MovingAhead

STREETS AND PLACES REIMAGINED

Level 1 Screening Evaluation

Lane Transit District
City of Eugene

In cooperation with
City of Springfield
Lane Council of Governments

October 2015

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Level 1 Screening Evaluation

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 eq. seq.

October 2015

Prepared for
Federal Transit Administration
Lane Transit District
City of Eugene

Prepared by
CH2M
Wannamaker Consulting
DKS Associates
John Parker Consulting

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Sasha Luftig, Project Manager for the MovingAhead Project, at
(541) 682-6135 or (800) 735-2900 TTY or Sasha.Luftig@ltd.org.

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For Additional Information or to Comment

If you would like additional information about the MovingAhead project or would like to provide feedback, please contact us.

Contact Method	How to Contact Us
Website	http://movingahead.org
U.S. Mail, Email and/or Telephone	Chris Henry, Transportation Planning Engineer City of Eugene Public Works – Engineering 99 East Broadway, Suite 400 Eugene, OR 97401-3174 chris.c.henry@ci.eugene.or.us 541-682-8472 Sasha Luftig, Transit Development Planner Lane Transit District P.O. Box 7070 Springfield, OR 97475 Or 3500 East 17th Avenue Eugene, OR 97401-0470 Sasha.Luftig@ltd.org 541-682-6135
Written Comments at Meetings	A comment box is available at community meetings for submitting written comments. Refer to the website for the dates and locations of meetings.

Report Authors

Identified in the following table is the list of authors who conducted analyses and prepared sections of this report along with the authors' titles and their affiliated organizations.

Report Authors and Senior Reviewers

Authors/Senior Reviewers	Role	Title/Organization
Kristin Hull	Author/Senior Reviewer	Senior Project Manager/CH2M
Lynda Wannamaker	Author/Senior Reviewer	Principal/Wannamaker Consulting
Kate Drennan	Author	Senior Planner/CH2M
Ryan Farncomb	Author	Senior Planner/CH2M
James McGrath	Lead Designer	Senior Project Manager/CH2M
Adrianna Stanley, PE	Engineer	Transportation Engineer/CH2M
Peter Coffey	Traffic Engineer	Principal/DKS
Sara Hoeber	Graphics	Graphic Designer/CH2M
Randy Parker	Travel Modelling	John Parker Consulting
Jennifer John	Travel Modelling	John Parker Consulting

1. Summary

1.1 Report Purpose and Organization

This report summarizes the findings of the Level 1 Screening Evaluation of the proposed investment options for six transportation corridors located in Eugene, Oregon. This report discusses the evaluation process, corridor concepts considered, evaluation findings, and recommendations as to which corridor options should be advanced for further study during the Level 2 Alternatives Analysis (AA).

This report is organized as follows:

- Chapter 1. Summary
- Chapter 2. Introduction
- Chapter 3. Study Process
- Chapter 4. Proposed Multimodal Solutions
- Chapter 5. Level 1 Screening Evaluation
- Chapter 6. Next Steps
- **Appendix A, Glossary of Acronyms, Abbreviations, and Terms—**transportation projects can be complicated and are often difficult to understand because of the acronyms, terms, and abbreviations used in technical documents and presentations. Thus, this appendix defines acronyms, abbreviations, and terms used in this report.
- **Appendix B, References—**this appendix lists the references and sources consulted in preparing this report.
- **Appendix C, Fatal Flaw Technical Memorandum**—this Fatal Flaw Memorandum describes the criteria and process LTD and the City of Eugene used to evaluate the larger initial set of corridors under consideration for improvements and the findings supporting which corridors would be delayed for near term investment and which considers would be advanced to this Level 1 Screening Evaluation.
- **Appendix D, MovingAhead Public Outreach Summary**—this appendix summarizes public feedback received during the Level 1 Screening process.
- **Appendix E, Agency Coordination Summary**—this document summarizes coordination between government agencies during the Level 1 Screening process.
- **Appendix F, Rail-based Modes Memorandum** – this memorandum describes the reasoning and process for eliminating rail-based modes from consideration during the MovingAhead process.

1.2 Purpose and Need

The MovingAhead project presents an opportunity to coordinate the timing and prioritization of capital investments in multimodal transit corridors. Project coordination will be 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 and help to ensure that development occurs consistent with the region's plans and vision.

This project will develop a Capital Improvements Program (CIP) that forecasts and matches projected revenues and capital needs over a 10-year period for the identified multimodal corridors. MovingAhead will also identify the most economical means of financing multimodal transit corridor capital improvements and establish agency partnerships that promote cooperation and prioritize multimodal transit infrastructure needs. The project problem statement, purpose, and need are presented in greater detail in Section 2.4 of this report.

1.3 Baseline Conditions and Methodologies

Chapter 3 summarizes information that informed development of concepts: existing and future corridor ridership; agency coordination; and public involvement input. This baseline information was used in the screening and comparison of the corridors. Detailed information on the inputs and methodologies used to model future conditions on the corridor can be found in the Methods and Data Reports for environmental and transportation disciplines (available upon request from LTD and the City of Eugene).

1.4 Findings

The Level 1 Screening Evaluation considered six corridors for near term multi-modal investments:

- 30th Avenue/Lane Community College
- Coburg Road
- Highway 99
- Martin Luther King, Jr. Boulevard
- River Road
- Valley River Center

Enhanced and EmX options were considered for all corridors except Valley River Center where community input suggested that EmX service in the corridor is not needed during the planning horizon.

The key evaluation criteria that differentiate the Level 1 corridors from each other are summarized below. The findings from the evaluation of these criteria were used in comparing the six corridors to reach recommendation regarding which corridors should advance to the Level 2 AA for further study:

- EmX options have the greatest potential to improve **transit travel times** in the River Road and Coburg Road Corridors, due to existing or projected traffic congestion.
- EmX options would also result in large increases in **ridership** in the Highway 99, River Road, Coburg Road, and 30th/LCC Corridors. Ridership would also increase in the Martin Luther King, Jr. Boulevard Corridor. The Valley River Center Corridor would experience moderate ridership increases with the Enhanced Corridor option.
- The River Road, Coburg Road, Martin Luther King, Jr. Boulevard, and 30th/LCC corridors have the greatest number of current and potential future **trip generators** (high density residential development, commercial centers, etc.).
- Total **system operating costs** would be similar for EmX options across all corridors. Total system operating costs would also be similar for Enhanced Corridor options across all corridors. In general, total system operating costs would be 6 to 8 percent higher for EmX options as compared to Enhanced Corridor options. However, system operating costs per boarding are expected to be the same for all corridors and options.
- **Capital costs per mile** for EmX options are estimated to be $10 million to $20 million, with the River Road Corridor EmX options estimated to cost more with per mile costs exceeding $20 million per

mile; however, refinement of EmX options during the Level 2 AA may result in reduced per-mile costs for this corridor and others.

- All EmX options would meet **federal grant funding requirements**, while Enhanced Corridor options could possibly meet funding requirements, depending on Enhanced Corridor features. All corridors would result in **enhanced facilities for pedestrians, mobility device users, and cyclists**; all corridors would also coordinate with existing pedestrian and bicycle plans, with the exception of the Valley River Center Corridor as current plans do not include as many improvements in that area. There are few planned roadway projects in the vicinity of the 30th/LCC and Valley River Center Corridors.
- EmX options across all corridors would either improve or have little impact on **emergency vehicle operations**. EmX option 2 in the Highway 99 Corridor would likely improve emergency operations somewhat as it would add an EmX lane that could be used by emergency vehicles.

Based on community input and technical analysis, the project team recommends:

- Advancing Highway 99, River Road, Coburg Road and 30th/LCC Corridors for further evaluation of EmX and Enhanced service in the Level 2 AA;
- Advancing the Martin Luther King, Jr. Boulevard corridor for further evaluation of only Enhanced service in the Level 2 AA; and,
- Eliminating the Valley River Center corridor from further consideration in the Level 2 AA.

No-Build options would be evaluated for all corridors advanced to the Level 2 AA. In some cases, the EmX alternatives may include design options.

This recommendation was approved by the MovingAhead Oversight Committee on September 23, 2015. A summary of the Level 1 Screening Evaluation and all recommendations were advanced to the Eugene City Council and LTD Board of Directors in October 2015 for consideration.

2. Introduction

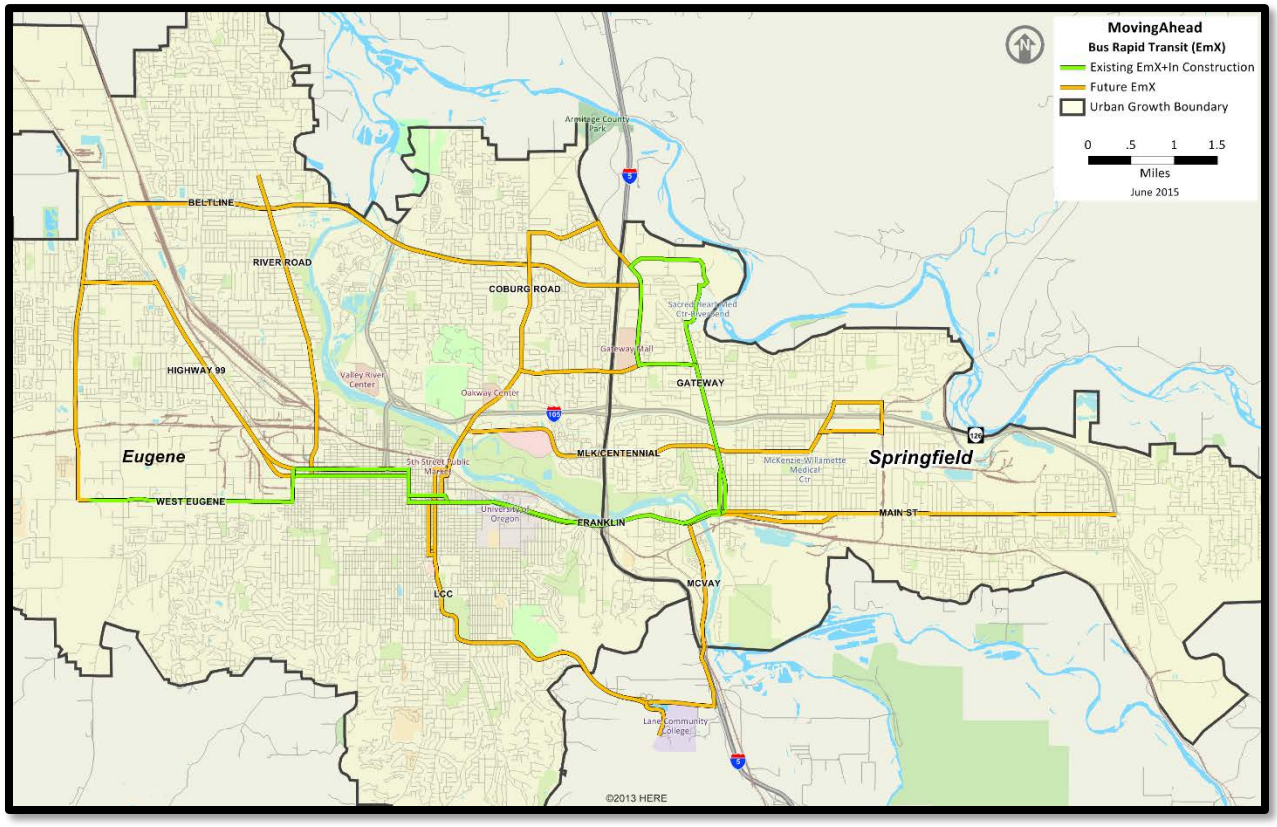
This chapter provides an overview of the MovingAhead project study area, project purpose, study process, and related area projects.

2.1 Project Study Area

The MovingAhead project is a study to determine which of the high-capacity transit corridors identified in the adopted Emerald Express (EmX) System Plan and 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 Lane Transit District (LTD) to facilitate a more streamlined and cost-efficient process through concurrent planning, environmental review, and design and construction of multiple corridors. The study area includes the city of Eugene and portions of unincorporated Lane County.

LTD's Long-Range Transit Plan (LTD, 2014) identifies the 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 the City of Springfield does not have the resources available to consider transit enhancements on Centennial Boulevard at this time, MovingAhead will only develop EmX and Enhanced Corridor options within the city of Eugene. Figure 2.1-1 presents LTD's existing EmX system.

Figure 2.1-1. Lane Transit District's EmX System



Source: Lane Transit District, 2015

2.2 Project Purpose and Need

The prioritization of capital investments in multimodal transit corridors will be 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 and prioritizing of the funding for strategic multimodal capital investments, the MovingAhead project, a multimodal transit corridor study, will help to ensure that development occurs consistent with our region's plans and vision.

2.2.1 Statement of Purpose

The purpose of MovingAhead is to accomplish the following:

- Develop a capital improvements program (CIP) 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 and are supported by community members in the corridor.

2.2.2 Statement of 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 bus rapid transit in the next 20 years consistent with the Central Lane Metropolitan Planning Organization Regional Transportation Plan Regional Transportation Plan (RTP) that provide the best level of transit service in a cost-effective and sustainable manner.
- Need for streamlined environmental reviews to leverage system-wide analysis.
- Selection of the next EmX/FTN corridors is based on long-range operational and financial planning for LTD's service.

2.2.3 Study Goals and Objectives

Following are the goals and objectives for the MovingAhead project:

- 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, for those using mobility devices, bicycling, and access to transit.
- Objective 1.5: Improve the safety of pedestrians, mobility device users, 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 community vision for high-capacity transit and 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, mobility device user, 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: High-capacity transit is consistent with community vision for the 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.

2.2.4 Evaluation Criteria

Table 2.5-1 presents the full set of goals and objectives for the MovingAhead project. Evaluation criteria were crafted to measure the performance of each corridor in meeting the goals and objectives. In the Level 1 Screening Evaluation, a select subset of the objectives was used to evaluate the performance of corridors relative to each other to determine which corridors should advance to a Level 2 AA; these objectives are indicated by an asterisk in Table 2.5-1. During the Level 2 AA, the full set of criteria will be applied.

Table 2.5-1. MovingAhead Corridor Evaluation Criteria

Goals and Objectives		Evaluation Criteria
Goal 1: Improve multimodal transit corridor service.		
Objective 1.1:	Improve transit travel time and reliability.*	• Round-trip PM peak transit travel time between select origins and destinations • On-time performance (no more than 4 minutes late) of transit service
Objective 1.2:	Provide convenient transit connections that minimizes the need to transfer.	• Number of transfers required between heavily used origin-destination pairs
Objective 1.3:	Increase transit ridership and mode share in the corridor.	• Average weekday boardings on corridor routes • Transit mode share along the corridor • Population within 0.5 mile of transit stop • Employment within 0.5 mile of transit stop
Objective 1.4:	Improve access for people walking, using mobility devices, and bicycling to transit.	• Connectivity to existing facilities for pedestrians and users of mobility devices • Connectivity to existing bicycle facilities
Objective 1.5:	Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit, traveling in and along the corridor, and crossing the corridor.*	• Opportunity to provide a safe and comfortable environment for pedestrians, mobility device users, and bicyclists in the corridor
Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner.		
Objective 2.1:	Control the increase in transit operating cost to serve the corridor.*	• Cost per trip • Impact on LTD operating cost • Cost to local taxpayers
Objective 2.2:	Increase transit capacity to meet current and projected ridership demand.	• Capacity of transit service relative to the current and projected ridership
Objective 2.3:	Implement corridor improvements that provide an acceptable return on investment.*	• Benefit/cost assessment of planned improvements
Objective 2.4:	Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment.	• Results of screening-level assessment of environmental impacts of transit solutions
Objective 2.5:	Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.*	• Number and dollar amount of funding opportunities that could be leveraged • Meet Federal Transit Administration's Small Starts funding requirements
Goal 3: Support community vision for high-capacity transit and economic development, revitalization, and land use redevelopment opportunities for the corridor.		
Objective 3.1:	Support development and redevelopment as planned in other adopted documents.*	• Consistent with the Bus Rapid Transit System Plan and Frequent Transit Network concept • Consistent with the regional Transportation System Plan • Consistent with local comprehensive land use plans

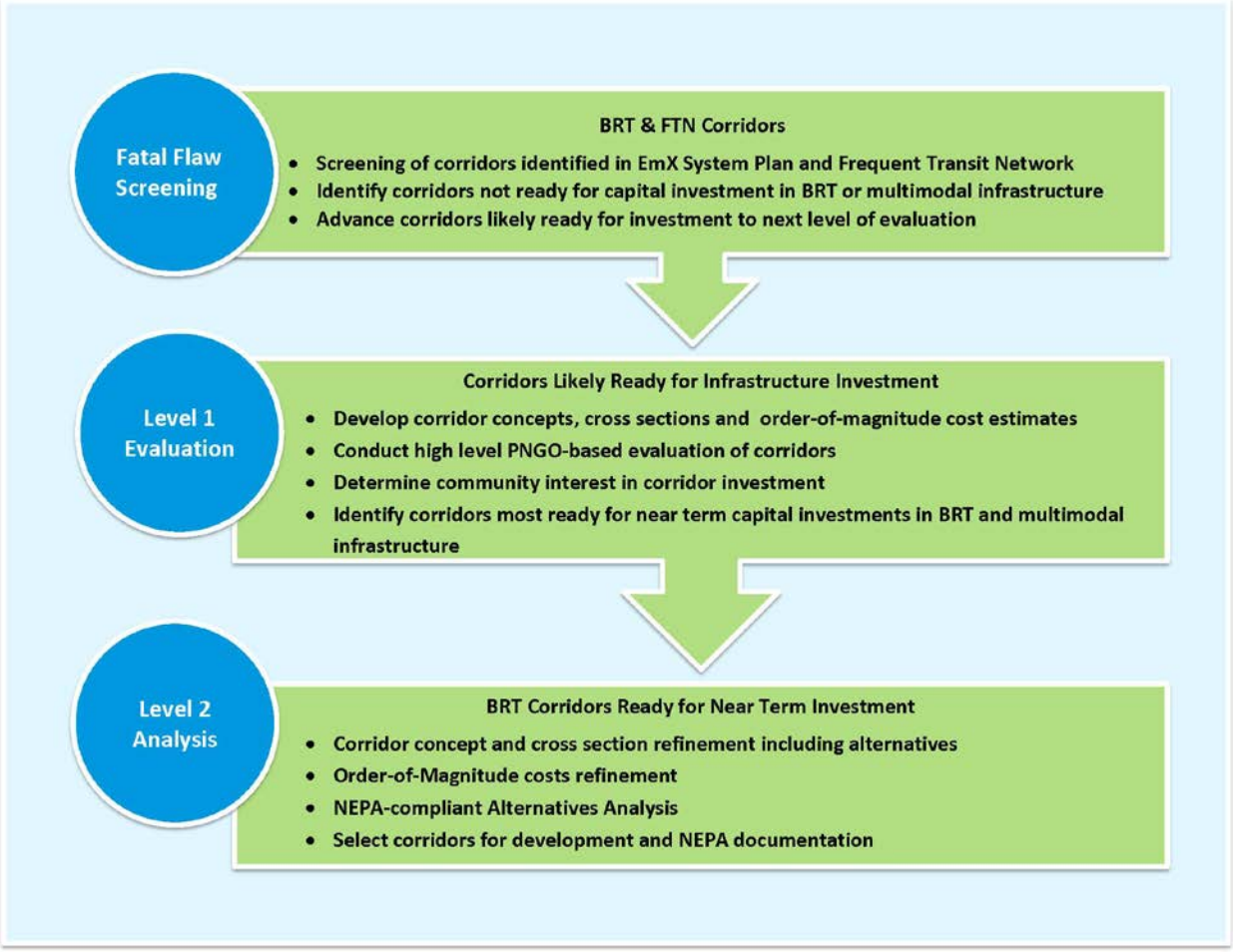
Table 2.5-1. MovingAhead Corridor Evaluation Criteria

	Goals and Objectives	Evaluation Criteria
Objective 3.2:	Coordinate transit improvements with other planned and programmed pedestrian, mobility device user, and bicycle projects.*	• Capability of transit improvement to coordinate with other planned and programmed pedestrian, mobility device user, and bicycle projects identified in adopted plans and Capital Improvement Program
Objective 3.3:	Coordinate transit improvements with other planned and programmed roadway projects.*	• Capability of transit improvement to coordinate with other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs
Objective 3.4:	Minimize adverse impacts to existing businesses and industry.*	• Impacts to businesses along the corridor measured in number and total acres of properties acquired, parking displacements, and access impacts • Impact on freight and delivery operations for corridor businesses
Objective 3.5:	Provide high-capacity transit that is consistent with community vision for the corridor.*	• Public input indicates that community vision includes high-capacity transit in corridor
Objective 3.6:	Improve transit operations on state facilities in a manner that is mutually beneficial to vehicular and freight traffic flow around transit stops and throughout the corridor.*	• Impact on current and future year intersection level of service on state facilities • Impact on current and future year peak-hour automobile/truck travel times on state facilities
Objective 3.7:	Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.*	• Qualitative assessment of potential impacts to emergency service vehicle traffic flow and access

2.3 Study Process

The MovingAhead project process includes two phases. This first phase of the study is broken into three discrete but closely related tasks: identifying transit improvements; identifying improvements for bicyclists, pedestrians, and users of mobility devices; and preparing a National Environmental Policy Act (NEPA)-compliant evaluation of options focused on the region's transportation system (Figure 2.1-2). Corridor options identified as part of this phase were developed using multimodal cross-sections that include variations on automobile, truck, and bus travel lanes, bicycle lanes, and sidewalks (see examples in Chapter 4). At the end of the first phase of the study, the City of Eugene and LTD will select the corridors most ready for near term capital improvements. Those selected corridors will be advanced to the second phase of the study, which will be focused on preparing the NEPA environmental reviews, prioritizing corridors for funding and initiating the Federal Transit Administration (FTA) project development process.

Figure 2.1-2. MovingAhead Phase 1 Steps



Source: Wannamaker Consulting. 2015.

2.3.1 Screening and Evaluation of Multimodal Options

2.3.1.1 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. This high-level evaluation used criteria based on the project's Purpose and Need, Goals and Objectives (PNGO) and existing data to determine which corridors will not be ready for any level of capital investment in bus rapid transit (EmX) or multimodal infrastructure in the next 10 years. The screening was conducted with local, regional, and state agency staff (see Section 3.1 for list of agencies). Each of the 10 corridors was evaluated and ranked (see Fatal Flaw Technical Memorandum in Appendix C). Of the initial 10 corridors identified, three corridors were not advanced from the fatal flaw screening to the Level 1 Screening Evaluation; corridors not advanced are 18th Avenue, Bob Straub Parkway, and the Randy Papé Beltline Highway.

The 18th Avenue and Bob Straub Parkway Corridors were determined to not be ready for any level of capital investment in bus rapid transit (EmX) in the next 10 years. Although originally advanced from the fatal flaw screening, the Main Street-McVay Highway Corridor was 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 into a study to select a locally preferred transit solution. At this time, the Main Street-McVay Highway Corridor will continue to be studied on a schedule that is ahead of the MovingAhead project schedule. If the Main Street-McVay Highway Corridor study schedule is delayed and its progress coincides with this project, then the corridor could be reincorporated back into the MovingAhead project.

As an urban expressway, the Randy Papé Beltline Highway (Hwy 569) is a grade-separated major highway running east-west through north Eugene, connecting Interstate 5, Highway 126 and Highway 99. With its only access via onramps at major signalized intersections, it was determined that the Beltline Highway could not function well as a BRT corridor for LTD. BRT requires safe and convenient pedestrian access to stations, in addition to a travel route with minimal long-term congestion delays, or exclusive travel lanes to avoid congestion. It is very unlikely the large amount of funding required to add these essential BRT elements to this urban highway could ever be justified given its current configuration and function.

The Randy Papé Beltline Highway may serve as a future east-west connector route for regular bus service but current ridership demand does not meet the levels LTD needs to justify the additional operational service cost. The need for this possible connector service will continue to be monitored over time by LTD as part of its annual service planning efforts.

The possibility of including an arterial BRT corridor roughly paralleling the Randy Papé Beltline Highway was also considered. This would require a new arterial bridge over the Willamette River. Although such a crossing may be included as part an ODOT planning process for capacity improvements to the Randy Papé Beltline Highway, the ODOT effort is only in the early planning stage. A BRT corridor dependent on an unplanned bridge is considered too speculative and beyond the scope and timeline of this project. At such time that an arterial crossing of the Willamette is advanced for development, LTD in consultation with Eugene, Lane County, and ODOT will consider the feasibility of a BRT corridor in the area.

The six remaining multimodal corridors were advanced to this Level 1 Screening Evaluation to determine how they compared with each other in meeting the PNGO.

2.3.1.2 Level 1 Screening Evaluation

This Level 1 Screening Evaluation assessed how each corridor performed according to the goals and objectives of MovingAhead. The project team applied the evaluation criteria to evaluate and compare each corridor relative to all of the other corridor options. In some cases, the output of the evaluation criteria is quantitative (e.g., range of cost) rather than a qualitative ranking. The goals, objectives, and screening methodology are presented in Section 4.2.

The Level 1 Screening Evaluation used existing studies and readily available data. This baseline data included recently completed travel forecasts for a base year (2011) and a 2035 forecast year produced by the Lane Council of Governments (LCOG). Information from recently completed and ongoing regional land use planning was used to assess future development potential and economic activity in study areas. Traffic analysis relied on draft buildout plans from local TSPs, traffic flow maps, and crash data available through ODOT's Crash Analysis and Reporting Unit. The existing conditions and draft buildout sections of the Eugene Draft TSP and the Springfield TSP determined operations for intersections and segments along proposed corridors. For the future year (2035) scenario, the project team assumed that the financially constrained project list would be constructed. The team used the 2013 Eugene Traffic Flow Map for corridor volumes and the Eugene Draft and Springfield TSPs to determine intersection crash rates. ODOT's Crash Analysis and Reporting Unit provided additional information on fatal and serious injury crashes as well as bicycle and pedestrian crashes for each corridor.

The team also assessed the transit market potential for each corridor using regional travel model data including transit trip productions and attractions. Forecasts were based on the modeling done for the Eugene Draft and Springfield TSPs. The base year reflects all routes and frequencies that were in operation during the spring 2011. The future year network is built from the 2011 base year with any service adjustments that were made through fall 2014, as well as planned changes to the transit system. The forecasts accounted for new EmX and Enhanced Corridor service and adjustments to other routes to support these system improvements.

The findings on each of the individual corridors are outlined in greater detail in Chapter 4. The corridors determined to be most ready for near term investment will advance to the Level 2 Alternatives Analysis for further study.

Transit trip "productions" are sources for transit trips – residences, like homes or apartments, are examples. Transit trip "attractions" are locations where transit riders are travelling to – downtown, universities, and grocery stores are examples.

2.3.1.3 Level 2 Alternatives Analysis (AA)

To guide the Level 2 AA, LTD will prepare new ridership forecasts and related evaluation measures using the LCOG regional model. Base year and future year forecasts will be prepared for advancing corridor options based upon updated inputs and transit networks specific to each corridor. Details will be provided when advancing corridors are selected. The findings from the Level 2 AA will aid LTD and its partner agencies in determining how corridors should be prioritized for capital investments over the next five years. Selected corridors will be advanced to NEPA evaluation.

2.3.1.4 Capital Improvement Programming

City of Eugene Capital Improvement Programming

Transportation projects not advanced from the Level 1 Screening Evaluation can be incorporated into the City of Eugene's CIP in several different ways. Larger projects—such as shared use paths, significant sidewalk infill, and protected bicycle lanes—can be incorporated into the City of Eugene Draft TSP through an amendment to the TSP. These types of larger projects are typically implemented through federal and state funded grants that the City will apply for in the future. Smaller projects, such as roadway crossing improvements for pedestrians and mobility device users, can be identified for implementation through existing funding programs (e.g., the pedestrian and bicycle component of the Street Bond) that are already in the City's CIP. The smaller projects will be considered for such funding in subsequent years.

Lane Transit District Capital Improvement Programming

Transit improvement projects not advanced from the Level 1 Screening Evaluation can be incorporated into LTD's CIP, which is reviewed and adopted annually. Staff will be responsible for determining which transit enhancement projects identified in MovingAhead will be advanced to the CIP.

2.3.2 Mode Options

Discussions about new transportation options in the Eugene-Springfield region began in the early 1990s as part of a regional transportation plan update. During the update process, several transit options were considered, analyzed, and discussed in public forums. Two key studies conducted during this period and sponsored by Lane Council of Governments (LCOG), the Eugene-Springfield regional Metropolitan Planning Organization (MPO), and LTD were the 1995 Urban Rail Feasibility Study and the 1999 Major Investment Study. From the analysis and the public and agency input, Bus Rapid Transit (BRT) emerged as the clearly preferred transit strategy. It was seen as a way to significantly enhance transit service and

achieve many of the benefits of light rail without the high cost. As a result, BRT was approved in 2001 as a key element of the new Regional Transportation Plan (TransPlan) adopted by the MPO as well as the cities of Eugene and Springfield, Lane County, and LTD.

As a part of the MovingAhead study, LTD reevaluated the factors leading to the selection of BRT as the preferred regional high capacity transit strategy and the elimination of rail-based modes for consideration in the Eugene-Springfield urbanized area. LTD affirmed that BRT is still the more appropriate high capacity transit mode than light rail for the Eugene-Springfield urbanized area based on population, boardings per mile and average cost per boarding relative to light rail costs, operating costs, and financial capacity. The findings from LTD's re-evaluation were submitted to FTA in September 2015 and FTA concurred with LTD's findings. LTD's memo to FTA is included in Appendix F. Based on LTD's re-evaluation and FTA's concurrence, the MovingAhead study will not consider rail-based modes and will only consider Enhanced service and / or EmX alternatives along with the No-Build alternative for each of the corridors.

2.3.3 Agency, Community, and Stakeholder Input

Input from agencies, stakeholders, and the community have been an important consideration at each step in the process. The earliest phases of MovingAhead involved coordination between the project sponsors (City of Eugene and Lane Transit District), and neighboring jurisdictions. During the fatal flaw screening, the following agencies participated in the evaluation of corridors to determine which corridors would advance to the Level 1 Screening Evaluation:

- City of Coburg
- City of Eugene
- City of Springfield
- Lane County
- Central Lane Metropolitan Planning Organization
- Lane Transit District
- Oregon Department of Transportation

In spring 2015, MovingAhead hosted five community workshops to gather input on needed transit and multimodal improvements for the corridors advanced from the fatal flaw screening. The workshops were held throughout the study area and focused on one or more geographically related corridors. Individual workshops were held for the River Road Corridor, Highway 99 Corridor, and 30th/LCC Corridor. The project partners hosted two workshops to discuss the Northeast Eugene Corridors, including the Coburg Road, Martin Luther King, Jr. Boulevard, and the Valley River Center Corridors. The Randy Papé Beltline Corridor was discussed at most workshops because it intersects with many of the study areas.

The workshops provided information about MovingAhead and invited participants to provide feedback on the project scope. Community members highlighted important places on corridors, challenging barriers to using and/or crossing the corridors, and the relative importance of certain types of street facilities (parking or street trees, for example). Participants also shared their concerns and aspirations for multimodal improvements along the corridors.

In addition to the local workshops, the team held a virtual workshop for online comments from May 11, 2015 to June 5, 2015. Approximately 1,000 people viewed the website during that time, with over 850 unique visitors. Input on corridor needs and opportunities informed design options for individual corridor segments. In total, more than 130 people attended workshops in person, and 152 comments were received at workshops, online, via email and through the mail.

The project team conducted outreach again during summer 2015 to solicit feedback on which corridors and transit options should move forward for further study in the next phase of the project. The project team participated in 11 events throughout the summer; engaged the Latino community through a Latino leaders' focus group and other events; engaged the business community through meetings coordinated by the Eugene Chamber of Commerce; presented to several community groups; held an in-person open house in September; and solicited feedback via a virtual open house. The team spoke with an estimated 600 people about the project over the summer. This number does not include the people who serve on existing City and LTD committees and commissions that received project information through their representation on the MovingAhead Sounding Board. In addition, 372 responses were received at the virtual open house. More details about outreach activities, comments, and outcomes of summer 2015 public outreach can be found in Appendix D.

2.3.4 Transit Concept Development

The project team developed transit concepts in collaborative working sessions carried out over a 2-day period. A "toolkit" of previously developed cross-sections featuring a variety of BRT designs informed initial concepts for each corridor. The cross-sections were refined to match area context. Considerations included the following:

- Right-of-way
- Existing lane arrangements
- Curb-to-curb roadway widths
- General traffic assumptions
- Pedestrian, mobility device user, and bicycle infrastructure needs and desires
- Feedback from online and in-person corridor workshops
- Trip generators
- Environmental considerations (e.g., existing landscaping, parks)

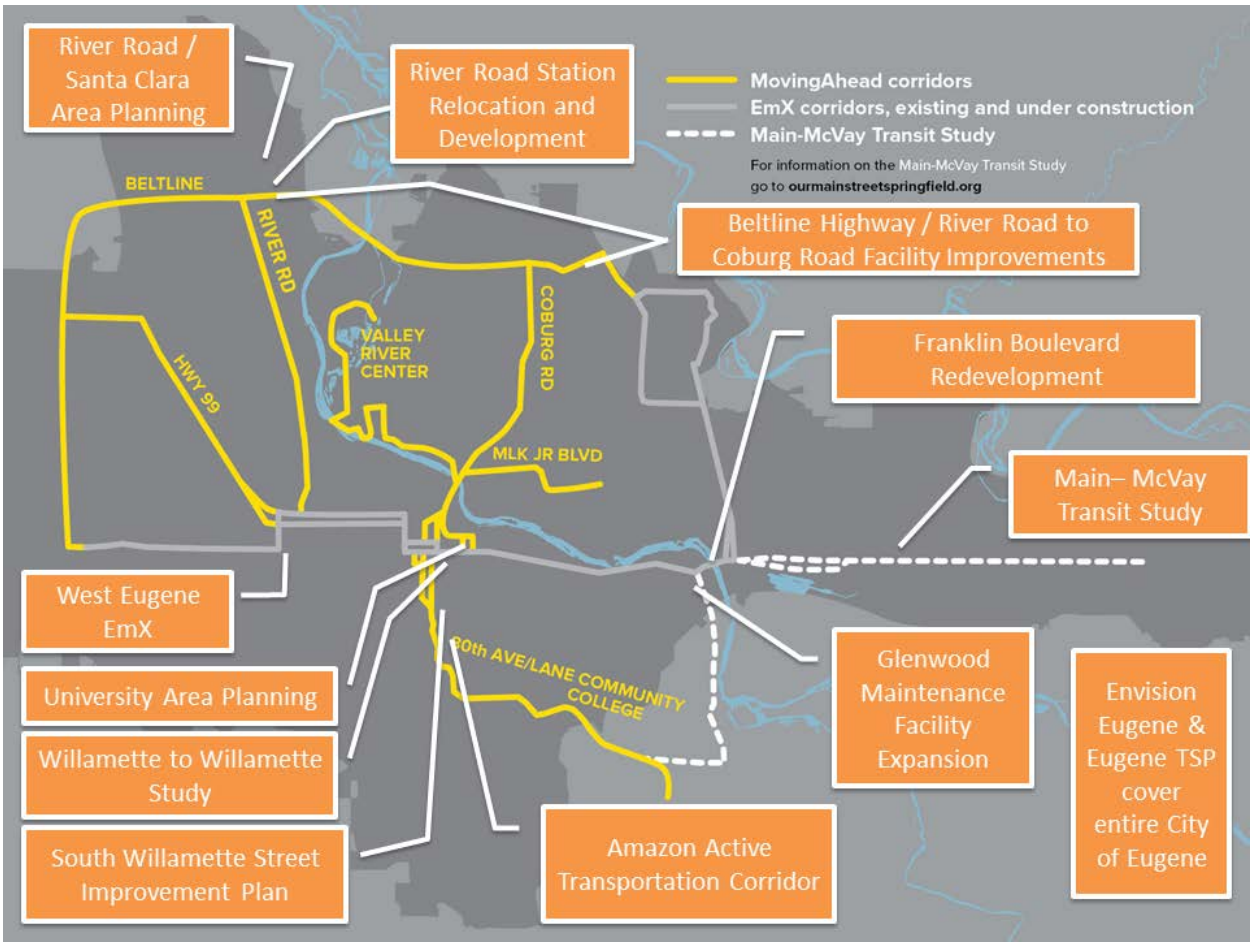
Right-of-way acquisition is a project challenge, so the team focused on maintaining existing right-of-way limits where possible. The team considered the functionality of all modes (car, truck, bus, bicycle, pedestrian, mobility device user) when designing roadway cross-sections. Design staff hand-drew cross-sections, with rough dimensions and extent on maps for each corridor. Design staff then converted the drawn sections into computer-aided design (CAD) and geographic information system (GIS) software for refinement, cost estimation, and visualization for public communication.

The initial concepts were refined to reflect community input from a series of workshops held in May 2015, and also refined based on input from agency partners including the Willamalane Parks and Recreation District, City of Springfield, ODOT, and others. After refinement, the concepts were developed into the EmX and Enhanced Corridor multimodal "options" for each study corridor that were evaluated in the Level 1 Screening. The concepts are described in more detail in Chapter 3.

2.4 Relationship to Other Projects

A number of projects are occurring throughout the Eugene-Springfield metropolitan area that could affect corridors being considered for MovingAhead. These projects and their relationship to MovingAhead are described below and are illustrated in Figure 2.2-1.

Figure 2.2-1. Other Projects Related to the MovingAhead Project



Source: Wannamaker Consulting. 2015.

2.4.1 Lane Transit District Projects

LTD currently has several projects underway that are related to MovingAhead; these are described below.

2.4.1.1 EmX

West Eugene EmX. LTD's extension of EmX service into West Eugene is currently under construction and is anticipated to be completed in 2017. The West Eugene EmX will provide greater east-west connectivity for the EmX system.

For the MovingAhead study, the West Eugene EmX Corridor terminus near the intersection of West 11th Avenue and Randy Papé Beltline Highway would provide connectivity to the Randy Papé Beltline Highway Connector and other linked corridors. The MovingAhead project considers several north-south corridors that intersect with the West Eugene EmX route, and if those corridors are advanced to development, then transit system service connectivity and efficiency would be increased.

Main Street-McVay Highway Corridor. This heavily used transportation corridor is currently being studied by LTD and the City of Springfield to determine whether EmX service should be extended east from LTD's Springfield Station to approximately 69th Street and south from Springfield Station to Lane Community College. The study's first phase was completed in spring 2015 and recommended evaluating

Bus Rapid Transit (BRT) and Enhanced Corridor options on Main Street and Enhanced Corridor options on McVay Highway. The study's second phase is anticipated to begin fall 2015 and will identify preferred options for each corridor.

The schedule for completing this study is ahead of the MovingAhead project schedule. Projects identified as a result of the Main-McVay study could be advanced to capital improvements programming ahead of projects identified in the MovingAhead study. Extending more frequent and reliable service east of Springfield Station would likely result in increased ridership and efficiency in the transit system. Lane Community College is a terminus for the 30th/LCC Corridor under consideration in the MovingAhead project. Extending more frequent and reliable service south to Lane Community College could provide increased connectivity to LCC and the City of Eugene if the 30th/LCC Corridor is advanced to development.

2.4.1.2 Other Projects

Glenwood Maintenance Facility Expansion. LTD is currently planning to expand its Glenwood Maintenance Facility to accommodate an increase in EmX vehicles and fixed-route service vehicles operating in the system. The MovingAhead project may advance multiple EmX corridors for development. Any increase in EmX vehicles operating in the system will need to be considered in maintenance facility planning.

River Road Station Relocation and Development. 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. The current River Road Station was built in 1982 as a transit station and park-and-ride lot with 118 spaces, and is served by Routes 51, 52 and 55. Over the past 33 years, the station and site have had minor improvements and its infrastructure is considered outmoded. In 2007, LTD purchased the 1.18 acre site from Lane County.

The River Road/Randy Papé Beltline Highway interchange area currently experiences congestion that limits ingress and egress from the current River Road Station site and causes service delays. The Oregon Department of Transportation (ODOT) is proposing improvements to the River Road/Randy Papé Beltline Highway interchange that will lengthen and reconfigure the ramps to improve acceleration to/from the highway and reduce queuing and congestion. These improvements could affect the existing site. To meet the growing ridership demand in the River Road Corridor and avoid the impacts of increasing congestion, LTD is planning to relocate the River Road Transit Station to a site north of the Randy Papé Beltline Highway. LTD has purchased a site that would allow for joint development with other agencies and is particularly interested in the opportunity to develop the site with housing that meets the needs of senior citizens or lower income residents. The relocated River Road Station will become the terminus for the River Road Corridor, and the location for the new site will be determined as a part of MovingAhead.

2.4.2 City of Eugene Projects

Envision Eugene. Envision Eugene is the City of Eugene's process for determining the best way to accommodate the community's projected needs over the next 20 years. Seven pillars guide Envision Eugene, including promoting compact urban development and efficient transportation options. Envision Eugene identifies key transit corridors that are areas throughout the city that are proposed for higher density development. Envision Eugene is currently in the process of being adopted by the City of Eugene. MovingAhead corridors advanced for evaluation were considered more consistent with local comprehensive plans if they were identified in Envision Eugene as key transit corridors.

Eugene Draft Transportation System Plan (TSP). The Eugene Draft TSP serves as the Transportation Element to the Envision Eugene update of the City's comprehensive land use plan. The Draft TSP contains goals, objectives, and policies to develop and prioritize funding for future transportation infrastructure and programs in Eugene. Data are being collected from many local and regional sources, including Envision Eugene, Eugene Pedestrian-Bicycle Master Plan, the Regional TSP, the Climate and Energy Action Plan, and the Airport Master Plan. The City of Eugene is in the process of adopting their Draft TSP. MovingAhead will rely on information from the Eugene Draft TSP for part of its analysis and will inform the City's capital improvements programming for multimodal corridor investments.

Amazon Active Transportation Corridor. This project implements bicycle, pedestrian, and mobility device user improvements on East and West Amazon Drive from Hilyard Street to Snell Street. Improvements include extending Amazon Path from East 33rd Avenue to Tugman Park, by widening the sidewalk on the west side of Hilyard Street, an East/West Amazon cycle track, intersection improvements at 33rd Avenue or 34th Avenue at Hilyard Street, and potentially two new and one replacement pedestrian bridges across Amazon Creek. One MovingAhead corridor (30th/LCC Corridor) would traverse Hilyard Street and West Amazon Drive and be directly affected by these improvements.

South Willamette Street Improvement Plan. The South Willamette Street Improvement Plan explored options for people to easily and safely walk, bicycle, take the bus, or drive. The South Willamette district encompasses the vital South Willamette Street areas from 23rd Avenue to 32nd Avenue, and from Amazon Park to the base of College Hill. The goal of this study was to help South Willamette Street become a vibrant urban corridor accessible by bicycle, foot, car, and bus. Although Willamette Street is heavily used to reach many popular destinations, it is uninviting to pedestrians, users of mobility devices, bicyclists, transit riders, and motorists alike. On May 27, 2014, the Eugene City Council accepted the South Willamette Street Improvement Plan and directed staff to implement a 12-month test of a three-lane alternative with bicycle lanes. If the test is successful, then the City will develop a complete street design plan for an active transportation corridor (providing for walking, biking, transit access, motoring and business access) that can be adopted and advanced as a CIP project for construction. Although the vision for the South Willamette Street Improvement Plan includes transit, the vision does not include exclusive right-of-way for EmX service. One MovingAhead corridor (30th/LCC Corridor) would traverse the South Willamette Street district and be directly affected by this plan.

Willamette-to-Willamette Study. This project is currently underway, and its purpose is to make tangible the connection between a city on the edge of a great river and a river on the edge of a great city. City staff are developing an infrastructure and public art plan on 8th Avenue, connecting Willamette Street to the Willamette River to advance the long-held vision for connecting downtown to the river. The Willamette-to-Willamette Study would link the downtown, the heart of Eugene, to the river, providing a critical connection between the natural and the urban environments—the two complementary components of Eugene's identity. Several corridors being evaluated in MovingAhead would cross 8th Street to connect to the Eugene Station in downtown (Coburg Road, Martin Luther King, Jr. Boulevard / Centennial, and Valley River Center) and may be affected by the outcomes of this study.

River Road/Santa Clara Area Planning. This upcoming area plan will determine the best way to accommodate projected needs and growth in the River Road/Santa Clara area. This upcoming area planning study will provide background information and policy direction for public decisions such as developing public facilities and services, zoning and station area planning. Area plans also aid in providing public responses to private development requests. The area planning process for the River Road/Santa Clara area is anticipated to begin in fall 2015. The MovingAhead project is considering multimodal improvements in the River Road/Santa Clara area, including the relocation of LTD's River Road Station.

University Area Planning. This upcoming area plan will determine the best way to accommodate projected needs and growth more specific to the area around the University of Oregon campus. This upcoming area planning study will provide background information and policy direction for public decisions, such as developing public facilities and services, zoning, and station area planning. Area plans also will aid in providing public responses to private development requests. The area planning process for the University of Oregon area is anticipated to begin in 2016. MovingAhead is considering several corridors (Coburg Road, Martin Luther King, Jr. Boulevard, and 30th/LCC) providing service to and through the University area and the north-south streets that will best serve the EmX system and its users.

2.4.3 Oregon Department of Transportation Projects

Randy Papé Beltline Highway/River Road to Coburg Road Facility Improvements. ODOT, the City of Eugene, and Lane County are working together to improve this four mile section of Randy Papé Beltline Highway. This facility currently experiences congestion, vehicle conflicts, and safety problems, which are anticipated to increase as traffic volumes increase at River Road, River Avenue, Division Street, the Willamette River Bridge, the Delta Highway, and Coburg Road. The Randy Papé Beltline Facility Plan identified and evaluated potential solutions. ODOT will begin the design and environmental phase for some of the interchange improvements identified in the Facility Plan in 2016.

The proposed improvements at intersections with corridors being studied as a part of the MovingAhead project would reduce corridor congestion and provide the opportunity to improve transit travel times. MovingAhead corridors advanced to project development would need to coordinate with ODOT's design efforts.

2.4.4 City of Springfield Projects

Franklin Boulevard Redevelopment. The City of Springfield is beginning the design of improvements to Franklin Boulevard to support redevelopment and new investment in the Glenwood area. Franklin Boulevard will be constructed to modern urban standards between Glenwood Boulevard and McVay Highway, transforming the automobile-oriented roadway into a multiway boulevard serving all modes of travel, including pedestrians, mobility device users, bicycles, buses, and motor vehicles.

Currently, EmX operates in mixed traffic on this segment of Franklin Boulevard. The project design will provide an area for future business access and transit (BAT) lanes but will not construct those as part of the project. Queue jumps (as bus pullouts) and roundabouts are anticipated to facilitate transit travel time and reliability on this EmX route and for the EmX system.

The Main-McVay Transit Study project was originally considered in the MovingAhead project, but the City of Springfield has now has advanced this project ahead of the MovingAhead project schedule. Although this project does not affect any of the remaining corridors being considered in the MovingAhead study, the project is anticipated to improve transit travel time and reliability for the EmX system.

3. Proposed Transit Options

This chapter describes the proposed transit options considered in the Level 1 Screening Evaluation.

3.1 Introduction to Corridor Options

The MovingAhead team developed EmX and Enhanced Corridor options for each MovingAhead corridor (Figure 4.1-1). The multimodal concepts were informed by input gathered at public workshops and online in May 2015. They were expressed as "fat lines" over aerial photographs. The team developed "EmX options" and "Enhanced Corridor options" for each corridor under consideration; a "No-Build Option" was also considered in each corridor.

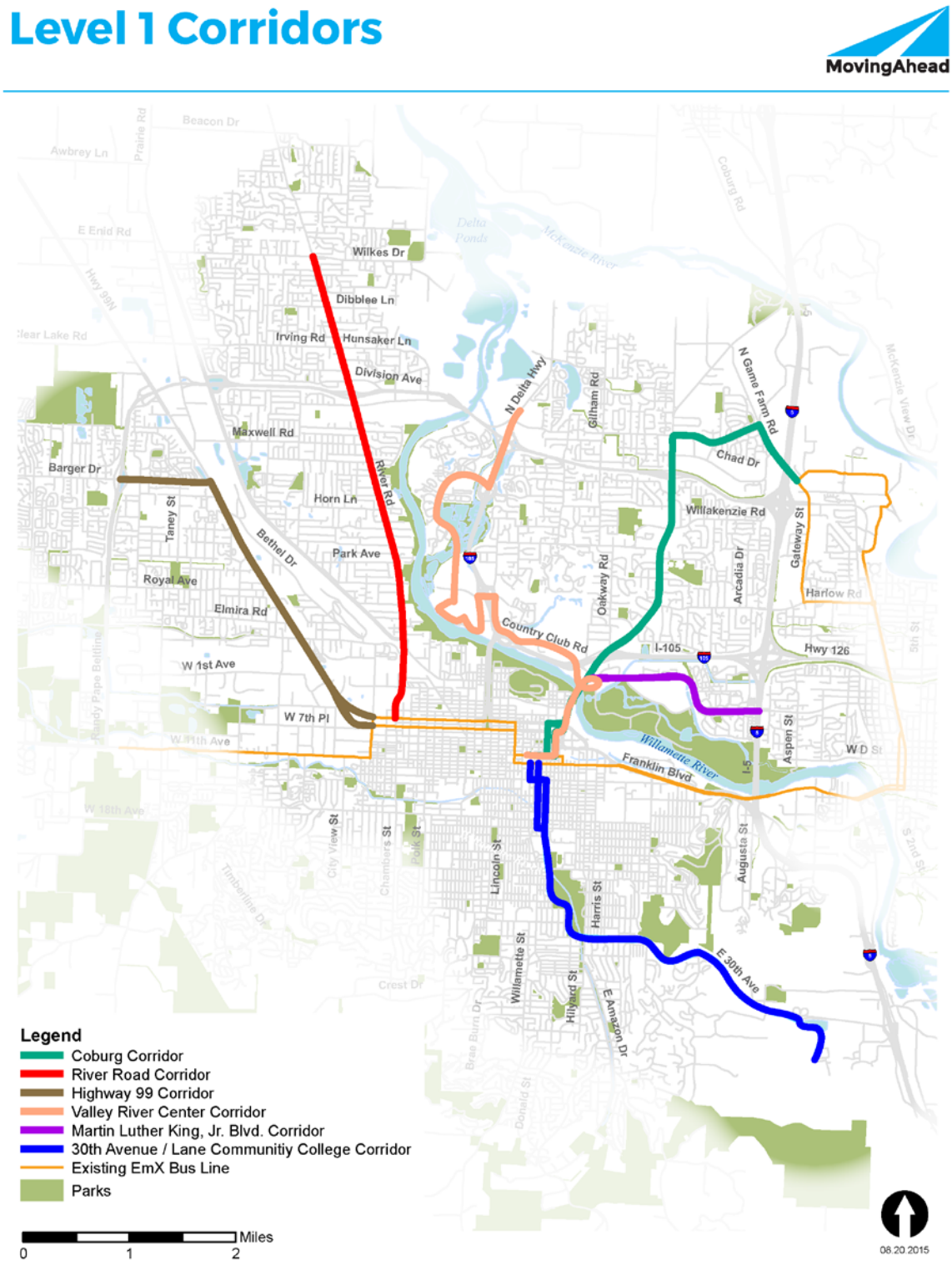
The "No-Build Options" assume that existing transit service within the corridors will be the same in the future. The No-Build also assumes that planned bicycle and pedestrian projects in the Eugene Transportation System Plan will be constructed.

Some corridors have two EmX options and one—Valley River Center—has one Enhanced Corridor option and no EmX options. EmX options were not developed due to a lack of community interest in EmX in the Valley River Center Corridor.

For ease of comparison at this high-level screening, several assumptions were made in the corridor designs, including the following:

- All routes terminate at Eugene Station.
- Randy Papé Beltline Highway will serve as an east-west connector route.
- Automobile capacity cannot be reduced on freight routes (e.g., Highway 99); roadway refinements that reduce vehicular capacity may be acceptable in other locations depending on traffic volumes.
- All options use 6th and 7th Avenues and Oak and Pearl Streets in downtown Eugene for Level 1 Screening purposes. Other route options will be considered in the Level 2 AA.
- MovingAhead options will not include new river crossings or modifications to bridges.
- The corridors are assumed to include midblock pedestrian and mobility device user crossings every 800 feet and u-turn pockets every 1,600 feet (where needed).
- EmX options are assumed to have one-third mile (1,760 feet) stop spacing. Enhanced Corridors will have stops every 800 feet.
- The downtown Eugene/Ferry Street Bridge area is congested and constrained. MovingAhead proposes queue jumps for both approaches to the Ferry Street Bridge. The Ferry Street Bridge area will require additional study, and other options such as connecting to the Eugene Water and Electric Board redevelopment site on 4th Avenue may be considered if either Coburg Road or Martin Luther King, Jr. Boulevard Corridors advance to the Level 2 AA.

Figure 3.1-1. Corridor Concept Overview Map



Source: CH2M. 2015.

3.2 30th Avenue/Lane Community College Corridor

The 30th Avenue/Lane Community College (30th/LCC) Corridor begins at the Eugene Station and travels south to East 30th Avenue, then on East 30th Avenue to its terminus at Lane Community College (LCC) (Figure 3.1-1). The corridor is approximately 5 miles one way and is currently served by Routes #81, #82, and #92. Other routes operating within the corridor include #24, #28, and #73.

Three options were developed for this corridor and studied in this Level 1 Screening Evaluation:

1. No-Build option
2. Enhanced Corridor option
3. EmX option

3.2.1 No-Build Option

Routes #81, #82, and #92 would serve the 30th/LCC Corridor as they do today. Route #82 would operate with 10-minute headways during the peak period and with 15-minute headways during off-peak periods. Route #81 would have 30-minute headways all day. Both routes would operate along the corridor, but Route #81 would provide all-day service to the University of Oregon, while Route #82 would not. Route #92 would provide three daily round trips between LCC and downtown Eugene.

Currently, sidewalks are present on most streets along and adjacent to the corridor, except along East 30th Avenue. Under the No-Build Option no additional sidewalks would be constructed. There is no continuous bicycle facility along the entire corridor; the City of Eugene has long-term plans (after 2032) to construct a shared path adjacent to East 30th Avenue. Lane County does not have plans to improve bicycle facilities along East 30th Avenue for road segments in unincorporated Lane County.

3.2.2 Enhanced Corridor Option

The Enhanced Corridor option (Figure 3.2-1) would include queue jumps, as well as bicycle and pedestrian improvements. Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation. Once out of downtown, Pearl Street would include a shared travel lane in each direction with a bicycle lane on one side of the street. As the roadway transitions to Amazon Parkway, the roadway would include queue jumps at congested intersections including 19th Avenue, 24th Avenue, and 29th Avenue; it would also include an enhanced bicycle facility from 19th to 27th Avenues.

Throughout most of the Amazon Parkway/30th Avenue segment, buses would share the two lanes in each direction with other traffic. The cross-section includes wide shoulders that could be used by bicycles. After exiting 30th Avenue, the buses would travel on Gonyea Road to reach LCC. This segment would have a five-lane cross-section that would include two shared lanes in each direction, a shared middle turn lane, and bicycle lanes and sidewalks on both sides of the roadway.

Business access and transit (BAT) lanes are lanes used by buses, but may also be used by right or left turning traffic.

3.2.3 EmX Option

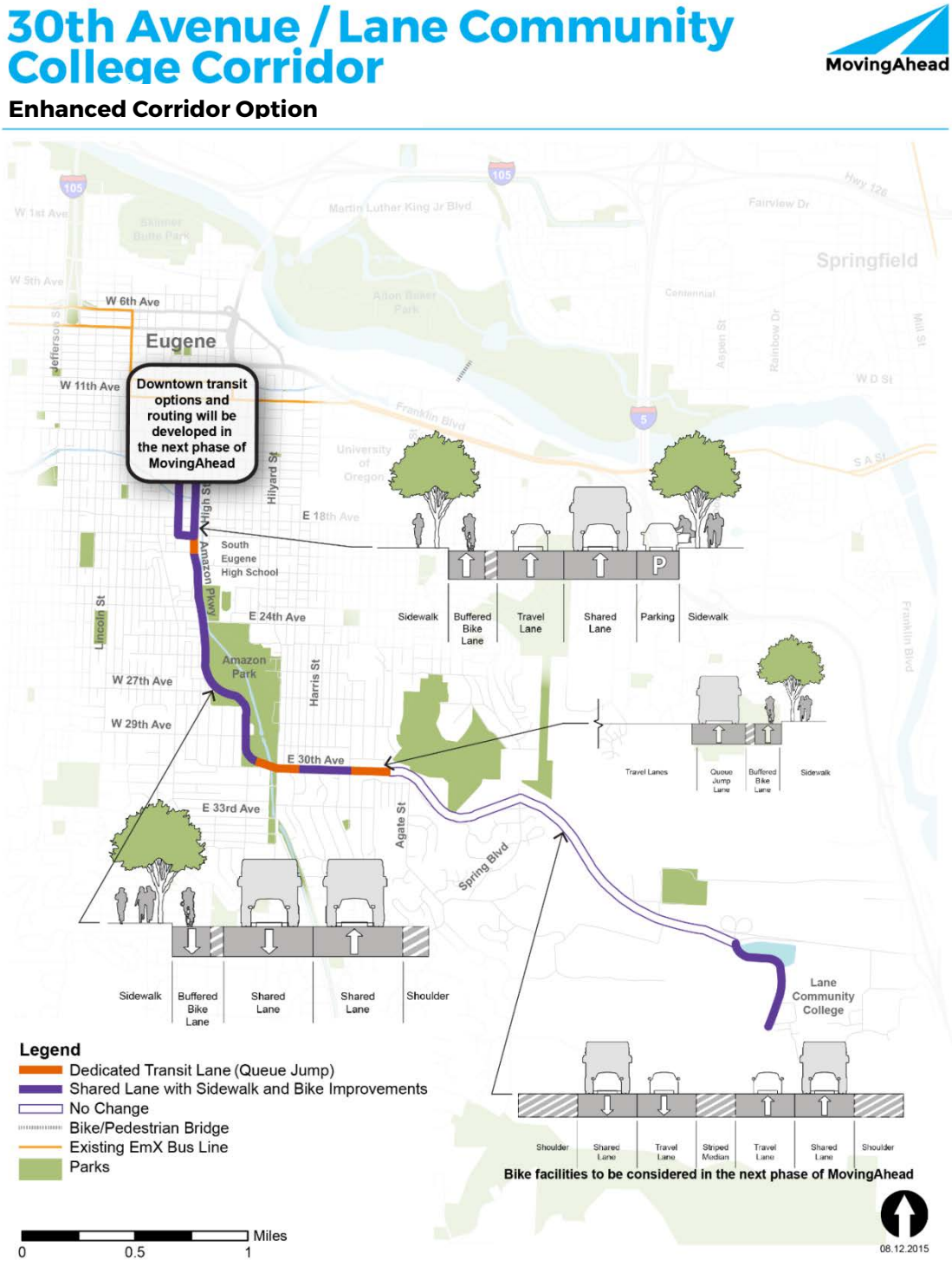
The EmX Option (Figure 3.2-2) would include a mix of business access and transit (BAT) lanes, exclusive transit lanes, and shared lanes supplemented with bicycle and pedestrian improvements. Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation. Further south at East 19th Avenue, this concept includes a dedicated transit lane in each direction that would buffer a wide shared use path. A median would provide separation for the dedicated transitway from the automobile lanes. From Hilyard Street to Onyx Place, the five-lane cross-section would include BAT lanes, an additional travel lane in each direction, and a shared center turn lane. This concept also includes bicycle lanes and sidewalks on both sides of the street.

A shared-use path is separated from road traffic and may be used by both pedestrians and cyclists.

Throughout most of the Amazon Parkway/30th Avenue segment, buses would share the two automobile lanes in each direction. The cross-section includes wide shoulders that could be used by bicycles. Re-striping the roadway or adding a barrier between traffic and cyclists could also increase cyclist comfort and safety.

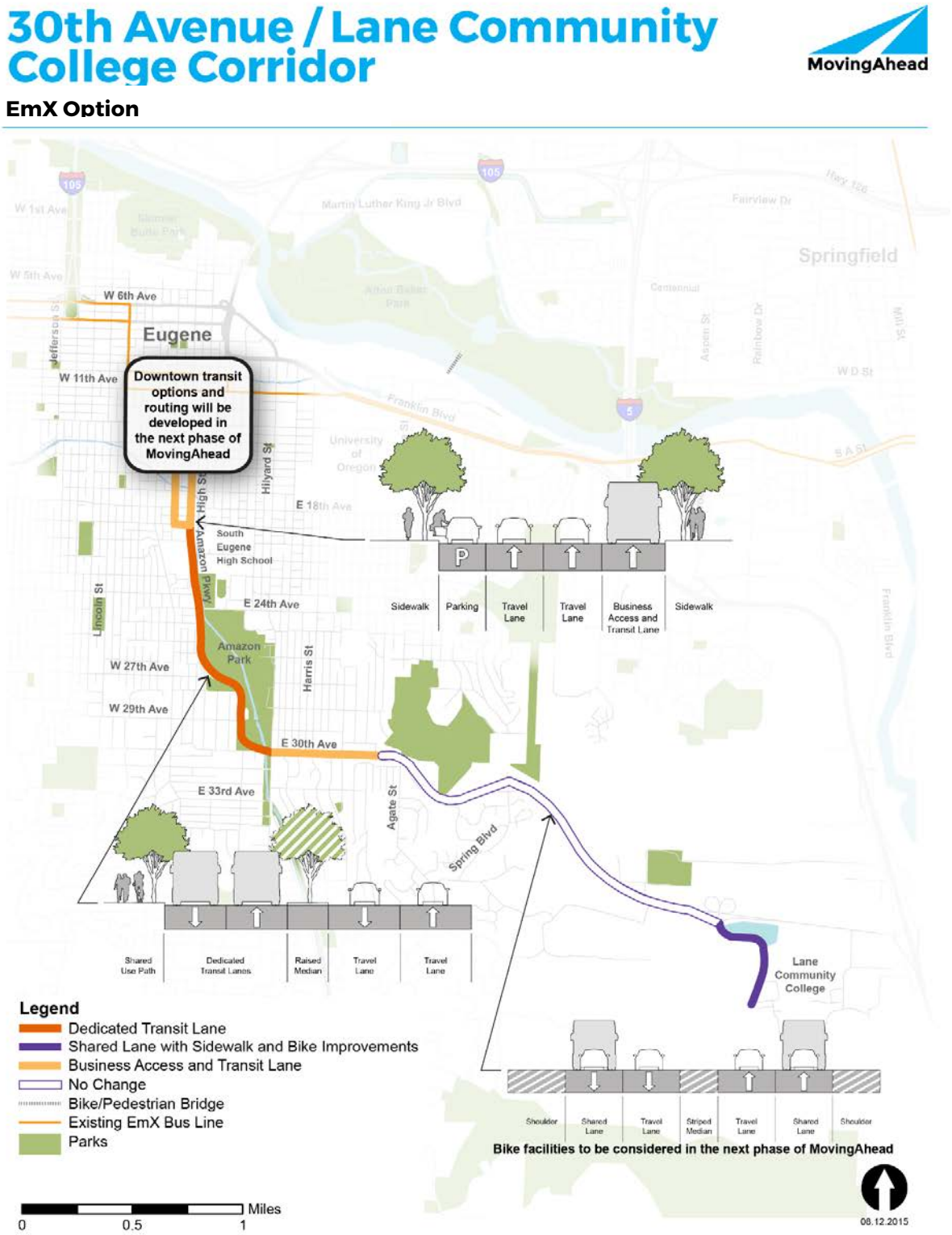
After exiting 30th Avenue, buses would travel on Gonyea Road to reach the terminus at LCC. This segment would have a five-lane cross-section that would include two shared automobile lanes in each direction, a shared middle turn lane, and bicycle lanes and sidewalks on each side of the roadway.

Figure 3.2-1. 30th Avenue/LCC Corridor Enhanced Corridor Option



Source: CH2M. 2015.

Figure 3.2-2. 30th Avenue/LCC Corridor EmX Option



Source: CH2M. 2015.

3.3 Coburg Road Corridor

The Coburg Road Corridor begins at the Eugene Station and uses the Ferry Street Bridge to Coburg Road (Figure 3.1-1). The corridor continues north on Coburg Road to Crescent Avenue, then east on Crescent Avenue to North Game Farm Road, then south on North Game Farm Road to the existing station at the intersection of Gateway Street and International Way. The corridor is approximately 5.2 miles one way. The corridor is served by Routes #66 and #67. Route #12 runs on Coburg Road to Harlow Road and #96 partially serves the corridor.

If the Coburg Road Corridor advances to the Level 2 AA, other routing, such as on parallel roadways, and termini may be considered.

In drafting design options, the team noted that the area from Oakway Road to Harlow Road is constrained. The addition of a seventh lane to Coburg Road in this area was considered and dismissed because of the extensive impacts generated by the design. The team also considered and dismissed reducing the number of travel lanes in the area because of potential impacts to traffic. Under each design option Coburg Road service would use the existing station at Gateway Street and International Way.

Three options were developed for this corridor and studied in the Level 1 Screening Evaluation:

1. No-Build option
2. Enhanced Corridor option
3. EmX option

3.3.1 No-Build Option

With the No-Build option, the Coburg Road Corridor would continue to be primarily served by LTD Routes #66 and #67 with 30-minute headways. Route #96 provides commuter service to the City of Coburg with 30- to 60-minute headways during peak periods, and Route #12 provides local service along Coburg Road then connects to the Gateway Corridor via Harlow Road at headways of 30 minutes. Currently, sidewalks are present on most streets along and adjacent to the corridor. The Coburg Road Corridor has continuous bicycle lanes along its length, and the City of Eugene anticipates that it will construct a short section of protected bicycle lane just north of Interstate 105 on Coburg Road in the next 20 years.

3.3.2 Enhanced Corridor Option

With the Enhanced Corridor option (Figure 3.3-1), the existing roadway cross-section would change little. Throughout the corridor the roadway would include a bicycle lane and sidewalks on each side of the street and queue jumps at congested intersections. Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation.

3.3.3 EmX Option

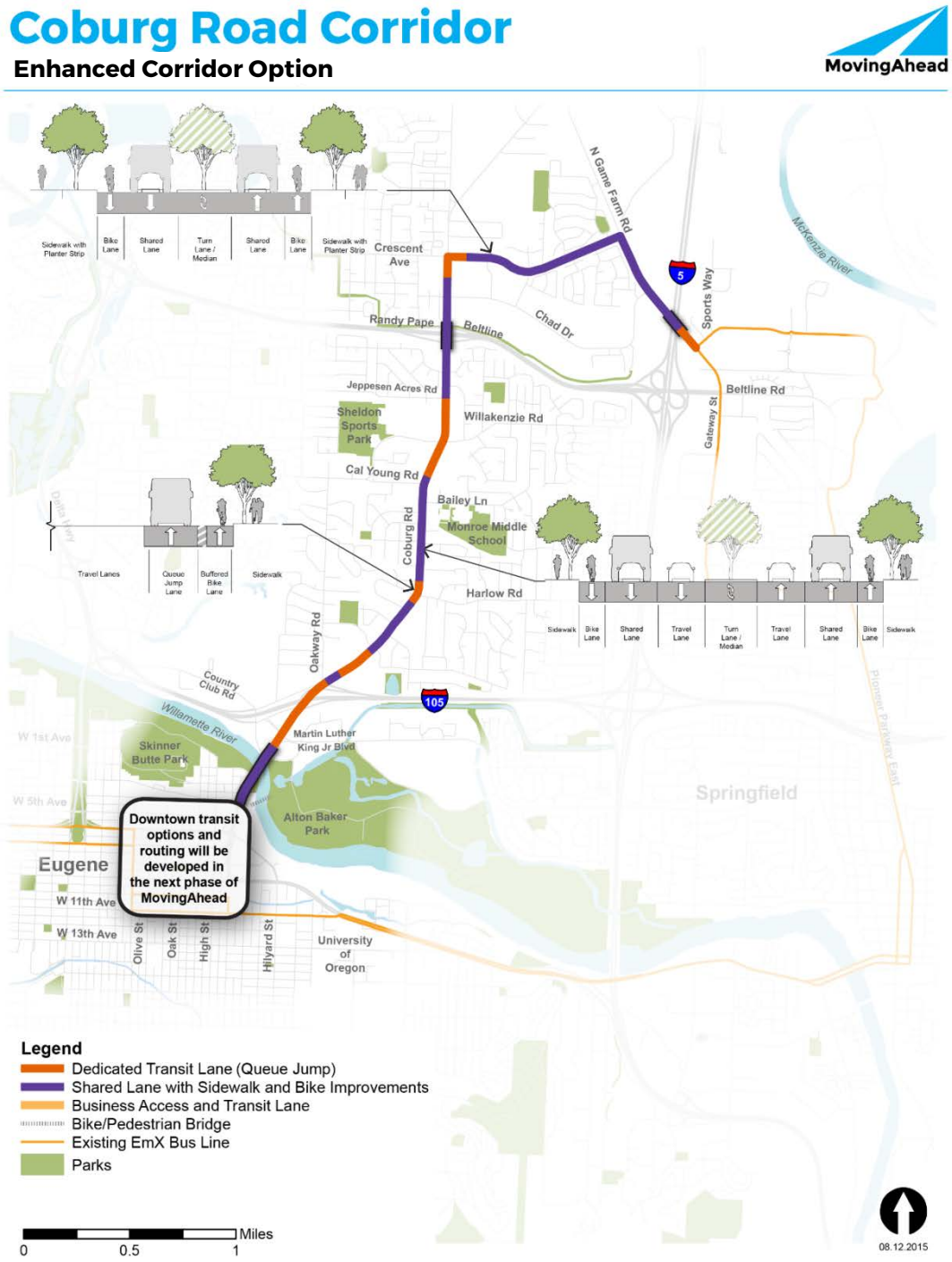
The EmX option (Figure 3.3-2) would include a mix of dedicated transit lanes, shared transit lanes, and BAT lanes. From downtown Eugene to the Ferry Street Bridge, the cross-section would include two travel lanes, parking, and a transit lane shared with right turning vehicles. East of the Ferry Street Bridge, the existing roadway cross-section would be supplemented with queue jumps and a bicycle lane. From Oakway Road to Harlow Road, the bus would operate alternatively in both a dedicated lane (a center lane to be used by buses in both directions) and mixed traffic.

The roadway between Harlow Road and Randy Papé Beltline Highway would have dedicated transit lanes, with one travel lane and bicycle lane in each direction and a shared center turn lane. As the corridor crosses Randy Papé Beltline Highway, the cross-section would expand to 118 feet and eight lanes. The roadway would feature two center exclusive transit lanes, two general purpose lanes in each direction, left turn lanes and a wide shared use path for bicycles and pedestrians.

Dedicated transit lanes are separated from traffic and may only be used by buses.

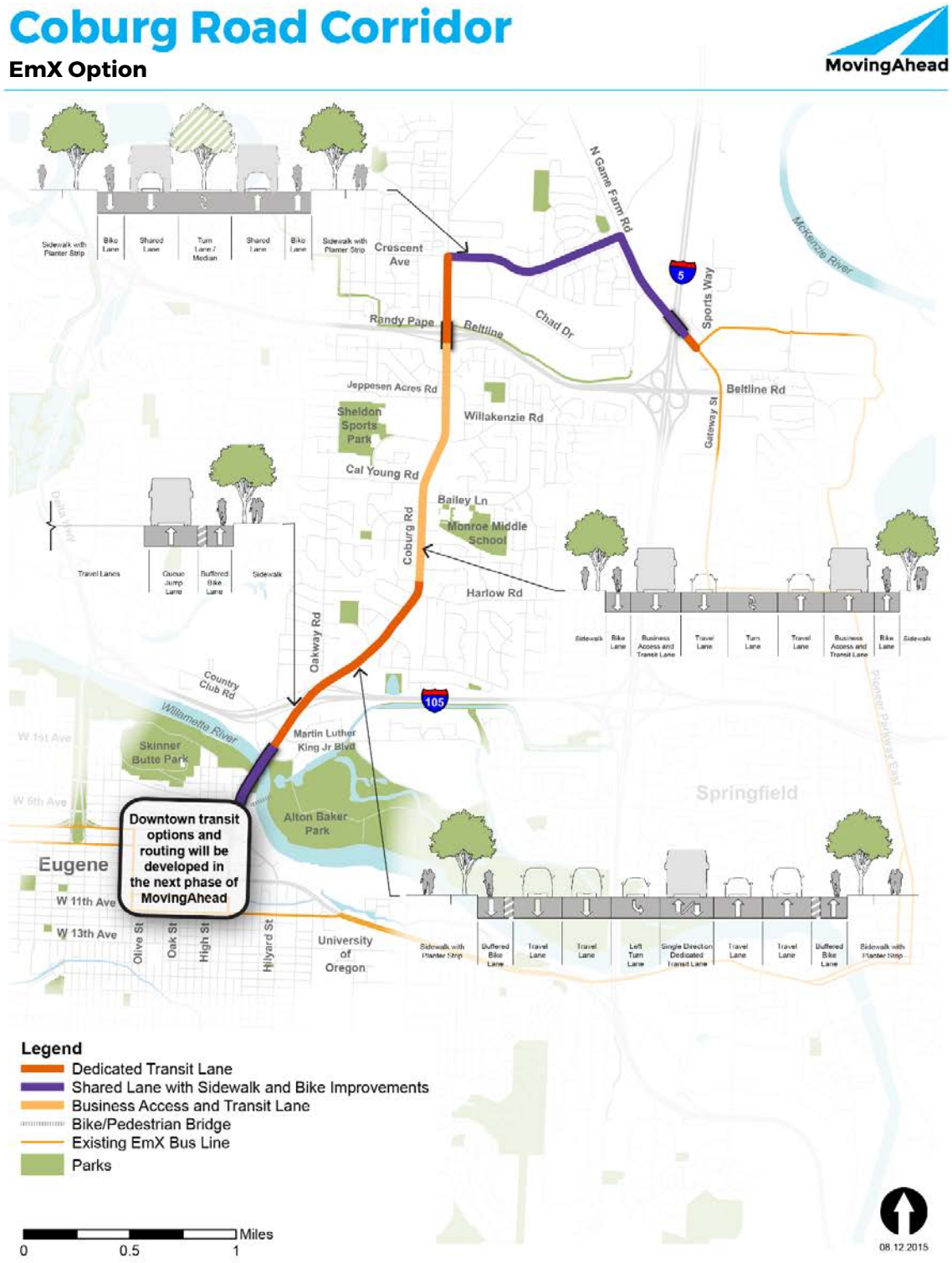
East of Randy Papé Beltline Highway to Crescent Avenue, the cross-section would have dedicated center transit lanes and two general purpose lanes in each direction. Once traveling on Crescent Avenue, buses would share travel lanes with other traffic. The roadway would have two travel lanes in each direction and a shared center turn lane that may be alternatively used as a pedestrian refuge and median with street plantings. The roadway would also have a bicycle lane and sidewalks throughout the corridor, although lane widths and arrangements would vary.

Figure 3.3-1. Coburg Road Corridor Enhanced Corridor Option



Source: CH2M. 2015.

Figure 3.3-2. Coburg Road Corridor EmX Option



Source: CH2M. 2015.

3.4 Highway 99 Corridor

The Highway 99 Corridor begins at the Eugene Station, uses West 6th Avenue (outbound) and West 7th Avenue (inbound) to Garfield Street, then extends northwest along Highway 99 to Barger Drive, and turns west at Barger Drive to a terminus in the area of the Randy Papé Beltline (Figure 3.1-1). This corridor is approximately 5.5 miles one way and is currently served by Routes #40, #41, #43, and #95.

Four options were developed and studied for the Highway 99 Corridor. Highway 99 is a designated freight route and all concepts maintain the current number of general purpose travel lanes; reducing the number of travel lanes would not meet the project's PNGO, which specifies that capacity cannot be reduced on freight routes. Single transit lane options could be explored in some segments during the Level 2 AA, but they were not included in the analysis at this stage.

Four options were developed for this corridor and studied in the Level 1 Screening Evaluation:

1. No-Build option
2. Enhanced Corridor option
3. EmX option 1
4. EmX option 2

3.4.1 No-Build Option

With the No-Build option, LTD Routes #41, #43, and #95 are expected to continue serving the corridor. Route #95 runs along Highway 99 and serves Junction City. Routes #41 and #43 operate in a loop along Highway 99, Terry Street, and Danebo Avenue. Routes #41 and #43 would operate with 15-minute headways during the peak and 30-minute headways off-peak, and Route #95, which primarily serves commuters from Junction City, would operate with several round trips per day. Route #40, while it does not run along Highway 99 itself, is expected to continue to serve the corridor with stops in downtown Eugene, on Highway 99 and on Roosevelt Boulevard, and on Barger Drive.

Currently, sidewalks are present on most streets along and adjacent to the corridor. Long term (more than 20 years from today) projects identified in the City of Eugene's Bicycle and Pedestrian Master Plan include continuous bicycle lanes for the entire length of the corridor and a section of shared path on Highway 99 south of Roosevelt Boulevard.

3.4.2 Enhanced Corridor Option

The Enhanced Corridor option (Figure 3.4-1) would maintain a five-lane cross-section on Highway 99 with queue jumps to provide priority for transit at congested intersections such as Barger Drive and Roosevelt Boulevard. This option would include a buffered bicycle lane with a wider buffer where right-of-way is available. The center turn lane could be modified to include sections of planted median, pedestrian refuges, and left-turn pockets and lanes. The sidewalk could bulb out at stations to allow buses to stop without leaving the travel lane; in these locations, the bicycle lane could be routed behind stations and pedestrian, and bicycle access to transit stops would be prioritized. On Barger Drive, the cross-section would include an automobile lane and bicycle lane in each direction with a shared center turn lane. In some places, a center median with street trees and pedestrian refuges would restrict turning movements. The intersections on Barger Drive would feature bus queue jumps at Highway 99, Taney Street, and Echo Hollow Road.

Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation.

3.4.3 EmX Option 1

EmX option 1 (Figure 3.4-2) would create a six-lane cross-section on Highway 99. The highway would be redesigned to include two center running exclusive bus lanes and four general purpose lanes. Sidewalks and bicycle lanes would be separated from the roadway by street trees on both sides of Highway 99. In some places, a left turn lane or pedestrian refuge would be provided.

On Barger Drive, buses would operate in a single, mixed center lane with one travel lane in each direction. The buses would share the center lane with turning vehicles. The three-lane cross-section would also feature bicycle lanes on each side, street trees, and sidewalks.

Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation.

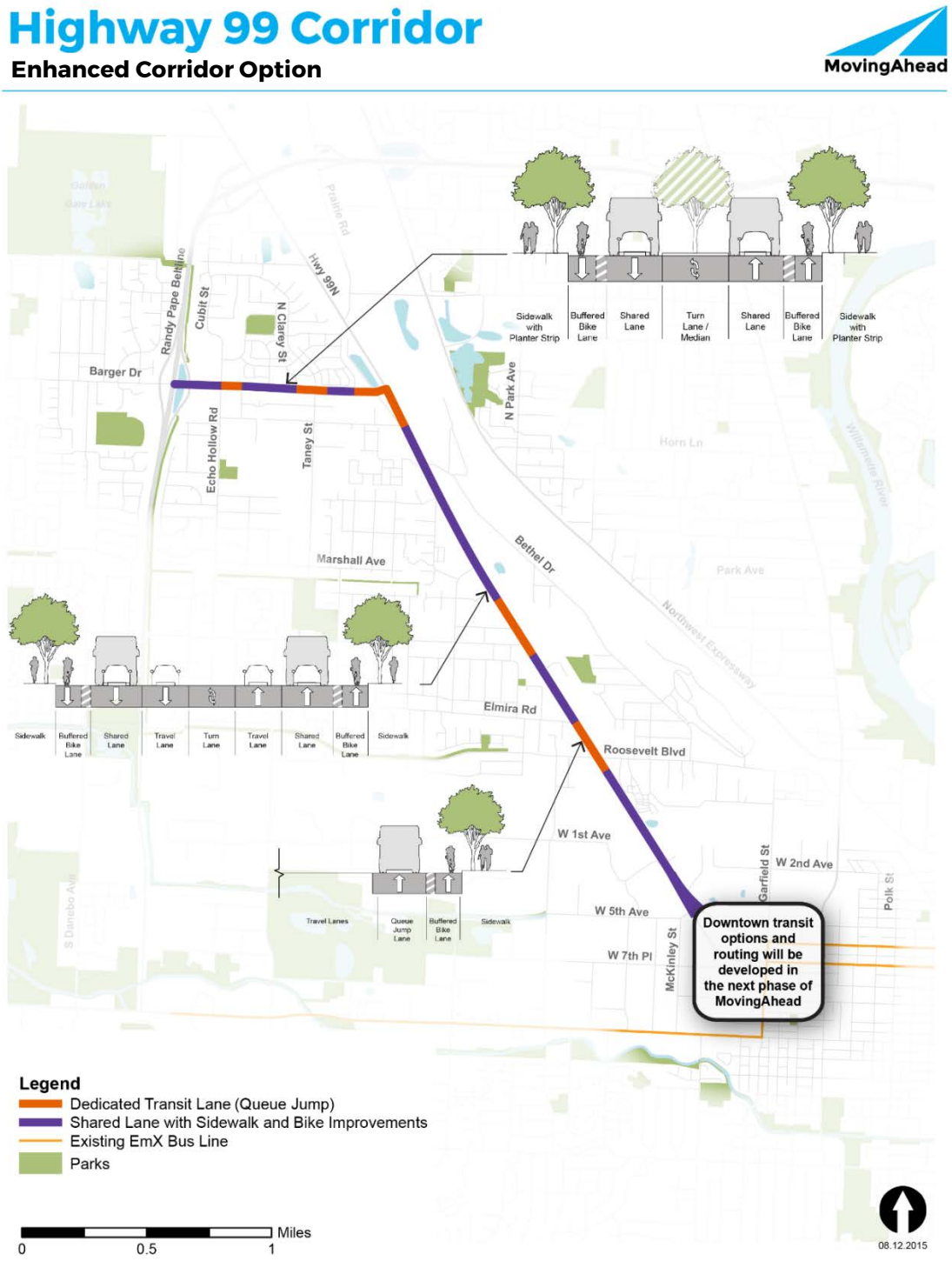
Pedestrian refuges provide a more comfortable crossing experience. Photo courtesy FHWA.

3.4.4 EmX Option 2

EmX option 2 (Figure 3.4-3) would feature a seven-lane cross-section on Highway 99. The roadway would be redesigned to include four general purpose lanes and two outside lanes shared by buses and right turning traffic (BAT lanes). Sidewalks and bicycle lanes would be separated from the roadway by street trees on both sides of Highway 99 and pedestrian refuges would augment mid-block crossings. On Barger Drive, the cross-section would include one lane and a bicycle lane in each direction with a shared center turn lane. In some segments, a center median would be planted with street trees to offer a pedestrian refuge. The intersections on Barger Drive would feature bus queue jumps at Highway 99, Taney Street, and Echo Hollow Road.

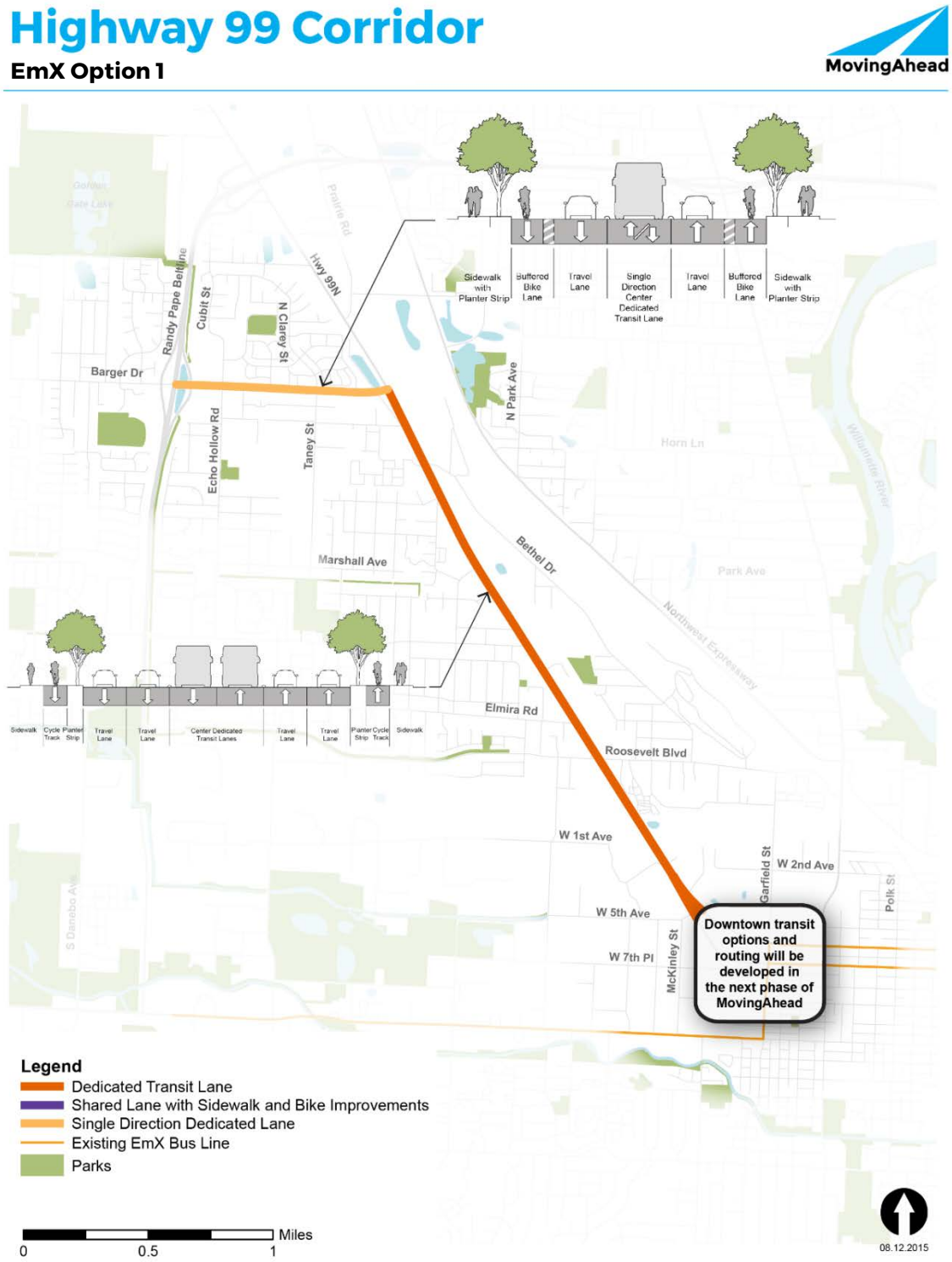
Routing and concepts for downtown Eugene will be developed during the Level 2 AA for all corridors and options advanced from the Level 1 Screening Evaluation.

Figure 3.4-1. Highway 99 Corridor Enhanced Corridor Option



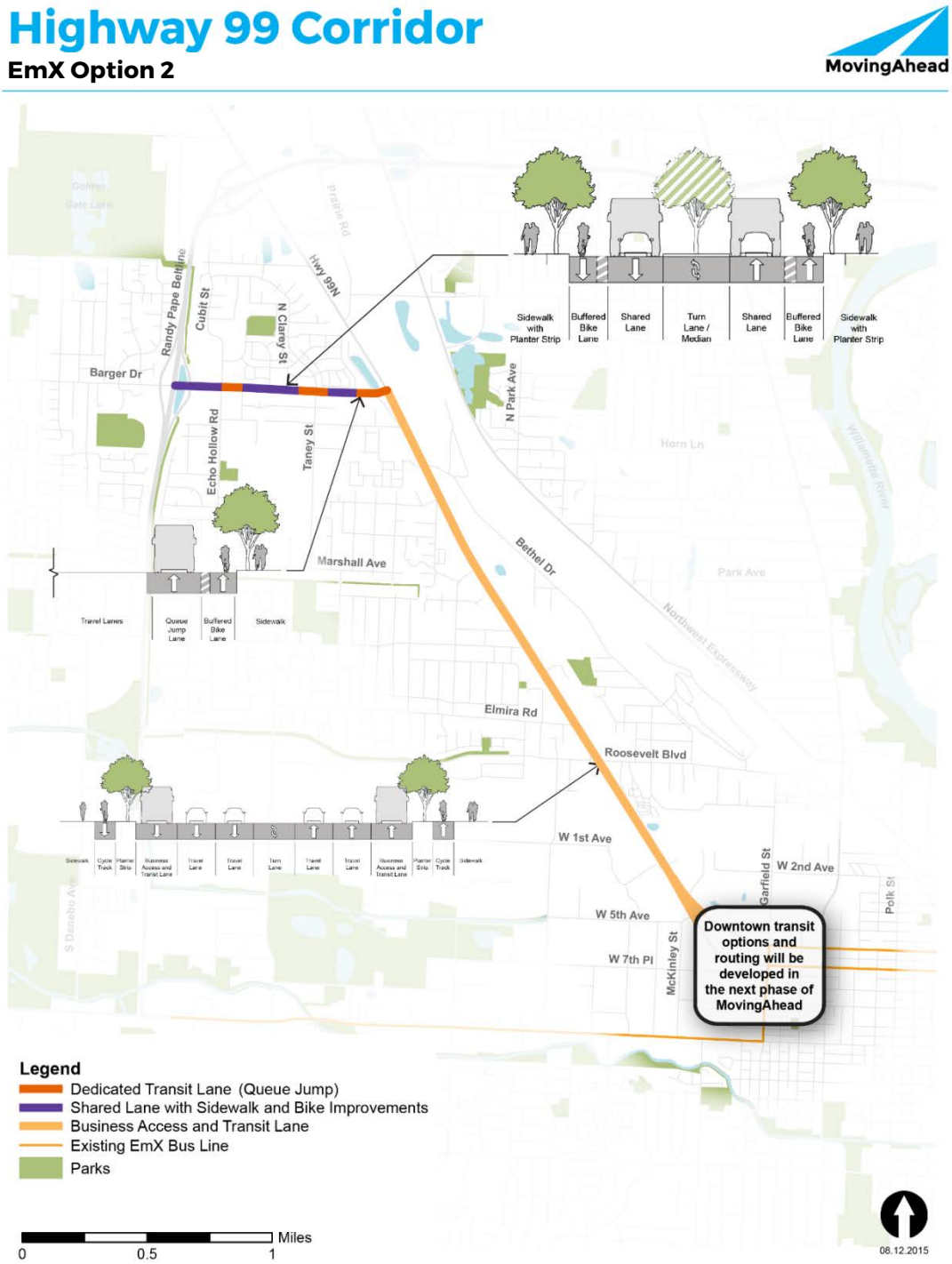
Source: CH2M. 2015.

Figure 3.4-2. Highway 99 Corridor EmX Option 1



Source: CH2M. 2015.

Figure 3.4-3. Highway 99 Corridor EmX Option 2



Source: CH2M. 2015.

3.5 Martin Luther King, Jr. Boulevard Corridor

The Martin Luther King, Jr. Boulevard Corridor begins at the Eugene Station and uses the Ferry Street Bridge to reach Martin Luther King, Jr. Boulevard (Figure 3.1-1). It continues east on Martin Luther King, Jr. Boulevard extending service near Autzen Stadium and terminates at Interstate 5. The corridor is approximately 2.3 miles one way and is served by Route #13. Other routes operate within the corridor. West of Interstate 5 within Eugene, Route #79x is a direct route from area student housing to the University of Oregon and is one of the highest-ridership routes in the LTD system.

LTD's Long-Range Transit Plan (LTD, 2014) identifies the 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 the City of Springfield does not have the resources available to consider transit enhancements on Centennial Boulevard at this time, MovingAhead will only develop and evaluate options for the portion of the corridor west of Interstate 5 within the City of Eugene. However, improvements to bus service on Martin Luther King, Jr. Boulevard may result in increased service frequencies on Centennial Boulevard depending on service planning decisions.

Four options were developed for this corridor and studied in the Level 1 Screening Evaluation:

1. No-Build option
2. Enhanced Corridor option
3. EmX option 1
4. EmX option 2

3.5.1 No-Build Option

With the No-Build option, Routes #13 and #79x would operate on the corridor with headways of 30 minutes and 10 to 15 minutes, respectively. Route #79x is an express route operating between Martin Luther King, Jr. Boulevard and University of Oregon Station. The route operates only when the University of Oregon is in session. The corridor currently has sidewalks on both sides of the street for the length of the corridor, but does not have bicycle lanes. The Eugene Pedestrian and Bicycle Master Plan proposes a cycle track along the corridor in the next 20 years.

Cycletracks are on-street bicycle facilities separated from vehicle traffic. Cycletracks can be one-way or two-way bicycle facilities.

3.5.2 Enhanced Corridor Option

The Enhanced Corridor option (Figure 3.5-1) would include a four-lane roadway design from Country Club Road to the bridge west of Autzen Stadium at Leo Harris Parkway. This option would include two general purpose travel lanes with buses sharing two additional outside lanes with automobiles. From the bridge at Leo Harris Parkway (west of Autzen Stadium) east to Interstate 5, this option would maintain the existing roadway cross-section while adding queue jumps at major intersections. The Enhanced Corridor option would also explore opportunities for managed lanes using Intelligent Transportation System (ITS) technologies to accommodate traffic due to events at the stadium.

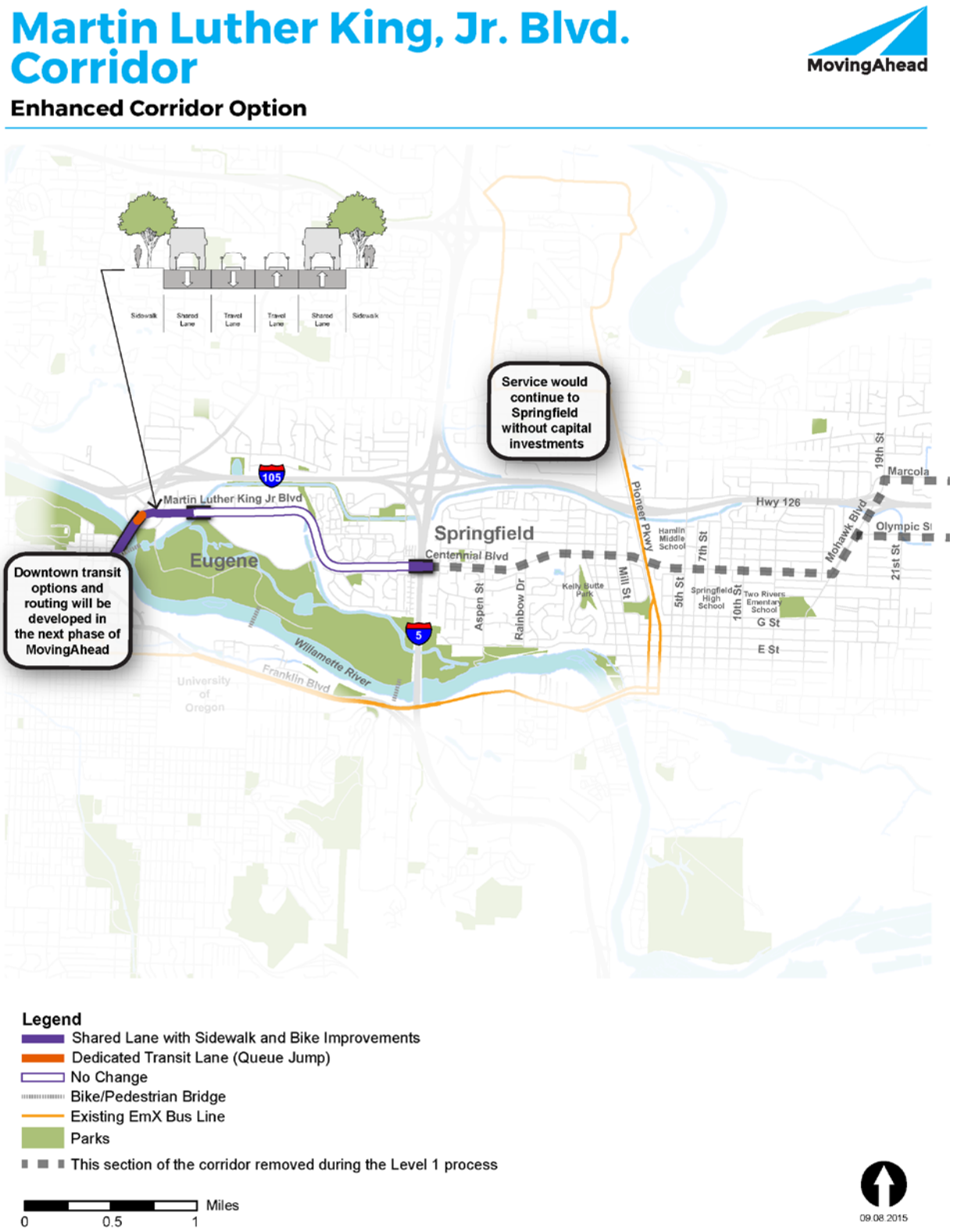
3.5.3 EmX Option 1

EmX option 1 (Figure 3.5-2) would have dedicated transit lanes in varying combinations. From Country Club Road to the bridge just west of Autzen Stadium at Leo Harris Parkway, the corridor would have BAT lanes in both directions, with one additional eastbound travel lane and two additional westbound. After crossing the bridge, buses would operate in dedicated lanes, separated from the automobile lanes by a wide median with street trees. Like today, the roadway would include two lanes in each direction, a center turn lane, and a shared use path on each side of the street for bicycles, pedestrians, and people using mobility devices. When the roadway narrows again, east of Autzen Stadium near Kinsrow Avenue, the cross-section would transition to an automobile lane and a BAT lane in each direction until its terminus at Interstate 5. Sidewalk widths would vary.

3.5.4 EmX Option 2

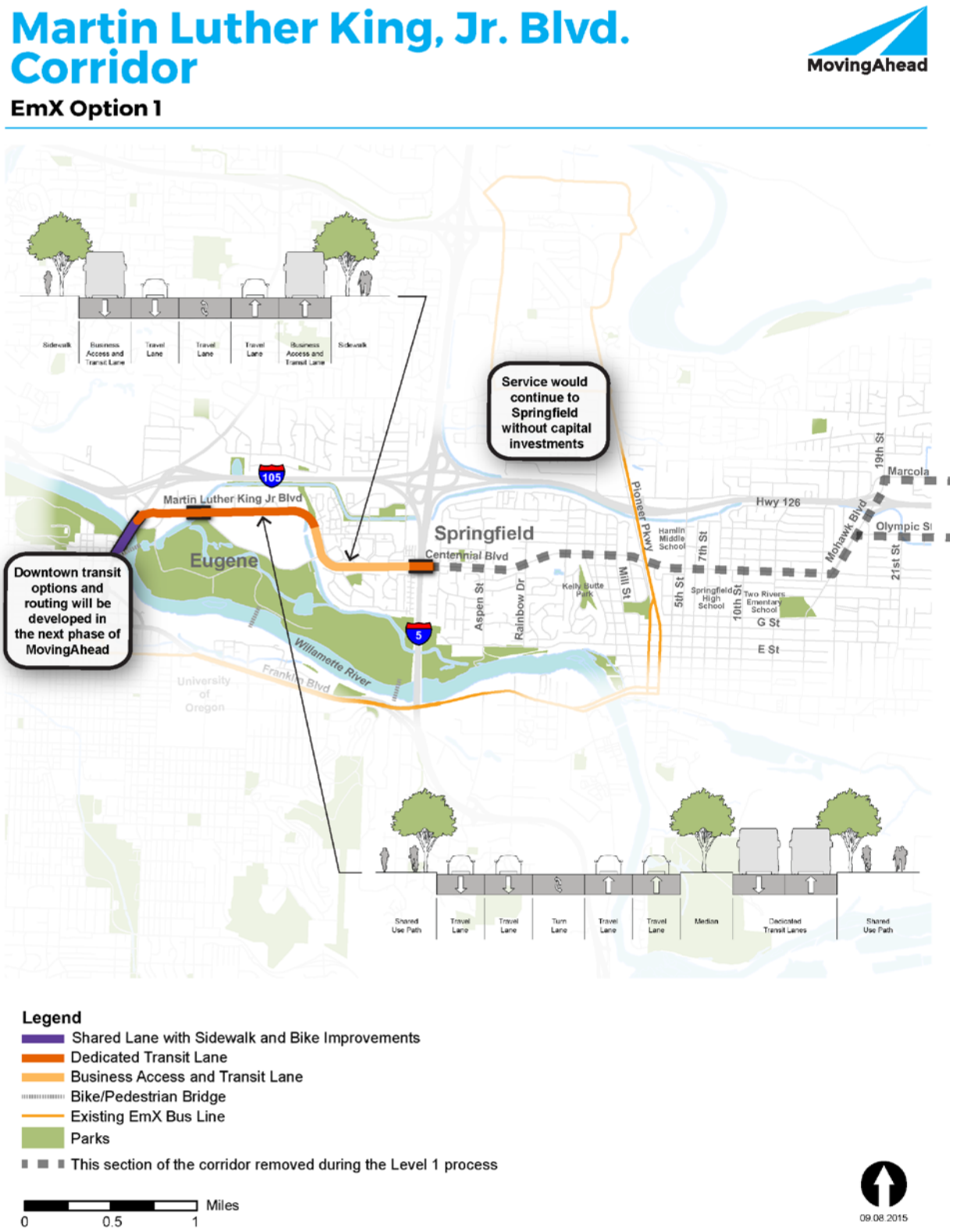
EmX option 2 (Figure 3.5-3) would maintain the existing cross-section from Country Club Road to the bridge west of Autzen Stadium at Leo Harris Parkway. Along this segment queue jumps would be added at major intersections. From the bridge at Leo Harris Parkway (just west of Autzen Stadium) east to Interstate 5, this option would include BAT lanes, automobile lanes, a shared center turn lane, and sidewalks on each side of the road.

Figure 3.5-1. Martin Luther King, Jr. Boulevard Corridor Enhanced Corridor Option



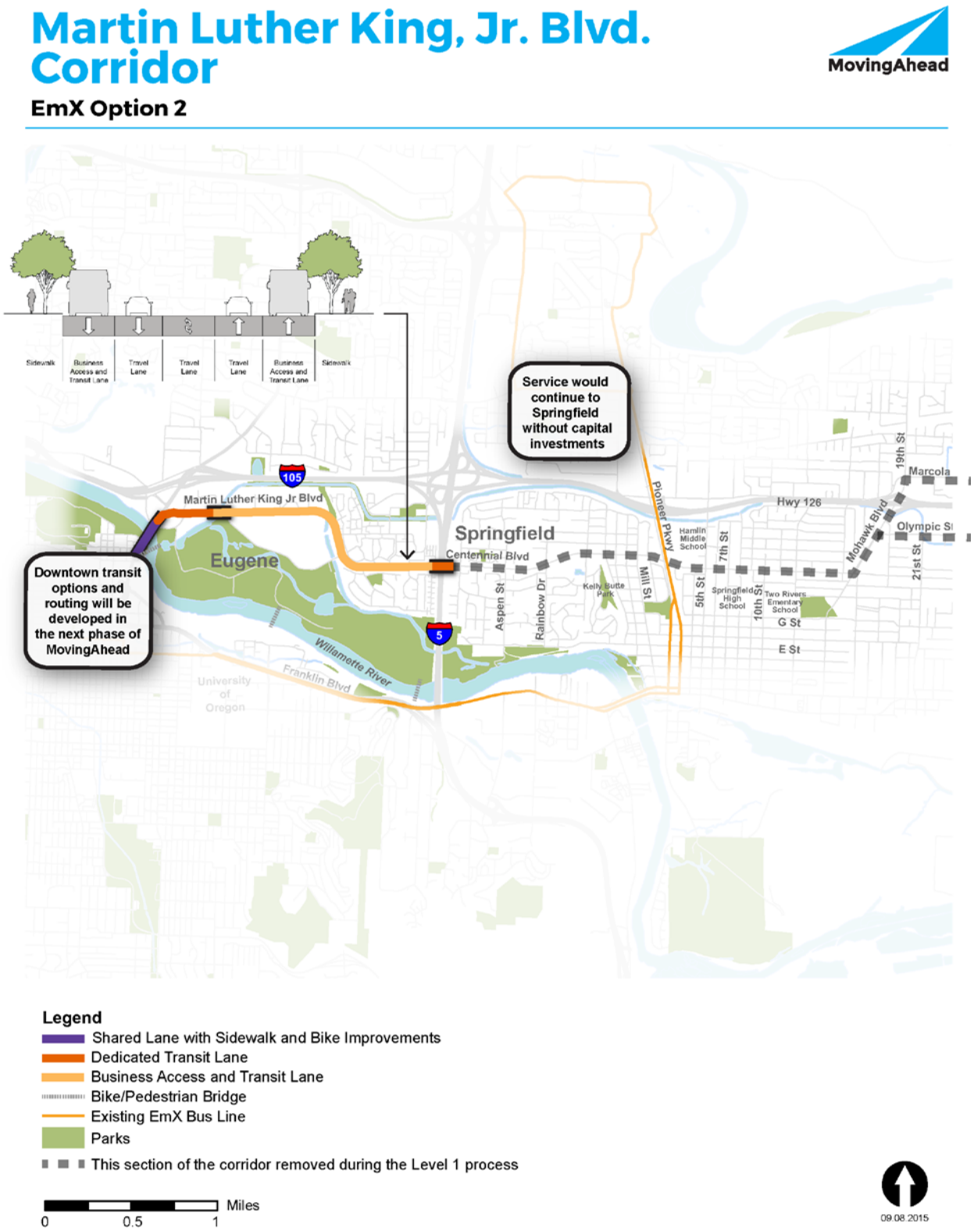
Source: CH2M. 2015.

Figure 3.5-2. Martin Luther King, Jr. Boulevard Corridor EmX Option 1



Source: CH2M. 2015.

Figure 3.5-3. Martin Luther King, Jr. Boulevard Corridor EmX Option 2



Source: CH2M. 2015.

3.6 River Road Corridor

This corridor begins at the Eugene Station, uses West 6th Avenue (outbound) and West 7th Avenue (inbound) to Chambers Street, then runs along River Road, terminating at Wilkes Drive/Irvington Drive (Figure 3.1-1). This corridor is approximately 4.5 miles one way and is currently served by Routes #51, #52, and #55.

LTD is planning to relocate the River Road Transit Station to a site north of the Randy Papé Beltline Highway (see Section 2.2.1.2 of this report). LTD is interested in a transit station site that would allow for joint development with other agencies and is particularly interested in the opportunity to develop the site with housing that meets the needs of senior citizens and/or lower income residents. The relocated River Road Station will become the terminus for the River Road Corridor. This new transit station site will be determined prior to the Level 2 AA. A single dedicated transit lane option may be considered in some locations on River Road; however, it will not be considered as a primary option for the following reasons:

- LTD needs to maintain flexibility to increase transit headways over time, which makes a bidirectional lane for the entire route infeasible.
- Relatively heavy traffic in both directions and closely spaced intersections make a single-lane swap option for the entire route infeasible.

Four options were developed for this corridor and studied in the Level 1 Screening Evaluation for this corridor:

1. No-Build option
2. Enhanced Corridor option
3. EmX option 1
4. EmX option 2

3.6.1 No-Build Option

With the No-Build option, the River Road Corridor would be served primarily by Routes #51 and #52, with Route #55 serving the southernmost part of the corridor. Routes #51 and #52 would operate with 30-minute headways during the peak period, and Route #55 would have 60-minute headways all day. Routes #51 and #52 would operate with staggered schedules, such that service would effectively operate with 15-minute headways along most of the corridor.

Currently, sidewalks are present on most streets along and adjacent to the corridor. River Road has bicycle lanes along the length of the corridor, and the City of Eugene plans to construct protected bicycle lanes along the corridor within the next 20 years.

3.6.2 Enhanced Corridor Option

The Enhanced Corridor option (Figure 3.6-1) would maintain a five-lane cross-section on River Road with queue jumps to provide priority for buses at congested intersections. This option would include a buffered bicycle lane with a wider buffer where right-of-way is available. The center turn lane could be modified to include sections of planted median, pedestrian refuges, and left turn lanes.

3.6.3 EmX Option 1

EmX option 1 (Figure 3.6-2) would include a four- to five-lane cross-section on most of the River Road Corridor. River Road would be redesigned to include two center-running exclusive bus lanes, two automobile lanes and left turn lanes where needed. The existing street trees would be preserved where possible. This option would include bicycle lanes with a buffer where possible. In some places, a left turn lane or pedestrian refuge would be provided.

As River Road passes through the Randy Papé Beltline Highway interchange, the cross-section would be six lanes wide with four travel lanes and two bus lanes. Recognizing existing pedestrian and bicycle safety concerns, enhanced bicycle and pedestrian facilities would be included in this area.

This option would use the existing bridges and maintain current cross-sections where Chambers Street crosses Railroad Boulevard. The roadway has four travel lanes and one shared middle turn lane. Buses would share the outside lane in each direction with right turning automobiles. The cross-section in this segment would include a bicycle lane in each direction and sidewalk of varying widths.

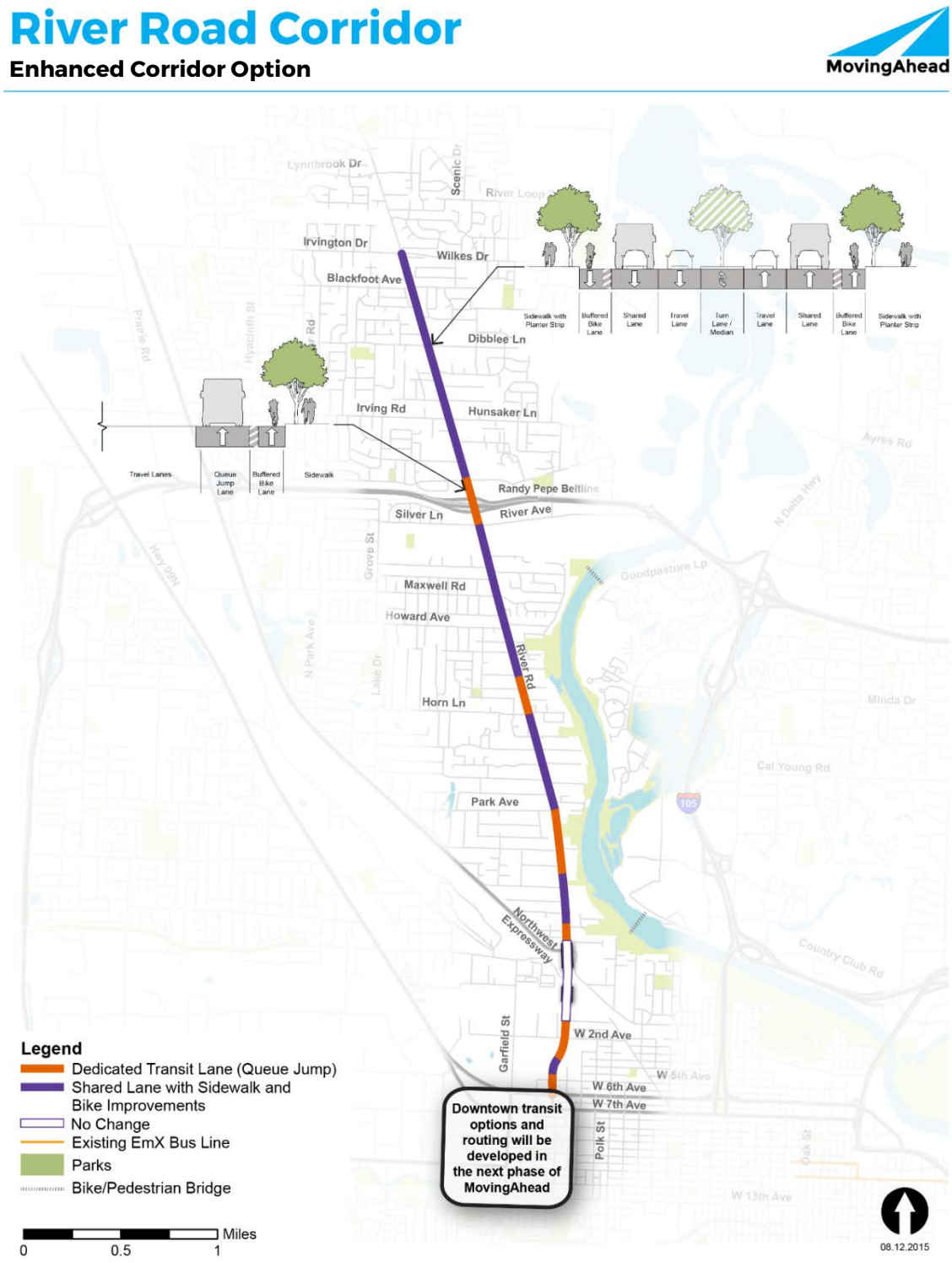
3.6.4 EmX Option 2

EmX option 2 (Figure 3.6-3) would include a five-lane cross-section on River Road. The roadway would be redesigned to include two travel lanes and two BAT lanes. Sidewalks and bicycle lanes would be separated from the roadway with the existing street trees. The center lane would be used for plantings, left turns, and mid-block pedestrian refuges.

As River Road passes through the Randy Papé Beltline Highway interchange, the cross-section would be six lanes wide with four travel lanes and two bus lanes. Recognizing existing pedestrian and bicycle safety concerns, enhanced bicycle and pedestrian facilities would be included in this area.

The option would use the existing bridges and maintain current cross-sections where Chambers Street crosses Railroad Boulevard. The roadway would have four travel lanes and one shared middle turn lane. Buses would share the outside lane in each direction with right turning automobiles. The cross-section in this segment would include a bicycle lane in each direction and sidewalk of varying widths.

Figure 3.6-1. River Road Corridor Enhanced Corridor Option



Source: CH2M. 2015.

Figure 3.6-2. River Road Corridor EmX Option 1

Source: CH2M. 2015.

Figure 3.6-3. River Road Corridor EmX Option 2

Source: CH2M. 2015.

3.7 Valley River Center Corridor

The Valley River Center Corridor starts in downtown Eugene at Eugene Station, heads northeast on Coburg Road, crossing the Ferry Street Bridge to Martin Luther King, Jr. Boulevard, then northwest on Country Club Road, west on Valley River Drive, then along the southern and western edge of Valley River Center, and north on Goodpasture Island Road to Goodpasture Loop (Figure 3.1-1). The route terminates at Delta Highway/Green Acres Road. The corridor is approximately 5.4 miles one way and is served by Routes #66 and #67. If the corridor advances to a Level 2 AA, other routing and termini may be considered.

No-Build and Enhanced Corridor options were developed for the Valley River Center Corridor. These reflect community input that suggested that EmX is not needed during the planning horizon.

3.7.1 No-Build Option

Under the No-Build option, Routes #66 and #67 would continue to serve the corridor. These routes operate in a loop to serve Valley River Center and Coburg Road, connecting to downtown Eugene. Both routes would operate with 30-minute headways all day.

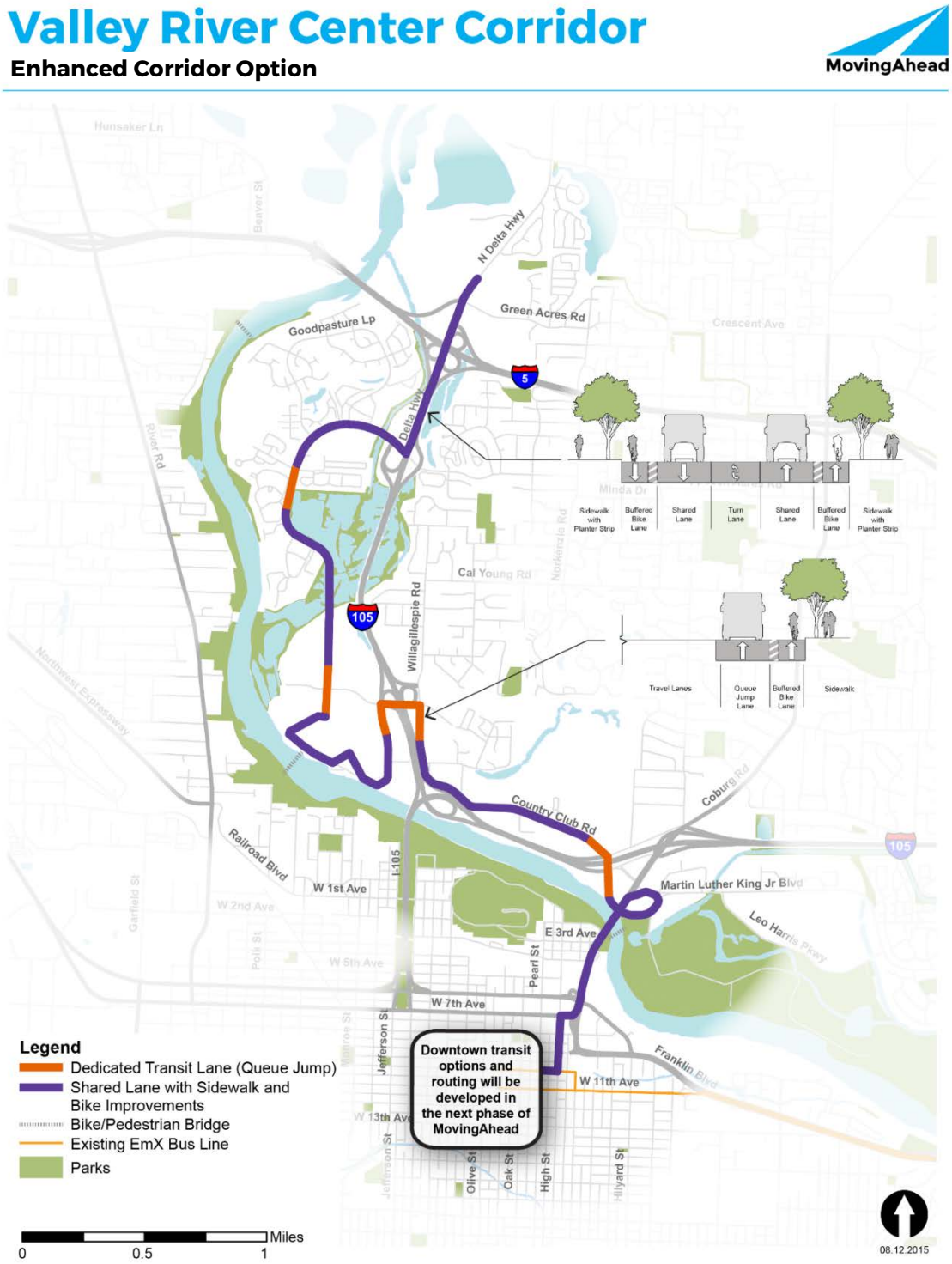
Currently, sidewalks are present on most streets along and adjacent to the corridor. The entire corridor includes bicycle facilities today including a shared path along the Willamette River and bicycle lanes along Country Club Road and Goodpasture Island Road.

3.7.2 Enhanced Corridor Option

The Enhanced Corridor option (Figure 3.7-1) would maintain the existing cross-section on roadways along the route, while adding queue jumps at congested intersections to provide priority for transit. Existing bicycle lanes would be maintained at intersections with transit queue jumps.

Some intersections that could have queue jumps include Country Club Road/Coburg Road, the Ferry Street Bridge approach, Interstate 105 ramps, and Country Club Road/Valley River Drive.

Figure 3.7-1. Valley River Center Corridor Enhanced Corridor Option



Source: CH2M. 2015.

4. Level 1 Screening Evaluation

This chapter describes the findings of the Level 1 Screening Evaluation, which gauges whether or not the proposed multimodal options address the project's PNGO.

4.1 Introduction

The project team used multiple data sources, as well as community feedback to evaluate the corridors. Data sources included recently completed travel forecasts produced by LCOG and recent and ongoing regional land use plans. Traffic analysis relied on draft build plans from local TSPs, traffic flow maps, and crash data available through ODOT. The transit market potential for each corridor was assessed using regional travel model data, including transit trip productions and attractions, and LTD's operations plans. Forecasts were based on the modeling done for the Eugene Draft TSP and Springfield TSP. Evaluations of economic development potential were based on current zoning, long-range plans, and feedback from agency staff. Feedback from public events and community stakeholders helped the project team determine how corridor options meet community goals. For more details about the data sources and methods for the Level 1 Screening Evaluation refer to Chapter 2.

4.2 Rating Corridor Options

For each option, the project team scored how well it would address the project's purpose, need, goals, and objectives (PNGO) relative to the other corridors being evaluated. The screening findings and ratings for each corridor are reported in the individual corridor sections of this chapter. Each corridor option (outlined in Chapter 3) was evaluated to determine which corridor options should be studied further during the Level 2 AA. The Level 1 Screening Evaluation is not intended to result in a preferred design alternative for each corridor but rather to determine which corridors best meet the PNGO and, therefore, should be moved forward to the Level 2 AA for refinement and additional study. Section 4.9 includes a comparative summary of the screening findings and the project team recommendations

The screening findings are reported either as data or as a score. Scoring is generally based on a high-medium-low scale or a better-moderate-poor scale. A score of not applicable (N/A) was assigned for two conditions: (1) where not enough information was available to indicate whether or not the transit option would address the objective; or (2) where a particular objective is not relevant to the transit option or corridor. The objectives, scoring metric, and data utilized for evaluating each corridor are described in Table 4.2-1.

Table 4.2-1. Evaluation Metrics and Methodology

Objective	Screening Metric	Scoring Methodology
1.1 Improve transit travel time and reliability	Qualitative assessment of improvement to traffic operations in the corridor. Rated on: • Most (more reduction in delay, more improvement in travel time reliability) • Some (some reduction in delay, some improvement in travel time reliability)	Qualitative assessment of improvement to traffic operations in the corridor through estimate of travel time between Eugene Station and corridor terminus.

Table 4.2-1. Evaluation Metrics and Methodology

Objective	Screening Metric	Scoring Methodology
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor. Rated on: • Better (greater improvement in safety) • Moderate (moderate improvement in safety) • No change	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor option based professional expertise and corridor safety amenities.
2.1 Control the increase in transit operating cost to serve the corridor	Estimate of 2035 system-wide operating cost per rider with new corridor.	Estimate of 2035 system-wide operating cost divided by 2035 ridership projection for EmX system with the addition of new corridor.
	Estimate of 2035 annual corridor ridership.	Estimate of 2035 annual corridor ridership projections is based on TDF model. Daily ridership from existing routes is annualized at a rate of 299.5 for EmX routes and 298.5 for enhanced bus routes.
	Change in 2035 average annual corridor ridership compared to No-Build option.	Change in 2035 average annual corridor ridership is a comparison to the No-Build option, using the TDF model.
	System-wide operating cost based on an estimate of 2035 annual system-wide service hours, miles and peak buses with corridor.	System-wide operating cost is based on an estimate of 2035 annual system-wide service hours, service miles and peak buses required with and without the new corridor.
	Amount of local match required for Small Starts application (assumed to be 40 percent of capital costs).	Estimated cost per mile of design and construction multiplied by corridor length and supplemented with estimated acquisition costs. The amount of local match required for Small Starts application is assumed to be 40 percent of capital costs.
2.3 Implement corridor improvements that provide an acceptable return on investment	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Greater dollar cost indicates less capital cost effectiveness.	Capital cost effectiveness is calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership.
	Order-of-magnitude costs to construct corridor options including stations, new signals and pedestrian/mobility device, and bicycle improvements.	Order-of-magnitude costs to construct corridor options include stations and new signals, pedestrian/mobility device and bicycle improvements derived from recent cost data from similar transit projects.
	Order of magnitude cost to construct corridor options per mile. Calculate by dividing order-of-magnitude capital costs by round-trip length of corridor in miles.	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles.

Table 4.2-1. Evaluation Metrics and Methodology

Objective	Screening Metric	Scoring Methodology
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars	Meet Federal Transit Administration's Small Starts funding requirements. Rated on: • Meets • Possibly meets	Federal Transit Administration's Small Starts funding requirements weigh the percent of corridor in exclusive guideway, service attributes, and project cost (less than $250 million).
3.1 Support development and redevelopment as planned in other adopted documents	Qualitative assessment of existing large trip generators or short-term redevelopment potential. Rated on: • Better (serves many trip generators or areas with more redevelopment potential) • Moderate (serves some trip generators or areas with some redevelopment potential) • Poor (serves fewer trip generators or areas with less redevelopment potential)	Redevelopment potential is based on existing large trip generators, or short-term redevelopment potential based on transit market potential, zoning, and long-range comprehensive plans.
3.2 Coordinate transit improvements with other planned and programmed pedestrian, mobility device user, and bicycle projects	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects. Rated on: • Better (connects to projects in adopted plans) • Moderate (located near projects in adopted plans) • Poor (not connected with or located near projects in adopted plans)	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects identified in adopted plans, Capital Improvement Programs, and from current planning efforts (e.g., Eugene Transportation System Plan). Does not preclude identification of new projects.
3.3 Coordinate transit improvements with other planned and programmed roadway projects	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Transportation System Plan). Rated on: • Better (connects to projects in adopted plans) • Moderate (located near projects in adopted plans) • Poor (not connected with or located near projects in adopted plans)	Connectivity to other planned and programmed roadway projects identified in adopted plans, Capital Improvement Programs, and from current planning efforts (e.g., Eugene Transportation System Plan). Does not preclude identification of new projects.
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns. Rated on: • No or minimal impacts (little change in access from the existing corridor) • Negative impact (restricted left-turn movements, typically from center running Bus Rapid Transit)	Assessment of opportunities for vehicles to be able to make turning movements along the corridor based on proposed cross-sections.
3.5 Supports community vision for high-capacity transit in corridor	Community vision includes high-capacity transit in corridor.	Determined through public input and community events. A summary of public outreach is included in Appendix D of this report.

Table 4.2-1. Evaluation Metrics and Methodology

Objective	Screening Metric	Scoring Methodology
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	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities. Rated on: • Meets (does not reduce automobile capacity) • Does not meet (reduces automobile capacity) • N/A (roadway is not a state facility)	Assessment of impacts on current and future year intersection Level of Service on state facilities is determined by roadway capacity for automobiles. Projects on state facilities cannot reduce automobile capacity.
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities. Rated on: • Meets (does not reduce automobile capacity) • Does not meet (reduces automobile capacity) • N/A (roadway is not a state facility)	Assessment of impacts on current and future year travel times for automobile and trucks based on PM peak-hour travel. Projects on state facilities cannot exceed certain standards.
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles	Qualitative assessment of potential impacts to emergency service vehicle flow and access. Rated on: • Better (least delay, greatest access) • Moderate (some delay, some reduction in access) • Poor (higher levels of delay, greater reductions in access)	Assessment of potential impacts to emergency service vehicle flow and access based on traffic congestion and delay, increase in non-traversable medians, increase in access management, and reduction in turn-around areas.

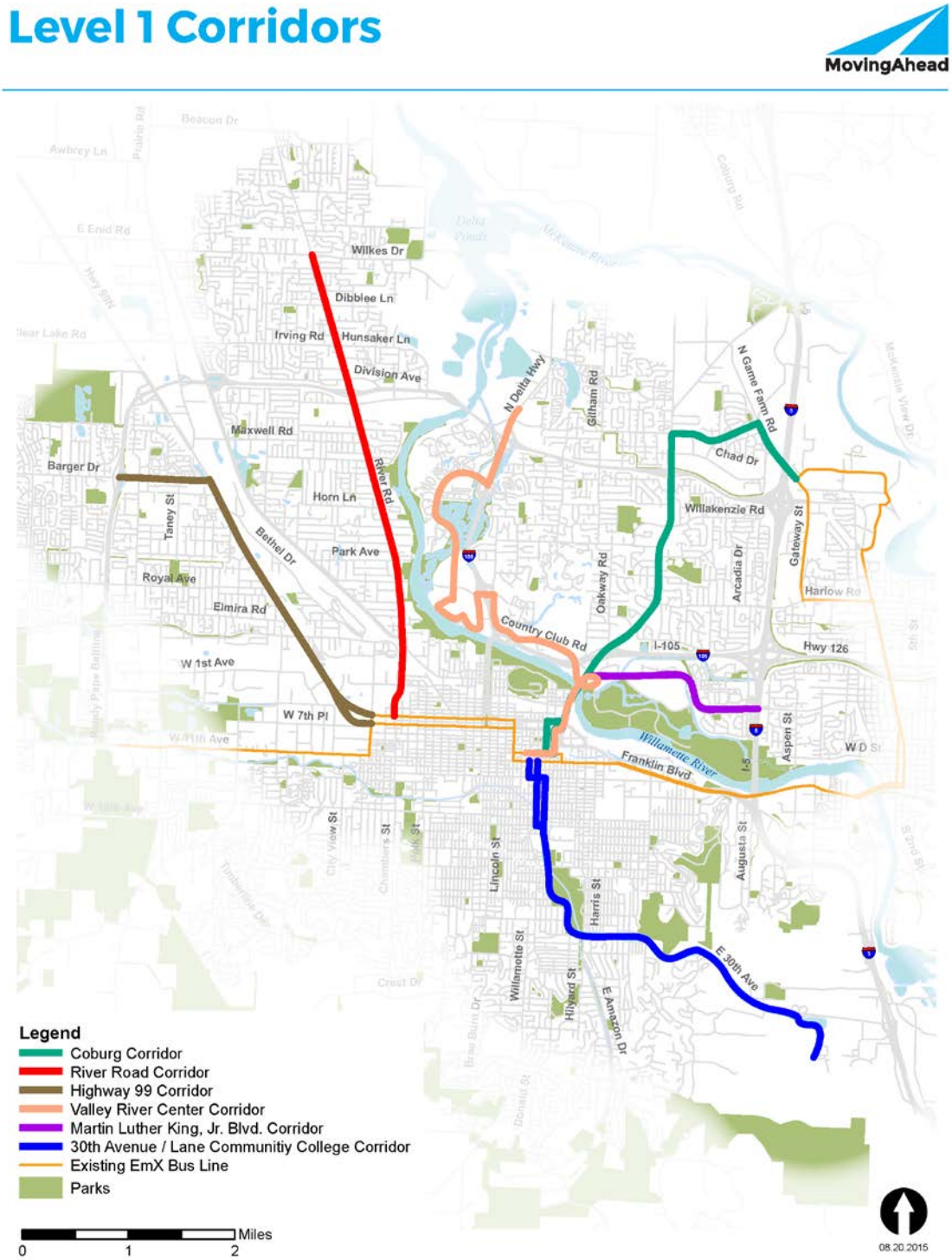
Source: LTD, 2015

The score and findings of the Level 1 Screening Evaluation for each of the corridors are described below. A summary matrix of all of the corridor scores and findings is provided in Table 4.9-2.

Figure 4.2-1 shows all of the corridors evaluated. For detailed maps of each corridor option, please see Chapter 3.

Figure 4.2-1. Corridors Evaluated in Level 1 Screening Evaluation

Source: CH2M. 2015.



4.3 30th Avenue/Lane Community College Corridor Findings

One EmX option and an Enhanced Corridor option were evaluated for the 30th/LCC Corridor. The corridor concepts are detailed in Section 3.2 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.3-1.

4.3.1 Trip Generators and Transit Market

Lane Community College (LCC) is the largest trip generator along this corridor. In the near term, redevelopment is likely in areas to the north and west of Amazon Parkway. Other development projects that will drive ridership include a school relocation and potential redevelopment of the Civic Stadium site. In the long term, continued expansion at LCC and redevelopment along Amazon Parkway will act as important trip generators.

Transit ridership forecasting for 2035 shows that boardings are likely to be highest at each end of the corridor (at LCC and in downtown Eugene). There are also likely to be large numbers of boardings and alightings at Amazon Station where riders can connect to other routes.

***Volume to capacity (V/C) ratio** is a measure used to determine the level of congestion on a roadway. V/C ratios greater than 1.0 generally mean the facility is congested.*

4.3.2 Traffic Operations and Impacts

Presently, the 30th Avenue portion of the corridor functions with low levels of congestion for both buses and cars. In 2035, the congestion along the corridor is anticipated to vary widely, with volumes expected to exceed capacity (more than 1.0 volume to capacity ratio [V/C]) on Amazon Parkway south of 18th Avenue and on 30th Avenue between Hilyard Street and Agate Street. Over the same time horizon, other portions of the corridor are expected to operate well below capacity, with relatively little congestion at High Street, Oak Street, and on 30th Avenue east of Agate Street.

Intersections and turning movements that are forecasted to be the most congested include Amazon Parkway/Hilyard Street, Amazon Parkway between 19th Avenue and 27th Avenue, and 30th Avenue from Hilyard Street to Agate Street. With the EmX option, buses would bypass the intersections in dedicated or shared transit lanes, while the Enhanced Corridor option would include queue jumps at intersections with the greatest delay.

Business access would not generally be affected under the corridor options. Emergency response times would be improved through the availability of BAT lanes, dedicated lanes, and queue jumps as additional maneuvering space for emergency vehicles.

4.3.3 Multimodal Connections and Safety Improvements

Both corridor options would improve pedestrian and bicycle safety in this corridor, which currently experiences higher and more severe bicycle and pedestrian crash rates. Between 2009 and 2013, 17 total bicycle or pedestrian crashes occurred, including one bicycle and one pedestrian fatality. Both fatalities were on the eastern portion of E 30th Avenue. The corridor currently features bicycle and pedestrian facilities, except along E 30th Avenue. With the Enhanced Corridor option, the roadway would include a buffered bicycle lane through downtown Eugene, on Amazon Parkway, and on some western portions of E 30th Avenue. With the EmX option, bicycles and pedestrians would operate on a shared use path, buffered from vehicular traffic by dedicated transit lanes. In both options, bicycle and pedestrian options on the County-owned portion of 30th Avenue would be explored in the Level 2 AA

concept refinement phase. The Eugene Draft TSP proposes some enhanced pedestrian crossings and intersections improvements in the corridor.

4.3.4 Estimated Corridor Costs

The cost to construct the Enhanced Corridor option is estimated to be less than $10 million per mile. The estimated cost to construct the EmX option ranges between $10 million and $20 million per mile.

4.3.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the 30th/LCC Corridor, 68 percent thought that EmX should be studied further and 79 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Evening and weekend bus service to LCC is needed for people attending events and meetings
- Express bus service to LCC would be the best choice
- Unsure EmX makes sense given lack of density on corridor
- EmX may provide a good transit option for LCC students
- Corridor does not connect well to other high capacity transit
- Corridor would complement changes occurring in the South Willamette area
- Do not make changes to transit in this corridor
- Oak Street and Pearl Streets should be used for buses; High Street should include a cycletrack
- Pedestrian improvements are needed on 30th Avenue to the LCC campus
- Need more details about how bicycles will be accommodated; better cycling options along 30th Avenue are needed

Table 4.3-1. 30th/LCC Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Some	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate/Better	Moderate/Better
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.32	$1.30
	Estimate of 2035 annual corridor ridership projections.	1.6 million	1.1 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	595,000	100,000

Table 4.3-1. 30th/LCC Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$26 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	$10 million to $30 million	<$10 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$6 to $13	$3 to $5
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$50 million to $70 million	$10 million to $20 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	$10 million to $20 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Better	Better
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Poor	Poor
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	No Impact to Minimal Impact	No Impact to Minimal Impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A	N/A

Table 4.3-1. 30th/LCC Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Moderate

4.4 Coburg Road Corridor Findings

One EmX option and an Enhanced Corridor option were evaluated for the Coburg Road Corridor. The corridor design concepts are detailed in Section 3.3 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.4-1.

4.4.1 Trip Generators and Transit Market

The Coburg Road Corridor has existing and emerging trip generators at several points along the corridor. Commercial development flanking Interstate 105 near Coburg Road currently generates transit demand. Further north, Sheldon High School and adjacent commercial development represent other major trip generators. On the northernmost section of the corridor, commercial and currently developing office and industrial areas along Coburg Road and Chad Drive are anticipated to be transit trip generators. The areas north of Randy Papé Beltline Highway are likely to continue to develop well into the future, further increasing transit travel demand.

4.4.2 Traffic Operations and Impacts

Coburg Road currently has higher levels of automobile and transit delay than other corridors, meaning the EmX option would likely lead to greater transit travel time savings. Within the corridor, congestion varies widely. While much of the corridor would operate well below capacity in year 2035, the segment between downtown Eugene and Harlow Road is expected to exceed capacity with V/C ratios greater than 1.0.

The worst performing intersections are anticipated to be Coburg Road/Harlow Road and Coburg Road/ Crescent Avenue and the most congested segment of Coburg Road is anticipated between Ferry Street Bridge and Harlow Road. With the EmX option, buses would bypass these intersections in a dedicated transit lane or BAT lanes, while the Enhanced Corridor option would include queue jumps to reduce travel time delay resulting from congestion at intersections. Multimodal improvements in the corridor would be consistent with Draft Eugene TSP projects for the intersection of 4th Avenue, and at the Randy Papé Beltline Highway interchange.

Center dedicated transit lanes could result in reduced access for left-turning vehicles into businesses, but may improve through-movements and reduce collisions. The addition of BAT lanes, dedicated lanes, and queue jumps could improve emergency vehicle response time by creating restricted roadway space that can be used by emergency vehicles.

4.4.3 Multimodal Connections and Safety Improvements

The corridor currently has bicycle and pedestrian facilities. Between 2009 and 2013, five total bicycle or pedestrian crashes occurred within the corridor. While none were categorized as severe, bicycle facilities could be improved by widening bicycle lanes and adding physical separation. For pedestrians and mobility device users, enhanced crossings, medians, and planter strips would increase safety and

improve comfort for those walking or using mobility devices in the corridor. Both groups of users would benefit from the connection with a proposed shared use path near the intersection with Sorrel Road.

4.4.4 Estimated Corridor Costs

The cost to construct the Enhanced Corridor option is estimated at less than $10 million per mile. The EmX option would cost between $10 million and $20 million per mile to construct. This corridor would require more right-of-way acquisition than some other options, which is included in the estimated cost.

4.4.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the Coburg Road Corridor, 76 percent thought that EmX should be studied further and 77 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Coburg is one of the most important EmX corridors because the service will reinforce development and help meet Envision Eugene goals
- The corridor is an important corridor for autos, given the nature of development and connection to freeways; would like to know what impact transit options would have on traffic flow
- Auto access to businesses must be maintained
- Space constraints may make it difficult to implement EmX or Enhanced Corridor
- Concerned about property owner opposition from the first attempt at EmX on this corridor
- More buses should not be added to Coburg Road
- Buses in mixed traffic cause congestion
- Both EmX and Enhanced Corridor options should serve the Amtrak station
- Coburg is scary with fast moving traffic
- Bicycling facilities separated from traffic are important
- Bicycle and pedestrian crossings are difficult
- The VA clinic and new development north of Crescent Drive has limited bus service and cycling options
- Need to consider ways of reducing traffic that may cut through neighborhoods after improvements are built

Table 4.4-1. Coburg Road Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Most	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate	Moderate

Table 4.4-1. Coburg Road Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
crossing and traveling along the corridor.			
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.34	$1.30
	Estimate of 2035 annual corridor ridership projections.	1.3 million	1.1 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	770,000	475,000
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$26 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	More than $30 million	$10 to $30 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$8 to $17	$4 to $9
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$50 million to $90 million	$10 million to $30 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	$10 million to $20 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Better	Better
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Moderate	Moderate

Table 4.4-1. Coburg Road Corridor Findings

Project Objective	Screening Metric	EmX	Enhanced Corridor
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	Negative Impact	No Impact to Minimal Impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A	N/A
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Moderate

4.5 Highway 99 Corridor Findings

Two EmX options and an Enhanced Corridor option were evaluated for the Highway 99 Corridor. The corridor design concepts are detailed in Section 3.4 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.5-1.

4.5.1 Trip Generators and Transit Market

The Highway 99 Corridor has relatively few major existing trip generators. WinCo Foods (near the intersection of Barger Drive and Randy Papé Beltline Highway) and Willamette High School, just south of Barger Drive, constitute some of the major existing trip generators. In the long term, properties flanking Highway 99 may redevelop, but there is little pressure in the near term for major redevelopment to occur. Due to the predominance of commercial and industrial zoning, future development is unlikely to attract or generate many transit trips. Rail yards adjacent to the corridor are also unlikely to redevelop in the long term. Property to the northwest of the corridor, presently undeveloped, is likely to develop into a significant employment center in the longer term (7 to 10 years or more).

2035 ridership forecasts indicate that the greatest number of boardings in the Highway 99 Corridor would be at each end of the line (Echo Hollow/Barger and downtown Eugene). Elsewhere, there would be smaller numbers of boardings and alightings, with the exception of Fairfield, a neighborhood with pockets of multifamily housing.

4.5.2 Traffic Operations and Impacts

The Highway 99 Corridor ranked lower on transit travel time improvements due to the relatively low levels of existing delay throughout the corridor. Based on 2035 traffic volume data, the corridor would operate generally at or near capacity, with a V/C of 0.8 to 1.0. Some roadway sections would have more capacity, while others would experience higher levels of delay. Intersections and turning movements would experience slightly longer levels of delay include Garfield Street/7th Avenue, Garfield Street/6th

Avenue, and Highway 99/Roosevelt Boulevard. Buses would avoid congestion at these intersections by utilizing dedicated transit lanes under the EmX option or queue jumps in the Enhanced Corridor option.

Traffic operations on Highway 99, a state-owned facility, could be impacted by left turn restrictions at private driveways and where medians separate dedicated transit lanes. Turning restrictions could reduce access but improve through-movement and reduce collisions. Constructing BAT lanes, dedicated lanes, and queue jumps could also improve emergency vehicle response by providing access to restricted roadway space that can be utilized by emergency vehicles.

4.5.3 Multimodal Connections and Safety Improvements

Multimodal improvements in this corridor would connect with several other proposed TSP projects in the corridor, including upgrades to Bethel Drive, Clear Lake Road, and Awbrey Lane; safety and congestion intersection improvements throughout the corridor; an improvement to Airport Road; and an extension of Theona Drive.

Implementing any of the options in the Highway 99 Corridor would result in major improvements to bicycle facilities and sidewalks. Currently, infrastructure for bicycles, pedestrians, and users of mobility devices does not extend south of Roosevelt Boulevard, although the Eugene Draft TSP proposes extending the bicycle lane and filling sidewalk gaps from Garfield Street to Roosevelt Boulevard. The project would also intersect with a proposed bicycle feasibility study on the east-west railroad corridor that begins in the rail yard in downtown Eugene and extends west toward the City limits.

A combined total of ten tbicycle and pedestrian crashes occurred on the corridor between 2009 and 2013, including one severe pedestrian crash. The enhanced crossings and medians, particularly in the EmX options, would improve the pedestrain experience and create a safer separation of modes.

4.5.4 Estimated Corridor Costs

The cost to construct the Enhanced Corridor option is estimated to be less than $10 million per mile. The cost to construct EmX options is estimated to be between $10 million and $20 million per mile.

4.5.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the Highway 99 Corridor, 81 percent thought that EmX should be studied further and 77 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Need a regular bus connection to airport
- Enhanced Corridor might be a good choice because of anticipated long-term changes to this corridor
- Interested in understanding how reliability would be affected if buses ran in shared lanes
- Interested in understanding how the corridor contributes to the greater transit system
- Consider route options that do not require going through downtown Eugene
- Pedestrian and bicycle crossings are presently unsafe; make the environment safer

Table 4.5-1. Highway 99 Corridor Findings

Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Some	Some	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate/ Better	Moderate/ Better	Moderate
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.32	$1.32	$1.28
	Estimate of 2035 annual corridor ridership projections.	1.2 million	1.2 million	0.8 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	420,000	420,000	135,000
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$27 million	$25 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	More than $30 million	More than $30 million	Less than $10 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$8 to $17	$8 to $17	$6 to $12
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$60 million to $90 million	$60 million to $90 million	$10 million to $30 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	$10 million to $20 million	$10 million to $20 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements

Table 4.5-1. Highway 99 Corridor Findings

Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Poor	Poor	Poor
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better	Better
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Moderate	Moderate	Moderate
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	Negative Impact	No Impact to Minimal Impact	No Impact to Minimal Impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	Meets	Meets	Meets
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	Meets	Meets	Meets
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Better	Moderate

4.6 Martin Luther King, Jr. Boulevard Corridor Findings

Two EmX options and an Enhanced Corridor option were evaluated for the Martin Luther King, Jr. Boulevard Corridor. LTD's Long-Range Transit Plan identifies the 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 the City of Springfield does not have the resources available to consider transit enhancements on Centennial Boulevard at this time, MovingAhead only developed EmX and Enhanced Corridor options within the City of Eugene. The team completed the technical evaluation on the original corridor, which included the Centennial Boulevard section east of Interstate 5. In the evaluation discussion below we note those

areas where the truncated Martin Luther King, Jr. Boulevard Corridor performs differently than the former corridor (which included Centennial Boulevard).

The corridor design concepts are detailed in Section 3.5 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.6-1.

4.6.1 Trip Generators and Transit Market

Within the Martin Luther King, Jr. Boulevard Corridor, Autzen Stadium near the western terminus is a major trip generator during events. Multifamily developments to the east of the stadium are another major source of transit travel demand. In the future, land north of Martin Luther King, Jr. Boulevard and west of Interstate 5 may redevelop to more transit-supportive uses.

2035 transit ridership projections are based on a new route that serves Martin Luther King, Jr. Boulevard from downtown Eugene to Mohawk/Marcola in Springfield. A portion of the new service would run in the same corridor as the existing express bus route (79X) that has high transit ridership due to large apartment complexes of students and staff traveling to the University of Oregon. The new proposed corridor project would have higher quality service with shorter travel times and increased service frequencies along the existing bus route. As Centennial Boulevard was removed from this corridor subsequent to travel modeling, ridership is likely to be lower than that projected in Table 4.6-1.

4.6.2 Traffic Operations and Impacts

The Martin Luther King, Jr. Boulevard Corridor currently has low levels of traffic delay, resulting in smaller transit travel time improvements as compared with other corridors. However, the corridor becomes congested during events at Autzen Stadium. In 2035, the corridor would likely operate below capacity, with the exception of the intersection near the Interstate 5 interchange, which will be more congested. With the EmX options, busses would bypass the intersections in BAT lanes or other types of managed lanes, while the Enhanced Corridor option would feature queue jumps at intersections with the greatest delay. The Eugene Draft TSP proposes a center turn lane between Leo Harris Parkway West and Centennial Loop West to improve current operations.

4.6.3 Multimodal Connections and Safety Improvements

All proposed corridor options would moderately improve pedestrian and bicycle facilities because the proposed new facilities are similar to existing facilities for bicyclists, pedestrians, and mobility device users. Currently, bicycle facilities and sidewalks exist along the length of the entire corridor. Between 2009 and 2013, six bicycle or pedestrian crashes occurred, including three that were categorized as severe. The crashes were concentrated near the intersections of Martin Luther King, Jr. Boulevard/South Garden Way and Martin Luther King, Jr. Boulevard/Kinsrow Avenue.

The EmX options would have a mix of bicycle lanes and buffered lanes, as well as a shared use path along the corridor. With the Enhanced Corridor option, the roadway cross-section would remain the same for most of the alignment with targeted bicycle improvements at problematic intersections. Under both options, users could connect with existing shared use paths near Day Island.

4.6.4 Estimated Corridor Costs

Because costs in Table 4.6-1 were calculated based on the original Martin Luther King, Jr./Centennial Corridor (before Centennial Boulevard was removed), the total costs for each option are higher than anticipated for the reduced corridor. The per-mile costs for this corridor provide a more accurate basis for comparison; the cost to construct the Enhanced Corridor option is estimated at less than $10 million

per mile. The estimated cost to construct the EmX options is between $10 million and $20 million per mile.

4.6.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the Martin Luther King, Jr. Boulevard Corridor, 64 percent thought that EmX should be studied further and 65 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Without Springfield connection, this corridor is a waste
- Both EmX and Enhanced Corridor options should serve the Amtrak station
- Good candidate for Enhanced Corridor because of ridership
- Holds promise of best return on investment
- Primary traffic concerns in this corridor are related to events at Autzen Stadium
- Essential corridor connecting student housing, Eugene, and Springfield
- Bicycle and pedestrian improvements are needed
- Dedicated bus routes already serve corridor
- Other corridors could use EmX service more
- Do not compromise any of Alton Baker Park to alleviate Ferry Street Bridge congestion

Table 4.6-1. Martin Luther King, Jr. Boulevard Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Some	Some	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate	Moderate	Moderate
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.32	$1.32	$1.28
	Estimate of 2035 annual corridor ridership projections.	1.7 million	1.7 million	1.2 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	1,200,000	1,200,000	675,000

Table 4.6-1. Martin Luther King, Jr. Boulevard Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$27 million	$25 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	More than $30 million	More than $30 million	$10 million to $30 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$6 to $12	$6 to $12	$3 to $4
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$60 million to $90 million	$60 million to $80 million	$20 million to $40 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	$10 million to $20 million	$10 million to $20 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Moderate/Better	Moderate/Better	Moderate/ Better
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better	Better
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Moderate	Moderate	Moderate
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	No Impact to Minimal Impact	No Impact to Minimal Impact	No Impact to Minimal Impact

Table 4.6-1. Martin Luther King, Jr. Boulevard Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A	N/A	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A	N/A	N/A
3. Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Moderate	Moderate

4.7 River Road Corridor Findings

Two EmX options and an Enhanced Corridor option were evaluated for the River Road Corridor. The corridor options are detailed in Section 3.6 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.7-1.

4.7.1 Trip Generators and Transit Market

The River Road Corridor would serve a mix of residential and commercial clusters. Existing or emerging major trip generators include North Eugene High School (southwest of the Randy Papé Beltline Highway/River Road interchange), new multifamily housing near River Road and Lidner Lane, and existing commercial developments northeast of the Randy Papé Beltline Highway/River Road interchange. While there are relatively few major trip generators currently located in the corridor, the area is identified in the Eugene Comprehensive Plan for an expansion of commercial jobs. In particular, clusters of commercially-zoned property along River Road may redevelop in the mid- to long-term.

The corridor is projected to have moderate transit ridership levels in 2035, with the greatest number of boardings and alightings near Hunsaker Road. The River Road Corridor would also serve a number of transfers to Route #55, providing a connection to residential areas west of River Road.

4.7.2 Traffic Operations and Impacts

River Road currently has relatively low levels of traffic delay, with 2035 traffic models indicating that the road would continue to operate well below capacity, with V/C ratios of less than 0.8. Some intersections and turning movements are predicted to experience heavier congestion, particularly Chambers Street/West 6th Avenue, River Road/Northwest Expressway, River Road/Irving Road, and River Road/Randy Papé Beltline Highway. With the EmX options, buses would bypass congestion at these

intersections in a dedicated transit lane, while the Enhanced Corridor option would include queue jumps.

Left-turn restrictions or dedicated left-turn restrictions could impact traffic on Randy Papé Beltline interchange, a state-owned facility. Turning restrictions could reduce access but improve through movement and reduce collissions. Constructing BAT lanes, dedicated lanes, and queue jumps may also improve emergency vehicle response by providing access to restricted roadway space that can be utilized by emergency vehicles.

4.7.3 Multimodal Connections and Safety Improvements

Bicycle and pedestrian safety is an issue in this corridor. Fourteen total bicycle and pedestrian crashes occurred between 2009 and 2013, including five severe crashes. The crashes are concentrated in the Randy Papé Beltline Highway/Irving Road area. All EmX and Enhanced Corridor options would include a buffered bicycle lane. Pedestrian facilities would also be improved through enhanced crossings and medians. Multimodal improvements in the River Road Corridor would be consistent with proposed Eugene Draft TSP projects to improve intersections at major crossings along River Road, including the Randy Papé Beltline Highway Interchange, Beacon Drive East, River Loops 1 and 2, Spring Creek Drive, and Wilkes Drive. Corridor improvements would also connect to a proposed shared-use path linking River Road with open and green space west of the river.

4.7.4 Estimated Corridor Costs

The cost to construct the Enhanced Corridor option is estimated to be less than $10 million per mile. The cost to construct EmX options is estimated to be greater than $20 million per mile. EmX costs reflect more dedicated transit lane miles than any other corridors.

4.7.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the River Road Corridor, 85 percent thought that EmX should be studied further and 75 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Very interested in EmX in light of expected area planning efforts
- Prefer buses to run in the center lane so that bus riders only need to cross half the street
- BAT lanes are preferred because of turn lane in the middle
- Likes that the potential EmX would extend to Irvington Road
- Carefully consider the northern terminus of the corridor – potential for economic development opportunities
- A bus to Junction City should be tested because of the increase of housing north of Beltline Highway and the new state facility in the area
- Enhance the route 55 to include evening and weekends
- Consider route options that do not require going to/through downtown Eugene
- Northwest Expressway should be improved to encourage use by commuter vehicles
- Avoid options that reduce auto capacity on River Road

- Improve facilities for cyclists on River Road
- Insist on dedicated transit and cycling lanes
- Consider safety of all road users in design for River Road Buffered bicycle lanes and cycle tracks are needed because it is currently unsafe
- Would like a landscaped median between bikes and vehicles
- Safe crossings and safer cycling facilities separated from traffic are a major issue
- A crosswalk at Briarcliff is critical to serve bus stops
- Concerns about cost
- Avoid tree removal with any transit option
- Reduce the speed limit on River Road
- Beltline interchange is a particular area of concern

Table 4.7-1. River Road Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Most	Most	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate/Better	Better	Moderate
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.32	$1.32	$1.28
	Estimate of 2035 annual corridor ridership projections.	1.4 million	1.4 million	1.1 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	415,000	415,000	110,000
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$27 million	$25 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	More than $30 million	More than $30 million	Less than $10 million

Table 4.7-1. River Road Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$14 to $18	$14 to $18	$4 to $9
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$70 million to $90 million	$70 million to $90 million	$10 million to $30 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	More than $20 million	More than $20 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Moderate/Better	Moderate/Better	Moderate/Better
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better	Better
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Better	Better	Better

Table 4.7-1. River Road Corridor Findings

Project Objective	Screening Metric	EmX Option 1	EmX Option 2	Enhanced Corridor
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	Negative Impact	No Impact to Minimal Impact	No Impact to Minimal Impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A	N/A	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A	N/A	N/A
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Moderate	Moderate

4.8 Valley River Center Corridor Findings

An Enhanced Corridor option was evaluated for the Valley River Center Corridor. The corridor design option is detailed in Section 3.7 of this report, and Level 1 Screening Evaluation results are summarized in Table 4.8-1.

4.8.1 Trip Generators and Transit Market

Transit travel demand in the Valley River Center Corridor is primarily driven by major commercial development: the Valley River Center Mall and commercial areas west of the Delta Highway. New multifamily housing northwest of the mall is likely to develop in the near term spurring more residential trips to that area. Existing commercial and single-family residential developments further north on Goodpasture Island Road constitute the other major trip generators in the corridor. Vacant land and existing parking lots near the mall may be candidates for development/redevelopment in the future.

Transit ridership forecasts show that the mall would generate the most ridership activity in the corridor. Other areas generating higher ridership include the northernmost residential portion of the corridor on Goodpasture Island Road that includes several larger apartment complexes.

4.8.2 Traffic Operations and Impacts

The corridor has low to moderate levels of traffic delay, leading to smaller travel time gains for transit relative to other corridors. In 2035, the corridor is estimated to operate below capacity with a V/C ratio

of less than 0.8. The longest delays are for turning vehicles at the intersections of Coburg Road/Country Club Road and Valley River Road/Delta Highway southbound ramp. The Enhanced Corridor option would address these potential bottlenecks with transit queue jumps at congested intersections.

Business access would generally not be impacted under the Enhanced Corridor option. Emergency response times would be improved through the availability of queue jumps.

4.8.3 Multimodal Connections and Safety Improvements

Between 2009 and 2013, two bicycle or pedestrian crashes occurred, with one pedestrian crash rated as severe. The corridor currently includes sidewalks and bicycle facilities, but pedestrian safety could be improved through enhanced crossings and medians. Similarly, the bicycle lanes could be improved by adding width or physical separation.

The project aligns with proposed Eugene Draft TSP projects to infill sidewalks near Valley River Road and Goodpasture Island Road. The project also would link to a proposed bicycle lane on Valley River Road.

4.8.4 Estimated Corridor Costs

The cost to construct the Enhanced Corridor option is estimated to be less than $10 million per mile.

4.8.5 Community Input

More than 400 comments were received about corridor options under consideration. Of those providing comments about the Valley River Center Corridor, 67 percent thought that Enhanced Corridor should be studied further. Other comments about this corridor included:

- Need to understand how Enhanced Corridor treatments would improve service in this corridor more specifically
- Corridor is already adequately served
- Bicycle and pedestrian access in the corridor could be improved; safety is important
- Route through Valley River Center will be too slow
- Riding experience needs to be more pleasant

Table 4.8-1. Valley River Center Corridor Findings

Project Objective	Screening Metric	Enhanced Corridor
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.29
	Estimate of 2035 annual corridor ridership projections.	0.9 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	285,000

Table 4.8-1. Valley River Center Corridor Findings

Project Objective	Screening Metric	Enhanced Corridor
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$26 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	Less than $10 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$3 to $6
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$10 million to $30 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Moderate
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Moderate
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Poor
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	No Impact to Minimal impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A

4.9 Comparative Summary of Screening Evaluation Findings and Recommendations

The following section provides a comparison of corridor performance and Level 1 Screening recommendations.

4.9.1 Comparative summary

The following summary identifies the key factors that differentiate the Level 1 corridors from each other.

EmX options have the greatest potential to improve transit travel times in the River Road and Coburg Road Corridors, due to existing or projected traffic congestion. EmX options would also result in large increases in ridership in the Highway 99, River Road, Coburg Road, and 30th/LCC Corridors. Ridership would also increase in the Martin Luther King, Jr. Boulevard Corridor. The Valley River Center Corridor would experience moderate ridership increases with the Enhanced Corridor option. The River Road, Coburg Road, Martin Luther King, Jr. Boulevard, and 30th/LCC corridors have the greatest number of current and potential future trip generators (high density residential development, commercial centers, etc.).

Total system operating costs would be similar for EmX options across all corridors. Total system operating costs would also be similar for Enhanced Corridor options across all corridors. In general, total system operating costs would be 6 to 8 percent higher for EmX options as compared to Enhanced Corridor options. However, system operating costs per boarding are expected to be the same with all corridors and options. Capital costs per mile for EmX options are estimated to be $10 million to $20 million, with the River Road Corridor EmX options estimated to cost more with per mile costs exceeding $20 million per mile; however, refinement of EmX options during the Level 2 AA may result in reduced per-mile costs for this corridor and others. All EmX options would meet federal grant funding requirements, while Enhanced Corridor options could possibly meet funding requirements, depending on Enhanced Corridor features.

All corridors would result in enhanced facilities for pedestrians, mobility device users, and cyclists; all corridors would also coordinate with existing pedestrian and bicycle plans, with the exception of the Valley River Center Corridor as current plans do not include as many improvements in that area. There are few planned roadway projects in the vicinity of the 30th/LCC and Valley River Center Corridors.

EmX options across all corridors would either improve or have little impact on emergency vehicle operations. EmX option 2 in the Highway 99 Corridor would likely improve emergency operations somewhat as it would add an EmX lane that could be used by emergency vehicles.

The community supports high capacity transit in all corridors, as determined through public outreach in summer 2015). The Valley River Center corridor had support, but it was slightly less strong than the other Level 1 corridors (see Appendix D).

4.9.2 Recommendation

Based on community input and technical analysis, the project team recommends:

- Advancing four corridors to the Level 2 AA for further evaluation of EmX and Enhanced service alternatives:
    - Highway 99 Corridor
    - River Road Corridor
    - Coburg Road Corridor

- 30th/LCC Corridor

The four corridors received the broadest community support for further study of EmX. From a technical perspective, they each offer growth in transit ridership with only modest effects on LTD's system operating costs, and provide investments in Envision Eugene's key transportation corridors. A full summary of corridor screening results is provided in Table 4.9-2.

- Advancing the Martin Luther King, Jr. Boulevard Corridor to the Level 2 AA for further evaluation of an Enhanced Corridor alternative.

  The Martin Luther King, Jr. Boulevard Corridor should advance as an Enhanced Corridor as part of the Level 2 AA. This corridor offers strong transit ridership with an Enhanced Corridor treatment and could benefit from transit improvements associated with Coburg Road between the intersection Martin Luther King, Jr. Boulevard and Coburg Road.

- Eliminating the Valley River Center Corridor from further consideration in the Level 2 AA.

  The Valley River Center Corridor should not advance at this time. During outreach conducted in spring 2015, community members suggested that EmX was not needed in the short term. In summer 2015, Valley River Center had less support than other corridors. LTD and the City of Eugene may consider improvements to this corridor through their existing capital improvements programs.

No-Build options will be evaluated for all corridors advanced to the Level 2 AA. In some cases, the EmX alternatives may include design options.

Table 4.9-1. Corridors and Transit Alternatives Recommended for Study in Level 2 AA

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

This recommendation was approved by the MovingAhead Oversight Committee on September 23, 2015. In October 2015, this recommendation was advanced to the Eugene City Council and LTD Board of Directors for consideration.

The recommended alternatives by corridor are summarized in Table 4.9-1. A full summary of public input is provided in Appendix D.

The MovingAhead team will refine the alternatives identified in Table 4.9-1 before beginning the Level 2 AA. Refinement will include concepts for transit operations, identification of general station locations

and termini, pedestrian crossing improvements, and linear pedestrian and bicycle facilities along the corridors.

Table 4.9-2 Summary Findings Matrix

		30th/LCC		Coburg Road		Martin Luther King, Jr. Blvd.			Highway 99			River Road			Valley River Center
Project Objective	**Screening Metric**	**EmX**	**Enhanced Corridor**	**EmX**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**Enhanced Corridor**
1.1 Improve transit travel time and reliability.	Qualitative assessment of improvements to traffic operations in the corridor.	Some	Some	Most	Some	Some	Some	Some	Some	Some	Some	Most	Most	Some	Some
1.5 Improve the safety of pedestrians, mobility device users, and bicyclists accessing transit and crossing and traveling along the corridor.	Qualitative assessment of safety improvements for pedestrians, mobility device users, and bicyclists in the corridor.	Moderate/ Better	Moderate/ Better	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate/ Better	Moderate/ Better	Moderate	Moderate /Better	Better	Moderate	Moderate
2.1 Control the increase in transit operating cost to serve the corridor.	Estimate of 2035 per rider cost calculated from 2035 system-wide operating cost divided by 2035 system-wide ridership with new corridor.	$1.32	$1.30	$1.34	$1.30	$1.32	$1.32	$1.28	$1.32	$1.32	$1.28	$1.32	$1.32	$1.28	$1.29
	Estimate of 2035 annual corridor ridership projections.	1.6 million	1.1 million	1.3 million	1.1 million	1.7 million	1.7 million	1.2 million	1.2 million	1.2 million	0.8 million	1.4 million	1.4 million	1.1 million	0.9 million
	Change in 2035 average annual corridor ridership compared to No-Build option.	595,000	100,000	770,000	475,000	1,200,000[1]	1,200,000[3]	675,000[3]	420,000	420,000	135,000	415,000	415,000	110,000	285,000
	Calculated system-wide operating cost based on an estimate of 2035 system service hours, miles and peak buses with corridor.	$27 million	$26 million	$27 million	$26 million	$27 million	$27 million	$25 million	$27 million	$27 million	$25 million	$27 million	$27 million	$25 million	$26 million
	Amount of local match required for Small Starts application; (assumed to be 40 percent of capital costs).	$10 million to $30 million	Less than $10 million	More than $30 million	$10 million to $30 million	More than $30 million	More than $30 million	$10 million to $20 million	More than $30 million	More than $30 million	Less than $10 million	More than $30 million	More than $30 million	Less than $10 million	Less than $10 million
2.3 Implement corridor improvements that provide an acceptable return on investment.	Capital cost effectiveness calculated by dividing estimated capital costs per mile by 2035 annual corridor ridership. Higher dollar cost indicates less capital cost effectiveness.	$6 to $13	$3 to $5	$8 to $17	$4 to $9	$6 to $12	$6 to $12	$3 to $4	$8 to 17	$8 to 17	$6 to 12	$14 to $18	$14 to $18	$4 to $9	$3 to $6
	Calculated order-of-magnitude costs to construct corridor options including stations and new signals.	$50 million to $70 million	$10 million to $20 million	$50 million to $90 million	$10 million to $30 million	$60 million to $90 million	$60 million to $80 million	$20 million to $40 million	$60 million to $90 million	$60 million to $90 million	$10 million to $30 million	$70 million to $90 million	$70 million to $90 million	$10 million to $30 million	$10 million to $30 million
	Order-of-magnitude capital costs per mile (divide capital costs to construct corridor option by round-trip length of corridor in miles).	$10 million to $20 million	Less than $10 million	$10 million to $20 million	Less than $10 million	$10 million to $20 million	$10 million to $20 million	Less than $10 million	$10 million to $20 million	$10 million to $20 million	Less than $10 million	More than $20 million	More than $20 million	Less than $10 million	Less than $10 million
2.5 Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars.	Meet Federal Transit Administration's Small Starts funding requirements.	Meets funding requirements	Possibly meets funding requirements	Meets funding requirements	Possibly meets funding requirements	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements	Meets funding requirements	Meets funding requirements	Possibly meets funding requirements	Possibly meets funding requirements
3.1 Support development and redevelopment as planned in other adopted documents.	Qualitative assessment of existing large trip generators or short-term redevelopment potential.	Better	Better	Better	Better	Moderate/ Better	Moderate/Better	Moderate/Better	Poor	Poor	Poor	Moderate/ Better	Moderate/ Better	Moderate/ Better	Moderate

[1] As noted in Section 5.6, the ridership and cost estimates were calculated based on the Martin Luther King, Jr. Boulevard Corridor that included Centennial Boulevard; ridership and costs are expected to be lower than presented here.

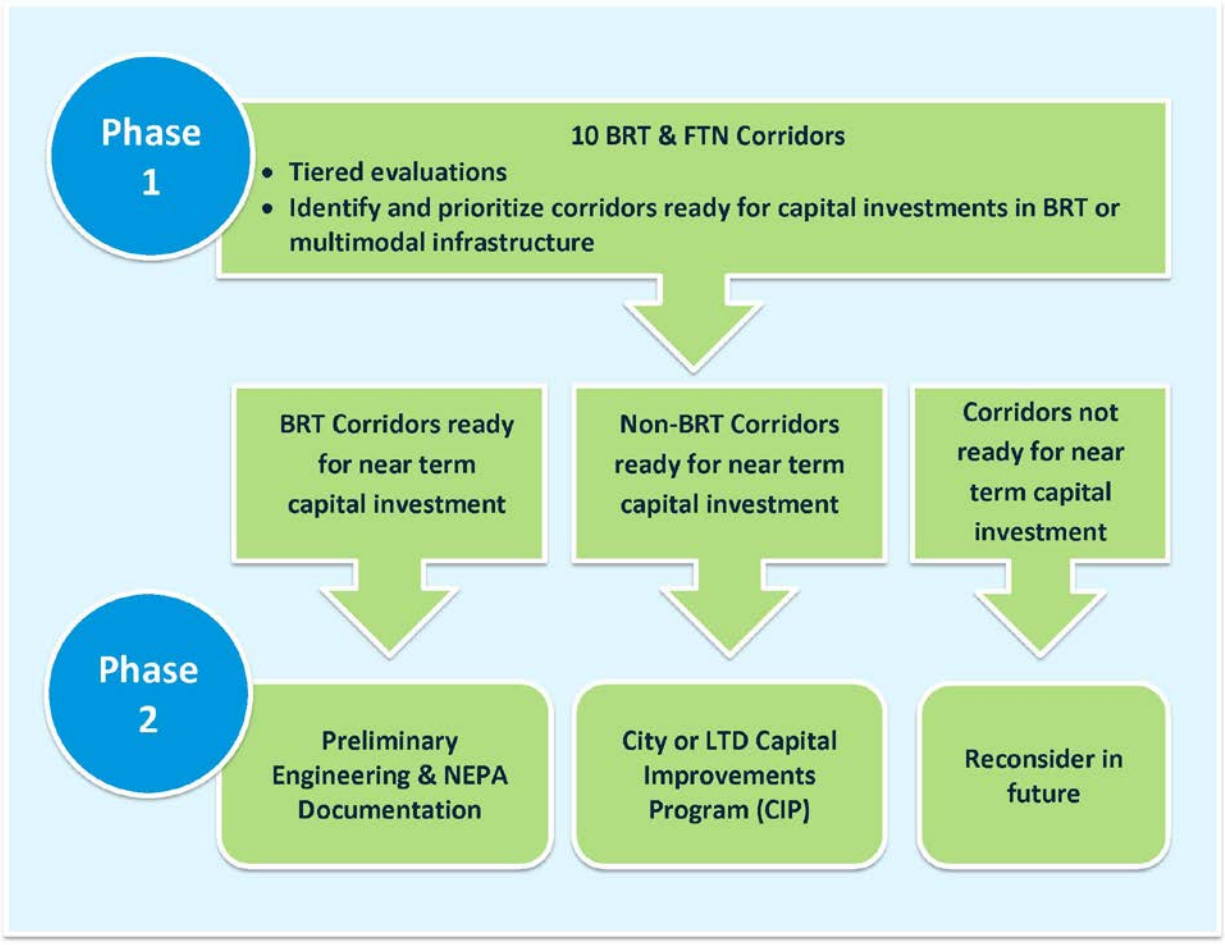
Table 4.9-2 Summary Findings Matrix

		30th/LCC		Coburg Road		Martin Luther King, Jr. Blvd.			Highway 99			River Road			Valley River Center
Project Objective	**Screening Metric**	**EmX**	**Enhanced Corridor**	**EmX**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**EmX Option 1**	**EmX Option 2**	**Enhanced Corridor**	**Enhanced Corridor**
3.2 Coordinate transit improvements with other planned and programmed projects for pedestrians, mobility device users, and bicycle riders.	Connectivity to other planned and programmed pedestrian, mobility device user, and bicycle projects.	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Moderate
3.3 Coordinate transit improvements with other planned and programmed roadway projects.	Connectivity to other planned and programmed roadway projects identified in adopted plans and Capital Improvement Programs, and from current planning efforts (e.g., Eugene Draft TSP).	Poor	Poor	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Better	Better	Better	Poor
3.4 Minimize adverse impacts to existing businesses and industry.	Qualitative assessment of impact to businesses from potentially restricted turns.	No Impact to Minimal Impact	No Impact to Minimal Impact	Negative Impact	No Impact to Minimal Impact	No Impact to Minimal Impact	No Impact to Minimal Impact	No Impact to Minimal Impact	Negative Impact	No Impact to Minimal Impact	No Impact to Minimal Impact	Negative Impact	No Impact to Minimal Impact	No Impact to Minimal Impact	No Impact to Minimal Impact
3.5 Supports community vision for high-capacity transit in corridor.	Community vision includes high-capacity transit in corridor.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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.	Qualitative assessment of impacts on current and future year intersection Level of Service on state facilities.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Meets	Meets	Meets	N/A	N/A	N/A	N/A
	Qualitative assessment of impacts on current and future year PM peak-hour automobile/truck travel times on state facilities.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Meets	Meets	Meets	N/A	N/A	N/A	N/A
3.7 Improve transit operations in a manner that is mutually beneficial to vehicular traffic flow for emergency service vehicles.	Qualitative assessment of potential impacts to emergency service vehicle flow and access.	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Better	Moderate	Moderate	Moderate	Moderate	Moderate

5. Next Steps

The Level 1 Screening Evaluation assessed how each corridor performed according to the goals and objectives of MovingAhead. The project team applied the screening factors to evaluate and compare each corridor against all the other corridor options. This chapter describes the next steps in the MovingAhead process for those corridors advanced from the Level 1 Screening Evaluation. Figure 5.1-1 shows the overall MovingAhead process.

Figure 5.1-1 MovingAhead Next Steps



Source: Wannamaker Consulting. 2015.

5.1 Corridors and Options Advanced to Level 2 Alternatives Analysis (AA)

To guide the Level 2 AA, LTD will prepare new ridership forecasts and related evaluation measures using the LCOG regional model for all corridors advanced by the Eugene City Council and LTD Board of Directors. Base year and future year forecasts will be prepared for advancing corridor options based upon updated inputs and transit networks specific to each corridor. The findings from the Level 2 AA will aid the City of Eugene, LTD, and its partner agencies in determining how corridors should be prioritized for capital investments over the next five years. Selected corridors will be advanced to NEPA evaluation.

5.2 Capital Improvement Programming

5.2.1 City of Eugene Capital Improvement Programming

Transportation projects not advanced from the Level 1 Screening Evaluation can be incorporated into the City of Eugene's CIP in several different ways. Larger projects—such as shared use paths, significant sidewalk infill, and protected bicycle lanes—can be incorporated into the City of Eugene Draft TSP through an amendment to the TSP. These types of larger projects are typically implemented through federal and state funded grants that the City will apply for in the future. Smaller projects, such as roadway crossing improvements for pedestrians and mobility device users, can be identified for implementation through existing funding programs (e.g., the pedestrian and bicycle component of the Street Bond) that are already in the City's CIP. The smaller projects will be considered for such funding in subsequent years.

5.2.2 Lane Transit District Capital Improvement Programming

Transit improvement projects not advanced from the Level 1 Screening Evaluation can be incorporated into LTD's CIP, which is reviewed and adopted annually. Staff will be responsible for determining which transit enhancement projects identified in MovingAhead will be advanced to the CIP.

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