Comparison of Alternatives

Impacts/Effects	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Parks within 200 feet	<ul style="list-style-type: none"> Washington Jefferson Park, McNail-Riley House, Lincoln School Park, and Trainsong Park 	<ul style="list-style-type: none"> McNail-Riley House, Lincoln School Park, and Trainsong Park 	<ul style="list-style-type: none"> Washington Jefferson Park, and Trainsong Park
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 41 (15/30/15) New Route 44 (30/30/30) 48 bus stops 	<ul style="list-style-type: none"> Highway 99 (15/15/15) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> Highway 99 (10/10/10) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> New crossings and enhanced crossings New bus stops and pedestrian crossings would enhance access across Highway 99 and a new bicycle/pedestrian bridge across the rail facilities would enhance access to Trainsong Park 	<ul style="list-style-type: none"> New crossings and enhanced crossings New EmX stations and pedestrian crossings would enhance access across Highway 99 and a new pedestrian bridge across the rail facilities would enhance access to Trainsong Park
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Construction of the bicycle/pedestrian bridge would impact approximately, 0.15 acre of property along the outer edges of the western boundary of Trainsong Park No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> Construction of the pedestrian bridge would impact approximately, 0.15 acre of property along the outer edges of the western boundary of Trainsong Park No anticipated impacts that could lead to a Section 6(f) conversion

4.3. Long-Term Direct Impacts

4.3.1. No-Build Alternative

Transit service near parks along Highway 99, Royal Avenue, W. 11th Avenue, and W. 13th Avenue would be provided by LTD Route 41. The WEEE would provide service along W. 6th Avenue and W. 7th Avenue

near Washington Jefferson Park. EmX stations would be located near the park at W. 6th Avenue/Monroe Street and W. 7th Avenue/Monroe Street.

4.3.2. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative (Figure 4.1-1), transit accessibility would improve with the new and enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit reliability would also improve with the construction of queue jumps at some intersections, BAT lanes, and traffic signal reconstruction. Beneficial effects would include more frequent service to the following resources:

- The Enhanced Corridor service near the McNail-Riley House and Lincoln School Park would be more frequent during off peak hours than the fixed route service under the No-Build Alternative. The existing bus stop at W. 13th Avenue and Monroe Street, closest to the resources, would receive no capital improvements.
- The WEEE along W. 6th Avenue and W. 7th Avenue would continue to serve the Washington Jefferson Park with no capital improvements or changes in frequencies.
- New bus stops and bicycle/pedestrian crossings would be constructed across Highway 99 all along the corridor, including near Trainsong Park. In addition, a new bicycle/pedestrian bridge would be constructed across the rail line, from Highway 99 to Trainsong Park. These improvements would enhance pedestrian connectivity and access to transit as the nearest direct access is south of the park via Roosevelt Boulevard and Highway 99.

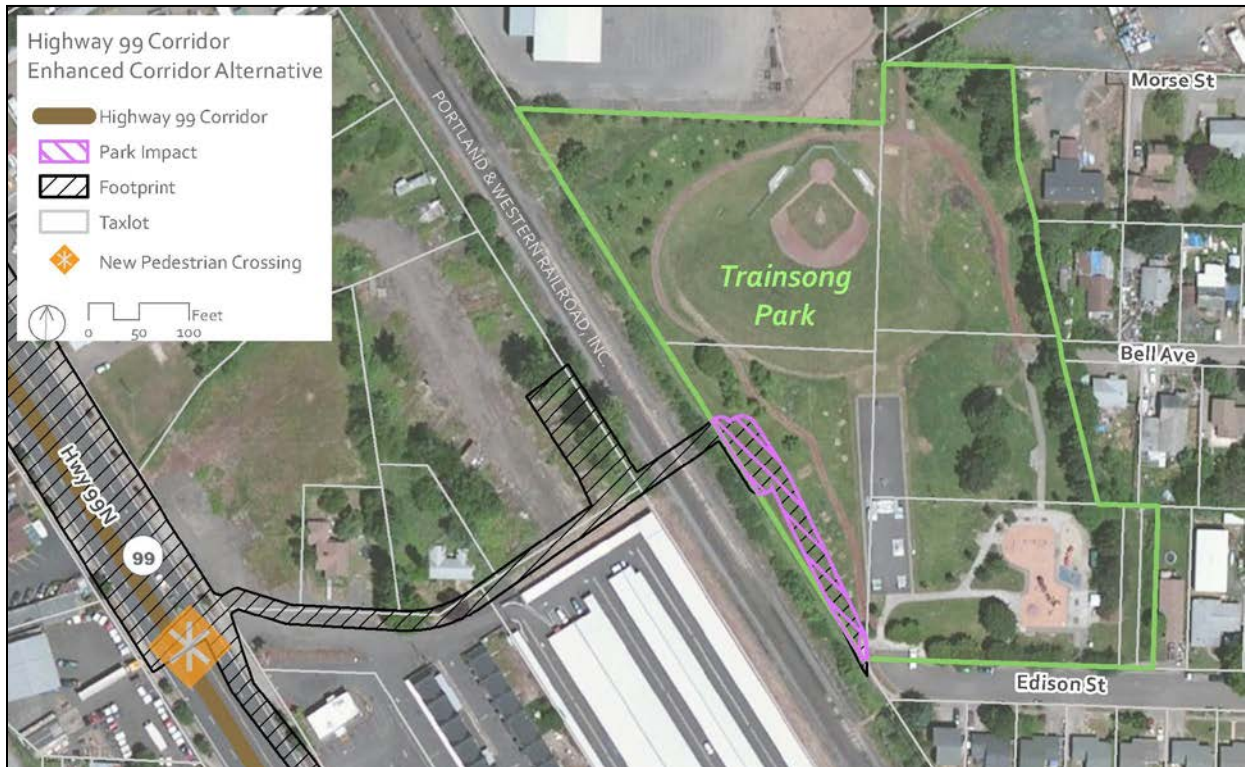
No adverse impacts to the McNail-Riley House or Lincoln School Park are anticipated because there would be no roadway improvements near any of the facilities. A traffic signal would be reconfigured at the intersection of Jefferson Street/W. 13th Avenue, near the McNail-Riley House. However, any construction would be limited to within the road ROW.

Construction of the bicycle/pedestrian bridge over the rail line would require approximately, 0.15 acre of property along the outer edge of the western boundary of Trainsong Park (Figure 4.3-1). This grassed area would no longer be available for recreational purposes. The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience. The new bridge would enhance access between Highway 99 and the park.

4.3.2.1. Section 6(f) Resources

None of the parks within 200 feet of the Enhanced Corridor Alternative have benefited from LWCF and therefore there are no Section 6(f) impacts under this Alternative.

Figure 4.3-1. Highway 99 Corridor Enhanced Corridor Alternative - Trainsong Park (Same impact area for EmX Alternative)



Source: CH2M. (2016b).

Note: Approximate location of proposed pedestrian bridge shown in blue

Source: CH2M. (2016b).

4.3.3. EmX Alternative

Under the EmX Alternative (Figure 4.1-1), transit accessibility would improve with the construction of new and enhanced pedestrian and bicycle crossings, new sidewalks, improvement of 1 bus bay at Eugene Station to accommodate BRT vehicles, and construction of new EmX stations. Transit reliability would also improve with the construction of queue jumps, BAT lanes, and traffic signal reconstruction. Beneficial effects would include increased access and more frequent service to the following resources:

- The WEEE, along W. 6th Avenue and W. 7th Avenue, would serve the Washington Jefferson Park with no capital improvements or changes in frequencies. No capital improvements would occur at the existing EmX stations near the park (W. 6th Avenue/Monroe Street and W. 7th Avenue/Monroe Street). However, signal timing would be altered to reduce delay and improve reliability for EmX service. The improved reliability to Washington Jefferson Park would enhance accessibility for the park users.
- New EmX stations and pedestrian crossings would be constructed across Highway 99 near the proposed bridge to Trainsong Park to provide new, safe access to Trainsong Park, which does not exist under the No-Build Alternative. EmX service would include BAT lanes and transit queue jumps to improve transit reliability. These improvements would enhance pedestrian connectivity and

access to transit by providing direct access from the park to the high capacity transit service on Highway 99.

No adverse impact to the Washington Jefferson Park is anticipated because there would be no roadway improvements along W. 6th and W. 7th Avenues.

Project effects at Trainsong Park would be the same as those described for the Enhanced Corridor Alternative (Figure 4.3-1). Construction of the bicycle/pedestrian bridge would impact approximately 0.15 acre of property along the outer edges of the western boundary of the park. This area would no longer be available for recreational purposes. The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience. The new bridge would provide enhanced access between Highway 99 and the park and overcome the existing railroad barrier for improved, safe access.

4.3.3.1. Section 6(f) Resources

The Washington Jefferson Park is known to have received funding from the LWCF. However, there are no anticipated impacts that could lead to a Section 6(f) conversion as a result of the EmX Alternative.

4.4. Indirect and Cumulative Effects

The residual effects of the project would not affect the continued viability, integrity, usage, or value of any park, nor would it degrade the recreational experience. When combined with past, present, and reasonably foreseeable future projects or actions there would be no significant increases or changes in park use or conflicts with adopted parks-related policies. Therefore, there would be no cumulative effects as a result of the project.

4.5. Short-Term Construction-Related Impacts

Construction would not occur within the immediate vicinity of McNail-Riley House, Lincoln School Park, or Washington Jefferson Park. Both the Enhanced Corridor and EmX Alternatives include a bicycle/pedestrian bridge from Highway 99 to Trainsong Park. Construction of this bridge would result in minor, short-term, construction-related impacts on Trainsong Park. Construction would occur along the outer edges of the western boundary of the park. There would be no direct loss of park amenities. However, users would experience short-term, minor increases in noise, dust, and visual intrusion as a result of construction.

Furthermore, LTD's construction practice is to concentrate construction activities in one area until complete, thereby reducing the overall duration of construction disturbance along the corridor and minimizing the dust, noise and inconvenience of detour routes.

4.6. Potential Mitigation Measures

LTD would mitigate short-term, minor impacts from construction through coordination of construction timing with the Eugene Parks and Open Space Division to avoid or reduce disruptive activities for users of parks and recreation resources. LTD would provide adequate barriers and flagging for construction of the bicycle/pedestrian bridge to Trainsong Park.

The permanent loss of 0.15 acre of Trainsong Park property would be mitigated, first by further exploring avoidance during subsequent design development phases. If avoidance is not practical, then mitigation measures would include compensation or enhancing the remaining park property consistent

with the City's *Full 30-Year Vision for Parks and Recreation Capital Project List with Draft Priorities* (City of Eugene, 2017, March 8). Specific enhancement measures would be determined through coordination with the Eugene Parks and Open Space Division.

4.7. Permits and Approvals

There are no anticipated impacts that could lead to a Section 6(f) conversion.

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5. River Road Corridor Environmental Consequences

The River Road Corridor begins at the Eugene Station, travels through downtown, and then extends north to the Santa Clara Community Transit Center (intersection of Hunsaker Lane and River Road). This corridor is approximately 10.3 round-trip miles.

5.1. Affected Environment

Table 5.1-1 identifies parks within 0.25 mile of the River Road Corridor. There are two community/metropolitan parks, three neighborhood parks, two urban plazas, and multiple public open space properties that are part of the Willamette River Natural Area. Of the parks and recreation resources within 0.25 mile of the River Road Corridor, only 5 are within 200 feet of the corridor: Washington Jefferson Park, Scobert Gardens, West Bank Park, Razor Park, and the River Road Park Annex (Figure 5.1-1). All other park and open space resources are at a greater distance, and sufficiently screened from any potentially adverse project effects.

Table 5.1-1. River Road Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Washington Jefferson	Community/Metropolitan Park	Within 200 feet	ODOT/City of Eugene	Basketball, shelter, picnic tables, play area, restrooms	Yes	Yes
Scobert Gardens	Neighborhood Park	Within 200 feet	City of Eugene	Play area	Yes ^a	No
West Bank	Willamette River Natural Area	Within 200 feet	City of Eugene	Fishing, off street bike/pedestrian path	Yes	No
Razor	Willamette River Natural Area	Within 200 feet	City of Eugene	Bike/pedestrian path	Yes	No
River Road Park Annex	Special Use	Within 200 feet	River Road Park and Recreation	Community gathering	Yes	No
Broadway Plaza	Urban Plaza	0.10 mile	City of Eugene	Performance space, public art	No	No
Maurie Jacobs	Community/Metropolitan Park	0.12 mile	City of Eugene	Community garden, performance space, picnic tables, soccer field	No	No

Table 5.1-1. River Road Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Park Blocks	Urban Plaza	0.14 mile	City of Eugene	Picnic tables, public art, performance space	No	No
Sladden	Neighborhood Park	0.20 mile	City of Eugene	Basketball, disc golf, picnic tables	No	No
Rosetta	Neighborhood Park	0.23 mile	City of Eugene	Picnic tables, street trees, play area	No	No

^a Scobert Gardens is uniquely visible from the Enhanced Corridor Alternative.

The Washington Jefferson Park and Scobert Gardens are located within the City Central neighborhood planning area; the West Bank Park, Razor Park, and River Road Park Annex are located in the *Parks and RECreate: System Plan Update, Research and Studies, Draft Planning SubArea Report*; River Road/Santa Clara neighborhood planning area (City of Eugene, 2016, July). Most of the streets along and adjacent to the corridor have sidewalks.

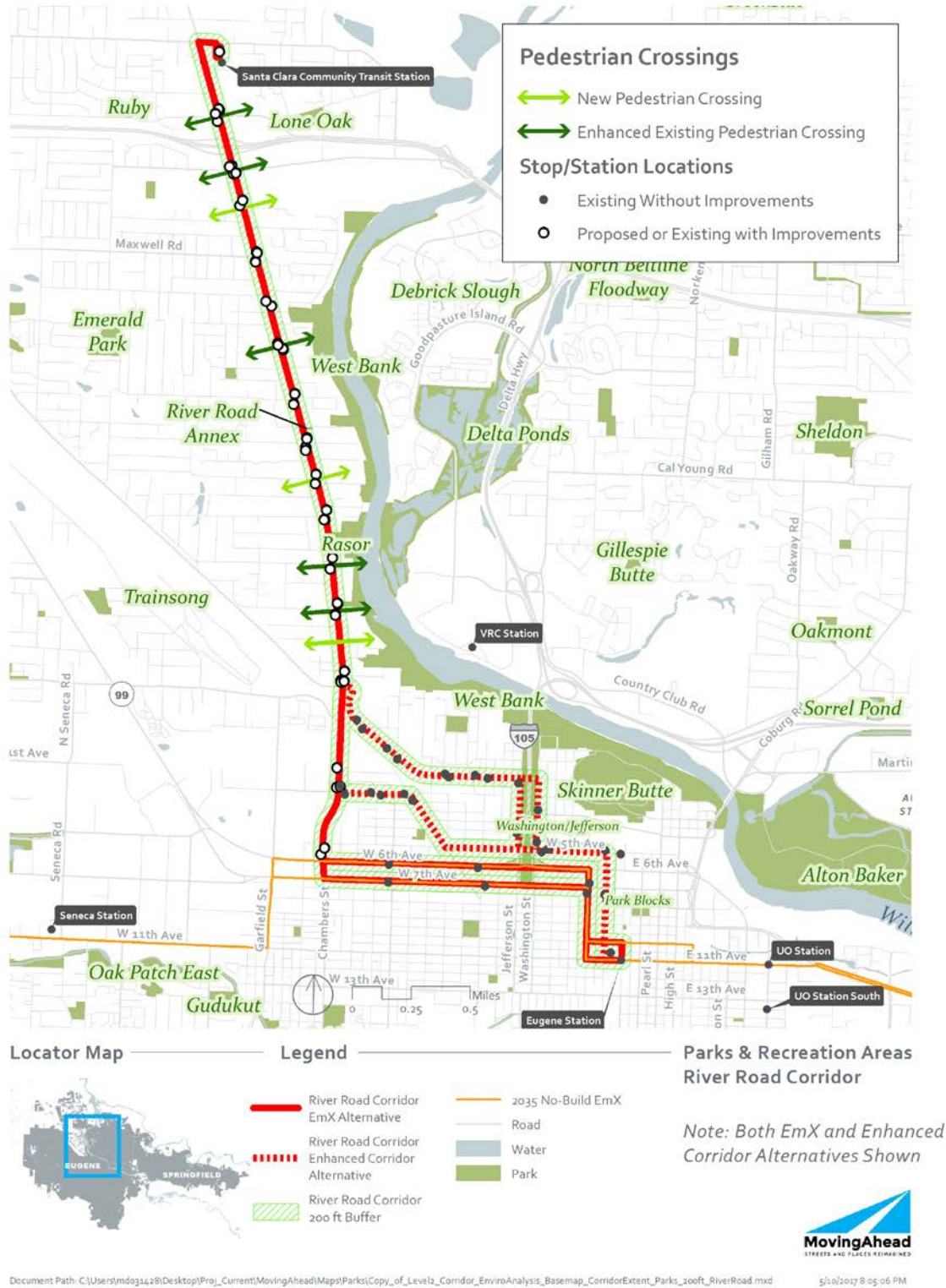
5.1.1. Washington Jefferson Park

The southern blocks of the Washington Jefferson Park are adjacent to the River Road Corridor EmX Alternative as it moves along W. 6th and W. 7th Avenues. This 24.6-acre park is managed by the City of Eugene on ODOT-owned properties at the I-105 terminus. The land’s primary purpose is as a ROW for the I-105 freeway structures. A portion of the park, including a stage, a 23,000-square-foot skatepark, a basketball court, and horseshoe pits, is covered by the I-105 bridge, creating a dry and lit place for recreation year-round. ODOT leases the land to the City to operate the park as a secondary use. Park amenities include active and passive recreational facilities with year-round restrooms that were developed using an LWCF grant.

Pedestrian access into the park is provided at several locations. Crosswalks through Washington and Jefferson Streets are provided at W. 6th Avenue. A limited number of parking stalls are provided along Washington and Jefferson Streets, with pay parking lots at W. 3rd Avenue and W. 4th Avenue. A designated bike lane exists along a portion of Washington and Jefferson Streets. The City of Eugene’s *Full 30-Year Vision for Parks and Recreation Capital Project List with Draft Priorities* (City of Eugene, 2017, March 8), includes a recommendation to develop a master plan for the Washington Jefferson Park.

LTD bus service currently runs along Jefferson and Washington Streets, and W. 5th, W. 6th, and W. 7th Avenues, with several bus stops near the Washington Jefferson Park.

Figure 5.1-1. River Road Corridor Parks and Recreation Resources



5.1.2. Scobert Gardens

Scobert Gardens is a 1.2-acre neighborhood park located at 1180 W. 4th Avenue, less than one block west of the corridor alignments along Blair Boulevard. The park includes a playground, walkways, and landscaping. It is located amid single-family homes with access and parking provided along W. 4th Avenue.

LTD bus service currently runs along Blair Avenue, with bus stops near W. 4th Avenue.

5.1.3. West Bank and Razor Parks

The West Bank Park and Razor Park natural area system is located along the Willamette River. West Bank Park is approximately 79.5 acres and Razor Park is 11.9 acres. A small portion of the parks is located adjacent to the corridor alignments along River Road. Both parks provide the River Road area with plant and wildlife habitat connectivity, and transportation and recreational opportunities adjacent to the Willamette River. The sidewalk along the eastside of River Road provides access into both parks. There is no parking provided along River Road.

LTD bus service currently runs along River Road, with bus stops near Hansen Lane and Knoop Lane near Razor Park and West Bank Park, respectively.

5.1.4. River Road Park Annex

The River Road Park Annex is a community building situated on a 0.2-acre property located at 1055 River Road, adjacent to the corridor alignments along River Road. The facility is used for community events and recreational programs, and is available for rent through the River Road Park and Recreation District. The property includes parking, and access is provided off E. Hillcrest Drive.

LTD bus service currently runs along River Road, with bus stops near Hilliard Lane, just south of the River Road Park Annex.

5.2. Effects Common to Most or All Build Alternatives

Beneficial effects would include increased access to the parks within the API and along the corridor, through more frequent and reliable transit service (Table 5.2-1). In addition, pedestrian connectivity would be enhanced with the new or enhanced pedestrian crossings along the corridor.

Table 5.2-1. River Road Corridor – Comparison of Alternatives

Item	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Parks within 200 feet	<ul style="list-style-type: none"> Washington Jefferson Park, Scobert Gardens, West Bank Park, Razor Park, and the River Road Park Annex 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Routes 51/52 (30/30/30) 64 bus stops 	<ul style="list-style-type: none"> River Road (30/30/30) Route 40 (30/30/30) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> River Road (10/10/10) Route 40 (15/30/15) New Route 50 (30/30/30) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks

Item	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Beneficial Effects	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Three new crossings and five enhanced crossings 	<ul style="list-style-type: none"> • One new crossing and five enhanced crossings • Protected bike lane on both sides of River Road
Adverse Impacts	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Approximately 0.03 acre of West Bank Park property is located within the construction footprint • The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to West Bank Park 	<ul style="list-style-type: none"> • Approximately 0.06 acre of West Bank Park property is located within the construction footprint • Approximately 0.09 acre of Razor Park property is located within the construction footprint • The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to West Bank Park

5.3. Long-Term Direct Impacts

5.3.1. No-Build Alternative

There would be no major bus capital improvements under the No-Build Alternative. Transit service near the Washington Jefferson Park, Scobert Gardens, West Bank Park, Razor Park, and the River Road Park Annex would be provided by LTD routes 51, 52, and 40. The WEEE would provide service along W. 6th and W. 7th Avenues, near Washington Jefferson Park. EmX stations would be located near the park at W. 6th Avenue/Monroe Street and W. 7th Avenue/Monroe Street.

5.3.2. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative (Figure 5.1-1), transit accessibility would improve with the new and enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit reliability would also improve with the construction of BAT lanes on River Road approaching the Randy Papé Beltline Highway and traffic signal reconstruction. Beneficial effects would include more frequent service to the following resources:

- The WEEE along W. 6th and W. 7th Avenues would serve the Washington Jefferson Park with no capital improvements or changes in frequencies.
- Enhanced Corridor service along Blair Avenue would replace Routes 51 and 52 with longer hours of operation but no increase in frequency, and serve the Scobert Gardens from the existing bus stop locations near the park.
- Enhanced Corridor service along River Road would serve the West Bank Park, Razor Park, and River Road Park Annex. New bus stops would be constructed near all three facilities. Pedestrian access to West Bank Park and Razor Park would improve with the enhanced bicycle/pedestrian crossings at

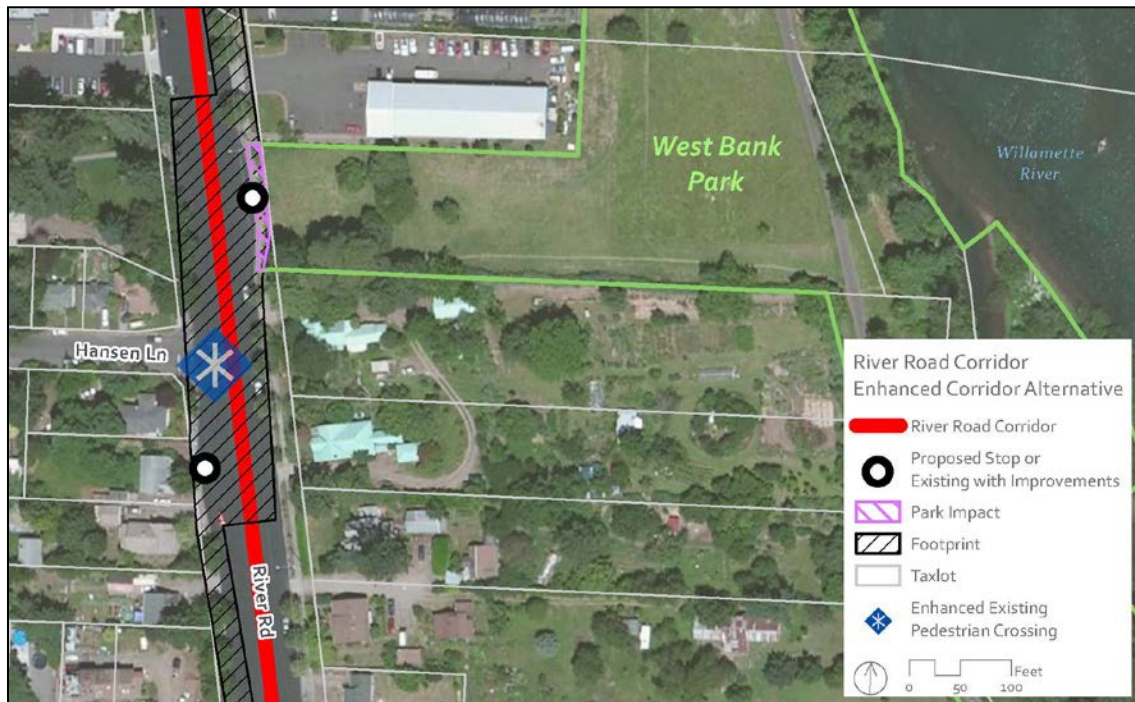
Hansen Lane and Knoop Lane. These improvements would enhance pedestrian connectivity from the bus stops to the park.

Minor property acquisitions would occur along River Road to accommodate capital improvements. Construction of an enhanced shelter and sidewalk could affect a small portion of the West Bank Park properties. Approximately 0.03 acre of park property is within the project footprint, and efforts would be made to avoid this potential impact through design refinement (Figure 5.3-1). The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience.

5.3.2.1. Section 6(f) Resources

West Bank Park is known to have received funding from the LWCF. The minor property acquisition could trigger requirement of a Section 6(f) conversion as a result of the Enhanced Corridor Alternative. Further avoidance would be conducted during the advance design phase, as Section 6(f) requires that a conversion can only occur when no practical alternative to the impact exists. If a conversion still persists, consultation with the Eugene Parks and Open Space Division, OPRD, and NPS would be required to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3. The conversion proposal would need to demonstrate that no practical alternative to the impact exists and that the proposed strategy for replacing existing protected Section 6(f) land with new land was in full accordance with both the prerequisites for conversion approval and the criteria for determining “equivalent usefulness and location” of a replacement property, as described in 36 CFR 59.3. Approvals would be required from the Eugene Parks and Open Space Division, OPRD, and NPS.

Figure 5.3-1. River Road Corridor Enhanced Corridor Alternative – West Bank Park



Source: CH2M. (2016b).

5.3.3. EmX Alternative

Under the EmX Alternative (Figure 5.1-1), transit accessibility would improve with the construction of new and enhanced pedestrian and bicycle crossings, the removal of existing bus stations and their replacement with new EmX stations in addition to the existing EmX stations. Transit reliability would improve with construction of BAT lanes, construction of short sections of exclusive bus lanes near the Randy Papé Beltline Highway, and adjusted traffic signal timing at some locations. Beneficial effects would include increased access and more reliable service to the following resources:

- The Washington Jefferson Park would no longer be served by LTD Routes 51 and 52 along Washington and Jefferson Streets. This service would be replaced with Route 50. The WEEE, along W. 6th and W. 7th Avenues, would serve the Washington Jefferson Park with no capital improvements or changes in frequencies. No capital improvements would occur at the existing EmX stations near the park (W. 6th Avenue/Monroe Street and W. 7th Avenue/Monroe Street).
- Scobert Gardens would no longer be served by LTD Routes 51 and 52. This service would be replaced by Route 50. Bus service would continue at the stops located at Blair Boulevard and W. 4th Avenue.
- EmX service along River Road would replace Routes 51 and 52 and would serve the West Bank Park, Razor Park, and River Road Park Annex. New stations would be constructed near all three facilities, and bicycle/pedestrian access to West Bank Park and Razor Park would improve with the enhanced bicycle/pedestrian crossings at Hansen Lane and Knoop Lane. These improvements would enhance pedestrian connectivity from the stations to the park. A protected bike lane would also be constructed along River Road between Railroad Boulevard and Kourt Drive.

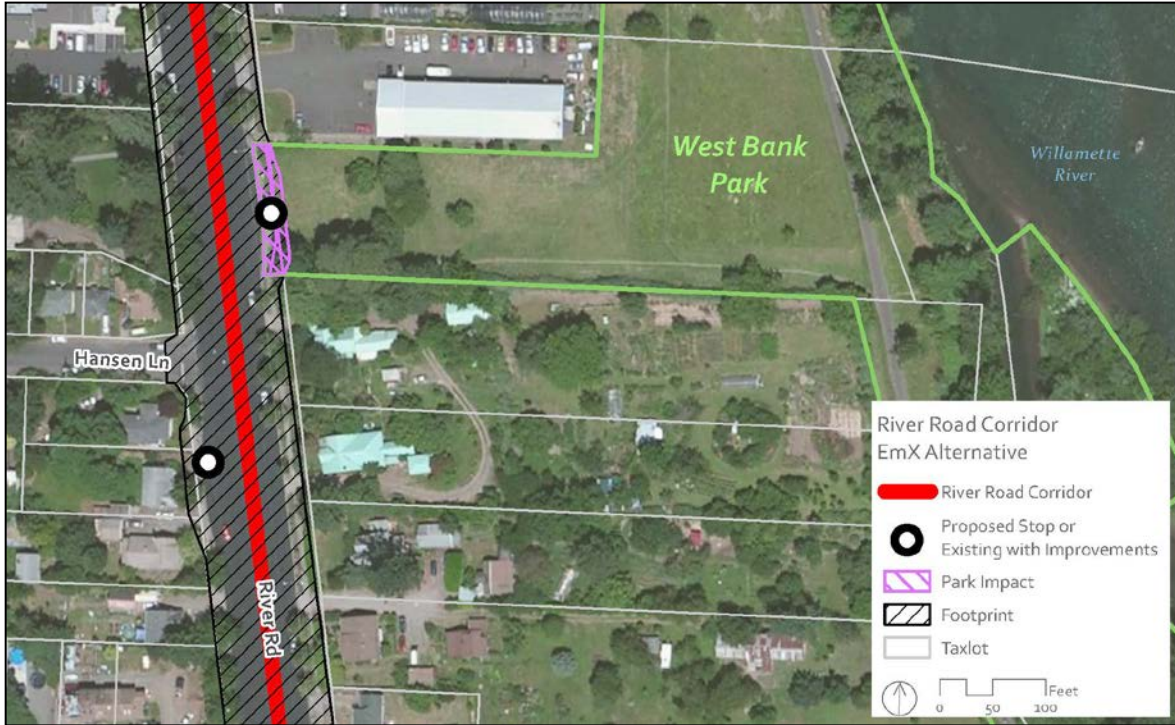
Minor property acquisitions would occur along River Road to accommodate capital improvements, including a BAT lane and a protected bike lane. A small portion of both West Bank Park and Razor Park are located within the construction footprint of these proposed improvements. Approximately 0.06 acre of West Bank Park property is located within the construction footprint of the proposed EmX station and bike lane, and efforts would be made to avoid this potential impact through design refinement (Figure 5.3-2). The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience.

Approximately 0.09 acre of Razor Park property is located within the bike lane construction footprint (Figure 5.3-3). The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience.

5.3.3.1. Section 6(f) Resources

The West Bank Park is known to have received funding from the LWCF. The minor property acquisition could trigger requirement of a Section 6(f) conversion as a result of the EmX Alternative. Further avoidance would be conducted during the advance design phase, as Section 6(f) requires that a conversion can only occur when no practical alternative to the impact exists. If a conversion still persists, consultation with the Eugene Parks and Open Space Division, OPRD, and NPS would be required to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3. The conversion proposal would need to demonstrate that no practical alternative to the impact exists and that the proposed strategy for replacing existing protected Section 6(f) land with new land was in full accordance with both the prerequisites for conversion approval and the criteria for determining “equivalent usefulness and location” of a replacement property, as described in 36 CFR 59.3. Approvals would be required from the Eugene Parks and Open Space Division, OPRD, and NPS.

Figure 5.3-2. River Road Corridor EmX Alternative – West Bank Park



Source: CH2M. (2016b).

Figure 5.3-3. River Road Corridor EmX Alternative – Rasor Park



Source: CH2M. (2016b).

5.4. Indirect and Cumulative Effects

The residual effects of the project would not affect the continued viability, integrity, usage, or value of any park, nor would it degrade the recreational experience. When combined with past, present, and reasonably foreseeable future projects or actions, there would be no significant increases or changes in park use or conflicts with adopted parks-related policies. Therefore, there would be no cumulative effects as a result of the project.

5.5. Short-Term Construction-Related Impacts

Construction would not occur within the immediate vicinity of Washington Jefferson Park or Scobert Gardens. Both the Enhanced Corridor and EmX Alternatives would result in construction along the outer edges of the western boundary of West Bank and Razor Parks. Although there could be minor property acquisitions, there would be no direct loss of park amenities. Users of the parks could experience short-term, minor increases in noise, dust, and visual intrusion as a result of construction along River Road. These effects are not expected to endure over the entire construction period, and best management practices (such as protective safety barriers for pedestrians and bicyclists and advanced notifications) would minimize the effects on park users. Construction activity is not expected to limit recreational activities beyond the border of Razor Park and physical use of 0.03 acre of West Bank Park in areas that do not include active uses or recreational facilities.

Furthermore, LTD's construction practice is to concentrate construction activities in one area until complete, thereby reducing the overall duration of construction disturbance along the corridor and minimizing the dust, noise and inconvenience of detour routes.

5.6. Potential Mitigation Measures

If demonstrated that the permanent impact on West Bank Park can be avoided and short-term minor impacts from construction on West Bank Park would not last over 6 months, then a Section 6(f) conversion would be avoided. If the construction phase could not provide this assurance, then, as required under Section 6(f), further design avoidance would be evaluated during subsequent design development phases.

Refer to Section 5.3.3.1, outlining Section 6(f) requirements when no practical alternative to impacting the park exists. If a conversion still persists, consultation with the Eugene Parks and Open Space Division, OPRD, and NPS would be required to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3, which includes replacement of parkland of equal area and value.

The permanent loss of approximately 0.09 acre of Razor Park property would be mitigated, first by further exploring avoidance during subsequent design development phases. If avoidance is found to be practical, then mitigation measures would include compensation or enhancing the remaining park property consistent with the City's *Full 30-Year Vision for Parks and Recreation Capital Project List with Draft Priorities* (City of Eugene, 2017, March 8). Specific enhancement measures would be determined through coordination with the Eugene Parks and Open Space Division.

5.7. Permits and Approvals

The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3.

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6. 30th Avenue to Lane Community College Corridor Environmental Consequences

The 30th Avenue to LCC Corridor begins at Eugene Station and travels south along Pearl Street (outbound) and north along Oak Street (inbound) to Amazon Parkway, then on E. 30th Avenue to its terminus at the LCC Station. This corridor is approximately 10.2 round-trip miles.

6.1. Affected Environment

Table 6.1-1 identifies parks within 0.25 mile of the 30th Avenue to LCC Corridor. There is one community park, one neighborhood park, two urban plazas, the Proposed Civic Stadium Park and two special facilities. Of the parks and recreation resources within 0.25 mile of the 30th Avenue to LCC Corridor, only 2 are within 200 feet of the corridor: Amazon Park and Laurelwood Golf Course (Figure 6.1-1). All other park and open space resources are at a greater distance and sufficiently screened from any potential adverse project effects.

Table 6.1-1. 30th Avenue to Lane Community College Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Laurelwood Golf Course	Special facility	Within 200 feet	City of Eugene/Private	Golf, performance space, trailheads	No	No
Amazon Park	Community / Metropolitan Park	Within 200 feet	City of Eugene	Ball fields, garden, performance space, picnic	Yes	No
Proposed Civic Stadium Park	Special facility	Within 200 feet	Eugene Civic Alliance non-profit	Sports and entertainment venue on historic civic stadium site	Yes	Unknown
Ribbon Trail	Natural Area	0.06 mile	City of Eugene	Trail and Trailhead	No	No
Bloomberg	Special facility	0.10 mile	City of Eugene	Undeveloped	No	No
Broadway Plaza (Keseey Square)	Urban Plaza	0.10 mile	City of Eugene	Performance space, public art	No	No
Park Blocks	Urban Plaza	0.14 mile	City of Eugene	Picnic tables, public art, performance space	No	No
Charnel Mulligan	Neighborhood Park	0.23 mile	City of Eugene	Performance space, picnic tables, play area	No	Yes ^a

^a This park is currently being reconstructed under a Community Development Block Grant. Such grants do not qualify under Section (6f) protection.

Figure 6.1-1. 30th Avenue to Lane Community College Corridor Parks and Recreation Resources



Locator Map



Legend

- 30th Ave/LCC Corridor
- 30th Ave/LCC Corridor 200 ft Buffer
- 2035 No-Build EmX
- Road
- Water
- Park

Parks & Recreation Areas
30th Avenue to Lane
Community College

Note: Both EmX and Enhanced Corridor Alternatives Shown



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The Amazon Park and Laurelwood Golf Course are located within the Southeast Eugene neighborhood planning subarea. Currently, sidewalks are present on some streets along and adjacent to the corridor. Much of E. 30th Avenue and sections of Amazon Parkway lack sidewalks. Bicycle lanes are present along sections of the major streets within the corridor, including portions of Amazon Parkway north of E. 29th Avenue. E. 30th Avenue does not have continuous dedicated bicycle facilities.

6.1.1. Proposed Civic Stadium Park

The Civic Stadium was originally built in 1938 as a private-public partnership between the South Eugene High School and the Chamber of Commerce. In 2015, the building was burned down but the Eugene Civic Alliance organized a nonprofit organization to raise funds to purchase the land from the local school district to build and operate a community sports facility on the existing site. The site is 8.74 acres and located between Willamette Street and Amazon Parkway. It is planned to provide more space for adult recreation: volleyball, basketball, futsal, and soccer and fitness programs, as well as the home of the Lane United Football Club (a minor league soccer team), and will be available for entertainment events. The facility portion of the land fronting onto Willamette Street is dedicated as a City of Eugene Plaza Park (noted as a “pocket park” in planning maps).

6.1.2. Amazon Park

Amazon Park encompasses nearly 100 acres and includes a variety of recreational opportunities, community centers, and natural areas. Recreational facilities at Amazon Park include two community centers and Eugene’s only outdoor pool. Amazon Community Center offers a variety of enrichment activities, classes, workshops, special events, and summer camps for people of all ages. Hilyard Community Center is where the City’s Adaptive Recreation Program is housed, which offers opportunities for people with physical, developmental, and emotional disabilities to develop active health and playful lifestyles. The Adidas Oregon Trail occupies the parkland between Amazon Parkway and Amazon Creek. It is a 5.5-mile jogging path, which winds through Amazon Park, along Amazon Parkway and up to Frank Kinney Park, where a connection to the Ridgeline Park is at the end of Canyon Drive. Other notable facilities in Amazon Park include ball and soccer fields, tennis courts, a community garden, an outdoor performance space, play area, a small skateboard bowl, and a dog park.

Transit access is provided by LTD Routes 82 and 92 along Amazon Parkway. Amazon Station, an existing park and ride lot (E. 29th Avenue and Amazon Parkway), is located in the southwestern area of the park. The park and ride lot is owned by the City of Eugene and provides 44 parking spaces. Vehicular access into the park is provided from the east off E. 28th Avenue. Parking is provided at several locations, including near the Hilyard Community Center.

6.1.3. Laurelwood Golf Course

Laurelwood Golf Course is a regulation 9-hole facility owned by the City and privately operated. Transit service is not provided to the golf course. There is vehicular access via E. 24th Avenue and Agate Street. There is no vehicular access from E. 30th Avenue.

6.2. Effects Common to Most or All Build Alternatives

Beneficial effects would include increased access to the parks within the API and along the corridor through more frequent and reliable transit service, as shown in Table 6.2-1. In addition, pedestrian connectivity would be enhanced with the new or enhanced pedestrian crossings along the corridor.

Table 6.2-1. 30th Avenue to Lane Community College Corridor – Comparison of Alternatives

Item	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Parks within 200 feet	<ul style="list-style-type: none"> Amazon Park and Laurelwood Golf Course 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 81 (30/30/30) Route 82 (10/15/20) 51 bus stops 	<ul style="list-style-type: none"> 30th Avenue to LCC (15/15/15) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> 30th Avenue to LCC (10/10/10) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> One new crossings and two enhanced crossings 	<ul style="list-style-type: none"> Eight new crossings and two enhanced crossings
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> A minor sliver of 0.26-acre property impact on the Proposed Civic Stadium Park may be avoidable when design advances. The improvements at E. 27th Avenue and Amazon Parkway (new signalized pedestrian crossing, sidewalks, and bus shelter) would impact approximately 0.29 acre of Amazon Park property No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> A minor sliver of 0.3-acre property impact on the Proposed Civic Stadium Park may be avoidable when design advances. The improvements at E. 27th Avenue and Amazon Parkway (new signalized pedestrian crossing, sidewalks, and EmX station) would impact approximately 1.0 acre of Amazon Park property No anticipated impacts that could lead to a Section 6(f) conversion

6.3. Long-Term Direct Impacts

6.3.1. No-Build Alternative

There would be no major bus capital improvements under the No-Build Alternative. The service frequencies near the Amazon Park and Laurelwood Golf Course would not substantially change under the No-Build Alternative.

6.3.2. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative (Figure 6.1-1), transit accessibility would improve with the new bike facilities on Oak and Pearl Streets; new and enhanced pedestrian crossings near Amazon Park; new or reconstructed traffic signals; roadway operations improvements at right-turn lanes on Coburg Road and at Randy Papé Beltline interchange; improvements at existing bus stops; construction of new

stops; and a traffic signal on Amazon Parkway at E. 20th Avenue. Beneficial effects would include more frequent service to the following resources:

- Enhanced Corridor service along Amazon Parkway and at the Amazon Station would be less frequent than the fixed-route service under the No-Build Alternative. However, bicycle and pedestrian access to the park would improve with the new crossing at Amazon Parkway and E. 27th Avenue and a new traffic signal on Amazon Parkway at E. 20th Avenue.
- Enhanced Corridor service along Amazon Parkway will serve the Proposed Civic Stadium Park destination when it is built.
- There would be no changes in transit accessibility to the Laurelwood Golf Course.

Minor property acquisitions would occur along Proposed Civic Stadium Park (Figure 6.3-1) and Amazon Parkway to accommodate capital improvements (Figure 6.3-2). A narrow sliver of 0.26 acre of property may be needed along the border of the Proposed Civic Stadium Park. This area may be avoided during subsequent design phases. This is not proposed to be a publicly owned park, but entrance and use would be open to all users on fee basis.

The improvements at E. 27th Avenue and Amazon Parkway (a new signalized pedestrian crossing, sidewalks, and a bus shelter) would impact approximately 0.29 acre of Amazon Park property. The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience. The specific area of impact may change during future design phases if subsequent surveys discover protected plant species exist in or around this station area. This evaluation is recorded within the *MovingAhead Ecosystems Technical Report* (Environmental Science & Assessment, LLC, and CH2M, 2017).

Figure 6.3-1. 30th Avenue to Lane Community College Corridor Enhanced Corridor Alternative – Proposed Civic Stadium Park



Source: CH2M. (2016b).

Figure 6.3-2. 30th Avenue to Lane Community College Corridor Enhanced Corridor Alternative – Amazon Park



Source: CH2M. (2016b).

6.3.2.1. Section 6(f) Resources

No parks are known to have received funding from the LWCF.

6.3.3. EmX Alternative

Under the EmX Alternative (Figure 6.1-1), transit accessibility would improve with the new and enhanced pedestrian crossings; the addition of a new cycle track on High Street, connecting to the Amazon Park multi-use trail; new sidewalks; and the replacement of 30 existing bus stop with 19 new EmX stations. Transit reliability would improve with the construction of queue jumps, adding BAT lanes on Oak and Pearl Streets, extending E. 20th Avenue, and adding a new traffic signal on Amazon Parkway. Beneficial effects would include increased access and more frequent service to the following resources:

- EmX service along Amazon Parkway and at the Amazon Station would be more frequent than both the fixed-route service under the No-Build Alternative and the service under the Enhanced Corridor Alternative. Amazon Park users who travel by transit would benefit from the EmX service along Amazon Parkway and at the Amazon Station. Similar to the Enhanced Corridor Alternative, bicycle and pedestrian access to the park would improve with the construction of a new crossing at Amazon Parkway and E. 27th Avenue. This alternative would also decommission a pedestrian bridge and convert it to an enhanced bicycle/pedestrian crossing on Amazon Parkway at the Civic Stadium development site. The EmX Alternative would also construct a two-way cycle track on High Street

from E. 10th Avenue connecting to the Amazon Active Transportation Corridor multi-use path at E. 19th Avenue. These improvements would enhance pedestrian connectivity from the park.

- There would be no changes in transit accessibility to the Laurelwood Golf Course. The EmX service along Amazon Parkway would serve the Proposed Civic Stadium Park destination.

Minor 0.3 acre of property acquisitions would occur along the Proposed Civic Stadium Park (Figure 6.3-3) and Amazon Parkway to accommodate capital improvements (Figure 6.3-4). A narrow sliver of property may be needed along the border of the Proposed Civic Stadium Park. This area may be avoided during subsequent design phases.

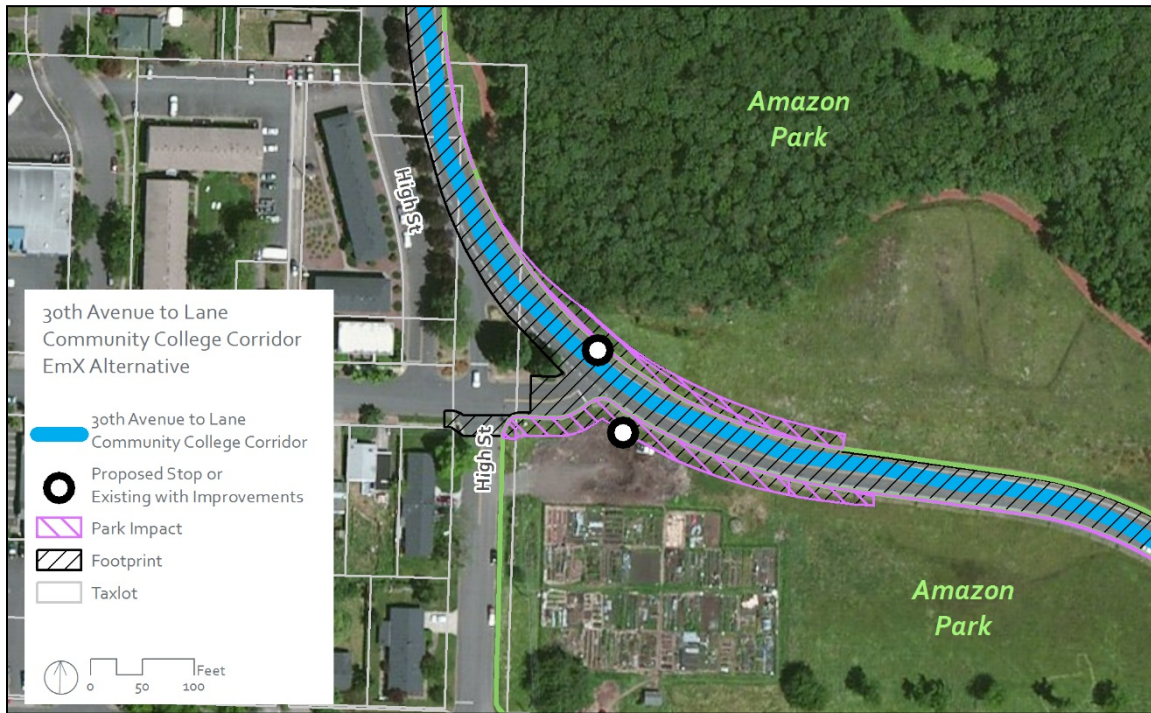
The improvements at E. 27th Avenue and Amazon Parkway (a new signal, sidewalks, an EmX station, and a pedestrian crossing) would impact approximately 1 acre of Amazon Park property. The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience. The specific area of impact may change during future design phases if subsequent surveys discover protected plant species exist in or around this station area. This evaluation is recorded within the *MovingAhead Ecosystems Technical Report* (Environmental Science & Assessment, LLC., and CH2M, 2017).

Figure 6.3-3. 30th Avenue to Lane Community College Corridor EmX Alternative – Proposed Civic Stadium Park



Source: CH2M. (2016b).

Figure 6.3-4. 30th Avenue to Lane Community College Corridor EmX Alternative – Amazon Park



Source: CH2M. (2016b).

6.3.3.1. Section 6(f) Resources

No parks are known to have received funding from the LWCF.

6.4. Indirect and Cumulative Effects

The residual effects of the project would not affect the continued viability, integrity, usage, or value of any park, nor would it degrade the recreational experience. When combined with past, present, and reasonably foreseeable future projects or actions, there would be no significant increases or changes in park use or conflicts with adopted parks-related policies. Therefore, there would be no cumulative effects as a result of the project.

6.5. Short-Term Construction-Related Impacts

Construction along Amazon Parkway would result in minor, short-term, construction-related impacts on Amazon Park. Construction would occur along the outer edges of the western boundary of the park. There would be no direct loss of park amenities. However, users would experience short-term minor increases in noise, dust, and visual intrusion as a result of construction. These effects are not expected to endure the entire construction period, and best management practices (such as protective safety barriers for pedestrians and bicyclists and advanced notifications) would minimize the effects on park users. Construction activity is not expected to limit recreational activities beyond the physical use of Amazon Park.

Furthermore, LTD's construction practice is to concentrate construction activities in one area until complete, thereby reducing the overall duration of construction disturbance along the corridor and minimizing the dust, noise and inconvenience of detour routes.

6.6. Potential Mitigation Measures

Adequate barriers and flagging would be provided for construction near parks and recreation resources along Amazon Parkway. The location of the bus shelter or station in Amazon Park would be coordinated with the City. The permanent loss of park property would be mitigated by compensation or enhancing the remaining park property consistent with the City's *Full 30-Year Vision for Parks and Recreation Capital Project List with Draft Priorities* (City of Eugene, 2017, March 8). Specific enhancement measures would be determined through coordination with the Eugene Parks and Open Space Division.

6.7. Permits and Approvals

There are no anticipated impacts that could lead to a Section 6(f) conversion.

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7. Coburg Road Corridor Environmental Consequences

The Coburg Road Corridor begins at Eugene Station and continues to Coburg Road using the Ferry Street Bridge. The corridor continues north on Coburg Road to Crescent Avenue, east on Crescent Avenue and Chad Drive to N. Game Farm Road, and south on N. Game Farm Road and Gateway Street to the existing Gateway Station at the Gateway Mall. This corridor is approximately 11.2 round-trip miles.

7.1. Affected Environment

Table 7.1-1 identifies parks within 0.25 mile of the Coburg Road Corridor. There are two metropolitan parks, one community park, two neighborhood parks, two urban plazas, and one natural area.

Table 7.1-1. Coburg Road Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Park Blocks	Urban Plaza	Within 200 feet	City of Eugene	Picnic tables, public art, performance space	Yes	No
Skinner Butte	Metropolitan Park	Within 200 feet	City of Eugene	Ball fields, picnic tables rock climbing recreation center	Yes	Yes
Alton Baker	Metropolitan Park	Within 200 feet	City of Eugene	BMX track, boat launch disc golf, dog park, picnic tables	Yes	Yes
Broadway Plaza	Urban Plaza	0.6 mile	City of Eugene	Performance space, public art	No	No
Ascot	Community Park	0.11 mile	City of Eugene	Ball fields, soccer field, track	No	No
Sorrel Pond	Natural Area	0.14 mile	City of Eugene	Looped path	No	No
Oakmont	Neighborhood Park	0.14 mile	City of Eugene	Basketball, picnic tables, play area	No	No
Willakenzie	Neighborhood Park	0.20 mile	City of Eugene	Looped path, picnic tables, play area	No	No

Of the parks and recreation resources within 0.25 mile of the Coburg Corridor, only three are within 200 feet of the corridor: Park Blocks, Skinner Butte Park, and Alton Baker Park (Figure 7.1-1). All other park and open space resources are at a greater distance and sufficiently screened from any potentially adverse project effects. The Park Blocks and Skinner Butte Park are located within the City Central neighborhood planning area and the Alton Baker Park is located within the Willakenzie neighborhood planning subarea (City of Eugene, 2016, July). Currently, sidewalks are present on most streets along and adjacent to the corridor,

Figure 7.1-1. Coburg Road Corridor Parks and Recreation Resources



Locator Map



Legend

- Coburg Road Corridor EmX Alternative
- - - - Coburg Road Corridor Enhanced Corridor Alternative
- ▨ Coburg Road Corridor 200 ft Buffer
- 2035 No-Build EmX
- Road
- Water
- Park

Parks & Recreation Areas
Coburg Road Corridor

Note: Both EmX and Enhanced Corridor Alternatives Shown



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except for sections of Crescent Avenue and Chad Drive. Coburg Road has continuous bicycle lanes north of Oakway Road and shared-use paths on both sides of the street south of Oakway Road.

7.1.1. Park Blocks

Park Blocks is a 1.5-acre urban plaza located in the heart of downtown Eugene in the midst of employment, city and county governments, and commercial activity. The park is a critical component of Eugene's identity and economic health. It is home to the Saturday Market and Lane County Farmers' Market. Transit access to Park Blocks is provided by LTD Routes 66 and 67, with bus stops on Oak and Pearl Streets near the park. On-street parking is also available nearby.

7.1.2. Skinner Butte Park

Skinner Butte Park is an approximately 100-acre metropolitan park located along the western side of the Willamette River, just north of downtown Eugene. The park serves as a community destination and includes features such as Skinner Butte, the Columns climbing area, RiverPlay Discovery Playground, Campbell Senior Center, Lamb Cottage, Skinner City Farm community garden, acres of lawn and meadows, hiking trails, bike paths, and picnic areas. The numerous trails take off from a number of locations, including the north side, off Cheshire Avenue; the Columns on the west side; and from the summit. Transit access to Skinner Butte Park is provided by LTD Routes 66 and 67, with stops approximately 0.25 mile from the park on E. 2nd and 3rd Avenues. Vehicular access into the park is provided from W. 3rd Avenue and High Street. The park includes an internal road system with parking at several locations, including near the Campbell Senior Center and the ball fields.

7.1.3. Alton Baker Park

Alton Baker Park, Eugene's largest developed park at approximately 400 acres, consists of forest, fields, plains, and trails. The park is located along the east banks of the Willamette River, directly across from the University of Oregon. Alton Baker Park's uses and facilities have continued to grow alongside the city of Eugene, with the park getting several additional features in recent years. Features include a concert venue, biking and walking trails that connect all over the Eugene and Springfield area, a canoe canal, a BMX track, a disc golf course, as well as an undeveloped and natural section. Several local events are also hosted in the park every year, including Art and the Vineyard and the Eugene Rotary Duck Race, in addition to the regular concerts hosted at the Cuthbert Amphitheater. Transit access to Alton Baker Park along Coburg Road is provided by LTD Routes 66 and 67. The closest bus stop is located at Coburg Road and Country Club Road. Vehicular access into the park is provided from Country Club Road and Leo Harris Parkway. The park includes an internal road system with parking at several locations.

7.2. Effects Common to Most or All Build Alternatives

Beneficial effects would include increased access to the parks within the API and along the corridor through more frequent and reliable transit service (Table 7.2-1). In addition, pedestrian connectivity would be enhanced with the new or enhanced bicycle/pedestrian crossings along the corridor.

Table 7.2-1. Coburg Road Corridor – Comparison of Alternatives

Item	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
Parks within 200 feet	<ul style="list-style-type: none"> Park Blocks, Skinner Butte Park, and Alton Baker Park 		
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> Route 66 (15/15/15) Route 67 (15/15/15) 43 bus stops 	<ul style="list-style-type: none"> Coburg Road (15/15/15) New Route 60 (15/15/15) Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters 	<ul style="list-style-type: none"> Highway 99 (10/10/10) New Route 60 (15/15/15) New EmX stations would be spaced approximately 0.33 mile apart and include shelters, benches, and bicycle racks
Beneficial Effects	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Seven new crossings and two enhanced crossings 	<ul style="list-style-type: none"> Seven new crossings and two enhanced crossings
Adverse Impacts	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> None No anticipated impacts that could lead to a Section 6(f) conversion 	<ul style="list-style-type: none"> Minor property acquisitions would occur along Oak Street to accommodate a new EmX station; the improvements would impact approximately 0.5-acre Park Blocks property No anticipated impacts that could lead to a Section 6(f) conversion

7.3. Long-Term Direct Impacts

7.3.1. No-Build Alternative

There would be no major bus capital improvements under the No-Build Alternative. The service frequencies near the Park Blocks, Skinner Butte Park, and Alton Baker Park would not substantially change under the No-Build Alternative.

7.3.2. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, accessibility would improve with the new and enhanced bicycle and pedestrian crossings, improvements to existing bus stops, and the construction of new stops. Transit reliability would also improve with the construction of new traffic signals, intersection improvements at several locations on Coburg Road, the addition of queue jumps, and the addition of BAT lanes south of the I-105 interchange. Beneficial effects would include increased access and more frequent service to the following resources:

- Park Blocks users who travel by transit would benefit from the more frequent bus service offered under the Enhanced Corridor Alternative. Bus stops along Pearl and Oak Streets would continue to serve the resource.
- Skinner Butte Park users would benefit from more frequent bus service. However, the closest bus stops (on E. 2nd and 3rd Avenues) would no longer be used. Park users would have to walk to the bus stops along Pearl and Oak Streets near E. 7th and 8th Avenues.

- Alton Baker Park users would benefit from more frequent bus service. An enhanced shelter would be constructed at the northbound and southbound stops at Coburg Road and Country Club Road.

No adverse impacts to the Park Blocks, Skinner Butte Park, or Alton Baker Park are anticipated because the existing road width near these resources would be maintained.

7.3.2.1. Section 6(f) Resources

The Skinner Butte Park and Alton Baker Park are known to have received funding from the LWCF. However, there are no anticipated impacts that could lead to a Section 6(f) conversion as a result of the Enhanced Corridor Alternative.

7.3.3. EmX Alternative

Under the EmX Alternative (Figure 7.1-1), accessibility would improve with new and enhanced bicycle and pedestrian crossings, improvements to one existing bus stop, and construction of new EmX stations. Transit reliability would also improve with the construction of exclusive transit lanes at several locations on Coburg Road and intersection reconstruction at multiple locations in the corridor. Beneficial effects would include increased access and more frequent service to the following resources:

- Park Blocks users who travel by transit would benefit from the more frequent bus service offered under the EmX Alternative. Bus stops along Pearl and Oak Streets would continue to serve the resource.
- Skinner Butte Park users would benefit from more frequent transit service. However, the closest bus stops (on E. 2nd and 3rd Avenues) would no longer be used. Park users would have to walk to the EmX stations along Pearl and Oak Streets near E. 7th and 8th Avenues.
- Alton Baker Park users would benefit from more frequent transit service. A new EmX station would be constructed at the northbound and southbound stops at Coburg Road and Country Club Road.

No adverse impacts to Skinner Butte Park or Alton Baker Park are anticipated as the existing road width near these resources would be maintained. Minor property acquisitions would occur along Oak Street to accommodate a new EmX station. The improvements would impact approximately 0.05 acre of Park Blocks property (Figure 7.3-1).

7.3.3.1. Section 6(f) Resources

Skinner Butte Park and Alton Baker Park are known to have received funding from the LWCF. However, there are no anticipated impacts that could lead to a Section 6(f) conversion as a result of the EmX Alternative.

7.4. Indirect and Cumulative Effects

The residual effects of the project would not affect the continued viability, integrity, usage, or value of any park, nor would it degrade the recreational experience. When combined with past, present, and reasonably foreseeable future projects or actions there would be no significant increases or changes in park use or conflicts with adopted parks-related policies. Therefore, there would be no cumulative effects as a result of the project.

Figure 7.3-1. Coburg Road Corridor EmX Alternative – Park Blocks



Source: CH2M. (2016b).

7.5. Short-Term Construction-Related Impacts

Construction would not occur within the immediate vicinity of Skinner Butte or Alton Baker Park, but would occur along the outer edges of the Park Blocks. There would be no direct loss of park amenities. However, users would experience short-term, minor increases in noise, dust, and visual intrusion as a result of construction. Construction effects near these parks are not expected to endure the entire construction period, and best management practices (such as protective safety barriers for pedestrians and bicyclists and advanced notifications) would minimize the effects on park users. Construction activity is not expected to limit recreational activities beyond the physical use of 0.05 acre on the Park Blocks in an area that does not include active uses or recreational facilities.

Furthermore, LTD’s construction practice is to concentrate construction activities in one area until complete, thereby reducing the overall duration of construction disturbance along the corridor and minimizing the dust, noise and inconvenience of detour routes.

7.6. Potential Mitigation Measures

Short-term, minor impacts from construction would be addressed through coordination of construction timing with the Eugene Parks and Open Space Division to avoid or reduce disruptive activities for users of parks and recreation resources. Adequate barriers and flagging would be provided for construction of the EmX station near Park Blocks.

The permanent loss of 0.05 acre of Park Blocks property would be mitigated, first by further exploring avoidance during subsequent design development phases. If avoidance is found to be practical, then mitigation measures would include compensation or enhancing the remaining park property consistent with City's *Full 30-Year Vision for Parks and Recreation Capital Project List with Draft Priorities* for the Park Blocks (City of Eugene, 2017, March 8). Specific enhancement measures would be determined through coordination with the Eugene Parks and Open Space Division.

7.7. Permits and Approvals

There are no anticipated impacts that could lead to a Section 6(f) conversion.

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8. Martin Luther King, Jr. Boulevard Corridor Environmental Consequences

The Martin Luther King, Jr. Boulevard Corridor begins at Eugene Station and travels through downtown Eugene on Oak and Pearl Streets and W. 7th and 8th Avenues. The corridor uses the Ferry Street Bridge to reach Martin Luther King, Jr. Boulevard and continues east on Martin Luther King, Jr. Boulevard past Autzen Stadium to Centennial Boulevard. Although transit service continues along Centennial Boulevard, capital improvements for the corridor terminate at I-5. The corridor is approximately 6.0 miles.

Table 8.1-1 identifies parks within 0.25 mile of the Martin Luther King, Jr. Boulevard Corridor. There are two metropolitan parks, two urban plazas, and one natural area.

Table 8.1-1. Martin Luther King, Jr. Boulevard Corridor Parks and Recreation Resources within 0.25 mile

Name	Facility Type	Approximate Distance from Corridor	Ownership and Management	Site Features and Characteristics	Potential Views of Corridor	LWCF or Similar Grant Funding?
Park Blocks	Urban Plaza	Within 200 feet	City of Eugene	Picnic tables, public art, performance space	No	No
Skinner Butte	Metropolitan Park	Within 200 feet	City of Eugene	Ball fields, picnic tables rock climbing recreation center	Yes	Yes
Alton Baker	Metropolitan Park	Within 200 feet	City of Eugene	BMX track, boat launch disc golf, dog park, picnic tables	Yes	Yes
Broadway Plaza	Urban Plaza	0.6 mile	City of Eugene	Performance space, public art	No	No
Sorrel Pond	Natural Area	0.22 mile	City of Eugene	Looped path	No	No

Of the parks and recreation resources within 0.25 mile of the Martin Luther King, Jr. Boulevard Corridor, only 3 are within 200 feet of the corridor: Park Blocks, Alton Baker, and Skinner Butte Park (Figure 8.1-1). All other park and open space resources are at a greater distance and sufficiently screened from any potential adverse project effects. The Park Blocks and Skinner Butte Park are located within the City Central neighborhood planning area and the Alton Baker Park is located within the Willakenzie neighborhood planning subarea (City of Eugene, 2016, July).

Currently, sidewalks are present on most streets along and adjacent to the corridor, but there are no bicycle lanes. However, the sidewalk on Martin Luther King, Jr. Boulevard is wide and functions as a shared-use path for cyclists and pedestrians. No sidewalk or bicycle lane improvements are planned in the corridor for the next 20 years.

Figure 8.1-1. Martin Luther King, Jr. Boulevard Corridor Parks and Recreation Resources



8.1. Park Blocks

Park Blocks is a 1.5-acre urban plaza, located in the heart of downtown Eugene in the midst of employment, city and county governments, and commercial activity. The park is a critical component of Eugene's identity and economic health. It is home to the Saturday Market and Lane County Farmers' Market. Transit access to Park Block along W. 8th Avenue is provided by LTD Routes 12, 13, 24, 91 and 96. The closest bus stop is located at E. 8th Avenue and Park Street.

8.1.1. Skinner Butte Park

Skinner Butte Park is an approximately 100-acre metropolitan park located along the western side of the Willamette River just north of downtown Eugene. The park serves as a community destination and includes features such as Skinner Butte, the Columns climbing area, RiverPlay Discovery Playground, Campbell Senior Center, Lamb Cottage, Skinner City Farm community garden, acres of lawn and meadows, hiking trails, bike paths, and picnic areas. The numerous trails take off from a number of locations, including the northern side, off Cheshire Avenue; the Columns on the western side; and from the summit. Transit access to Skinner Butte Park is provided by LTD Routes 66 and 67 along E. 2nd and 3rd Avenues and Pearl Street. The park includes an internal road system with parking at several locations, including near the Campbell Senior Center and near the ball fields.

8.1.2. Alton Baker Park

Alton Baker Park, Eugene's largest developed park at approximately 400 acres, consists of forest, fields, plains, and trails. The park is located along the eastern banks of the Willamette River directly across from the University of Oregon. Alton Baker's uses and facilities have continued to grow alongside the city of Eugene, with several park features added in recent years. Features include a concert venue, biking and walking trails that connect all over the Eugene and Springfield area, a canoe canal, a BMX track, a disc golf course, as well as an undeveloped and natural eastern section to the park. Several local events are also hosted in the park every year, including Art and the Vineyard and the Eugene Rotary Duck Race, in addition to the regular concerts hosted at the Cuthbert Amphitheater.

Transit access to Alton Baker Park along Martin Luther King, Jr. Boulevard is provided by LTD Routes 13 and 79x. Several bus stops are located along Martin Luther King, Jr. Boulevard within close proximity to the park. The park includes an internal road system with parking at several locations.

8.2. Effects Common to Most or All Build Alternatives

Beneficial effects would include increased access to downtown park destinations, as well as increased access to nearby parks throughout the API, through more frequent and reliable transit service (Table 8.2-1). In addition, the new or enhanced bicycle/pedestrian crossings along the corridor would enhance pedestrian connectivity.

Table 8.2-1. Martin Luther King, Jr. Boulevard Corridor – Comparison of Alternatives

Item	No-Build Alternative	Enhanced Corridor Alternative
Parks within 200 feet	<ul style="list-style-type: none"> • Park Blocks, Skinner Butte Park, and Alton Baker Park 	
Bus Frequencies (peak/off-peak/evening) and Facilities	<ul style="list-style-type: none"> • Route 13 (30/30/30) • 20 bus stops 	<ul style="list-style-type: none"> • Martin Luther King, Jr. Boulevard (15/15/15) • Bus stops would be spaced approximately 0.25 mile apart; some stops would be improved with seating and shelters
Beneficial Effects	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Seven new crossings and two enhanced crossings
Adverse Impacts	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Construction of the BAT lane and the new signal at Martin Luther King, Jr. Boulevard and Leo Harris Parkway could affect 0.13 acre of the Alton Baker Park property • The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal as a result of impacts to Alton Baker Park

8.3. Long-Term Direct Impacts

8.3.1. No-Build Alternative

There would be no major bus capital improvements under the No-Build Alternative. Route frequencies near the Park Blocks, Alton Baker, and Skinner Butte Park would not substantially change under the No-Build Alternative.

8.3.2. Enhanced Corridor Alternative

Under the Enhanced Corridor Alternative, transit accessibility would improve with new pedestrian crossings, and improvements to existing bus stops and the construction of new stops. Transit reliability would improve with the reconstruction of traffic signals at the intersections of Coburg Road and Martin Luther King, Jr. Boulevard and of Martin Luther King, Jr. Boulevard and Centennial Loop; the repurposing of existing general purpose lanes to BAT lanes on Martin Luther King, Jr. Boulevard; and adding a new traffic signal at the intersection of Martin Luther King, Jr. Boulevard and Leo Harris Parkway. Bus operations under the Enhanced Corridor Alternative would be the same as bus operations under the No-Build Alternative with the exception of eliminating Route 13 and replacing it with Enhanced Corridor service.

No adverse impacts to the Park Blocks or Skinner Butte Park are anticipated as the existing road width near these resources would be maintained.

Minor property acquisitions would occur along Martin Luther King, Jr. Boulevard to accommodate capital improvements on Alton Baker Park property (Figure 8.3-1). Construction of the BAT lane and the new signal at Martin Luther King, Jr. Boulevard and Leo Harris Parkway could affect 0.13 acre of the Alton Baker Park property. The area of impact would not affect the continued viability, integrity, usage, or value of the park, nor would it degrade the recreational experience.

Figure 8.3-1. Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Alternative – Alton Baker Park



Source: CH2M. (2016b).

8.3.2.1. Section 6(f) Resources

The Alton Baker Park is known to have received funding from the LWCF. The minor property acquisition could lead to a Section 6(f) conversion as a result of the Enhanced Corridor Alternative. Further avoidance would be conducted during the advance design phase, as Section 6(f) requires that a conversion can only occur when no practical alternative to the impact exists. If a conversion still persists, consultation with the Eugene Parks and Open Space Division, OPRD, and NPS would be required to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3. The conversion proposal would need to demonstrate that no practical alternative to the impact exists and that the proposed strategy for replacing existing protected Section 6(f) land with new land was in full accordance with both the prerequisites for conversion approval and the criteria for determining “equivalent usefulness and location” of a replacement property, as described in 36 CFR 59.3. Approvals would be required from the Eugene Parks and Open Space Division, OPRD, and NPS.

8.4. Indirect and Cumulative Effects

The residual effects of the project would not affect the continued viability, integrity, usage, or value of any park, nor would it degrade the recreational experience. When combined with past, present, and reasonably foreseeable future projects or actions, there would be no significant increases or changes in park use or conflicts with adopted parks-related policies. Therefore, there would be no cumulative effects as a result of the project.

8.5. Short-Term Construction-Related Impacts

Construction would not occur within the immediate vicinity of Park Blocks or Skinner Butte Park. Construction would occur near Alton Baker Park. Construction of the business access and transit lane and the new signal at Martin Luther King, Jr. Boulevard and Leo Harris Parkway could affect 0.13 acre of the Alton Baker Park property. Short-term effects from construction include noise, dust, and short-term access detours. These effects are not expected to endure the entire construction period, and best management practices (such as protective safety barriers for pedestrians and bicyclists and advanced notifications) would minimize the effects on park users. Construction activity is not expected to limit recreational activities beyond the physical use of 0.13 acre of Alton Baker Park in an area that does not include active uses or recreational facilities.

Furthermore, LTD's construction practice is to concentrate construction activities in one area until complete, thereby reducing the overall duration of construction disturbance along the corridor and minimizing the dust, noise and inconvenience of detour routes.

8.6. Potential Mitigation Measures

Short-term minor impacts from construction would be addressed through coordination of construction timing with the Eugene Parks and Open Space Division to avoid or reduce disruptive activities for users of parks and recreation resources. Adequate barriers and flagging would be provided for construction near parks and recreation resources.

The permanent loss of 0.13 acre of Alton Baker Park property would be mitigated by further avoidance design during the advance design phase. Refer to Section 8.3.2.1 outlining Section 6(f) requirements when no practical alternative to impacting the park exists. If a conversion still persists, consultation with the Eugene Parks and Open Space Division, OPRD, and NPS would be required to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3.

8.7. Permits and Approvals

Property acquisition of Alton Baker Park would trigger a Section 6(f) conversion. The project would need to coordinate with the Eugene Parks and Open Space Division, OPRD, and NPS to develop a Section 6(f) conversion proposal, in accordance with 36 CFR 59.3.

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Appendix A: Glossary and Naming Conventions

This appendix includes a detailed list of acronyms, abbreviations, and technical terms used throughout this report. It also includes naming conventions used in the MovingAhead Project.

Acronyms and Abbreviations

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
/H-RCP	Historic Structures or Sites Combine Zone
/WP	Waterside Protection
/WQ	Water Quality
°C	degree(s) Celsius
µg/L	microgram(s) per liter
µg/m ³	microgram(s) per cubic meter
AA	Alternatives Analysis
AAC	all aluminum conductor
AASHTO	American Association of State Highway and Transportation Officials
AAI	All Appropriate Inquiry
ACS	American Community Survey
ADA	Americans with Disabilities Act
AEO	Annual Energy Outlook
APE	Area of Potential Effect
API	Area of Potential Impact
approx.	Approximately
ARTS	All Roads Transportation Safety Program
ATR	Automated Traffic Recording
BAT	business access and transit
BEST	Better Eugene Springfield Transit
BFE	Base Flood Elevation
BMP	best management practice
BPA	Bonneville Power Administration
BRT	bus rapid transit
Btu	British thermal unit
c	Circa
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CFR	Code of Federal Regulations
CFU	Colony-Forming Unit
CH2M	CH2M HILL, Inc.
CIG	Capital Investment Grant
CIP	Capital Improvements Program
City	City of Eugene
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COGP	County Opportunity Grant Program
Corps	U.S. Army Corps of Engineers
CRL	Confirmed Release List
CSZ	Cascadia Subduction Zone
CTR	commute trip reduction
CWA	Clean Water Act
CY	cubic yard
dB	Decibel
dba	A-weighted decibel
DBE	Disadvantaged Business Enterprise
DEIS	Draft Environmental Impact Statement. Also referred to as Draft EIS.
DEQ	Oregon Department of Environmental Quality
DKS	DKS Associates
DLS	Donation Land Claim
DOE	Determination of Eligibility
DOGAMI	Oregon Department of Geology and Mineral Industries
DOT	Department of Transportation
Draft EIS	Draft Environmental Impact Statement. Also referred to as DEIS.
Draft Envision Eugene	<i>Draft Envision Eugene Community Vision</i> (Envision Eugene, 2016, July)
Draft Eugene 2035 TSP	<i>DRAFT Eugene 2035 Transportation System Plan</i> (City of Eugene, 2016)
DSL	Oregon Department of State Lands
DU	dwelling unit
EA	Environmental Assessment or each
EC	City of Eugene Code
EC	eligible contributing

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
EC	Enhanced Corridor Alternative (in some tables)
ECLA	<i>Eugene Comprehensive Lands Assessment</i> (ECONorthwest, 2010, June)
ECSI	Environmental Cleanup Site Information database (Oregon DEQ, 2016)
EFH	essential fish habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
EmX	Emerald Express, Lane Transit District’s Bus Rapid Transit System
EmX	EmX Alternative (in some tables)
EOA	Equity and Opportunity Assessment
EPA	U. S. Environmental Protection Agency
ES	eligible significant
ES NR	eligible significant NRHP
ESA	Endangered Species Act or Environmental Site Assessment
ESH	essential indigenous anadromous salmonid habitat
ESU	Evolutionarily Significant Unit
EWEB	Eugene Water & Electric Board
FAST Act	Fixing America’s Surface Transportation Act
FEIS	Final Environmental Impact Statement. Also referred to as Final EIS.
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act of 1974
Final EIS	Final Environmental Impact Statement. Also referred to as FEIS.
FOE	Finding of Effect
FPPA	Farmland Protection Policy Act, 7 U.S.C. 4201-4209 and 7 CFR 658
FRA	Federal Railroad Administration
ft	foot (feet)
ft ²	square foot (feet)
FTA	Federal Transit Administration
FTN	Frequent Transit Network
FY	fiscal year
GAN	Grant Anticipation Note
GARVEE	Grant Anticipation Revenue Vehicle
GHG	greenhouse gas
GIS	geographic information system
GLO	General Land Office
Heritage	Heritage Research Associates, Inc.

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
HGM	Hydro-geomorphic
HMTA	Hazardous Materials Transport Act of 1975, with amendments in 1990 and 1994
HOV	high-occupancy vehicle
HPNW	Historic Preservation Northwest
I-5	Interstate 5
I-105	Interstate 105
IOF	Immediate Opportunity Fund
ISA	International Society of Arboriculture
ISTEA	Intermodal Surface Transportation Efficiency Act
kV	kilovolt(s)
LaneACT	Lane Area Commission on Transportation
LCC	Lane Community College
LCDC	Land Conservation and Development Commission
LCOG	Lane Council of Governments
Ldn	day-night sound level
LE	Listed Endangered
LEP	limited English proficiency
L_{eq}	equivalent sound level
LF	lineal foot (feet)
LGAC	Local Government Affairs Council
LGGP	Local Government Grant Program
LID	Local Improvement District
L_{max}	maximum sound level
L_{min}	minimum sound level
LNG	liquefied natural gas
LOS	level of service
LPA	Locally Preferred Alternative
LRAPA	Lane Regional Air Protection Agency
LRFP	LTD's Long-Range Financial Plan
LRT	Light Rail Transit
LRTP	LTD's Long-Range Transit Plan
LT	Listed Threatened
LTD	Lane Transit District
LUST	leaking underground storage tank
LWCF	Land and Water Conservation Fund
m	meter(s)

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
MAP-21	Moving Ahead for Progress in the 21st Century
MBTA	Migratory Bird Treaty Act
Metro Plan	<i>Metro Plan, Eugene-Springfield Metropolitan Area General Plan</i> (LCOG et al., 1987, as updated on 2015, December 31)
mg/kg	milligram(s) per kilogram
MI	mile(s)
mL	milliliter(s)
MMA	Michael Minor and Associates, Inc.
MOA	Memorandum of Agreement
MOE	Measure of Effectiveness
MPC	Metropolitan Policy Committee
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MTIP	<i>Metropolitan Transportation Improvement Program Federal FY 2015 to Federal FY 2018</i> (Central Lane MPO, adopted 2014, October, as amended)
Mw	Earthquake moment magnitude
N/A	not applicable
NA	not applicable; no data available
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAVD88	North American Vertical Datum of 1988
ND	nodal development
NEPA	National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321-4347
NFA	no further action
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO ₂	nitrous dioxide
NO _x	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
NPMS	National Pipeline Mapping System
NPS	Department of Interior's National Park Service
NR	Natural Resource
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NS	no standard established

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
NW Natural	Northwest Natural
O ₃	Ozone
O&M	operations and maintenance
OAR	Oregon Administrative Rule
OARRA	Oregon Archaeological Records Remote Access
ODA	Oregon Department of Agriculture
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
OPA	Oil Pollution Act of 1990
OPRD	Oregon Parks and Recreation Department
OR	Oregon
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
OTIB	Oregon Transportation Infrastructure Bank
Pb	Lead
PCB	polychlorinated biphenyl
PEM	Palustrine Emergent Wetland
PM	particulate matter
PM ₁₀	particulate matter – 10 microns in diameter
PM _{2.5}	particulate matter – 2.5 microns in diameter
PMT	Project Management Team
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PROS	Parks, Recreation, and Open Space
PUC	Public Utilities Commission
Qls	landslide and debris avalanche deposits
Qtg	terrace and fan deposits
Qty	Quantity
RCRA	Resource Conservation and Recovery Act of 1976
RFFA	reasonably foreseeable future action
ROW	right of way
RRFB	Rectangular Rapid Flash Beacon

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
RTP	<i>Central Lane Metropolitan Planning Organization Regional Transportation Plan</i> (LCOG, adopted 2007, November; 2011, December). (The RTP includes the Financially Constrained Roadway Projects List)
SARA	Superfund Amendments and Reauthorization Act of 1986
SARA III	Emergency Planning and Community Right to Know Act of 1986; part of the SARA amendments
SC	sensitive critical
SCC	Standard Cost Categories
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SDC	Systems Development Charge
SDWA	Safe Drinking Water Act
sec	second(s)
Section 4(f)	Section 4(f) of the Department of Transportation Act of 1966
Section 6(f)	Section 6(f) of the LWCF Act of 1965
Section 106	Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800.5)
SF	square foot (feet)
SHPO	Oregon State Historic Preservation Office
SIP	State Implementation Plan
SMU	Species Management Unit
SO ₂	sulfur dioxide
SOC	species of concern
SSGA	Small Starts Construction Grant Agreement
STA	Special Transportation Area
STIP	Statewide Transportation Improvement Program
SV	Sensitive Vulnerable
SY	square yard(s)
TAP	Transportation Alternatives Program
TAZ	transportation analysis zone
TCE	Temporary Construction Easement
TD	transit-oriented development
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century
Teoe	siliciclastic marine sedimentary rocks
TESCP	Temporary Erosion and Sediment Control Plan
TIF	Tax Increment Financing
TIP	Transportation Improvement Program
TMDL	total maximum daily load

Table A-1. Acronyms and Abbreviations

Acronyms and Abbreviations	Definitions
TOD	transit-oriented development
TPAU	Department of Transportation – Transportation Planning Analysis Unit
TPR	Transportation Planning Rule
TransPlan	<i>Eugene-Springfield Transportation System Plan</i> (City of Eugene et al., adopted 2002, July)
TRB	Transportation Research Board
TSI	Transportation System Improvement
TSM	Transportation System Management
TSP	Transportation System Plan
UGB	Urban Growth Boundary
UMTA	Urban Mass Transit Administration
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601 et. seq., 49 CFR Part 24
URA	Urban Renewal Area
U.S.C.	United States Code
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
v/c	volume-to-capacity
VHT	vehicle hours traveled
VMT	vehicle miles traveled
VOC	volatile organic compound
WEEE	West Eugene EmX Extension
WEG	wind erodibility group
YOE	year of expenditure

Terms

Terms	Definitions
Accessibility	The extent to which facilities are barrier-free and useable for all persons with or without disabilities.
Action	An “action,” a federal term, is the construction or reconstruction, including associated activities, of a transportation facility. For the purposes of this Handbook, the terms “project,” “proposal,” and “action” are used interchangeably unless otherwise specified. An action may be categorized as a “categorical exclusion” or a “major federal action.”
Agricultural/Forest/Natural Resource	AG, EFU-25, EFU-30, EFU-40, F-1, F-2, and NR
Alignment	Alignment is the street or corridor that the transit project would be located within.
Alternative Fuels	Low-polluting fuels which are used to propel a vehicle instead of high-sulfur diesel or gasoline. Examples include methanol, ethanol, propane or compressed natural gas, liquid natural gas, low-sulfur or "clean" diesel and electricity.
Alternatives Analysis (AA)	The process of evaluating the costs, benefits, and impacts of a range of transportation alternatives designed to address mobility problems and other locally-defined objectives in a defined transportation corridor, and for determining which particular investment strategy should be advanced for more focused study and development. The Alternatives Analysis (AA) process provides a foundation for effective decision making.
Area of Potential Effect	A term used in Section 106 to describe the area in which historic resources may be affected by a federal undertaking.
Area of Potential Impact	An assessment’s Area of Potential Impact for the project is defined separately for each discipline.
Auxiliary Lanes	Lanes designed to improve safety and reduce congestion by accommodating cars and trucks entering or exiting the highway or roadway, and reducing conflicting weaving and merging movements.
Base Fare	The price charged to one adult for one transit ride; excludes transfer charges, and reduced fares.
Base Period	The period between the morning and evening peak periods when transit service is generally scheduled on a constant interval. Also known as "off-peak period."
Boarding	Boarding is a term used in transit to account for passengers of public transit systems. One person getting on a transit vehicle equals one boarding. In many cases, individuals will have to transfer to an additional transit vehicle to reach their destination and may well use transit for the return trip. Therefore, a single rider may account for several transit boardings in one day.
Bus Phase	An exclusive traffic signal phase for buses and/or BRT vehicles.
Bus Rapid Transit (BRT)	A transit mode that combines the quality of rail transit and the flexibility of buses. It can operate on bus lanes, high-occupancy vehicle (HOV) lanes, expressways, or ordinary streets. The vehicles are designed to allow rapid passenger loading and unloading, with more doors than ordinary buses.

Table A-2. Terms

Terms	Definitions
Business Access and Transit (BAT) Lane	In general, a BAT lane is a concrete lane, separated from general-purpose lanes by a paint stripe and signage. A BAT lane provides Bus Rapid Transit (BRT) priority operations, but general-purpose traffic is allowed to travel within the lane to make a turn into or out of a driveway or at an intersecting street. However, only the BRT vehicle is allowed to use the lane to cross an intersecting street.
Busway	Exclusive freeway lane for buses and carpools.
Capital Improvements Program (CIP)	A CIP is a short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for funding projects in the program.
Categorical Exclusion (CE)	A CE means a category of actions that do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.
Chambers Special Area Zone	S-C
Charter Tree	A tree defined by the Eugene Charter (City of Eugene, 2002, updated 2008) as “... (a living, standing, woody plant having a trunk 25 inches in circumference at a point 4-½ feet above mean ground level at the base of the trunk) of at least fifty years of age within publicly owned rights of way for streets, roads, freeways, thoroughways, and thoroughfares and within those portions of the city which were in the incorporated boundaries of the city as of January 1, 1915, shall be designated historic street trees and recognized as objects of high historic value and significance in the history of the city and deserving of maintenance and protection.” These trees have special historic importance to the City and require special processes be followed if their removal is proposed, including a public vote on the project proposing the removal.
Charter Tree Boundary	Defined by the Eugene Charter (City of Eugene, 2002, updated 2008) as “...those portions of the city which were in the incorporated boundaries of the city as of January 1, 1915.” Trees within this boundary may, if they meet certain criteria, be granted the special title and protective status of a Charter Tree, defined above.
City of Eugene Zoning Classifications	Industrial (I-2 and I-3), Commercial (C-3), Mixed-Use (C-1, C-2, GO, S-C, S-CN, S-DR, S-DW, S-E, S-F, S-HB, S-JW, S-RN, S-W, and S-WS), Single-Family Residential (R-1), Multi-Family Residential (R-2 and R-3), Institution (PL and PRO), Agricultural/Forest/Natural Resource (AG, EFU-25, EFU-30, EFU-40, F-1, F-2, and NR), Office (E-1 and E-2), Special Area Zone (Non-Mixed Use) (S-H and S-RP), Downtown Westside Special Area Zone (S-DW), Chambers Special Area Zone (S-C)
Clean Air Act Amendments of 1990	The comprehensive federal legislation that establishes criteria for attaining and maintaining the federal standards for allowable concentrations and exposure limits for various air pollutants; the act also provides emission standards for specific vehicles and fuels.
Collector Streets	Collector streets provide a balance of both access and circulation within and between residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access, and are located in residential neighborhoods, distributing trips from the neighborhood and local street system.
Commercial	C-3

Table A-2. Terms

Terms	Definitions
Commuter Rail	Commuter rail is a transit mode that is a multiple car electric or diesel propelled train. It is typically used for local, longer-distance travel between a central city and adjacent suburbs, and can operate alongside existing freight or passenger rail lines or in exclusive rights of way.
Compressed Natural Gas (CNG)	An alternative fuel; compressed natural gas stored under high pressure. CNG vapor is lighter than air.
Conformity	The ongoing process that ensures the planning for highway and transit systems, as a whole and over the long term, is consistent with the state air quality plans for attaining and maintaining health-based air quality standards; conformity is determined by metropolitan planning organizations (MPOs) and the U.S. Department of Transportation (U.S. DOT), and is based on whether transportation plans and programs meet the provisions of a State Implementation Plan.
Congestion Mitigation and Air Quality (CMAQ)	Federal funds available for either transit or highway projects that contribute significantly to reducing automobile emissions, which cause air pollution.
Cooperating Agency	Regulations that implement the National Environmental Policy Act define a cooperating agency as any federal agency, other than a lead agency, which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major federal action significantly affecting the quality of the human environment.
Coordination Plan	Required under Moving Ahead for Progress in the 21st Century (MAP-21), the coordination plan contains procedures aimed at achieving consensus among all parties in the initial phase of environmental review and to pre-empt disagreements that can create delays later on in a project.
Corridor	A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, and transit route alignments.
Corridor Transit Service Characteristics	The amount of transit service provided in each corridor, measured by daily vehicle hours traveled, daily vehicle miles traveled, and daily place-miles of service.
Demand Responsive	Non-fixed-route service utilizing vans or buses with passengers boarding and alighting at pre-arranged times at any location within the system's service area. Also called "Dial-a-Ride."
Diesel Multiple Unit (DMU)	Each unit carries passengers and can be self-powered by a diesel motor; no engine unit is required.
Documented Categorical Exclusion (DCE)	<p>A DCE means a group of actions that may also qualify as Categorical Exclusions (CEs) if it can be demonstrated that the context in which the action is taken warrants a CE exclusion; i.e., that no significant environmental impact will occur. Thus, these actions are referred to as DCEs. Such actions require some National Environmental Policy Act documentation, but not an Environmental Assessment or a full-scale Environmental Impact Statement.</p> <p>DCEs documentation must demonstrate that, in the context(s) in which these actions are to be performed, they will have no significant environmental impact or that such impacts will be mitigated.</p>

Table A-2. Terms

Terms	Definitions
Downtown Westside Special Area Zone	S-DW
Draft Environmental Impact Statement (DEIS)	The DEIS is the document that details the results of the detailed analysis of all of the projects alternatives. The DEIS contains all information learned about the impacts of a project and alternatives.
Earmark	A federal budgetary term that refers to the specific designation by Congress that part of a more general lump-sum appropriation be used for a particular project; the earmark can be designated as a minimum and/or maximum dollar amount.
Effects	Effects include ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial. Effects include: (1) direct effects that are caused by the action and occur at the same time and place, and (2) indirect effects that are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).
Electrical Multiple Unit (EMU)	The EMU is heavier than a light rail vehicle, but it is powered in the same way by an overhead electrical system.
EmX	Lane Transit District's Bus Rapid Transit System, pronounced "MX," short for Emerald Express.
Environmental Assessment (EA)	A report subject to the requirements of the National Environmental Policy Act (NEPA) demonstrating that an Environmental Impact Statement (EIS) is not needed for a specific set of actions. The EA can lead to a Finding of No Significant Impact (FONSI).
Environmental Impact Statement (EIS)	A comprehensive study of likely environmental impacts resulting from major federally-assisted projects; EISs are required by the National Environmental Policy Act.
Environmental Justice	A formal federal policy on environmental justice was established in February 1994 with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations." There are three fundamental environmental justice principles: <ul style="list-style-type: none"> • To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations. • To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process. • To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.
Envision Eugene	The City of Eugene's Comprehensive Plan (latest draft or as adopted). Envision Eugene includes a determination of the best way to accommodate the community's projected needs over the next 20 years.

Table A-2. Terms

Terms	Definitions
Evaluation Criteria	Evaluation criteria are the factors used to determine how well each of the proposed multimodal alternatives would meet the project’s Goals and Objectives. The Evaluation Criteria require a mix of quantitative data and qualitative assessment. The resulting data are used to measure the effectiveness of proposed multimodal alternatives and to assist in comparing and contrasting each of the alternatives to select a preferred alternative.
Exclusive Right of Way	A roadway or other facility that can only be used by buses or other transit vehicles.
Fatal Flaw Screening	The purpose of a Fatal Flaw Screening is to identify alternatives that will not work for one reason or another (e.g., environmental, economic, community). By using a Fatal Flaw Screening process to eliminate alternatives that are not likely to be viable, a project can avoid wasting time or money studying options that are not viable and focus on alternatives and solutions that have the greatest probability of meeting the community’s needs (e.g., environmentally acceptable, economically efficient, implementable).
Finding of No Significant Impact (FONSI)	A document prepared by a federal agency showing why a proposed action would not have a significant impact on the environment and thus would not require preparation of an Environmental Impact Statement (EIS). A FONSI is based on the results of an Environmental Assessment (EA).
Fixed Guideway System	A system of vehicles that can operate only on its own guideway constructed for that purpose (e.g., rapid rail, light rail). Federal usage in funding legislation also includes exclusive right of way bus operations, trolley coaches, and ferryboats as "fixed guideway" transit.
Fixed Route	Service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers at set stops and stations; each fixed-route trip serves the same origins and destinations, unlike demand responsive and taxicabs.
Geographic Information System (GIS)	DA data management software tool that enables data to be displayed geographically (i.e., as maps).
Goals and Objectives	Goals and objectives define the project’s desired outcome and reflect community values. Goals and objectives build from the project’s Purpose and Need Statement. <ul style="list-style-type: none"> • Goals are overarching principles that guide decision making. Goals are broad statements. • Objectives define strategies or implementation steps to attain the goals. Unlike goals, objectives are specific and measurable.
Guideway	A transit right of way separated from general purpose vehicles.
Headway	Time interval between vehicles passing the same point while moving in the same direction on a particular route.
Heritage Tree	The <i>City of Eugene Urban Forest Management Plan</i> (City of Eugene Public Works Department Maintenance Division, 1992) defines “Heritage Trees” as: “Any tree of exceptional value to our community based on its size (relative to species), history, location, or species, or any combination of these criteria.” Such a tree cannot be removed “except when otherwise necessary for the public health, safety, or welfare.”

Table A-2. Terms

Terms	Definitions
Hydrology	Refers to the flow of water including its volume, where it drains, and how quickly it flows.
Impacts	A term to describe the positive or negative effects upon the natural or built environments as a result of an action (i.e., project).
In-vehicle Travel Time	The amount of time it takes for a transit vehicle to travel between an origin and a destination.
In-vehicle Walk and Wait Travel Time	The amount of in-vehicle travel time plus time spent walking to transit, initial wait time, transfer wait time (if any), and time walking from transit to the destination.
Independent Utility	A project or section of a larger project that would be a usable and reasonable expenditure even if no other projects or sections of a larger project were built and/or improved.
Industrial	I-2 and I-3
Institution	PL and PRO
Intergovernmental Agreement	A legal pact authorized by state law between two or more units of government, in which the parties contract for, or agree on, the performance of a specific activity through either mutual or delegated provision.
Intermodal	Those issues or activities that involve or affect more than one mode of transportation, including transportation connections, choices, cooperation, and coordination of various modes. Also known as "multimodal."
Jefferson Westside Special Area Zone	S-JW
Joint Development	Ventures undertaken by the public and private sectors for development of land around transit stations or stops.
Key Transit Corridors	Key Transit Corridors are mapped in Envision Eugene and are anticipated to be significant transit corridors for the City and the region
Kiss & Ride	A place where commuters are driven and dropped off at a station to board a public transportation vehicle.
Land and Water Conservation Fund (LWCF) Act of 1965	16 U.S.C. 4601-4 et seq. The Land and Water Conservation Fund (LWCF) State Assistance Program was established by the LWCF Act of 1965 to stimulate a nationwide action program to assist in preserving, developing, and providing assurance to all citizens of the United States (of present and future generations) such quality and quantity of outdoor recreation resources as may be available, necessary, and desirable for individual active participation. The program provides matching grants to states and through states to local units of government, for the acquisition and development of public outdoor recreation sites and facilities.
Landscape Tree	A living, standing, woody plant having a trunk that exists on private property.
Lane Regional Air Protection Agency (LRAPA)	LRAPA is responsible for achieving and maintain clean air in Lane County using a combination of regulatory and non-regulatory methods
Layover Time	Time built into a schedule between arrival at the end of a route and the departure for the return trip, used for the recovery of delays and preparation for the return trip.

Table A-2. Terms

Terms	Definitions
Lead Agency	The organization that contracts and administers a study. For transit projects, FTA would typically fill this role. The lead agency has the final say about the project's purpose and need, range of alternatives to be considered, and other procedural matters.
Level of Detail	The amount of data collected, and the scale, scope, extent, and degree to which item-by-item particulars and refinements of specific points are necessary or desirable in carrying out a study.
Level of Service (LOS)	LOS is a measure used by traffic engineers to determine the effectiveness of elements of transportation infrastructure. LOS is most commonly used to analyze highways, but the concept has also been applied to intersections, transit, and water supply.
Light Rail Transit (LRT)	Steel wheel/steel rail transit constructed on city streets, semi-private right of way, or exclusive private right of way. Formerly known as "streetcar" or "trolley car" service, LRT's major advantage is operation in mixed street traffic at grade. LRT vehicles can be coupled into trains, which require only one operator and often are used to provide express service.
Limited (or Controlled) Access	Restricted entry to a transportation facility based upon facility congestion levels or operational condition. For example, a limited access roadway normally would not allow direct entry or exit to private driveways or fields from said roadway.
Liquefaction	A phenomenon associated with earthquakes in which sandy to silty, water saturated soils behave like fluids. As seismic waves pass through saturated soil, the structure of the soil distorts, and spaces between soil particles collapse, causing ground failure.
Liquefied Natural Gas (LNG)	An alternative fuel; a natural gas cooled to below its boiling point of 260 degrees Fahrenheit so that it becomes a liquid; stored in a vacuum bottle-type container at very low temperatures and under moderate pressure. LNG vapor is lighter than air.
Local Streets	Local streets have the sole function of providing direct access to adjacent land. Local streets are deliberately designed to discourage through-traffic movements.
Locally Preferred Alternative (LPA)	The LPA is the alternative selected through the Alternatives Analysis process completed prior to or concurrent with National Environmental Policy Act analysis. This term is also used to describe the proposed action that is being considered for New Starts or Small Starts funds.
Low-Income Persons	Those whose median household income is at or below the Department of Health and Human Services poverty guidelines. For a four-person household with two related children, the poverty threshold is \$24,300 (year 2016 dollars).
Maintenance area	An air quality designation for a geographic area in which levels of a criteria air pollutant meet the health-based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. An area may have an acceptable level for one criteria air pollutant, but may have unacceptable levels for others. Maintenance/attainment areas are defined using federal pollutant limits set by EPA.
Maintenance facility	A facility along a corridor used to clean, inspect, repair and maintain bus vehicles, as well as to store them when they are not in use.

Table A-2. Terms

Terms	Definitions
Major Arterial	Major arterial streets should serve to interconnect the roadway system of a city. These streets link major commercial, residential, industrial, and institutional areas. Major arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets for through traffic in lieu of a well-placed arterial street. Access control, such as raised center medians, is a key feature of an arterial route. Arterials are typically multiple miles in length.
Major Investment Study (MIS)	An alternatives analysis study process for proposed transportation investments in which a wide range of alternatives is examined to produce a smaller set of alternatives that best meet project transportation needs. The purpose of the study is to provide a framework for developing a package of potential solutions that can then be further analyzed during an Environmental Impact Statement process.
Metro Plan Designations	Commercial, Commercial/Mixed Use, Government and Education, Heavy Industrial, High Density Residential/Mixed-Use, High Density Residential, Light-Medium Industrial, Low Density Residential, Medium Density Residential, Medium Density Residential/Mixed-Use, Mixed-Use, Parks and Open Space, Major Retail Center, Campus Industrial, University Research
Metropolitan Planning Organization (MPO)	The organization designated by local elected officials as being responsible for carrying out the urban transportation and other planning processes for an area.
Minimum Operable Segment	A stand-alone portion of the alternative alignment that has independent utility, allowed by FTA to be considered as interim termini for a project. A minimum operable segment (MOS) provides flexibility to initiate a project with available funding while pursuing additional funding to complete the remainder of the project.
Minor Arterial	A minor arterial street system should interconnect with and augment the urban major arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than major arterials. This system also distributes travel to geographic areas smaller than those identified with the higher system. The minor arterial street system includes facilities that allow more access and offer a lower traffic mobility. Such facilities may carry local bus routes and provide for community trips, but ideally should not be located through residential neighborhoods.
Minority	A person who is one or more of the following: <ul style="list-style-type: none"> • Black: a person having origins in any of the black racial groups of Africa • Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race • Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent • American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition • Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

Table A-2. Terms

Terms	Definitions
Mitigation	A means to avoid, minimize, rectify, or reduce an impact, and in some cases, to compensate for an impact.
Mixed-Use	C-1, C-2, GO, S-C, S-CN, S-DR, S-DW, S-E, S-F, S-HB, S-JW, S-RN, S-W, and S-WS
Modal Split	A term that describes how many people use different forms of transportation. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using public transportation, walking, or biking. Modal split can also be used to describe travelers using other modes of transportation. In freight transportation, modal split may be measured in mass.
Mode	A particular form or method of travel distinguished by vehicle type, operation technology, and right-of-way separation from other traffic.
Moving Ahead for Progress in the 21st Century (MAP-21)	Moving Ahead for Progress in the 21st Century (MAP-21) was signed by President Obama on July 6, 2012, reauthorizing surface transportation programs through FY 2014. It includes new and revised program guidance and regulations with planning requirements related to public participation, publication, and environmental considerations.
MovingAhead Project	<p>The City of Eugene and LTD are working with regional partners and the community to determine which improvements are needed on some of our most important transportation corridors for people using transit, and facilities for people walking and biking. MovingAhead will prioritize transit, walking, and biking projects along these corridors so that they can be funded and built in the near-term.</p> <p>The project will focus on creating active, vibrant places that serve the community and accommodate future growth. During Phase 1, currently underway, the community will weigh in on preferred transportation solutions for each corridor and help prioritize corridors for implementation. When thinking about these important streets, LTD and the City of Eugene refer to them as corridors because several streets may work as a system to serve transportation needs.</p>
Multi-Family Residential	R-2 and R-3
Multimodal	Multimodal refers to various modes. For the MovingAhead project, multimodal refers to Corridors that support various transportation modes including vehicles, buses, walking and cycling.
National Environmental Policy Act of 1969 (NEPA)	A comprehensive federal law requiring analysis of the environmental impacts of federal actions such as the approval of grants; also requiring preparation of an Environmental Impact Statement for every major federal action significantly affecting the quality of the human environment.
New Starts	Federal funding granted under Section 3(i) of the Federal Transit Act. These discretionary funds are made available for construction of a new fixed guideway system or extension of any existing fixed guideway system, based on cost-effectiveness, alternatives analysis results, and the degree of local financial commitment.

Table A-2. Terms

Terms	Definitions
No Action or No-Build Alternative	An alternative that is used as the basis to measure the impacts and benefits of the other alternative(s) in an environmental assessment or other National Environmental Policy Act action. The No-Build Alternative consists of the existing conditions, plus any improvements that have been identified in the Statewide Transportation Improvement Program.
Nonattainment Area	Any geographic region of the United States that the U.S. Environmental Protection Agency (EPA) has designated as not attaining the federal air quality standards for one or more air pollutants, such as ozone and carbon monoxide.
Notice of Intent	A federal announcement, printed in the <i>Federal Register</i> , advising interested parties that an Environmental Impact Statement will be prepared and circulated for a given project
Off-Peak Period	Non-rush periods of the day when travel activity is generally lower and less transit service is scheduled. Also called "base period."
Office	E-1 and E-2
Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP)	The 2013-2017 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP), entitled <i>Ensuring Oregon's Outdoor Legacy</i> (OPRD, No Date), constitutes Oregon's basic 5-year plan for outdoor recreation. The plan guides the use of LWCF funds that come into the state; provides guidance for other OPRD-administered grant programs; and provides recommendations to guide federal, state, and local units of government, as well as the private sector, in making policy and planning decisions.
Park and Ride	Designated parking areas for automobile drivers who then board transit vehicles from these locations.
Participating Agency	A federal or non-federal agency that may have an interest in the project. These agencies are identified and contacted early-on in the project with an invitation to participate in the process. This is a broader category than "cooperating agency" (see Cooperating Agency).
Passenger Miles	The total number of miles traveled by passengers on transit vehicles; determined by multiplying the number of unlinked passenger trips times the average length of their trips.
Peak Hour	The hour of the day in which the maximum demand for transportation service is experienced (refers to private automobiles and transit vehicles).
Peak Period	Morning and afternoon time periods when transit riding is heaviest.
Peak/Base Ratio	The number of vehicles operated in passenger service during the peak period divided by the number operated during the base period.
Place-miles	Place-miles refers to the total carrying capacity (seated and standing) of each bus and is calculated by multiplying vehicle capacity of each bus by the number of service miles traveled each day. Place-miles highlight differences among alternatives caused by a different mix of vehicles and levels of service.
Preferred Alternative	An alternative that includes a major capital improvement project to address the problem under investigation. As part of the decision-making process, the Preferred Alternative is compared against the No Action or No-Build Alternative from the standpoints of transportation performance, environmental consequences, cost-effectiveness, and funding considerations.

Table A-2. Terms

Terms	Definitions
Purpose and Need	The project Purpose and Need provides a framework for developing and screening alternatives. The purpose is a broad statement of the project’s transportation objectives. The need is a detailed explanation of existing conditions that need to be changed or problems that need to be fixed.
Queuing	Occurs when traffic lanes cannot fit all the vehicles trying to use them, or if the line at an intersection extends into an upstream intersection.
Record of Decision (ROD)	A decision made by FTA as to whether the project sponsor receives federal funding for a project. The Record of Decision follows the Draft EIS and Final EIS.
Regulatory Agency	An agency empowered to issue or deny permits.
Resource Agency	A federal or state agency or commission that has jurisdictional responsibilities for the management of a resource such as plants, animals, water, or historic sites.
Revenue Hours	Hours of transit service available for carrying paying riders.
Ridership	The number of people using a public transportation system in a given time period.
Ridesharing	A form of transportation, other than public transit, in which more than one person shares the use of the vehicle, such as a van or car, to make a trip. Also known as "carpooling" or "vanpooling."
Right of Way	Publicly owned land that can be acquired and used for transportation purposes.
Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)	SAFETEA-LU was passed by Congress July 29, 2005, and signed by the President August 10, 2005. Includes new and revised program guidance and regulations (approximately 15 rulemakings) with planning requirements related to public participation, publication, and environmental considerations. SAFETEA-LU covers FY 2005 through FY 2009 with a total authorization of \$45.3 billion.
Scoping	A formal coordination process used to determine the scope of the project and the major issues likely to be related to the proposed action (i.e., project).
Screening Criteria	Criteria used to compare alternatives.
Section 4(f) of the Department of Transportation Act of 1966	23 U.S.C. 138 and 49 U.S.C. 303. Parks are subject to evaluation in the context of Section 4(f) of the Department of Transportation Act of 1966, which governs the use of publicly-owned/open to the public park and recreation lands, government-owned wildlife lands, and historic resources.
Section 4(f) resources	(i) any publicly owned land in a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or (ii) any land from a historic site of national, state, or local significance
Section 6(f) of the LWCF Act of 1965	The LWCF’s most important tool for ensuring long-term stewardship is its “conversion protection” requirement. Section 6(f)(3) strongly discourages conversions of state and local park, and recreational facilities to other uses. Conversion of property acquired or developed with assistance under the program requires approval of the Department of Interior’s National Park Service (NPS) and substitution of other recreational properties of at least equal fair market value, and of reasonably equivalent usefulness and location.
Section 106	Section 106 of the National Historic Preservation Act of 1966 requires that federal agencies take into account the effect of government-funded construction projects on property that is included in, or eligible for inclusion in, the NRHP.

Table A-2. Terms

Terms	Definitions
Shuttle	A public or private vehicle that travels back and forth over a particular route, especially a short route or one that provides connections between transportation systems, employment centers, etc.
Single-Family Residential	R-1
Special Area Zone (Non-Mixed Use)	S-H and S-RP
Springfield 2030	Currently underway, this update to the City of Springfield’s Comprehensive Plan will guide and support attainment of the community’s livability and economic prosperity goals and redevelopment priorities.
Springfield Transportation System Plan (TSP)	The City of Springfield’s Transportation System Plan looks at how the transportation system is currently used and how it should change to meet the long-term (20-year) needs of the City of Springfield’s residents, businesses, and visitors. The Plan, which identifies improvements for all modes of transportation, will serve as the City of Springfield’s portion of the Regional Transportation System Plan prepared by Lane Council of Governments (LCOG). It was prepared in coordination with Oregon Department of Transportation, LCOG, and the Oregon Department of Land Conservation and Development. The TSP was adopted March 11, 2014.
State Implementation Plan (SIP)	A state plan mandated by the Clean Air Act Amendments of 1990 that contains procedures to monitor, control, maintain, and enforce compliance with national standards for air quality.
Strategy	An intended action or series of actions which when implemented achieves the stated goal.
Street Tree	A living, standing, woody plant having a trunk that exists in the public right of way.
Study Area	The area within which evaluation of impacts is conducted. The study area for particular resources will vary based on the decisions being made and the type of resource(s) being evaluated.
Throughput	The number of users being served at any time by the transportation system.
Title VI	This Title declares it to be the policy of the United States that discrimination on the ground of race, color, or national origin shall not occur in connection with programs and activities receiving federal financial assistance and authorizes and directs the appropriate federal departments and agencies to take action to carry out this policy.
Transit Oriented Development (TOD) or Nodal Development	A strategy to build transit ridership, while discouraging sprawl, improving air quality and helping to coordinate a new type of community for residents. TODs are compact, mixed-use developments situated at or around transit stops. Sometimes referred to as Transit Oriented Communities, or Transit Villages.
Transit System	An organization (public or private) providing local or regional multi-occupancy-vehicle passenger service. Organizations that provide service under contract to another agency are generally not counted as separate systems.
Transitway	A Bus Rapid Transit (BRT) priority lane generally with a concrete lane, with or without concrete tracks with grass-strip divider, and a curb separation, traversable by general-purpose vehicles at signalized intersections.

Table A-2. Terms

Terms	Definitions
Transportation Demand Management (TDM)	Strategies to attempt to reduce peak period automobile trips by encouraging the use of high occupancy modes through commuter assistance, parking incentives, and work policies that alter the demand for travel in a defined area in terms of the total volume of traffic, the use of alternative modes of travel, and the distribution of travel over different times of the day.
Transportation Improvement Program (TIP)	A program of intermodal transportation projects, to be implemented over several years, growing out of the planning process and designed to improve transportation in a community. This program is required as a condition of a locality receiving federal transit and highway grants.
Travel Shed	Synonymous with “corridor” (see Corridor). A subarea in which multiple transportation facilities are experiencing congestion, safety, or other problems.
urban plaza	An urban plaza is a place that can be used for socializing, relaxation, and/or events.
v/c ratio	Used as a principal measure of congestion. The “v” represents the volume or the number of vehicles that are using the roadway at any particular period. The “c” represents the capacity of a roadway at its adopted level of service (LOS). If the volume exceeds the capacity of the roadway (volume divided by capacity exceeds 1.00), congestion exists.
Vehicle Hours of Delay	Cumulative delay experiences by transit vehicles during high traffic periods.
Water Quality	Refers to the characteristics of the water, such as its temperature and oxygen levels, how clear it is, and whether it contains pollutants.
Whiteaker Special Area Zone	S-W

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Appendix B: Construction Activities and Methods

General Construction Methods

The following section describes how construction of the Locally Preferred Alternative (LPA) would likely be staged and sequenced. This description is based on Lane Transit District's (LTD's) experience with the Franklin, Gateway, and West Eugene EmX Corridors. The final plan for construction methods, sequencing, and staging will be determined in coordination with the contractor and permitting authorities.

Utility work will generally be completed before the transportation infrastructure is constructed. Utility work, often conducted by local utility companies, occurs separately from project-related construction. After completing required utility relocation and other preparatory site work, the contractor will begin with construction of new transit lanes, bike lanes, sidewalks, and any other "flatwork." The contractor will modify existing signals or construct new traffic signals as part of this work. In some cases, the contractor may construct the signal footings but install signal arms after initial work is complete. Flatwork for stations, including curbs, ramps, and station footings, will be completed as the work progresses along the alignment. Streets and street segments will be restored to normal operations after this work is complete. The contractor is expected to progress approximately two blocks every two 2 weeks, with additional time required — up to two 2 weeks — for each enhanced stop or EmX station. Additional time will be required at intersections that require new or substantially modified traffic signals. The construction sequencing will be determined through coordination between the contractor and local residents, businesses, and property owners regarding construction scheduling preferences. It is expected that, for each major segment, the work would start at one end of the segment and progress to the other end of the segment. All flatwork is expected to be completed in two construction seasons.

Stations will be fabricated during the second construction season and installed during the subsequent (final) construction season, along with landscaping, fare machines, real-time passenger information, enhanced stop or EmX station amenities, and other similar items.

The contractor and LTD will coordinate closely with the Oregon Department of Transportation (ODOT) and with the City of Eugene (as appropriate to the jurisdiction) on traffic control. Depending on the segment, ODOT or the City will review and approve traffic plans for construction.

On streets with multiple lanes in each direction (or multiple lanes in one direction for one-way streets), at least one lane of traffic will be open at all times. Flaggers will coordinate travel at intersections and other points of congestion, as necessary. On streets with a single lane, it may be necessary to close one direction of traffic for certain periods. In those situations, flaggers will be used to manage the traffic flow safely. The contractor and LTD will also coordinate with businesses to ensure that the project maintains access for patrons and deliveries.

Coordination with Businesses and Residents

LTD's Franklin, Gateway, and West Eugene EmX projects demonstrated LTD's commitment to communicating with impacted businesses, residences, and travelers, both before and during construction. As with those projects, LTD will contact all businesses and residents along the alignment well before construction begins to solicit local concerns, issues, and scheduling preferences. Businesses and residents will also be able to communicate with the contractor and LTD during construction. LTD's construction liaison will provide e-mail updates and serve as an ongoing point of contact to address

concerns and to provide information to affected businesses, residents, and other interested persons. LTD will provide a 24-hour hotline to quickly address construction concerns from businesses and residences.

LTD will also work to enhance activity at businesses affected by construction. This can be done through attractive signage, direct communications with the public (e.g., direct mail and advertising), and community events (e.g., street fairs). These techniques succeeded in keeping business areas active during previous EmX projects.