



**Moving Ahead**

STREETS AND PLACES REIMAGINED

**DRAFT FINAL Acquisitions and  
Displacements  
Technical Report**

Lane Transit District  
City of Eugene

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

**Revised July 7, 2017**

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# DRAFT FINAL Acquisitions and Displacements 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 and Abbreviations

Acronyms and Abbreviations	Definitions
AA	Alternatives Analysis
ADA	Americans with Disabilities Act
BAT	Business Access and Transit
BRT	bus rapid transit
CH2M	CH2M HILL, Inc.
City	City of Eugene
Draft Eugene TSP	<i>DRAFT Eugene 2035 Transportation System Plan (City of Eugene, 2016)</i>
EmX	Emerald Express, Lane Transit District's Bus Rapid Transit System
FTA	Federal Transit Administration
FTN	Frequent Transit Network
LCC	Lane Community College
LTD	Lane Transit District
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321-4347
ORS	Oregon Revised Statutes
ROW	right of way
RTP	<i>Central Lane Metropolitan Planning Organization Regional Transportation Plan (LCOG, adopted 2007, November; 2011, December). (The RTP includes the Financially Constrained Roadway Projects List)</i>
TCE	temporary construction easement
U.S.C.	United States Code
UMTA	Urban Mass Transit Administration
Uniform Relocation 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
WEEE	West Eugene EmX Extension

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## Acquisitions and Displacements Summary

This Acquisitions and Displacements Technical Report discusses the effects of potential property acquisitions and displacements of existing uses that would be required to construct and operate the Lane Transit District (LTD) and City of Eugene's (City's) MovingAhead Project in Eugene, Oregon. 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 the following 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, 2016a; 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. The *Level 2 Definition of Alternatives* (CH2M HILL, Inc. [CH2M] et al., 2016) contains a detailed description of the project alternatives. The following items summarize 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, the *Lane County Transportation System Plan* (Lane County Public Works, Engineering Division Transportation Planning, 2004), the *Lane Transit District Capital Improvement Plan* (LTD, 2015), and the *Lane Transit District Long-Range Transit Plan* (LTD, 2014).
- **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.

**Figure S.1-1. Enhanced Corridor Alternatives Overview**

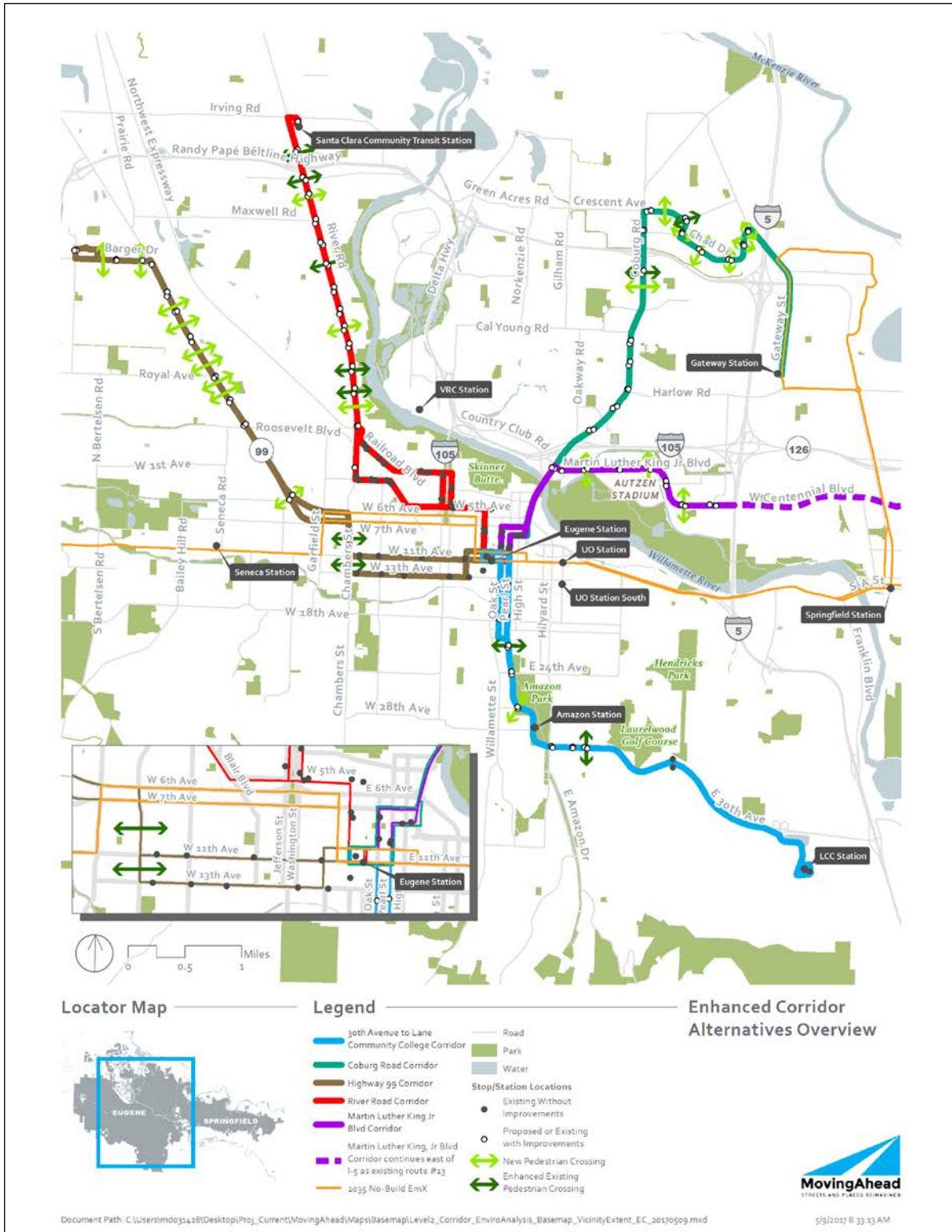
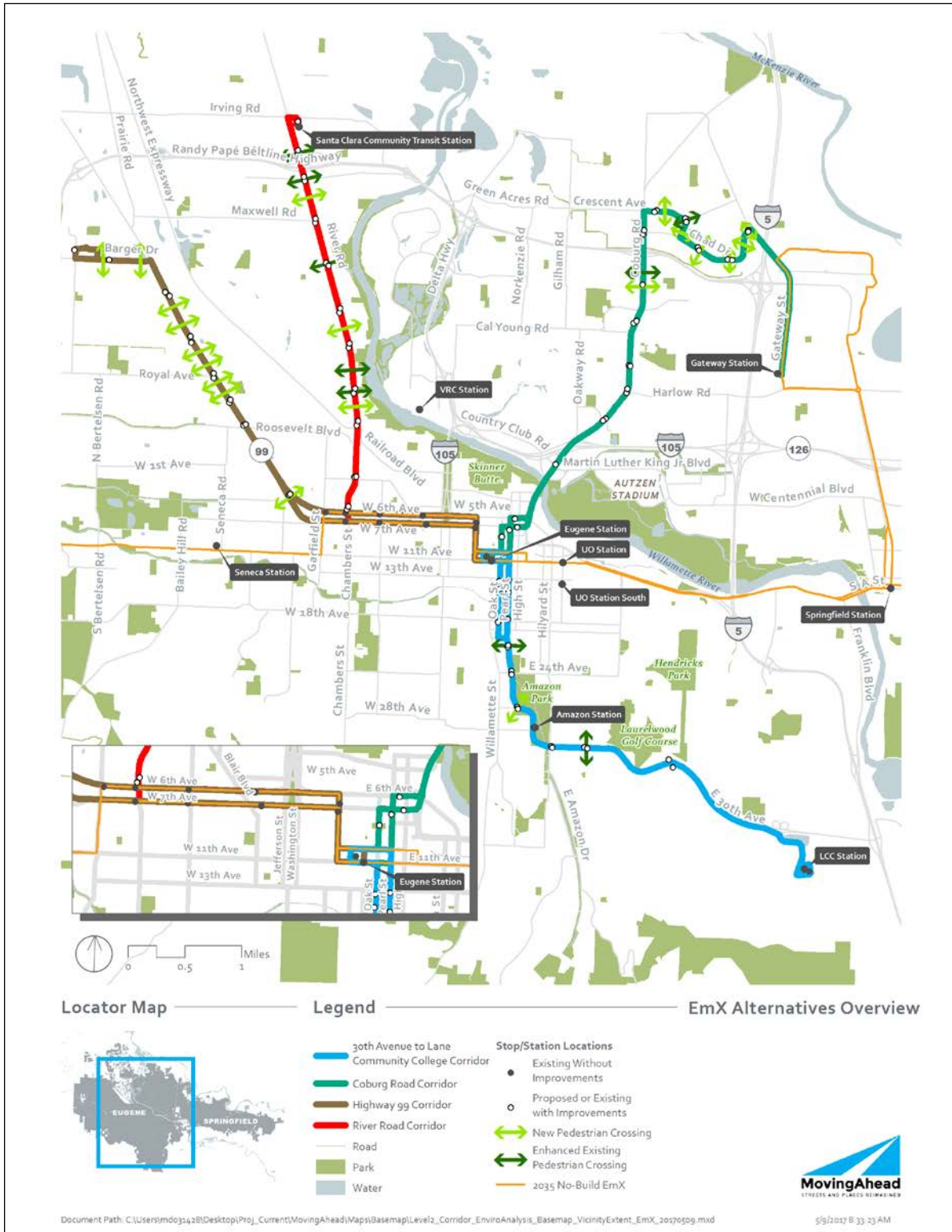


Figure S.1-2. EmX Alternatives Overview



- **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 technical report provides information on the methods used to identify the potential significant impacts of property acquisitions and displacements that the project's alternatives would cause. The potential indirect effects of property acquisitions and displacements (including changes in employment, development, or community character) are discussed in the *MovingAhead Land Use and Prime Farmlands Technical Report* (CH2M, 2017c) and in the *MovingAhead Community, Neighborhood, and Environmental Justice Technical Report* (CH2M, 2017b).

This report was prepared in compliance with the National Environmental Policy Act, 42 United States Code (U.S.C.) 4321-4347 (NEPA), applicable state environmental policy legislation, and 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.

For both the Enhanced Corridor Alternatives and the EmX Alternatives, the area of potential impact is defined as those properties that would be impacted by either full or partial acquisition and is based on the existing construction footprint.

The corridors are characterized as areas primarily consisting of commercial and residential land uses. Common land uses along the corridors consist of single- and multi-family residential homes, commercial (e.g., restaurants and automobile sales), and small office buildings. Portions of the 30th Avenue to LCC Corridor located in unincorporated Lane County include forest lands. Figures S.1-1 and S.1-2 provide details related to the Enhanced Corridor Alternatives and the EmX Alternatives corridor alignments, respectively.

## S.2. Environmental Consequences

This section summarizes potential environmental consequences from the potential property acquisition for each alternative. Potential impacts would include long-term direct acquisition impacts, indirect and cumulative effects of land acquisitions, and the short-term construction-related impacts. Subsequent sections address potential mitigation measures for land acquisitions and displacements and conclusions drawn from the information from this Acquisitions and Displacements analysis.

### S.2.1. Impacts Related to No-Build Alternative

No additional impacts related to the No-Build Alternative would be anticipated beyond those from the approved plans and construction projects identified in the Draft Eugene 2035 TSP.

### S.2.2. Impacts Common to All Build Alternatives

The project team identified affected properties based on conceptual engineering. Potential property impacts would be refined as the project moves toward final design. Long-term direct impacts for all alternatives would include partial acquisitions of parcels. Table S.2-1 provides summary effects information for each of the alternatives.

The majority of parcels that would be affected are associated with commercial and industrial land uses. The project alternatives were designed to avoid and minimize property acquisitions and displacements, where possible. Many, if not most, of the associated permanent partial acquisitions are minor slivers of property that parallel the roadway or involve adjusting the sidewalks. These impacts are frequently so minor that they would not change the usefulness or appearance of the property. As design refinement continues through to final design, it may be possible to avoid or minimize property acquisition from some parcels.

Some build alternatives potentially displace commercial properties due to sliver acquisitions that impact their drive-throughs. LTD and the City of Eugene have prepared an addendum to the MovingAhead Alternatives Analysis Technical Reports Memorandum (CH2M, 2017a) that evaluates ways to avoid or minimize impacts at some properties, including all potential business displacements. Please see this addendum for additional information on potential acquisitions, parking, property access and circulation, and tree impacts mitigation.

Short-term impacts during construction would include temporary construction easements (TCEs) on adjacent properties for construction staging and construction activities. These areas would be identified during final design, and LTD would negotiate with property owners.

Indirect and cumulative effects would not be anticipated for the build alternatives.

**Table S.2-1. Summary of Acquisitions and Displacements Environmental Consequences by Corridor and Alternative**

Alternatives	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
<b>Highway 99 Corridor</b>			
Long-Term Direct Impacts / Benefits	No planned property acquisitions	<ul style="list-style-type: none"> <li>• 1.3 acres</li> <li>• 44 Partial Property Acquisitions               <ul style="list-style-type: none"> <li>- 38 Commercial and Industrial</li> <li>- 1 Public and Institutional</li> <li>- 4 Residential</li> <li>- 1 Vacant</li> </ul> </li> <li>• 8 parcels with parking impacts</li> <li>• No parcels with drive-through impacts</li> </ul>	<ul style="list-style-type: none"> <li>• 1.6 acres</li> <li>• 38 Partial Property Acquisitions               <ul style="list-style-type: none"> <li>- 34 Commercial and Industrial</li> <li>- 1 Public and Institutional</li> <li>- 3 Residential</li> </ul> </li> <li>• 13 parcels with parking impacts</li> <li>• 1 parcel with drive-through impacts</li> </ul>
Indirect and Cumulative Effects	None	None	None

**Table S.2-1. Summary of Acquisitions and Displacements Environmental Consequences by Corridor and Alternative**

<b>Alternatives</b>	<b>No-Build Alternative</b>	<b>Enhanced Corridor Alternative</b>	<b>EmX Alternative</b>
Temporary / Short-Term Construction-Related Impacts / Benefits	None	Identify TCEs during final design, and restore areas after completion of construction	Identify TCEs during final design, and restore areas after completion of construction
Potential Mitigation Measures	None	Minimize site-specific property impacts during final design	Minimize site-specific property impacts during final design
Unavoidable Adverse Effects	None	None	None
<b>River Road Corridor</b>			
Long-Term Direct Impacts / Benefits	No planned property acquisitions	<ul style="list-style-type: none"> <li>• 0.2 acre Partial Property Acquisition</li> <li>• 1.1 acres Full Property Acquisition</li> <li>• 3 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>– 3 Commercial and Industrial</li> </ul> </li> <li>• 2 parcels with parking impacts</li> <li>• 2 Full Property Acquisitions                             <ul style="list-style-type: none"> <li>– 2 Commercial and Industrial</li> </ul> </li> <li>• 2 parcels with drive-through impacts inducing full acquisition of the business. Two partial property acquisitions inducing full displacement of a business with impacted drive-through, for a total of 4 displaced businesses in this alternative.</li> </ul>	<ul style="list-style-type: none"> <li>• 0.6 acre Partial Property Acquisition</li> <li>• 1.6 acres Full Property Acquisition</li> <li>• 37 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>– 23 Commercial and Industrial</li> <li>– 14 Residential</li> </ul> </li> <li>• 13 parcels with parking impacts</li> <li>• 3 Full Property Acquisitions                             <ul style="list-style-type: none"> <li>– 3 Commercial and Industrial</li> </ul> </li> <li>• 3 parcels with drive-through impacts inducing full acquisition of the property. 3 partial property acquisitions inducing full displacement of businesses with impacted drive-throughs, for a total of 6 displaced businesses in this alternative.</li> </ul>
Indirect and Cumulative Effects	None	None	None
Temporary / Short-Term Construction-Related Impacts / Benefits	None	Identify TCEs during final design, and restore areas after completion of construction	Identify TCEs during final design, and restore areas after completion of construction



**Table S.2-1. Summary of Acquisitions and Displacements Environmental Consequences by Corridor and Alternative**

<b>Alternatives</b>	<b>No-Build Alternative</b>	<b>Enhanced Corridor Alternative</b>	<b>EmX Alternative</b>
Potential Mitigation Measures	None	Minimize site-specific property impacts during final design Mitigation measures to avoid displacement of impacted drive-through businesses are discussed in the Addendum (CH2M, 2017a).	Minimize site-specific property impacts during final design Mitigation measures to avoid full displacement of impacted drive-through businesses are discussed in the Addendum (CH2M, 2017a).
Unavoidable Adverse Effects	None	None	None
<b>30th Avenue to Lane Community College Corridor</b>			
Long-Term Direct Impacts / Benefits	No planned property acquisitions	<ul style="list-style-type: none"> <li>• 0.4 acre</li> <li>• 14 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>– 6 Commercial and Industrial</li> <li>– 6 Public and Institutional</li> <li>– 1 Residential</li> <li>– 1 Vacant</li> </ul> </li> <li>• No parcels with parking impacts</li> <li>• No parcels with drive-through impacts</li> </ul>	<ul style="list-style-type: none"> <li>• 0.6 acre</li> <li>• 20 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>– 10 Commercial and Industrial</li> <li>– 7 Public and Institutional</li> <li>– 2 Residential</li> <li>– 1 Vacant</li> </ul> </li> <li>• 1 parcel with parking impacts</li> <li>• No parcels with drive-through impacts</li> </ul>
Indirect and Cumulative Effects	None	None	None
Temporary / Short-Term Construction Related Impacts / Benefits	None	Identify TCEs during final design, and restore areas after completion of construction	Identify TCEs during final design, and restore areas after completion of construction
Potential Mitigation Measures	None	Minimize site-specific property impacts during final design	Minimize site-specific property impacts during final design
Unavoidable Adverse Effects	None	None	None

**Table S.2-1. Summary of Acquisitions and Displacements Environmental Consequences by Corridor and Alternative**

<b>Alternatives</b>	<b>No-Build Alternative</b>	<b>Enhanced Corridor Alternative</b>	<b>EmX Alternative</b>
<b>Coburg Road Corridor</b>			
Long-Term Direct Impacts / Benefits	No planned property acquisitions	<ul style="list-style-type: none"> <li>• 0.8 acre</li> <li>• 47 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>- 20 Commercial and Industrial</li> <li>- 4 Public and Institutional</li> <li>- 23 Residential</li> </ul> </li> <li>• 8 parcels with parking impacts</li> <li>• No parcels with drive-through impacts</li> </ul>	<ul style="list-style-type: none"> <li>• 2.6 acres Partial Property Acquisition</li> <li>• 1.4 acres Full Property Acquisition</li> <li>• 71 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>- 35 Commercial and Industrial</li> <li>- 7 Public and Institutional</li> <li>- 29 Residential</li> </ul> </li> <li>• 19 parcels with parking impacts</li> <li>• 2 Full Property Acquisitions</li> <li>• 2 parcels with drive-through impacts inducing full acquisition of the property.</li> </ul>
Indirect and Cumulative Effects	None	None	None
Temporary / Short-Term Construction Related Impacts / Benefits	None	Identify TCEs during final design, and restore areas after completion of construction	Identify TCEs during final design, and restore areas after completion of construction
Potential Mitigation Measures	None	Minimize site-specific property impacts during final design	Minimize site-specific property impacts during final design. Mitigation measures to avoid displacement of impacted drive-through businesses are discussed in the Technical Reports Memorandum Addendum (CH2M, 2017a).
Unavoidable Adverse Effects	None	None	None

**Table S.2-1. Summary of Acquisitions and Displacements Environmental Consequences by Corridor and Alternative**

Alternatives	No-Build Alternative	Enhanced Corridor Alternative	EmX Alternative
<b>Martin Luther King, Jr. Boulevard Corridor</b>			
Long-Term Direct Impacts / Benefits	No planned property acquisitions	<ul style="list-style-type: none"> <li>• 0.1 acre</li> <li>• 8 Partial Property Acquisitions                             <ul style="list-style-type: none"> <li>- 5 Commercial and Industrial</li> <li>-</li> <li>- 3 Residential</li> </ul> </li> <li>• No parcels with parking impacts</li> <li>• No parcels with drive-through impacts</li> </ul>	Not applicable
Indirect and Cumulative Effects	None	None	Not applicable
Temporary / Short-Term Construction-Related Impacts / Benefits	None	Identify TCEs during final design, and restore areas after completion of construction	Not applicable
Potential Mitigation Measures	None	Minimize site-specific property impacts during final design	Not applicable
Unavoidable Adverse Effects	None	None	Not applicable

### S.2.3. Highway 99 Corridor

#### S.2.3.1. Enhanced Corridor Alternative

The Enhanced Corridor Alternative would result in partial acquisitions of 44 parcels, which total an estimated 1.3 acres of land (Table S.2-1). The 44 affected parcels consist of 38 commercial and industrial parcels, 1 public and institutional parcel, 4 residential parcels, and 1 vacant land parcel. This alternative would impact six more parcels than the Highway 99 Corridor EmX Alternative, and it would result in the second greatest number of partial acquisitions after the Coburg Road Corridor build alternatives. Of the 44 impacted parcels, 8 would have potential impacts on parking and none would affect drive-through circulation.

#### S.2.3.2. EmX Alternative

The EmX Alternative would result in partial acquisitions of 38 parcels, which total an estimated 1.6 acres of land. The 38 affected parcels consist of 34 commercial and industrial parcels, 1 public and institutional parcel, and 3 residential parcels. The Highway 99 EmX Alternative would impact six fewer parcels than the Enhanced Corridor Alternative, and it would require the second greatest land acquisition area among all build alternatives. Of the 38 impacted parcels, 13 would have potential

impacts on parking. One parcel would have potential impacts on its drive-through circulation. This parcel is currently vacant, and therefore is not counted as a displacement, but is considered a potential displacement if it were to become occupied before the project is constructed. Working with potential property owners to identify this property impact in advance of purchase and mitigate as appropriate would reduce the risk of a potential displacement in this location.

#### **S.2.4. River Road Corridor**

##### **S.2.4.1. Enhanced Corridor Alternative**

The Enhanced Corridor Alternative would result in partial acquisitions of three commercial and industrial parcels, which total an estimated 0.2 acre of land (Table S.2-1). Of the three partial acquisitions, two would have potential impacts on parking and two would have potential impacts on drive-through circulation.

The Enhanced Corridor Alternative would result in potential full acquisitions of two commercial parcels, which total an estimated 1.1 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation. These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in the present day. Two additional businesses on larger parcels would be displaced due to impacts to its drive-through circulation, though the entire parcel would not be acquired.

Mitigation options are available to avoid the potential full acquisition of properties and displacement of businesses by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

##### **S.2.4.2. EmX Alternative**

The River Road EmX Alternative would result in partial acquisitions of 37 parcels, which total an estimated 0.6 acre of land (Table S.2-1). The 37 affected parcels consist of 23 commercial and industrial properties, and 14 residential properties. Of the 37 partial acquisitions, 13 would have potential parking impacts. This alternative would impact 35 more parcels than the River Road Corridor Enhanced Corridor Alternative.

The EmX Alternative would result in potential full acquisitions of three commercial parcels, which total an estimated 1.6 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation. These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in the present day. Two additional businesses on larger parcels would be displaced due to impacts to their drive-through circulation, though the entire parcel would not be acquired.

Mitigation options are available to avoid the potential full acquisition of properties and displacement of businesses by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

#### **S.2.5. 30th Avenue to Lane Community College Corridor**

##### **S.2.5.1. Enhanced Corridor Alternative**

The 30th Avenue to LCC Corridor Enhanced Corridor Alternative would result in partial acquisitions of 14 parcels, which total an estimated 0.4 acre of land (Table S.2-1). This alternative would impact six fewer

parcels than the 30th Avenue to LCC EmX Alternative. This total represents six commercial and industrial parcels, six public and institutional parcels, one residential parcel, and one vacant parcel. There would be no impacts to parking or drive-through circulation on private property under this alternative.

#### **S.2.5.2. EmX Alternative**

The EmX Alternative would result in partial acquisitions of 20 parcels, which total 0.6 acre of land (Table S.2-1). This alternative would impact six more parcels than the 30th Avenue to LCC Enhanced Corridor Alternative. Of the 20 affected parcels, 10 are commercial and industrial properties, 7 are public and institutional parcels, 2 are residential parcels, and 1 is a vacant parcel. One parcel would have potential parking impacts under this alternative, and there would be no effects on drive-through circulation.

### **S.2.6. Coburg Road Corridor**

#### **S.2.6.1. Enhanced Corridor Alternative**

The Coburg Road Corridor Enhanced Corridor Alternative would result in partial acquisitions of 47 parcels, which total 0.8 acre of land (Table S.2-1). This total represents 20 commercial and industrial parcels, 4 public and institutional parcels, and 23 residential parcels. This alternative would result in the second greatest number of partial acquisitions of parcels for all build alternatives. Of the 47 partial parcel acquisitions, 8 would have potential parking impacts and 1 would have potential impacts on drive-through circulation.

#### **S.2.6.2. EmX Alternative**

The Coburg Road Corridor EmX Alternative would require partial acquisitions of 71 parcels, comprising an estimated 2.6 acres (Table S.2-1). This total represents partial acquisitions of 35 commercial and industrial parcels, 7 public and institutional parcels, and 29 residential parcels. Of the impacted parcels, 19 would have impacts to parking.

The EmX Alternative would result in potential full acquisitions of two commercial parcels, which total an estimated 1.4 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation. These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in the present day.

This alternative would impact 3.2 acres of additional land, partial acquisitions of 26 more parcels, and full acquisitions of two parcels more than the Coburg Road Corridor Enhanced Corridor Alternative, and it would result in the greatest number of partial acquisitions and total land acquired for all build alternatives.

Mitigation options are available to avoid the potential full acquisition of properties by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

### **S.2.7. Martin Luther King, Jr. Boulevard Corridor**

#### **S.2.7.1. Enhanced Corridor Alternative**

The Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Alternative would require partial acquisitions of eight parcels parcel, comprising an estimated 0.1 acre (Table S.2-1). This total represents

five commercial and industrial partial parcels three and residential parcels. Of the impacted parcels, none would have impacts to parking or to drive-through circulation.

### **S.3. Mitigation Measures**

Many, if not most, of the associated permanent partial acquisitions are minor slivers of property that parallel the roadway or involve adjusting the sidewalks. These impacts are frequently so minor that they would not change the usefulness nor appearance of the property. As design refinement continues through to final design, it may be possible to avoid or minimize property acquisition from some parcels. LTD would comply with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. 4601 et seq. (Uniform Relocation Act) and Oregon Revised Statutes (ORS) for those property owners affected by property acquisition. Short-term impacts would occur where property would be required through TCEs to allow for construction. Short-term property impacts, typically to accommodate construction activity, are mitigated through financial compensation to the affected property owner, and after construction is complete, the area would be restored to preexisting conditions. Also, mitigation could occur by accommodating construction activity through other sites.

Based on the initial technical analysis used to complete this Technical Report identifying potential business displacements, an addendum was prepared to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a). The addendum describes ways to avoid or minimize impacts at some properties, including all locations of potential full property acquisition and/or displacement of businesses. Please see this addendum for additional information on potential acquisitions, parking, property access and circulation, and tree impacts mitigation.

### **S.4. Conclusions**

The parcels impacted would be adjacent to the existing right of way, and the acreage would be relatively minor compared to the total number and areas of project-adjacent parcels. The majority of the partial acquisitions would consist of a narrow strip alongside roadways. The majority of the parcels affected would be associated with commercial and industrial land uses. No residential units would be displaced, but some strip and sliver acquisitions of residential property would occur in some build alternatives. Some build alternatives would potentially displace businesses whose drive-throughs would be blocked or altered. LTD and the City of Eugene have prepared an Addendum to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a) that describes ways to avoid or minimize impacts at some properties, including all locations of potential business displacements. alternatives

# 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. Acquisitions and Displacements Technical Report and Purpose

This technical report presents the results of the Acquisitions and Displacements assessment for the MovingAhead Project corridor alternatives:

- Acquisitions would result when property, partial or full, was acquired from parcels outside of existing transportation right of way (ROW) along the corridors.
- Displacements would result when the acquisition of property was great enough to affect the function of the existing use on the property (such as business, residential, public, or institutional).

When selecting the locally preferred alternative for a corridor, the effects of potential acquisitions and displacements, along with possible mitigation measures, would be considered.

## 1.3. Discipline Experts

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

<b>Discipline</b>	<b>Technical Expert</b>	<b>Affiliated Organization</b>	<b>Title / Years of Experience</b>
Acquisitions and Displacements	Scott Bucklin	CH2M	Planner / 2 years
	Marisa DeMull	CH2M	Planner / 3 years Engineer / 2 years
	Laura Higashi-Poynter	CH2M	Planner / 3 years
Editors	Kath Althen	CH2M	Editor / 20 years
	Rob Rodland	CH2M	Senior Transportation Planner / 20 years
	Lynda Wannamaker	Wannamaker Consulting	President / 33 years
	Scott Richman	CH2M	Senior Project Manager / 18 years
	Ryan Farncomb	CH2M	Senior Transportation Planner / 7 years
	Sasha Luftig	LTD	Development Project Manager / 9 years
	Zach Galloway	City of Eugene	Senior Planner / 10 years

Source: MovingAhead Project Team. (2017).

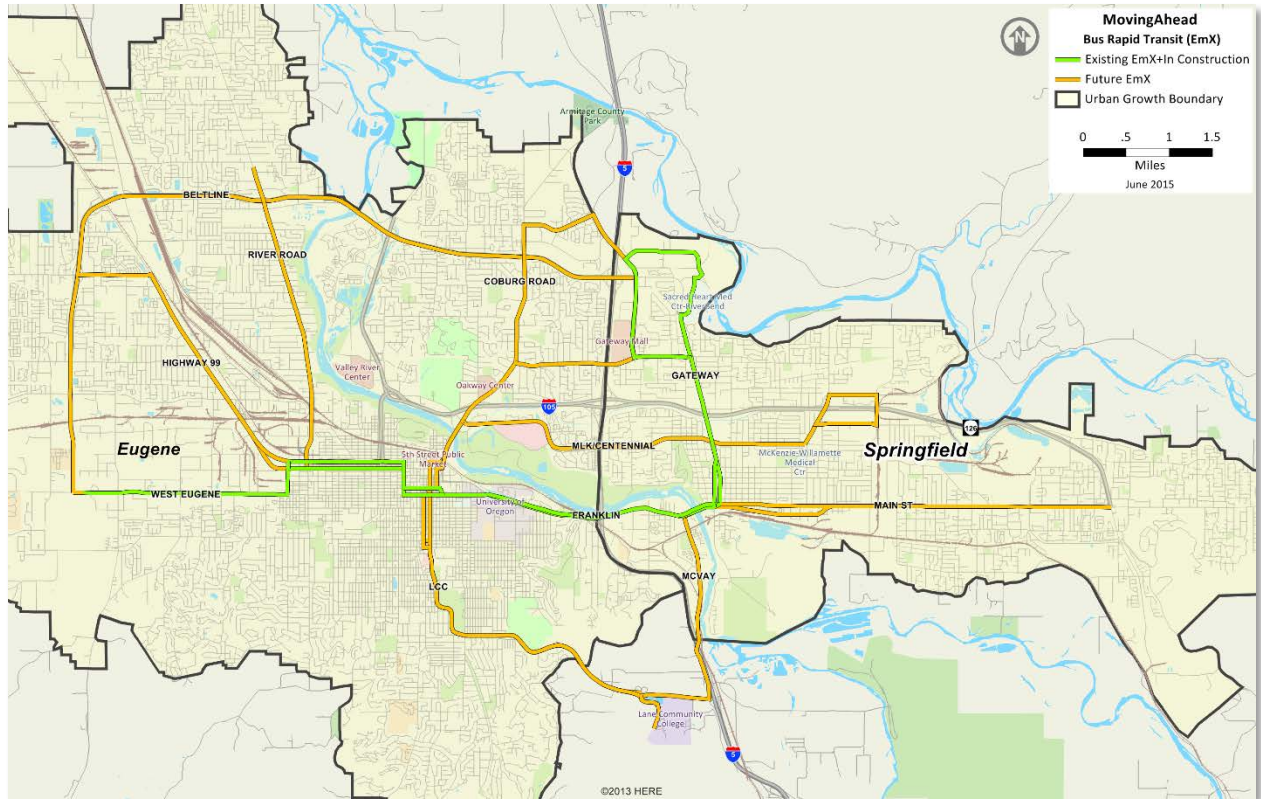
## 1.4. Study Background

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* (Lane Transit District [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, Amended 2015, June).

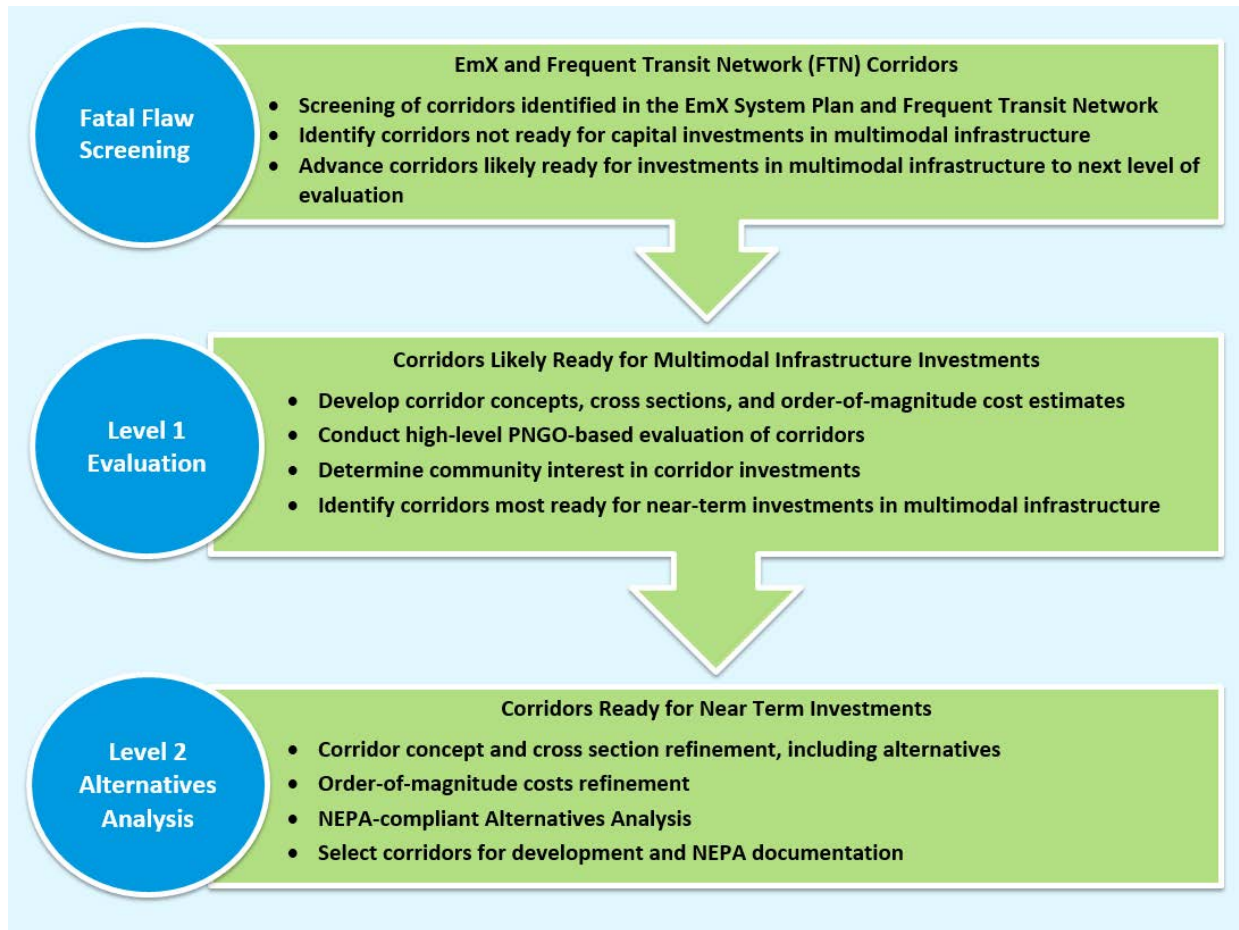
### 1.5. Screening and Evaluation of Multimodal Options

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, Amended 2015, June) 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 Lane Community College	✓	
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

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

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

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

Source: CH2M. (2016a).

For a detailed discussion of alternatives and design options considered for each corridor, but not carried forward to the Level 2 AA, please 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
<b>Goal 1: Improve multimodal transit corridor service</b>		
Objective 1.1:	Improve transit travel time and reliability	<ul style="list-style-type: none"> <li>• Round trip p.m. peak transit travel time between select origins and destinations</li> <li>• On-time performance (no more than 4 minutes late) of transit service</li> </ul>
Objective 1.2:	Provide convenient transit connections that minimizes the need to transfer	<ul style="list-style-type: none"> <li>• Number of transfers required between heavily used origin-destination pairs</li> </ul>
Objective 1.3:	Increase transit ridership and mode share in the corridor	<ul style="list-style-type: none"> <li>• Average weekday boardings on corridor routes</li> <li>• Transit mode share along the corridor</li> <li>• Population within 0.5 mile of transit stop</li> <li>• Employment within 0.5 mile of transit stop</li> </ul>
Objective 1.4:	Improve access for people walking and bicycling, and to transit	<ul style="list-style-type: none"> <li>• Connectivity to existing pedestrian facilities</li> <li>• Connectivity to existing bicycle facilities</li> </ul>
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"> <li>• Opportunity to provide a safe and comfortable environment for pedestrians and bicyclists in the corridor</li> </ul>
<b>Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner</b>		
Objective 2.1:	Control the increase in transit operating cost to serve the corridor	<ul style="list-style-type: none"> <li>• Cost per trip</li> <li>• Impact on LTD operating cost</li> <li>• Cost to local taxpayers</li> </ul>
Objective 2.2:	Increase transit capacity to meet current and projected ridership demand	<ul style="list-style-type: none"> <li>• Capacity of transit service relative to the current and projected ridership</li> </ul>
Objective 2.3:	Implement corridor improvements that provide an acceptable return on investment	<ul style="list-style-type: none"> <li>• Benefit / cost assessment of planned improvements</li> </ul>
Objective 2.4:	Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment	<ul style="list-style-type: none"> <li>• Results of screening-level assessment of environmental impacts of transit solutions</li> </ul>

**Table 1.6-1. Evaluation Criteria**

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

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

LOS = level of service

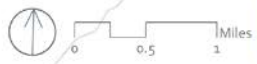
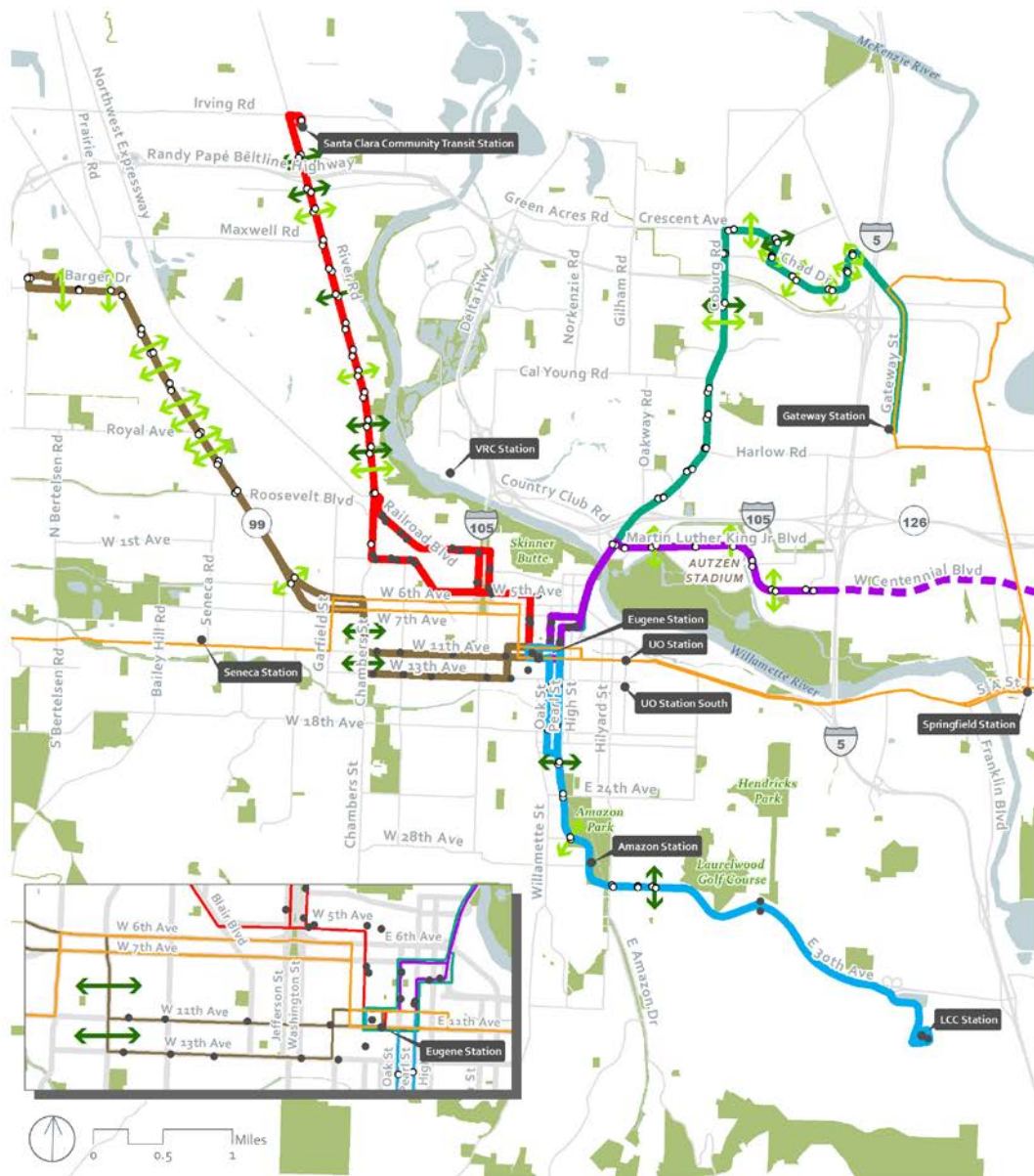
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## 2. Alternatives Considered

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**



**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
- Corridor continues east of I-5 as existing route #13
- 2035 No-Build EmX
- Road
- Park
- Water
- Stop/Station Locations
- Existing Without Improvements
- Proposed or Existing with Improvements
- ↔ New Pedestrian Crossing
- ↔ Enhanced Existing Pedestrian Crossing

**Enhanced Corridor Alternatives Overview**



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**Figure 2.1-2. 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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## 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 to 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 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. There

would be no additional major transportation improvements to the Coburg Road Corridor under the No-Build Alternative.

Under the No-Build Alternative, the Coburg Road Corridor service would remain at 15-minute headways on Routes 66 and 67 at all weekday times, 30-minute headways on Saturdays, and 60-minute headways on Sundays.

### **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. 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.

### **2.7.3. 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 section summarizes the methods and data used to assess potential long-term and short-term direct impacts and the indirect and cumulative impacts from property acquisition from the alternatives under study for the MovingAhead Project.

#### 3.1. Relevant Laws and Regulations

Federal and state statutes and regulations that address property acquisition, displacements, and relocation that could occur as a result of the MovingAhead Project are described below.

##### 3.1.1. Federal

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. 4601 et seq. (Uniform Relocation Act) establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or that displace persons from their homes, businesses, or farms. The Act's protections and assistance apply to the displacement of residents, and the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. Its primary purpose is to ensure that people will not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship for directly displaced people.
- The U.S. Department of Transportation (2005) *Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs, Final Rule and Notice* is a federal regulation issued by the U.S. Department of Transportation governing acquisition and relocation for transportation projects using federal funds.
- The Urban Mass Transit Administration (UMTA, now FTA) (1988) *Urban Mass Transportation Project Management Guidelines for Grantees* is issued by UMTA. It provides direction for the application of the Uniform Relocation Act for federally funded transit projects.

##### 3.1.2. State

- The Relocation of Displaced Persons statutes, Oregon Revised Statute (ORS) 35.500-35.530 in 2003 (formerly ORS 281.045 to ORS 281.105), addresses relocation of displaced persons (State of Oregon, 2003).
- The Oregon Department of Transportation (2016) *Right-of-Way Manual* provides guidance for implementing procedures of the Uniform Relocation Act.

#### 3.2. Methods

The primary data sources for determining potential property acquisitions and displacements of existing uses include conceptual engineering drawings, property tax lot maps, City zoning maps, and aerial photographic imagery. The project team used these data source areas to identify where the project ROW needs would exceed the current public ROW and would require acquisition from adjacent properties. For each corridor and alternative, the project team assessed potentially affected properties and determined whether the parcel acquisition would be partial or full, as follows:

- Partial acquisition, when LTD would acquire part of a parcel and generally not displace the existing use
- Full acquisition, when LTD would acquire the full parcel and displace the current use

In addition, the potential displacement of a business or residence was considered whenever one or more of the following circumstances would occur:

- A portion of the building used as a business or residence would lie within the property to be acquired
- Access to a property would be completely and permanently eliminated by the project and could not be restored by reconfiguring the site access
- Partial parcel acquisition that permanently impacts the circulation of a drive-through
- Partial parcel acquisition that permanently changes land use of a given site
- Off-street parking for a business is eliminated or reduced to the extent that the business does not meet code requirements

The project team quantified the number of parcels with potential parking impacts, the number of parking stalls potentially impacted, and properties with potential impacts to drive-through circulation. As the design is refined in subsequent phases, the project may be able to work with property owners to reduce or eliminate parking impacts by reconfiguring existing sites. This method would also be used in an effort to protect property access and partial acquisitions that may change the land use of a given site attributable to a change in or loss of access. The land type affected by property acquisition was generalized into the following types of property:

- Commercial and industrial
- Public and institutional
- Residential
- Vacant

### 3.3. Impact Analysis

The impact analysis considered the long-term and short-term impacts. Long-term impacts would occur whenever the need for project ROW would encroach on property that was not part of the existing ROW and would be needed to operate the project. Short-term impacts would occur where property would be required through temporary construction easements (TCEs) to allow for construction. After completion of construction, the area would be restored to preexisting conditions.

The project team quantified the long-term impacts by parcel (partial and full) for each corridor by land type (e.g., residential, commercial, and industrial). Using geographic information systems, the construction footprints of the alternatives were overlaid on parcel maps to determine potential impacts. For each parcel impacted, the project team collected the following information:

- Partial or full acquisition
- Approximate area of acquisition (acres)
- Number of potential displacements for each parcel characterized by land type

Because the exact location and extent of TCEs is not known, the team discussed the short-term impacts qualitatively. For further information on impacts and the areas of parcels that would be acquired, refer to the *MovingAhead Land Use and Prime Farmlands Technical Report* (CH2M, 2017c).

### 3.4. Mitigation Analysis

Because part of the project definition is compliance with the Uniform Relocation Act, such compliance is not considered a mitigation measure. Section 5.4 identifies measures that could reduce long-term or short-term impacts related to acquisitions and displacements.

Based on the initial technical analysis used to complete this Technical Report identifying potential full displacements of businesses, an addendum was prepared to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a). The addendum describes ways to avoid or minimize impacts at some properties, including all locations of potential full property acquisition and/or business displacement. Please see this addendum for additional information on potential acquisitions, parking, property access and circulation, and tree impacts mitigation.

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#### 4. Affected Environment

The project's five corridors are located primarily within the City of Eugene. A portion of the 30th Avenue to LCC Corridor is located within unincorporated Lane County, and a portion of the Coburg Road Corridor Area of Potential Impact is located within the City of Springfield. For the Enhanced Corridor and EmX Alternatives, preliminary stop and station locations have been identified. More detailed land use information for the project corridors and alternatives is described in the *MovingAhead Land Use and Prime Farmlands Technical Report* (CH2M, 2017c).

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## 5. Environmental Consequences

This section summarizes parcel acquisition specific to each corridor and alternative, and provides information on the long-term direct acquisition and displacement impacts, indirect and cumulative effects of parcel acquisitions and displacements, and short-term construction-related impacts. In addition, this section identifies potential mitigation measures and permits and approvals.

### 5.1. Long-Term Direct Impacts

#### 5.1.1. No-Build Alternatives

No additional property impacts related to the No-Build Alternative would be anticipated beyond those from the approved plans and construction projects identified in the Draft Eugene 2035 TSP. Any property acquisitions and displacements of existing uses under the No-Build Alternatives would need to comply with the Uniform Relocation Act and ORS.

#### 5.1.2. Impacts Common to All Build Alternatives

Based on the conceptual design, the build alternatives would not result in acquisitions that would require the displacement of residences. Table 5.1-1 provides information on the number of parcels affected by land type and the total acquisition area for each of the corridors by alternative. The analysis presented in the Technical Report assumes a more refined footprint than is evaluated in the other MovingAhead Alternatives Analysis Technical Reports. Other technical reports consider potential impacts from a larger construction footprint, which allows for shifting of station locations if needed to avoid impacts identified as design and analysis of the corridors progresses, and is generally larger than the final impacts construction would ultimately have on the corridor(s). The footprint used for this Acquisitions and Displacement Report focuses on the number of properties that would actually be needed based on the physical design elements as proposed for the purposes of the analysis, rather than all that could potentially be needed for the project.

The majority of impacts would be partial acquisitions that consist of narrow strips of property along the outer edge of the existing ROW. Within each corridor, the EmX Alternative would impact a larger area of land than the Enhanced Corridor Alternative to accommodate more roadway space for dedicated transit operations and larger areas for EmX stations. With the exception of the Highway 99 Corridor, the EmX Alternatives would also require partial acquisitions of more parcels than the Enhanced Corridor Alternatives.

Table 5.1-2 provides information on the number of parcels where the acquisition area includes parking or a portion or all of a parcel's commercial drive-through circulation. Because of the current level of design, no quantification of the exact number of parking spaces per impacted parcel was performed. As the design is refined in subsequent phases, the project may be able to work with property owners to reduce or eliminate parking impacts by reconfiguring existing sites. This method would also be used in an effort to protect property access and partial acquisitions that may change the land use of a given site. LTD has prepared an addendum to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a) that evaluates ways to avoid or minimize impacts at some properties. See this addendum for additional information on potential parking, acquisitions, and tree impacts mitigation.

**Table 5.1-1. Long-Term Direct Impacts by Land Type and Area of Acquisition**

Alternative	Land Type				Total Parcels Affected	Total Area of Acquisitions (in acres)
	Commercial & Industrial	Public & Institutional	Residential	Vacant Land		
<b>Highway 99 Corridor</b>						
Enhanced Corridor	38	1	4	1	44	1.3
EmX	34	1	3	0	38	1.6
<b>River Road Corridor</b>						
Enhanced Corridor	5	0	0	0	5	1.3
EmX	26	0	14	0	40	2.2
<b>30th to LCC Corridor</b>						
Enhanced Corridor	6	6	1	1	14	0.4
EmX	10	7	2	1	20	0.6
<b>Coburg Road Corridor</b>						
Enhanced Corridor	20	4	23	0	47	1.0
EmX	37	7	29	0	73	4.0
<b>Martin Luther King, Jr. Boulevard Corridor</b>						
Enhanced Corridor	5	0	3	0	8	0.1

Because of the level of design, no quantification of the exact number of parking spaces per impacted parcel was performed. As the design is refined in subsequent phases, the project may be able to work with property owners to reduce or eliminate parking impacts by reconfiguring existing sites. This method would also be used in an effort to protect property access and partial acquisitions that may change the land use of a given site.

LTD and the City of Eugene have prepared an Addendum to the MovingAhead Alternatives Analysis Technical Reports that evaluates ways to avoid or minimize impacts at some properties, including all potential business displacements. See this addendum for additional information on potential parking and acquisitions.

**Table 5.1-2. Long-Term Direct Impacts to Parking and Drive-Through Circulation by Alternative**

Alternative	Parcels with Potential Parking Impacts	Number of Parking Stalls Potentially Removed at Impacted Parcels	Approximate Total Number of Parking Stalls at Impacted Parcels <sup>a</sup>	Parcels with Potential Drive-Through Impacts
<b>Highway 99 Corridor</b>				
Enhanced Corridor	5	46	Greater than 500	0
EmX	6	53	Greater than 500	1
<b>River Road Corridor</b>				
Enhanced Corridor	1	2	27	4
EmX	7	31	Greater than 300	6

**Table 5.1-2. Long-Term Direct Impacts to Parking and Drive-Through Circulation by Alternative**

Alternative	Parcels with Potential Parking Impacts	Number of Parking Stalls Potentially Removed at Impacted Parcels	Approximate Total Number of Parking Stalls at Impacted Parcels <sup>a</sup>	Parcels with Potential Drive-Through Impacts
<b>30th to LCC Corridor</b>				
Enhanced Corridor	0	0	0	0
EmX	2	17	Greater than 100	0
<b>Coburg Road Corridor</b>				
Enhanced Corridor	5	42	Greater than 300	0
EmX	16	92	Greater than 500	2
<b>Martin Luther King, Jr. Boulevard Corridor</b>				
Enhanced Corridor	0	0	0	0

<sup>a</sup> Includes potentially removed parking stalls. Number is based on approximate count of spaces based on aerial view existing lot configuration (Google Earth, 5/29/2016 aerial imagery). For information regarding off-street parking impacts to individual properties, refer to the Transportation Technical Report. (DKS et. al, 2016).

Because the acquisitions shown in Tables 5.1-1 and 5.2-1-2 are based upon conceptual design, they are subject to change as the design is refined. During final design of any of the corridors, parcels could be developed or redeveloped prior to construction. This might result in displacements, or design changes might occur that could change the number of parcels and total area affected. As the project moves toward final design and as permanent station locations are identified, a refined analysis related to the property impacts would be completed and every reasonable effort would be made to reduce impacts to parking and site access.

LTD and the City have prepared an Addendum to the MovingAhead Alternatives Analysis Technical Reports that evaluates ways to avoid or minimize impacts at some properties, including all potential business displacements. See this addendum for additional information on potential parking and acquisitions

### 5.1.3. Highway 99 Corridor

#### 5.1.3.1. Enhanced Corridor Alternative

The Enhanced Corridor Alternative would result in partial acquisitions of 44 parcels, which total an estimated 1.3 acres of land (Table 5.1-1). The 44 affected parcels consist of 38 commercial and industrial parcels, 1 public and institutional parcel, 4 residential parcels, and 1 vacant land parcel. The impact on a public parcel would be acquisition of 0.1 acre from Empire Park, at the corner of Highway 99 and Barger Drive. This alternative would impact six more parcels than the Highway 99 Corridor EmX Alternative because it would have more stops that require use of non-ROW property. It would, however, result in the second greatest number of partial parcel acquisitions after the Coburg Road Corridor build alternatives. The higher number of parcels and total area, as compared to most other build alternatives, is because of the construction of the pedestrian bridge in the Trainsong neighborhood which would require acquisitions from six parcels (three commercial, three vacant). Of the 44 impacted parcels, 8 would have potential impacts on parking and none would affect drive-through circulation (Table 5.1-2).

### 5.1.3.2. EmX Alternative

The EmX Alternative would result in partial acquisitions of 38 parcels, which total an estimated 1.6 acres of land (Table 5.1-1). The 38 affected parcels consist of 34 commercial and industrial parcels, 1 public and institutional parcel, and 3 residential parcels. The impact on a public parcel would be acquisition of 0.1 acre from Empire Park, at the corner of Highway 99 and Barger Drive. The Highway 99 EmX Alternative would impact six fewer parcels than the Enhanced Corridor Alternative, and it would require the second greatest land acquisition area among all build alternatives for all corridors. The higher number of parcels and total area, as compared to most other build alternatives, is a result of the construction of the pedestrian bridge in the Trainsong neighborhood which would require acquisitions from six parcels (three commercial, three vacant). Of the 38 impacted parcels, 13 would have potential impacts on parking.

One parcel would have potential impacts on its drive-through circulation (Table 5.1-2). This parcel is a commercial use that as of July 2017 is vacant. Due to the uncertain future use of the parcel, it should be considered a potential business displacement. However, it is not included in the number of displacements in the summary. Working with potential property owners to identify this property impact in advance of purchase and mitigate as appropriate would reduce the risk of a potential displacement in this location.

### 5.1.4. River Road Corridor

#### 5.1.4.1. Enhanced Corridor Alternative

The Enhanced Corridor Alternative would result in partial acquisitions of three commercial and industrial parcels, which total an estimated 0.2 acre of land (Table 5.1-1). This alternative would impact 35 fewer parcels than the River Road Corridor EmX Alternative. Both of the partial acquisitions would have potential impacts on parking (Table 5.1-2).

The Enhanced Corridor Alternative would result in potential full acquisitions of two commercial parcels, which total an estimated 1.1 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation. These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in the present day. Two additional businesses on larger parcels would be displaced due to impacts to their drive-through circulation, though the entire parcel would not be acquired.

Mitigation options are available to avoid the potential full acquisition of properties by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

#### 5.1.4.2. EmX Alternative

The EmX Alternative would result in partial acquisitions of 37 parcels, which total an estimated 0.7 acre of land (Table 5.1-1). This alternative would impact 35 more parcels than the River Road Corridor Enhanced Corridor Alternative. The 37 partial acquisitions, 23 would be commercial and industrial properties and 14 would be residential properties. Of the 37 partial acquisitions, 13 would have potential parking impacts (Table 5.1-2).

The EmX Alternative would also result in potential full acquisitions of three commercial parcels, which total an estimated 1.6 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation. These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in

the present day. Three additional businesses on larger parcels would be displaced due to impacts to their drive-through circulation, though the entire parcel would not be acquired.

Mitigation options are available to avoid the potential full acquisition of properties by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

### **5.1.5. 30th Avenue to Lane Community College Corridor**

#### **5.1.5.1. Enhanced Corridor Alternative**

The Enhanced Corridor Alternative would result in partial acquisitions of 14 parcels, which total an estimated 0.4 acre of land (Table 5.1-1). This alternative would impact six fewer parcels than the 30th Avenue to LCC EmX Alternative. This total represents six commercial and industrial parcels, six public and parcels, one institutional parcels, one residential parcel, and one vacant parcel. The public and institutional parcels impacted include partial acquisitions of four Amazon Park parcels, one parcels, one parcel near South Eugene High School, and one partial acquisition of the proposed Civic Stadium Park property. There would be no impacts to parking or drive-through circulation on private property under this alternative (Table 5.1-2).

#### **5.1.5.2. EmX Alternative**

The EmX Alternative would result in partial acquisitions of 20 parcels, which total 0.6 acre of land (Table 5.1-1). This alternative would impact six more parcels than the 30th Avenue to LCC Enhanced Corridor Alternative. Of the 20 affected parcels, 10 are commercial and industrial properties, 7 are public institutional parcels, 2 are residential parcels, and 1 is a vacant parcel. The public and institutional parcels include partial acquisitions of five Amazon Park parcels, and one parcel near South Eugene High School and the Proposed Civic Stadium Park property. One parcel would have potential parking impacts under this alternative, and there would be no effects on drive-through circulation (Table 5.1-2).

### **5.1.6. Coburg Road Corridor**

#### **5.1.6.1. Enhanced Corridor Alternative**

The Enhanced Corridor Alternative would result in partial acquisitions of 47 parcels, which total 1.0 acre of land (Table 5.1-1). This total represents 20 commercial and industrial parcels, 4 public and institutional parcels, and 23 residential parcels. The four public and institutional parcels are partial acquisitions from Campus Employment lots on Shadowview between Chad Drive and Crescent Avenue. Twenty-three acquisitions would be portions of planted areas portions of areas in residential parcels adjacent to Coburg Road. Of the 47 partial parcel acquisitions, 8 would have potential parking impacts and 1 would have potential impacts on drive-through circulation (Table 5.1-2).

#### **5.1.6.2. EmX Alternative**

The Coburg Road Corridor EmX Alternative would result in 71 partial parcel acquisitions, which total 2.6 acre of land (Table 5.1-1). This total represents 18 commercial and industrial parcels, 4 public and institutional parcels, 23 residential parcels, and no vacant land parcels. The four public and institutional parcels are sliver acquisitions from Campus Employment lots on Shadowview between Chad Drive and Crescent Avenue. This alternative would result in the second greatest number of partial property acquisitions for all build alternatives. Of the parcels acquired, the majority of the 18 commercial and

industrial parcels would be sliver acquisitions surrounding Oakway Center shopping mall on Coburg Road. Twenty-three acquisitions would be along planter strips in residential areas adjacent to Coburg Road. Of the 71 partial parcel acquisitions, 8 would have potential parking impacts (Table 5.1-2).

The EmX Alternative would result in potential full acquisitions of two commercial parcels, which total an estimated 1.4 acres of land. Strip acquisitions of land to construct improvements on these properties would result in potential impacts on drive-through circulation (Table 5.1-2). These impacts would potentially require full acquisition of the properties due to changing their ability to function as they do in the present day.

Mitigation options are available to avoid the potential full acquisition of properties by this alternative. They are available for review in the *Addendum to MovingAhead Alternatives Analysis Technical Reports Memorandum* (CH2M, 2017a).

### **5.1.7. Martin Luther King, Jr. Boulevard Corridor**

#### **5.1.7.1. Enhanced Corridor Alternative**

The Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Alternative would result in parcel acquisitions of eight parcels, which total approximately 0.1 acre of land (Table 5.1-1). This total represents five commercial or industrial parcels and three residential parcels. There would be no impacts to parking or drive-through circulation on private property under this alternative (Table 5.1-2).

## **5.2. Indirect and Cumulative Impacts**

While the build alternatives would result in minor land acquisitions, no additional indirect impacts are anticipated that would require additional acquisitions or displacements. Potential cumulative impacts could occur as a result of property acquisitions or displacements that may be required for other reasonable and foreseeable actions separate from the MovingAhead Project. Indirect and cumulative impacts such as changes in demand or potential redevelopment activities by others are discussed in the *MovingAhead Land Use and Prime Farmlands Technical Report* (CH2M, 2017c) and *MovingAhead Community, Neighborhood, and Environmental Justice Technical Report* (CH2M, 2017b).

## **5.3. Short-Term Construction-Related Impacts**

Short-term property impacts could occur from TCEs. At the current level of design, specific TCEs have not been identified and, if required, would be determined during final design. Because there is some flexibility in the location and size of TCEs, they can be located in such a way as to minimize adverse impact to the adjacent property. This property typically would revert to its original use once construction had been completed.

### **5.3.1. No-Build Alternative**

The No-Build Alternatives would result in only those short-term construction-related impacts resulting from approved plans and construction projects outlined in the Draft Eugene 2035 TSP.

### **5.3.2. Impacts Common to All Build Alternatives**

LTD or the construction contractor may require the use of additional properties for construction staging, including equipment storage, contractor offices, and other activities. These areas would be generally



confirmed during final design and would be leased through TCEs, rather than permanently acquired. For any short-term land acquisitions, LTD would negotiate TCEs from the property owners.

#### 5.4. Potential Mitigation Measures

The build alternatives have been conceptually designed to minimize and avoid property impacts where possible, within the constraint of providing an acceptable rapid transit operating environment and serving travel destinations along the corridor. Many, if not most, of the associated permanent partial acquisitions are minor slivers of property that parallel the roadway or involve adjusting the sidewalks. These impacts are frequently so minor that they would not change the usefulness nor appearance of the property. As design refinement continues through to final design, it may be possible to avoid or minimize property acquisition from some parcels. LTD would comply with the provisions of the and Uniform Relocation Act and ORS for those property owners affected by property acquisition. The project team will consider all reasonable options during design refinement to avoid displacements due to parking, drive-through, or other impacts. LTD has prepared an addendum to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a) that evaluates ways to avoid or minimize impacts at some properties. Please see this addendum for additional information on potential parking, acquisitions, and tree impacts mitigation.

Direct property acquisitions and relocation impacts for federally funded projects must be mitigated through financial compensation and technical assistance, regulated in accordance with the Uniform Relocation Act and ORS as identified in Section 3.1 of this technical report. These regulations are intended to ensure that fair market value would be paid for acquired property and that relocation assistance would be made available to help displaced residents and businesses find suitable alternative locations. It is LTD's intent that all affected property owners, business owners, and tenants would be treated fairly and equitably, in accordance with federal and state regulations.

Owners of property would be offered just compensation for the required property or property interest. Just compensation is the estimated value of all the land and improvements within the needed area based on fair market value. If displacements are unavoidable, relocation assistance would be available to assist displaced residents and businesses. Relocation assistance would differ for displaced residences compared to businesses. However, eligible parties would typically receive assistance to cover moving expenses. Residents might also be eligible for housing replacement payments, as necessary, to ensure that the replacement dwelling would meet federal standards for decent, safe, and sanitary housing.

Short-term impacts would occur where property would be required through TCEs to allow for construction. Short-term property impacts, typically to accommodate construction activity, are mitigated through financial compensation to the affected property owner. Payment for TCEs would be made according to federal and state statutes identified in Section 3 of this technical report. Mitigation for temporary property impacts can also be provided by staging and scheduling construction to minimize the amount of time that any particular section of the project is under construction, which would minimize the amount of time the property is not available to the owner. After construction is complete, the area would be restored to preexisting conditions. Also, mitigation could occur by accommodating construction activity through other sites.

LTD and the City of Eugene have prepared an Addendum to the MovingAhead Alternatives Analysis Technical Reports (CH2M, 2017a) that evaluates ways to avoid or minimize impacts at some properties. Please see this addendum for additional information on potential acquisitions, parking, property access and circulation, and tree impacts mitigation.

## 5.5. Permits and Approvals

No specific permits would be required for acquisitions.

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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 <sup>3</sup>	microgram(s) per cubic meter
AA	Alternatives Analysis
AAC	all aluminum conductor
AAI	All Appropriate Inquiry
AASHTO	American Association of State Highway and Transportation Officials
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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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 <sub>2</sub>	carbon dioxide
CO <sub>2</sub> 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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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 <sup>2</sup>	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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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-105	Interstate 105
I-5	Interstate 5
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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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 <sub>2</sub>	nitrous dioxide
NO <sub>x</sub>	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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
NW Natural	Northwest Natural
O&M	operations and maintenance
O <sub>3</sub>	ozone
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 <sub>10</sub>	particulate matter – 10 microns in diameter
PM <sub>2.5</sub>	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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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 106	Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800.5)
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
SF	square foot (feet)
SHPO	Oregon State Historic Preservation Office
SIP	State Implementation Plan
SMU	Species Management Unit
SO <sub>2</sub>	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**

<b>Acronyms and Abbreviations</b>	<b>Definitions</b>
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
U.S.C.	United States Code
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
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

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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**

<b>Terms</b>	<b>Definitions</b>
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**

<b>Terms</b>	<b>Definitions</b>
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**

<b>Terms</b>	<b>Definitions</b>
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"> <li>• 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.</li> <li>• To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.</li> <li>• To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.</li> </ul>
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**

<b>Terms</b>	<b>Definitions</b>
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)	A 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"> <li>• Goals are overarching principles that guide decision making. Goals are broad statements.</li> <li>• Objectives define strategies or implementation steps to attain the goals. Unlike goals, objectives are specific and measurable.</li> </ul>
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.

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.”
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 <i>Envision Eugene</i> 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.

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.
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).

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.
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.

**Table A-2. Terms**

Terms	Definitions
Minority	<p>A person who is one or more of the following:</p> <ul style="list-style-type: none"> <li>• Black: a person having origins in any of the black racial groups of Africa</li> <li>• Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race</li> <li>• Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent</li> <li>• 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</li> <li>• Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands</li> </ul>
Mitigation	<p>A means to avoid, minimize, rectify, or reduce an impact, and in some cases, to compensate for an impact.</p>
Mixed-Use	<p>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</p>
Modal Split	<p>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.</p>
Mode	<p>A particular form or method of travel distinguished by vehicle type, operation technology, and right-of-way separation from other traffic.</p>
Moving Ahead for Progress in the 21st Century (MAP-21)	<p>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.</p>
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	<p>R-2 and R-3</p>
Multimodal	<p>Multimodal refers to various modes. For the MovingAhead project, multimodal refers to Corridors that support various transportation modes including vehicles, buses, walking and cycling.</p>

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.
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.

**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.
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

**Table A-2. Terms**

Terms	Definitions
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.
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.



**Table A-2. Terms**

<b>Terms</b>	<b>Definitions</b>
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.
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

This section of the *MovingAhead Environmental Disciplines Methods and Data Report* (CH2M et al., 2015) addresses the methods and data that would be used to assess potential direct and indirect short-term construction-related impacts of the alternatives for the MovingAhead Project's Alternatives Analysis. This section outlines (1) how construction-related activities for the alternatives would be determined and documented and (2) which disciplines would address potential construction-related impacts and any specific methodologies and/or data that would be used.

### Description of Construction-Related Activities

The MovingAhead project engineer will use the project's *Conceptual Engineering Plan Set* and capital cost estimating documents to develop a general description of construction activities that would occur under each alternative or under groups of alternatives. The description will address the following: general types and locations of construction activities, duration of types of construction activities (i.e., days of the week, time of day, and weeks/months/years), general geographic scope of construction activities, known staging area requirements, and significant fill/excavation requirements.

Specific construction-related issues that would be addressed include the following:

- In-water construction
- Activities under, across, or over freight rail lines
- Street, highway, bicycle facility, and/or pedestrian facility detours/closures
- Transit line and facility detours
- Property access closures
- Noise-generating activities
- Runoff-generating activities
- Dust-generating activities
- Known best management practices that would or may be implemented during construction

The draft description of construction-related activities for the MovingAhead Project will be reviewed and commented on by construction project management staff for the MovingAhead Project. Specific areas of concern (e.g., the potential for a significant short-term construction-related impact) may require additional detail to be included within the description of construction-related activities for one or more of the discipline areas.

### Specific Methodologies

Specific methodologies used to address potential impacts because of project construction activities are addressed under the discipline sections of the *MovingAhead Environmental Disciplines Methods and Data Report*.

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