CENTRAL LANE
REGIONAL TRANSPORTATION PLAN
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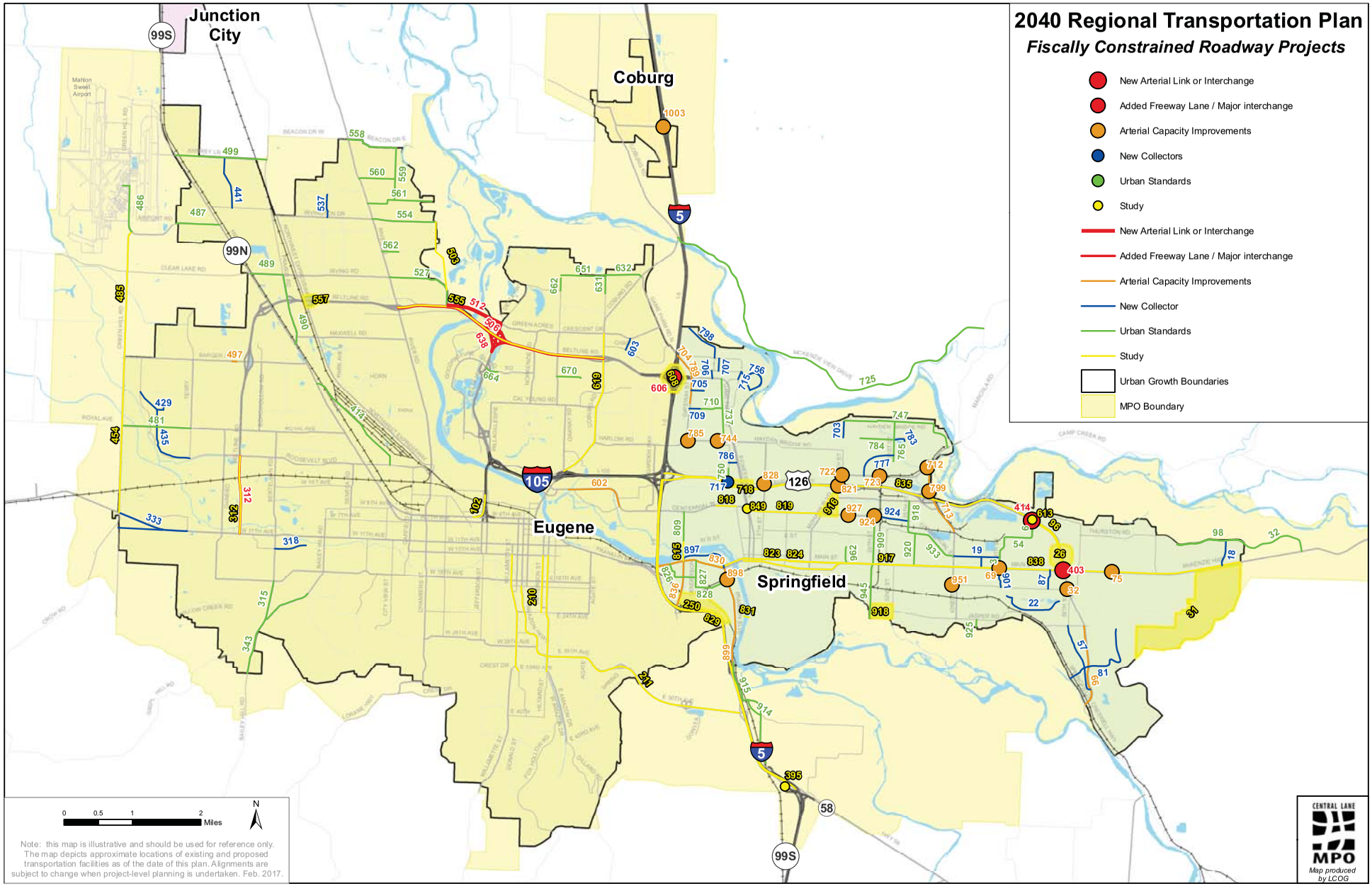
APPENDIX A

MAPS

- FINANCIALLY CONSTRAINED ROADWAY PROJECTS
- ILLUSTRATIVE ROADWAY PROJECTS
- FEDERALLY DESIGNATED ROADWAY FUNCTIONAL CLASSIFICATION
- BUS RAPID TRANSIT SYSTEM
- EXISTING LANE TRANSIT DISTRICT SYSTEM (within MPO)
- FINANCIALLY CONSTRAINED BIKEWAY PROJECTS
- PRIORITY BIKEWAY SYSTEM PROJECTS
- ILLUSTRATIVE BIKEWAY SYSTEM PROJECTS
- GOODS MOVEMENT AND INTERMODAL FACILITIES
- REGIONAL TRANSPORTATION DEMAND MANAGEMENT:
  point2point SOLUTIONS REGIONAL PROGRAMS
- CONGESTION MANAGEMENT SYSTEM:
  PERCENT CHANGE IN CONGESTION 2004-2031



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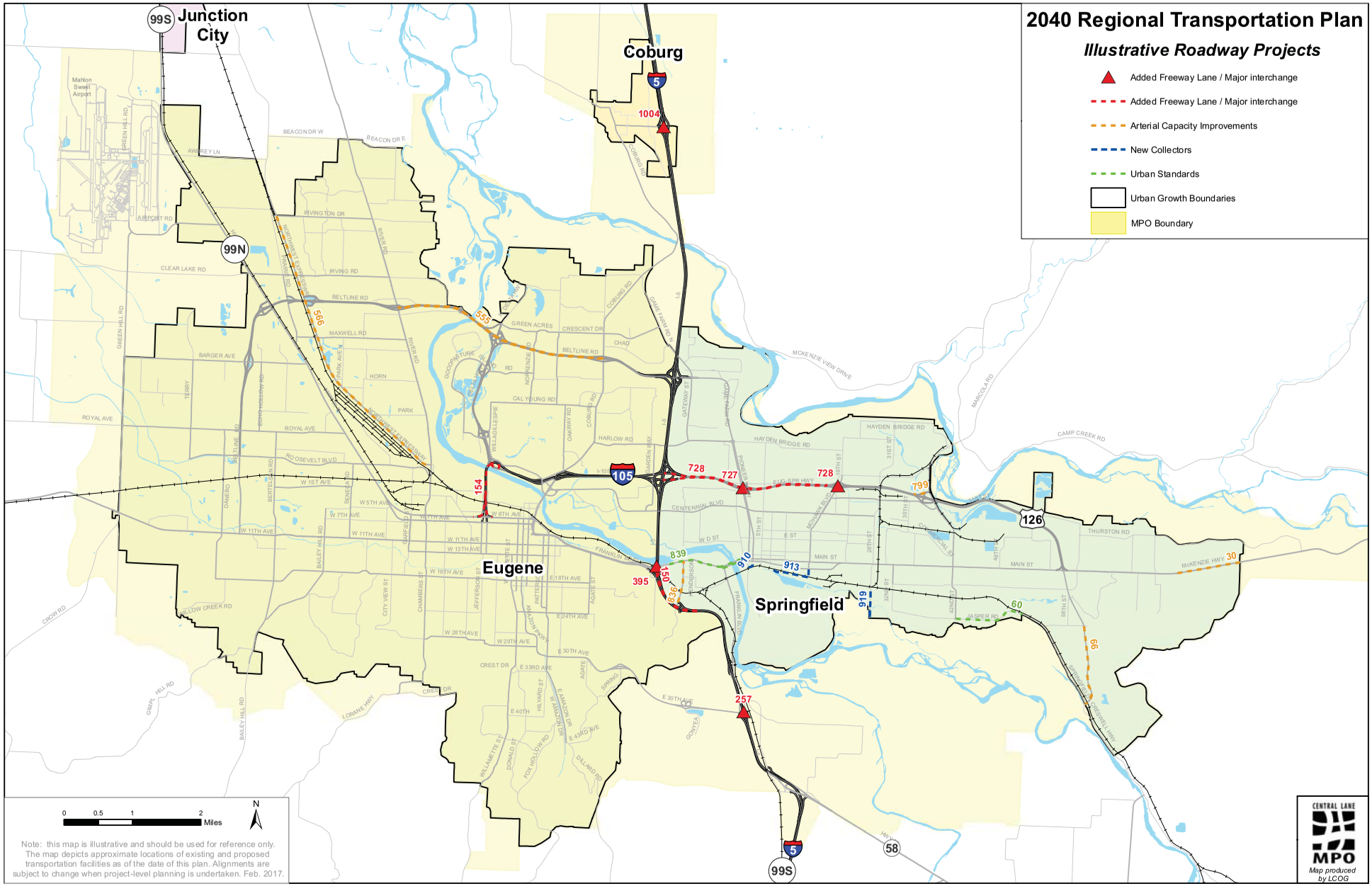

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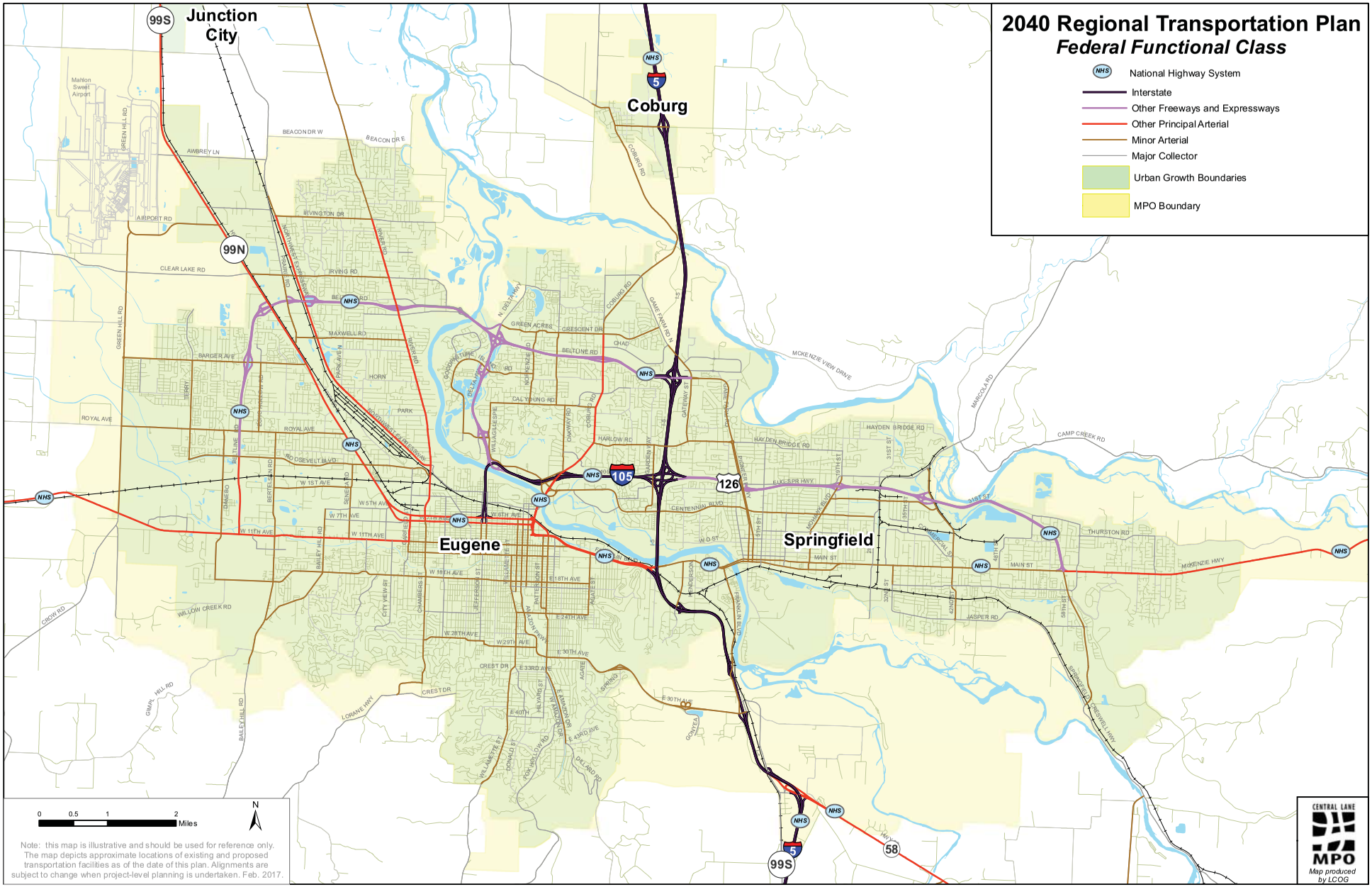

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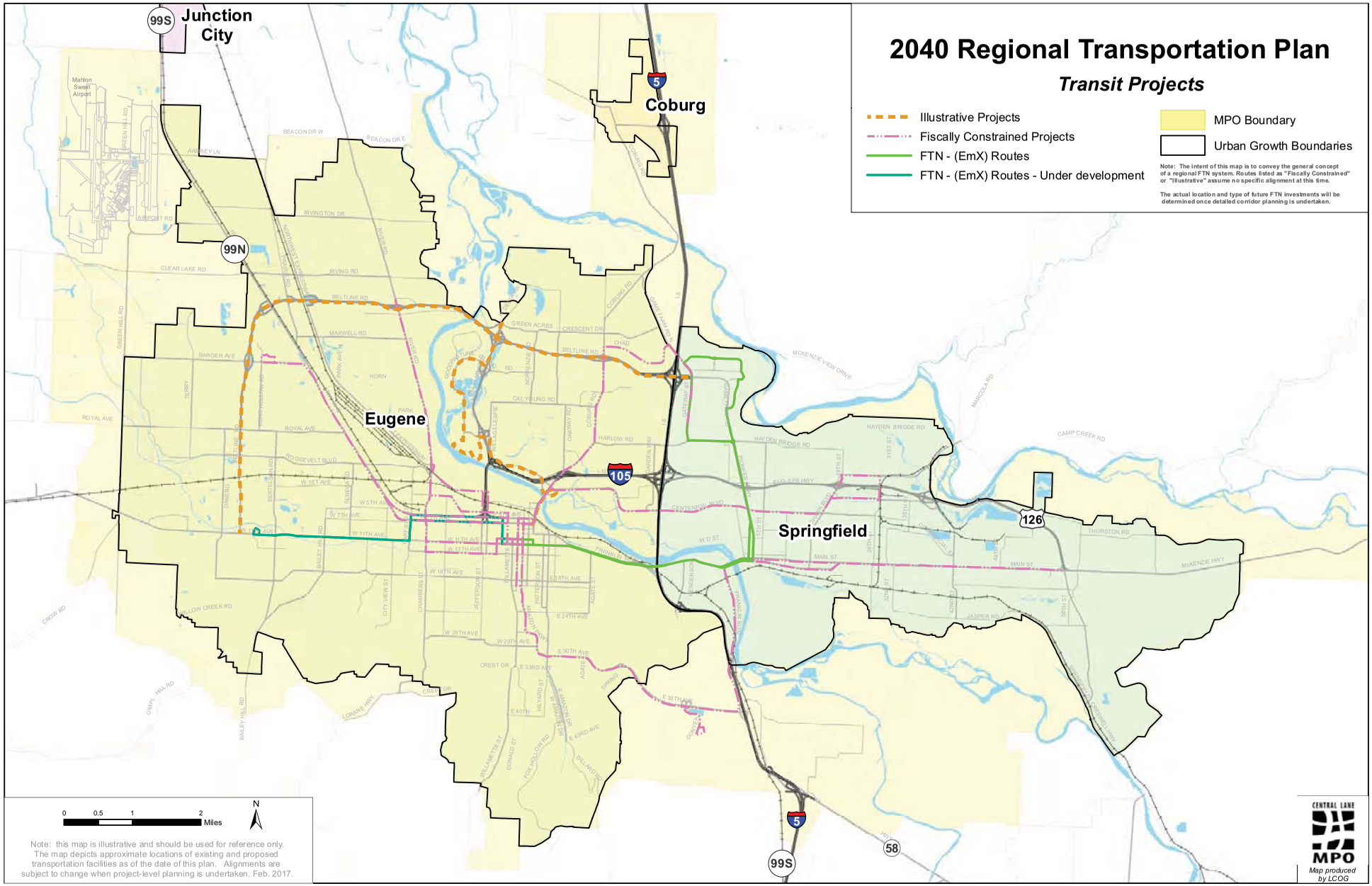

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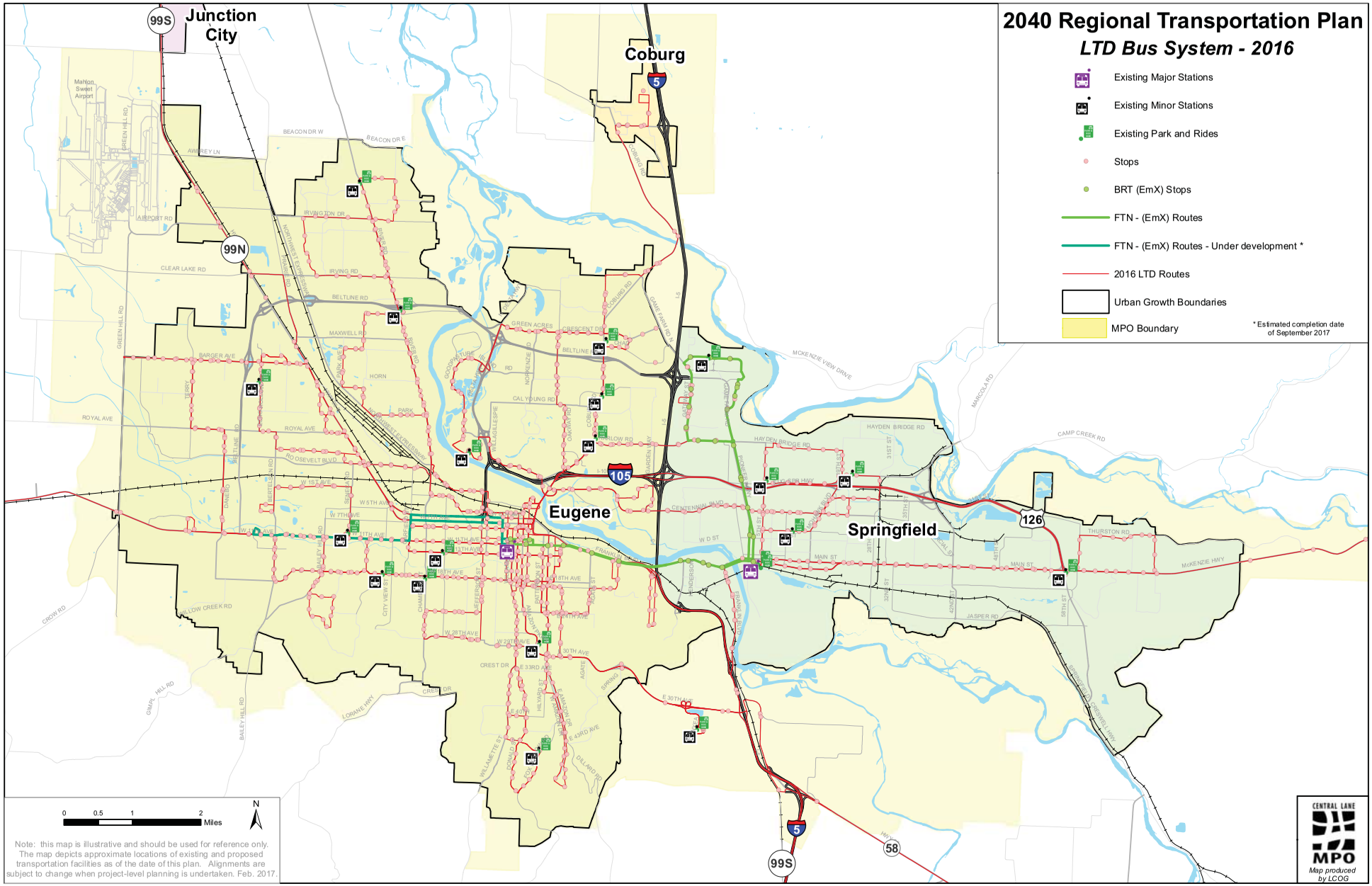

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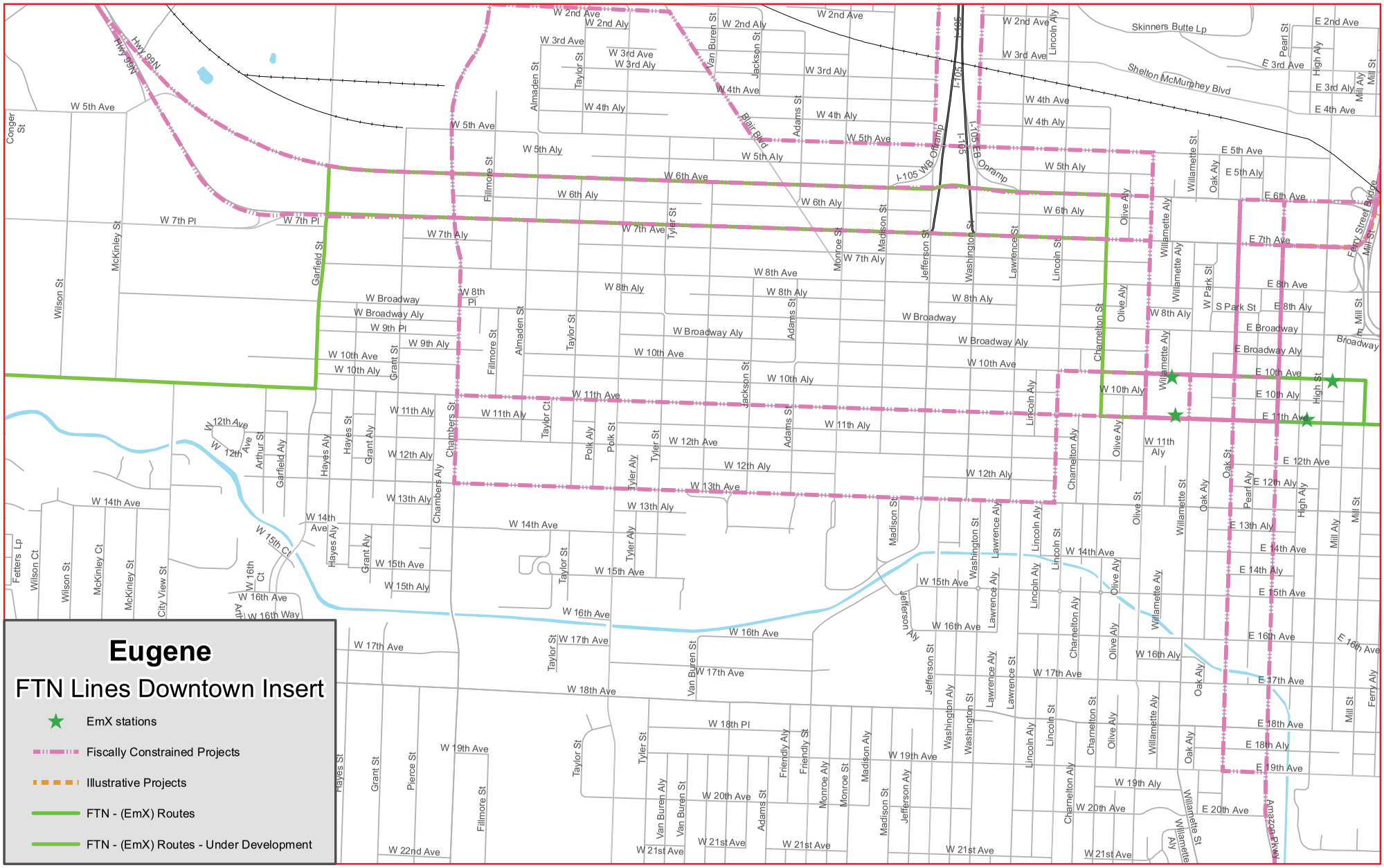

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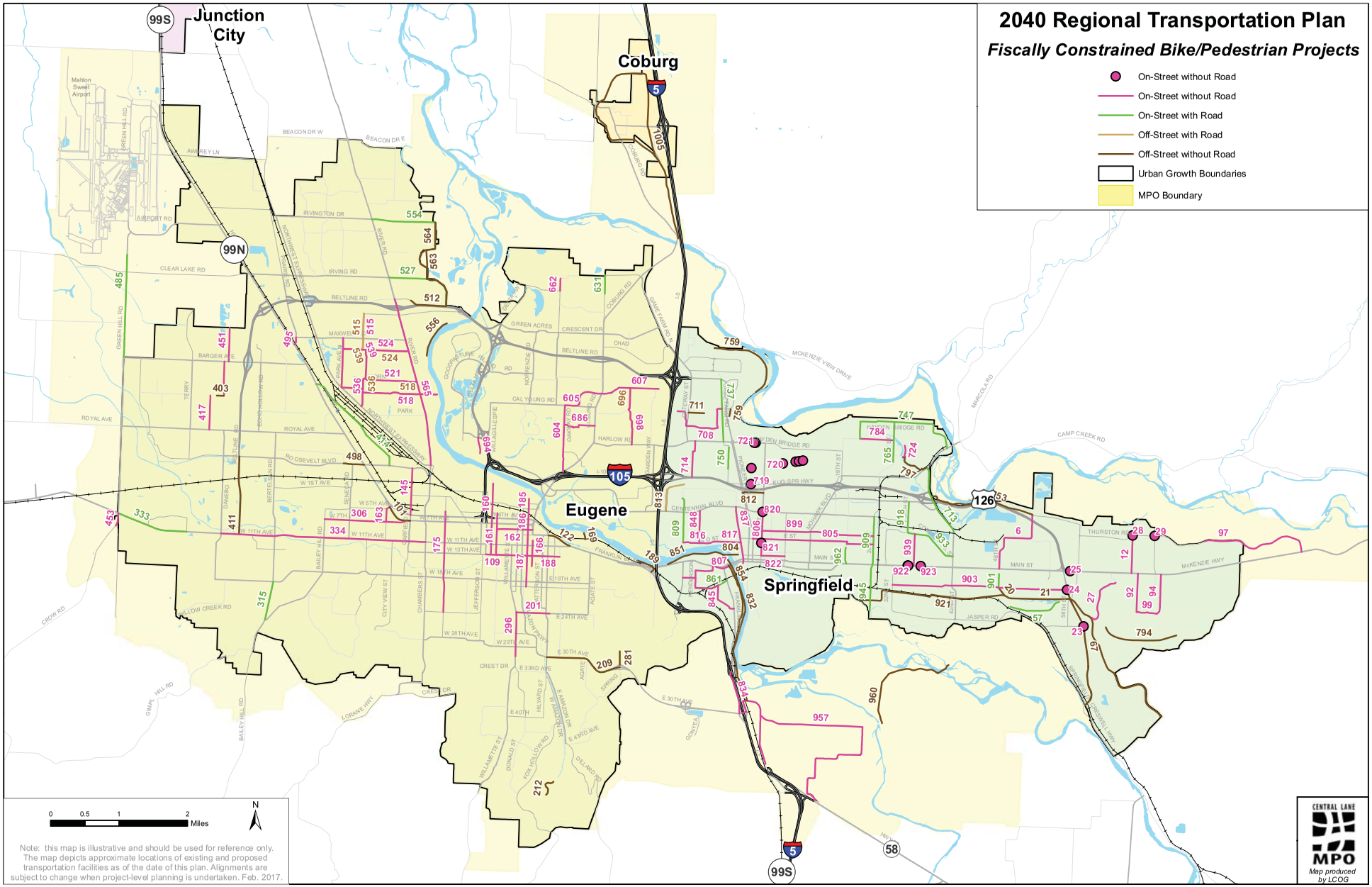

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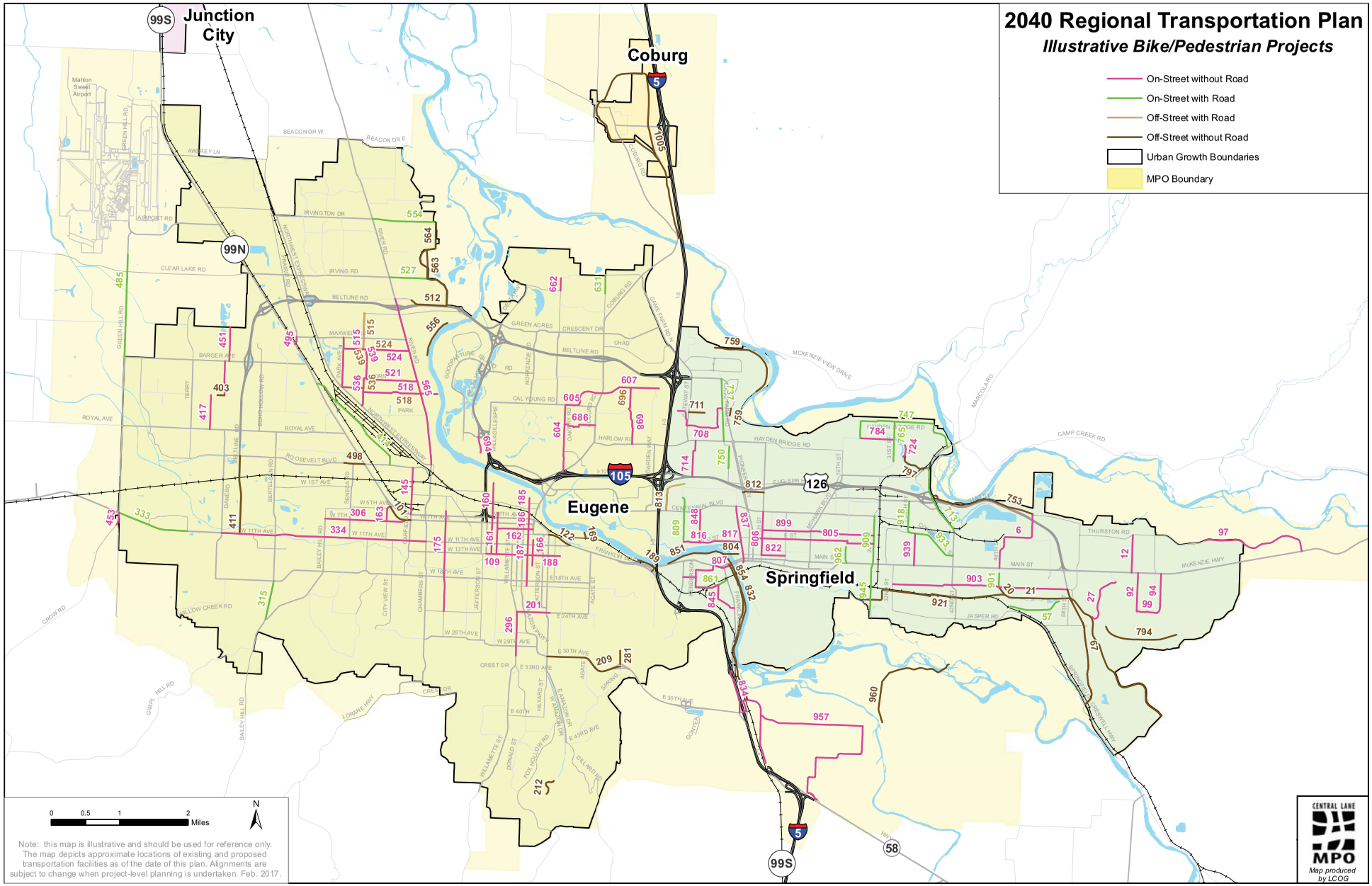

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2040 Regional Transportation Plan

Goods Movement and Intermodal Facilities

Urban Growth Boundaries
MPO Boundary
Rail
State Freight Route*
Federal Truck Route*

National Highway System*
NHS route
NHS connector

A Air/Truck Freight Facilities
I Inter-City Bus Station
L Lane Transit District Bus Station
P Pipeline/Truck Freight Facilities
S Amtrak Station
T Truck/Rail Freight Facilities

Metro Plan Designation

Eugene/Springfield
Campus Industrial
Light Med Ind Mixed Use
Light Medium Industrial
Heavy Industrial
Special Heavy Industrial
Rural Industrial
Sand and Gravel

Coburg
Light Industrial

Lane County
Forest
Industrial
Natural Resource (gravel)

* Freight, truck and NHS routes are as specified in the 1999 Oregon Highway Plan, as amended May 2015.

** Hatching indicates areas that lie within West Eugene Wetlands Program: these are, for the most part, in public protected ownership.

Junction City
Coburg
Eugene
Springfield

0 0.5 1 2 Miles
N

Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Feb. 2017.

CENTRAL LANE MPO
Map produced by LCOG

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2040 Regional Transportation Plan

point2point Solutions Regional Programs

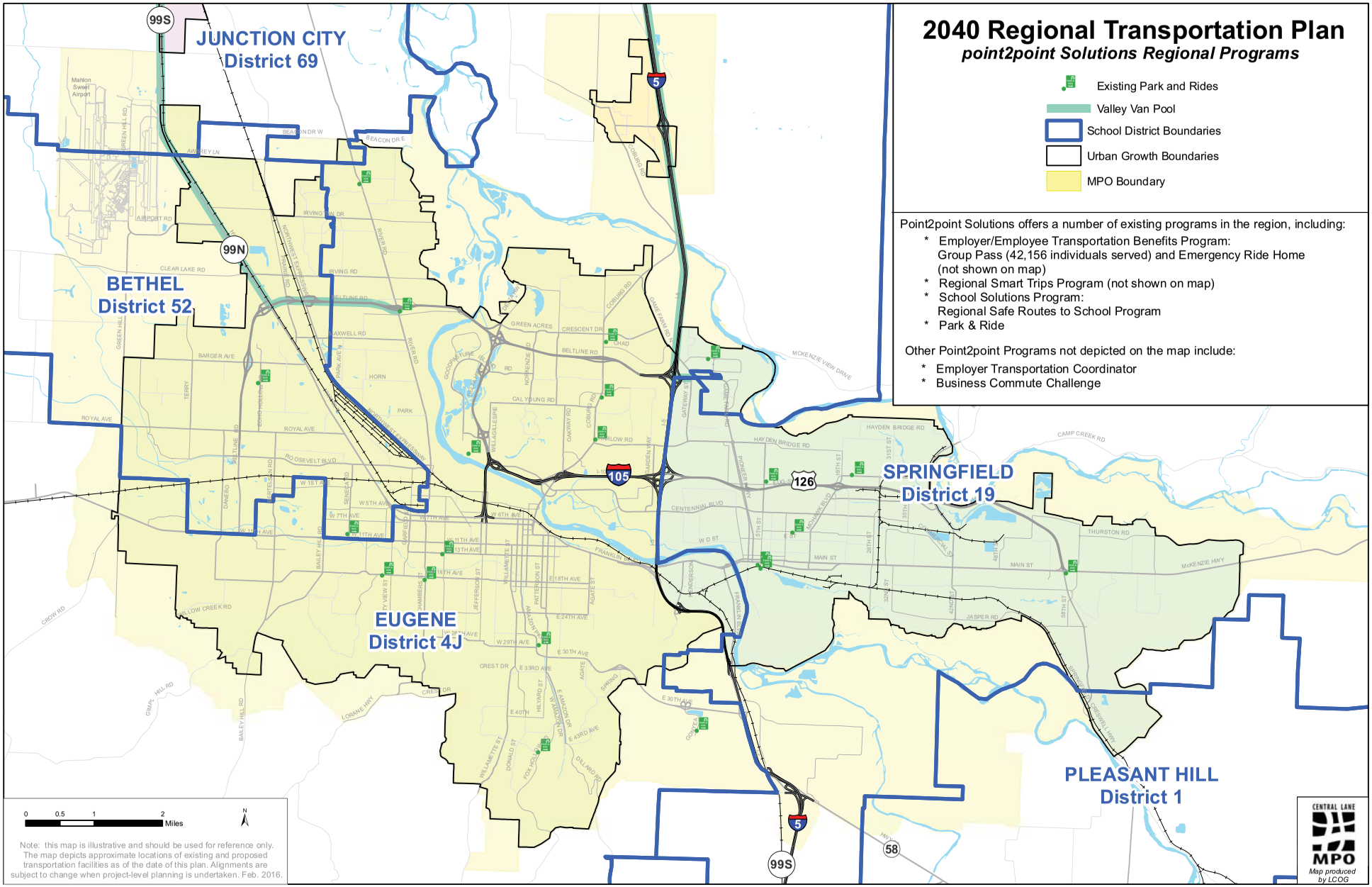
- Existing Park and Rides
- Valley Van Pool
- School District Boundaries
- Urban Growth Boundaries
- MPO Boundary

Point2point Solutions offers a number of existing programs in the region, including:

* Employer/Employee Transportation Benefits Program: Group Pass (42,156 individuals served) and Emergency Ride Home (not shown on map)
* Regional Smart Trips Program (not shown on map)
* School Solutions Program: Regional Safe Routes to School Program
* Park & Ride

Other Point2point Programs not depicted on the map include:

* Employer Transportation Coordinator
* Business Commute Challenge



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APPENDIX B

LEVEL OF SERVICE STANDARDS

Appendix B: Level of Service Standards

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Roadway Congestion Impacts 1
Responses to Roadway Congestion 2
LOS Standards – Application 2
Capacity Analysis Methodologies 2
Roadway System Needs Analysis 3

Level of Service Concept

Level of service (LOS) is a concept that is used to assess roadway system performance. It measures traffic flow *quality* as experienced by motor vehicle drivers and passengers. Typically, six levels of service are defined and each is assigned a letter designation from A to F, with LOS A representing the least congested conditions and LOS F the most congested.

A roadway's LOS is based on the ratio of its peak-hour traffic volume to the maximum hourly volume the roadway can accommodate. This is referred to as the roadway's *volume-to-capacity ratio* (V/C).

Roadway Congestion Impacts

When the volume of traffic using a roadway nears the roadway's capacity, the resulting congestion has several types of undesirable impacts:

- Travel speeds fall, which lengthens travel times and significantly increases the overall cost of transportation.
- Congestion on main routes causes traffic to spillover onto local routes through neighborhoods.
- Slowdowns and backups on high-speed freeway facilities can produce more frequent and severe vehicle collisions.
- Vehicle idling time caused by severe traffic congestion is a primary source of excessive auto emissions that degrade air quality.

Responses to Roadway Congestion

A key *TransPlan* strategy for meeting the region's mobility needs using available resources is to extract maximum value from the existing roadway system. Transportation System Improvements (TSI) System-Wide policies and implementation actions set a high priority on managing and protecting existing and future transportation infrastructure. When combined with policies and implementation actions for land use, transportation demand management and transit, TSI System-Wide polices provide direction for a wide range of actions that reduce the need to construct new roadway capacity improvements. Examples of such actions include the following:

- Reconfigure roadway accesses to minimize traffic conflicts at intersections;
- Limit parking near signalized intersections to increase intersection capacity;
- Coordinate and operate traffic signals to improve traffic progression;
- Relocate driveways and improve local street connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on arterials and collectors;
- Improve turning-radii at intersections that are heavily used by trucks to avoid lane blockages;
- Install raised medians to reduce traffic conflicts; and
- Improve accesses so that traffic can enter or exit the highway with minimal disruptions of flow.

Even with the above actions, significant components of the roadway system are forecast to fall below acceptable LOS standards. Where management actions have failed to produce acceptable LOS, construction projects to add roadway capacity must be considered.

LOS Standards – Application

TSI Roadway Policy #2: Motor Vehicle Level of Service guided *TransPlan's* transportation system needs analysis and is intended to guide the transportation aspects of future land use decisions. OAR 660-12-0060 (1) "Transportation Planning Rule" states that,

> "Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g., level of service, volume to capacity ratio, etc.) of the facility."

Capacity Analysis Methodologies

The most current Highway Capacity Manual (HCM), *Special Report 209, Transportation Research Board* is the standard reference for roadway capacity analysis methodology. The basic concepts of *capacity* and *LOS* are described in Chapter 1 of the HCM.

In general terms, the HCM defines roadway capacity as the maximum hourly rate at which vehicles can reasonably be expected to traverse a uniform section of roadway during a given time period under prevailing roadway, traffic, and control conditions. Capacity is often stated in terms of Passenger Cars Per Lane Per Hour (pcplph).

The Highway Capacity Software (HCS) package is a tool that implements the HCM analysis methods. The HCM/HCS package has been developed over time as an integrated, comprehensive package of analysis methods that are widely understood and accepted.

The Oregon Department of Transportation (ODOT) has developed special analysis tools for use in analyzing capacity issues for certain types of facilities on the state highway system. In particular, the SIGCAP2 and UNSIG10 software packages are used for signalized and unsignalized intersection capacity/LOS analysis, respectively. Other more specialized analysis methods are also used, depending on the nature of issues being analyzed.

Roadway System Needs Analysis

Transportation system needs analysis for the Central Lane MPO area's collector and arterial roadway network was conducted using a computer model (EMME/2). Output from this model was used as a primary source of information about locations on the roadway network where roadway volumes are forecast to exceed capacity.

The traffic volume forecasted to occur on each network link was compared to the link's assumed capacity to produce a V/C ratio. The following thresholds were established to relate these V/C ratios to the roadway LOS performance standards:

Facility Type	LOS D	LOS E
Freeways, 55 MPH	V/C ≤0.78	V/C ≤1.0
Non-freeways, 55 MPH	V/C ≤0.87	V/C ≤1.0
Other Arterials and Collectors	V/C ≤0.87	V/C = 0.88 - .97

Oregon Highway Plan Mobility Standards

Through the *Oregon Highway Plan* (OHP), ODOT establishes performance standards for the state highway system, including all state facilities considered in *TransPlan*. The adopted OHP sets V/C standards based on various combinations of highway and land use categories. Due to the prominent role that state facilities play in the local transportation system, these standards are reproduced below for reference. As referenced in *TSI Roadway Policy #2: Motor Vehicle Level of Service,* the OHP Mobility Standards are the operable standards on state facilities within the Central Lane MPO area.

Alternative Mobility Standards

The Oregon Highway Plan (OHP) Policy 1F establishes highway mobility standards to "maintain acceptable and reliable levels of mobility on the state highway system." The mobility standards are expressed as maximum allowable volume to capacity ratios in the peak hour. The standards vary by facility type, and different standards are applied to urban and to non-urban areas; to Portland Metro, to other Oregon MPO and to non-MPO urban areas; and to Special Transportation Areas (STAs). The OHP recognizes that it may be infeasible, in some cases, to meet the standards in Policy 1F, and allows for the adoption of alternative mobility standards in

metropolitan areas or portions thereof, provided that the local plan also includes specific actions to manage transportation demand and ensure efficient use of the capacity of the state highway system.

A TGM-grant funded project began the development of a set of Alternative Mobility Standards for the Central lane MPO area, where determined necessary by an alternative mobility standards analysis.

Maximum Volume-to-Capacity Ratios for Peak Hour Operating Conditions Through a Planning Horizon for State Highway Sections Located Outside the Portland Metropolitan Area Urban Growth Boundary*

Highway Category	Inside Urban Growth Boundary					Outside Urban Growth Boundary	
	Special Transportation Areas (STAs)	MPO	Non-MPO Outside of STAs where non-freeway posted speed <= 35 mph, or a Designated UBA	Non-MPO outside of STAs where non-freeway speed > 35 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways	N/A	0.80	N/A	0.70	0.70	0.70	0.70
Statewide Expressways	N/A	0.80	0.70	0.70	0.70	0.70	0.70
Freight Route on a Statewide Highway	0.85	0.80	0.80	0.75	0.70	0.70	0.70
Statewide (not a freight route)	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Freight Route on a Regional or District Highway	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Expressway on a Regional or District Highway	N/A	0.85	N/A	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.85	0.80	0.75	0.75	0.70
District / Local Interest Roads	0.95	0.90	0.90	0.85	0.80	0.80	0.75

Lane County Level of Service Standards

Lane County has developed a set of Level of Service Standards in its adopted 2004 Transportation System Plan. Similar to ODOT's Mobility Standards, these standards apply on the County's roads within the Central Lane MPO area.

Lane Code 15.696 provides peak hour performance standards, and Lane Code 15.697 provides traffic impact analysis requirements. Traffic impact analyses, when required for proposed plan amendments, zone changes, or land developments, must demonstrate that the maximum volume to capacity ratios specified in Lane Code 15.696 will not be exceeded. Level of service calculations may also be useful in completing the analysis, and may be required by the County. The minimum peak hour level of service standard for Lane County is "LOS D." Where level of service analysis is required, both the v/c ratio standard and LOS D must be achieved or maintained. Achieving or maintaining the v/c standard means the v/c ratio is numerically equal to or less than the v/c ratio in the table in Lane Code (see below). Achieving or maintaining LOS D means the level of service is "D" or better, i.e. "A","B","C", or "D". Failure to meet the standard, or "exceedence" of the standard means that the predicted level of service is "E" or "F". The v/c ratio standards shown below are taken from the June 4, 2004 Lane County Transportation System Plan and are provided for informational purposes only.

Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions on Lane County Roads

Highway Category	Land Use Type/Speed Limits					
	Inside Urban Growth Boundary				Outside Urban Growth Boundary	
	STAs	MPO	Non-MPO outside of STAs where non-freeway speed limit <45 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways and Statewide (NHS) Expressways	N/A	0.80	0.70	0.70	0.70	0.70
Statewide (NHS) Freight Routes	0.85	0.80	0.75	0.70	0.70	0.70
Statewide (NHS) Non-Freight Routes and Regional or District Expressways	0.90	0.85	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.80	0.75	0.75	0.70
District/Local Interest Roads	0.95	0.90	0.85	0.80	0.80	0.75

Notes:

- Interstates and Expressways shall not be identified as Special Transportation Areas (STAs).
- For the purposes of this policy, the peak hour shall be the 30th highest annual hour. This approximates weekday peak hour traffic in larger urban areas.

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APPENDIX C

LIST OF SUPPORTING DOCUMENTS

Appendix C: List of Supporting Documents

Doc No.	Title	Date Published	Location
1.	Eugene Bikeways Master Plan	November-74	LCOG, City of Eugene
2.	Eugene-Springfield Transportation Alternatives	September-75	LCOG
3.	Eugene-Springfield Area 2000 Transportation Plan	December-78	LCOG
4.	Evaluation of the Eugene Bikeways Master Plan	January-79	LCOG, City of Eugene
5.	Springfield Bikeway Plan	April-82	LCOG, City of Springfield
6.	Evaluation Report of the Eugene-Springfield Area 2000 Transportation Plan	May-84	LCOG
7.	Eugene-Springfield Area Metropolitan Area Transportation Plan	May-86	LCOG
8.	Eugene/Springfield Metro Area General Plan	April-87	LCOG
9.	Lane County Long Range Paratransit Plan - Final Metro Paratransit Plan	April-92	LCOG
10.	Lane Council of Governments TransPlan Update Base Line Data	April-93	LCOG
11.	Trends, Issues, and Opportunities	November-93	LCOG
12.	Glossary of Transportation and Land Use Terms	December-93	LCOG
13.	Eugene Sidewalk Program	December-93	LCOG, City of Eugene
14.	Transportation Rule Implementation Project (TRIP) Code Amendments as adopted by the Eugene City Council	December-93	LCOG, City of Eugene
15.	Picture Your Future - TransPlan Visual Preferences	February-94	LCOG
16.	Household Activity and Travel Survey Technical Memorandum, Stated Preference Focus Groups Report	March-94	LCOG
17.	LTD May 1994 Origin and Destination Survey: Summary Report	May-94	LCOG, LTD
18.	Transportation System Improvement Final Report	June-94	LCOG
19.	Land Use Measures Strategies Document	June-94	LCOG
20.	Transportation Demand Management Task Force Final Report	June-94	LCOG
21.	Proposed Design Principles for Nodal Development	September-94	LCOG
22.	Citizen's Guide to Transportation Planning	November-94	LCOG
23.	Strategies to Balance and Improve Our Transportation System	December-94	LCOG
24.	1994 Commuter Pack Survey	January-95	LCOG
25.	LTD Market Area Survey	March-95	LCOG, LTD
26.	Household Activity and Travel Survey Final Report	March-95	LCOG
27.	Eugene/Springfield Urban Rail Feasibility Study - Potential Rail Corridor Screening	April-95	LCOG
28.	1994 Origin-Destination Surveys Final Report Volume II: Eugene Surveys	May-95	LCOG

29.	Nodal Development Strategy Implementation Options, Working Paper	June-95	LCOG
30.	Design Team Report and Recommendations to the Land Use Measures Task Force	June-95	LCOG
31.	Design Principles for Mixing Uses and Increasing Densities - Workshop Process, Key Findings, and Recommendations	June-95	LCOG
32.	A Comparison of Development Costs in Eugene/Springfield: Standard Subdivision vs Nodal Development	June-95	LCOG
33.	How Do We Grow From Here?	June-95	LCOG
34.	Regional Parking Inventory Eugene/Springfield Final Report	July-95	LCOG
35.	Pacific Northwest High Speed Rail Southern Terminus Study	July-95	LCOG
36.	Urban Rail Feasibility Study - Final Report	July-95	LCOG
37.	Transportation Demand Management Strategies: Technical Evaluation and Model Results	July-95	LCOG
38.	Eugene-Springfield Metropolitan Area Transportation Plan: Summary Descriptions of Proposed Nodal Development Areas	August-95	LCOG
39.	Pricing Study (Technical Memo)	September-95	LCOG
40.	TransPlan Focus Groups with Area Residents	February-96	LCOG
41.	User Manual for Land Use Allocation Spreadsheets	April-96	LCOG
42.	Transportation-Efficient Development	May-96	LCOG
43.	TransPlan Community Survey Report	June-96	LCOG
44.	Exploratory Research on TransPlan with Area Business Owners/Managers	June-96	LCOG
45.	Exploratory Research on Bus Rapid Transit Report	July-96	LCOG, LTD
46.	TransPlan Update 3rd Symposium Materials	August-96	LCOG
47.	Eugene Local Street Plan	August-96	LCOG, City of Eugene
48.	Market Demand Study for Nodal Development	October-96	LCOG
49.	Policy Makers' Decision Package for Draft Plan Direction	November-96	LCOG
50.	TransPlan and Metro Plan Periodic Review Future Land Use Assumptions	May-97	LCOG
51.	Improving Our Transportation Choices newsletter (Public Decision Document)	June-97	LCOG
52.	Springfield Conceptual Local Street Map	June-97	LCOG, City of Springfield
53.	Draft Design Guidelines for Multi-Unit Housing	June-97	LCOG
54.	Metro Area General Plan, 1987 Update with Amendments	July-97	LCOG
55.	Analysis and Findings on the Potential for Public Transportation in the Eugene-Springfield Area	August-97	LCOG
56.	Analysis of the Suitability and Effectiveness of Transportation Demand Management Strategies in Selected Areas	August-97	LCOG
57.	Eugene-Springfield Area Transportation Improvement Program FY 1997-98 to FY 2000-2001	September-97	LCOG
58.	Local Jurisdiction Review Edition Draft TransPlan	November-97	LCOG
59.	Evaluating Redevelopment Potential in the Eugene/Springfield Metropolitan Area	December-97	LCOG
60.	Draft TransPlan	February-98	LCOG
61.	Springfield Bike Plan	June-98	LCOG, City of Springfield

62.	Draft TransPlan Reference Materials for Joint Planning Commission/RAC Worksession	September-98	LCOG, managers and administors offices
63.	City of Coburg Transportation System Plan	September-99	City of Coburg
64.	Revised Draft TransPlan	May-99	LCOG
65.	Oregon Highway Plan	May-99	LCOG, ODOT
66.	Residential Lands Study	August-99	LCOG, City of Eugene, City of Springfield
67.	Coburg Transportation System Plan	September-99	Coburg, LCOG
68.	Eugene Arterial and Collector Street Plan	November-99	LCOG, City of Eugene
69.	Public Testimony - Volumes I, II and Alternative Performance Measures	November-99	LCOG
70.	Land Use Code Update	February-01	City of Eugene
71.	TransPlan Update Public Involvement Documentation Working Paper	June-01	LCOG
72.	Joint Adopting Officials Schedule	June-01	LCOG
73.	Alternative Measures Approved by LCDC	June-01	LCOG
74.	Adopted TransPlan Update	December-01	LCOG
75.	TransPlan, as Ammended	July-02	LCOG
76.	TransPlan Transportation Demand Management Element Refinement Preliminary Draft	May-03	LCOG, LTD
77.	Regional ITS Operation and Implementation Plan for the Eugene-Springfield Metropolitan Area	November 2003	LCOG
78.	Willamalane Park and Recreation Comprehensive Plan	March-04	Willamalane, Lane County, LCOG
79.	Lane County Transportation System Plan	June-04	Lane County, LCOG
80.	Jasper-Natron Specific Development Plan	June-99	City of Springfield
81.	Chase Gardens Node (6K) Designation	November-02	City of Eugene
82.	Royal Node (4F) Designation	January-03	City of Eugene
83.	Crescent Village Node (6D) Designation	February-03	City of Eugene
84.	Danebo Node (4G) Designation	February-03	City of Eugene
85.	Rasor Park / Lower River Road (5F) Designation	May-03	City of Eugene
86.	Downtown and Southbank - Downtown Plan	April-04	City of Eugene
87.	City of Springfield Traffic Count Map	June-04	City of Springfield
88.	2004 Origin/Destination Study Research Report	September-04	Lane Transit District
89.	Lane County Coordinated Population Projections	February-05	LCOG
90.	ODOT Transportation Volume Tables, 2004	June-05	ODOT TSM Unit
91.	Employment Projections by Industry, 2004-2014	July-05	Oregon Employment Div
92.	Employment Projections by Occupation, 2004-2014	October-05	Oregon Employment Div
93.	City of Springfield and City of Eugene Nodal Development Assumptions	August-06	LCOG, Eugene, Springfield, Planners Work Product
94.	City of Eugene Traffic Flow Map	July-07	City of Eugene
95.	Glenwood Riverfront District (8A)	September-07	City of Springfield
96.	City of Springfield TSP	March-14	City of Springfield
97.	City of Eugene draft TSP		City of Eugene

NOTE: All documents show original references relied on for the development of the relevant RTP. The RTP adopted in December 2001 relied on documents #1-72. The 2002 RTP update additionally relied on document #73. The RTP update in 2004 added documents #74-78. The 2007 update lists additional supporting documents #79-94 (note that in an effort for completeness, this range of documents includes older documents that may have been referenced in earlier RTP updates). All subsequent RTP updates have also relied on the original or updated versions of documents used in earlier updates. The 2016 update lists additional documents #67,96 and 97.

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APPENDIX D

GLOSSARY AND ACRONYMS

Appendix D: Glossary and Acronyms

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Glossary

Access management

Measures that regulate access to streets, roads, and highways from public roads and private driveways while simultaneously preserving traffic flow on the surrounding road system in terms of safety, capacity, and speed. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and the use of physical controls, such as signals and channelization, including raised medians, to reduce impacts of approaching road traffic on the main facility.

Accessibility

Physical proximity and ease of reaching destinations throughout the urban metropolitan area.

Alternative modes

Means of travel such as rail, transit, bicycles, and walking that provide transportation alternatives to the use of the automobile.

Americans with Disabilities Act (ADA)

Federal civil rights legislation signed into law in 1990 that includes requirements for accessible public transportation services for persons with disabilities. Services include complementary or supplemental paratransit services for persons who are unable to use regular bus service due to a disability in areas where fixed-route transit service is operated. All new construction and modifications must be accessible to individuals with disabilities. For existing facilities, barriers to services must be removed if readily achievable.

Average daily traffic (ADT)

The average number of vehicles passing a specified point in a typical 24-hour timeframe.

Benchmarks

Target objectives for the RTP's Performance Measure assessment method. Benchmarks are required by the Transportation Planning Rule for use in evaluating progress at five-year intervals. Transportation system plans must be amended to include new or additional efforts where benchmarks are not met.

Bikeways

A facility intended to accommodate bicycle travel for recreational or commuting purposes. Examples include striped lanes, bike routes, and multi-use paths. Bikeways are not necessarily separate facilities; they may be designed and operated to be shared with other traffic modes.

Bus Rapid Transit (BRT)

High-frequency, fast bus service along major transportation corridors that is intended to emulate the positive characteristics of a light rail system. Feeder service in neighborhoods using small buses connect the BRT corridor service with nearby activity centers.

Clean Air Act Amendments of 1990 (CAAA)

Federal law that established criteria for attaining and maintaining National Ambient Air Quality Standards. A *nonattainment* area is a region that fails to meet one or more of the standards. CAAA shifts the emphasis of conformity analysis from a system-level review of the State Implementation Plan towards a more project-oriented approach. Transportation agencies are interested in projects that help to reduce pollutant levels by reducing vehicle congestion and vehicle miles traveled.

Capacity

The maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions; capacity is usually expressed as vehicles per hour or persons per hour.

Capital improvement program (CIP)

A plan for future capital infrastructure and program expenditures that identifies each capital project, its anticipated start and completion, and allocates existing funds and known revenue sources for a given period of time.

Conformity

Process to assess the compliance of any transportation plan, program, or project with air quality control plans. The Clean Air Act defines the conformity process.

Development review process

Process used by local governments to assess development proposals on a case-by-case basis.

Development standards

A measure of physical attributes and/or policy conformance that shall be satisfied to allow a proposed land use or development to be established or modified.

Differential nodal development infrastructure cost

The additional cost for infrastructure in nodal development areas that would not be built in typical development, such as street modifications, pedestrian amenities, transit centers and public open space. [Eugene-specific definition]

Functional classification

Street classification system that describes streets according to their purpose and capacity. The four main categories are detailed below.

Principal arterial

A street that serves the major centers of activity of a metropolitan area, the highest traffic volume corridors and the longest trip needs. Principal arterials should carry a high proportion of the total urban area travel on a minimum of mileage and provide important intra-urban as well as inter-city bus routes.

Minor Arterial

Includes all arterials not classified as principal arterials and offers a lower level of traffic mobility than the higher street classifications. Such facilities may carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable neighborhoods.

Collector

A street designed to provide both land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. The primary function of a collector street is to distribute local trips to the arterial system.

Local

All streets that are not collectors or arterials. These facilities serve primarily to provide direct access to abutting land and access to the higher order systems. They offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement is usually discouraged.

The jurisdictions participating in the RTP have slightly differing classifications for arterial and collector streets. The breakdown and a source document for each are listed below.

City of Coburg: Collector and local (draft 2013 Coburg TSP)

City of Eugene: Major arterial, minor arterial, major collector neighborhood collector, and local (Eugene Arterial and Collector Street Plans, 1999)

City of Springfield: Major arterial, minor arterial collector, and local (Springfield Development Code Article 32)

Lane County: Principal arterial, minor arterial, major collector, minor collector, and local (Lane County Code, 15.010(3))

Oregon Department of Transportation: Interstate highway, state-wide highway, regional highway, and district highway. All Oregon Department of Transportation roads are arterials. (Oregon Highway Plan, 1992)

Goal

Broad statement of philosophy that describes the hopes of the community's residents for the community's future. A goal may never be completely attainable, but it is a point towards which to strive.

High-occupancy vehicle (HOV)

Any passenger vehicle carrying more than one person. The term HOV is sometimes used to refer to lanes on large-volume roadways that are specifically set aside for the exclusive use of carpools, vanpools, and buses.

Implementation actions

Specific measures for achieving RTP policies.

Infill development

Development that consists of either construction on one or more lots in an area that is mostly developed or new construction between existing structures. Development of this type can conserve land and reduce sprawl.

Intelligent Transportation Systems Technology (ITS)

Computer and communication technology that provide information to travelers about road and transit conditions. Research in the field may eventually lead to a system that monitors, guides, and/or controls the operation of vehicles.

Intermodal

Connecting individual modes of transportation and/or accommodating transfers between such modes. Intermodal transportation emphasizes the transfer of people or freight in a single journey through connections, provides options to facilitate trip making, and promotes coordination among transportation providers.

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991

The 1991 federal transportation funding legislation that provides for a new direction in transportation planning, with an emphasis to protect the environment and reduce congestion, relying on the most efficient transportation mode, and providing increased flexibility to state and local governments on the use of federal funds.

Level of service

A qualitative rating of how well a unit of transportation supply (e.g., street, intersection, sidewalk, bikeway, transit route, ferry) serves its current or projected demand.

A: Free flow conditions, 32% of capacity

B: Reasonably free flow conditions, 51% of capacity

C: Operation stable, but becoming more critical, 75% of capacity

D: Lower speed range of stable flow, 92% of capacity

E: Unstable flow, 100% of capacity

F: Forced flow, +100% of capacity, stop-and-go operation

Major investment study (MIS)

A method of analyzing and evaluating the transportation needs and related problems of a corridor or subarea within a region. The MIS may identify a multi-modal set of investment and policy options to address identified needs and problems, develop measures of benefits, calculate costs, and determine impacts. The process is intended to provide decision makers with better and more complete information on the options available for addressing identified transportation problems before decisions are made.

Metro Plan

The *Eugene-Springfield Metropolitan Area General Plan, 1987 Update*, amendments incorporated as of July 1997, 1998 Reprint. The official document adopted by local governments that contains the general, long-range policies on how the community's future development should occur.

Metropolitan Planning Organization (MPO)

The organizational entity designated by law to have the lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. MPOs are established by agreement of the Governor and units of general purpose local government that together represent 75 percent of the affected population of an urbanized area. Lane Council of Governments is the MPO for the Eugene-Springfield metropolitan area.

Mixed-use development

A development that has a mixture of land uses that may include office and other commercial uses, residential uses, parks and public places, and supporting public facilities and services.

Mobility

The ease with which a person is able to travel from place to place. It can be measured in terms of travel time.

Modal split

The proportion of total persons using a particular mode of travel.

Mode

A means of moving people and/or goods. Modes may include motor vehicles, public transit, bicycles, railroads, airplanes, waterways, pipelines, and pedestrian walkways.

Multi modal

Refers to the diversity of transportation options for the same trip. Also, an approach to transportation planning or programming that acknowledges the existence of or need for transportation options.

Nodal development (Node)

Nodal development is a mixed-use, pedestrian-friendly land use pattern that seeks to increase concentrations of population and employment in well-defined areas with good transit service, a mix of diverse and compatible land uses, and public and private improvements designed to be pedestrian and transit oriented. Fundamental characteristics of Nodal development require:

- Design elements that support pedestrian environments and encourage transit use, walking, and bicycling;
- A transit stop which is within walking distance (generally 1/4 mile) of anywhere in the node;
- Mixed uses so that services are available within walking distance;
- Public spaces, such as parks, public and private open space, and public facilities, that can be reached without driving; and
- A mix of housing types and residential densities that achieve an overall net density of at least 12 units per net acre.

Nodal developments will vary in the amount, type, and orientation of commercial, civic, and employment uses; target commercial floor area ratios; size of buildings; and the amount and types of residential uses.

Objective

An attainable target that the community attempts to reach in striving to meet a goal. An objective may also be considered as an intermediate point that will help fulfill the overall goal.

1991 Oregon Highway Plan (OHP)

Document that outlines the policies and strategies that will guide the Highway Division's operation and fiscal activities during the 1991-2012 period. The current document represents an update to the 1985 Highway Plan.

Oregon Statewide Planning Goals

A mandated statewide program for land use planning in place since 1973. The foundation of the program is a set of 19 goals that express the state's policies on land use and related topics such as natural resources (Goal 5), housing (Goal 10), and transportation (Goal 12).

Oregon Transportation Plan (OTP)

The comprehensive, long-range plan for a multi-modal transportation system for the state that encompasses economic efficiency, orderly economic development, safety, and environmental quality. The OTP was adopted by the Oregon Transportation Commission in 1992.

Overlay zone

A set of zoning specifications that is imposed on an area, in addition to the underlying zoning district's requirements.

Paratransit

Transit alternative known as *special or specialized* transportation that often includes flexibly scheduled and routed transportation services that use low-capacity vehicles, such as vans, to operate within normal urban transit corridors or rural areas. Services usually cater to the needs of persons who cannot use standard mass transit services. Common patrons are the elderly and persons with disabilities.

Park-and-Ride

Public parking lots whose primary purpose is to provide access to public transportation services. These parking areas may function as shared use parking areas.

> **Major Park-and-Rides**
>
> Park-and-Rides provide public parking for access to public transportation. In general, this type of Park-and-Ride includes capacity for 100 cars or more. A major Park-and-Ride generally includes buses operating on-site and passenger amenities such as a larger style bus shelter, lighting, and passenger information and may include restrooms for operators. Major Park-and-Rides are not transfer points and usually are on-street bus stops.
>
> **Minor Park-and-Rides**
>
> A minor Park-and-Ride is smaller in scale than a major Park-and-Ride, with capacity for fewer than 100 cars. Buses typically will not operate on-site. Buses may serve the Park-and-Ride via an on-street bus stop, which may include a bus turnout and standard LTD bus shelter adjacent to the bus stop. A minor Park-and-Ride generally is a public parking lot less than two acres in size. These stops are not transfer points and the bus stop is on-street.

Parking management

Management strategies designed to address the supply and demand for vehicle parking. They contribute to balancing the travel demand within the region among the modes of transportation.

Pavement Condition Rating (PCR)

Pavement condition ratings provide an assessment of pavement condition. Local and state road agencies use a pavement management process that provides, analyzes, and summarizes information for use in selecting and implementing cost-effective pavement construction, rehabilitation, and maintenance programs designed to accommodate current and forecasted traffic.

Performance measure

Predetermined indicators monitored during the life of the RTP as a method of evaluating the plan'*s* effectiveness. To provide numerical targets needed to assess plan progression, *benchmarks* are established for each performance measure at five-year intervals.

Person trip

A movement from one address to another by one person by any mode.

Policy

Statement adopted as part of a plan to provide a specific course of action that moves the community towards attainment of its goals.

Regional roadway system

Streets with classifications of arterial and major collector.

Single-occupant vehicle (SOV)

A vehicle, usually referring to a private automobile, that is carrying only one person.

Special transportation area (STA)

As defined by the OHP, STAs are designated existing or future compact, mixed-use areas within an urban growth boundary in which growth management considerations outweigh the considerations underlying the highway level-of-service policy. STAs include central business districts, transit-oriented development areas and other activity centers that emphasize non-auto travel. They are high-density areas with an interconnected local street network. They are not located on interstates or limited-access highways and are not encouraged on major designated freight routes.

State implementation plan (SIP)

An air quality plan mandated by the Federal Clean Air Act that contains procedures to monitor, control, maintain, and enforce compliance with federal air quality standards.

Statewide Transportation Improvement Program (STIP)

Statewide budget and programming document for funding. Required by the ISTEA legislation as a prioritized, fiscally constrained list of transportation projects that covers, at a minimum, a three-year period. STIPs are compiled by the Oregon Department of Transportation in order to program authorized levels of federal funding.

Systems development charge (SDC)

A fee collected from new development by local governments to pay for offsite public facility improvements to mitigate impacts associated with development. SDCs are imposed on development projects by local governments to cover the capital costs for certain types of infrastructure and public facilities needed to serve those developments. Under Oregon's SDC Act of 1989, transportation facilities are eligible capital improvements that may be funded by SDCs. Examples include arterial and collector streets; acquisition of street rights-of-way, easements, and other property interests necessary to construct a capital improvement; and traffic control devices.

Traffic calming

A variety of techniques designed to reduce the speed and impacts of motor vehicle traffic. It is an attempt to mix the different modes of transportation and to create an efficient mix between them. Examples include road humps, roundabouts, and woonerfs.

Transit station

Major transit station

Provides room for three or more buses for customer transfers and facilitate bus operations. A major transit station typically includes a larger facility than minor stations to accommodate passenger transfers (to three or more routes and/or serves major destinations) and may include parking for customers and restrooms for Lane Transit District employees or the public. A major station is usually an off-street facility.

Minor transit station

Provides room for two or three buses. Minor transit stations are primarily large bus turnouts near key intersections to facilitate customer transfers (to two to four routes) or bus operations. Minor stations may include parking. Typically, a minor transit station is an on-street facility.

Transit-oriented development (TOD)

A mix of residential, retail, and office uses and a supporting network of roads, bicycle, and pedestrian ways focused on a major transit stop designed to support a high level of transit use. The key features of transit-oriented development include:

- A mixed-use center at the transit stop, oriented principally to transit riders and pedestrian and bicycle travel from the surrounding area;
- High density of residential development proximate to the transit stop sufficient to support transit operation and neighborhood commercial uses within the TOD; and
- A network of roads, and bicycle and pedestrian paths to support high levels of pedestrian access within the TOD and high levels of transit use.

TransPlan

The Eugene-Springfield Metropolitan Area Transportation System Plan (TSP). A policy document intended to guide transportation system planning in the Eugene-Springfield metropolitan area by setting forth goals, policies, and implementation actions.

Transportation Demand Management (TDM)

Demand-based techniques that are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods include the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.

Transportation disadvantaged

Persons who must rely on public transit or paratransit services for most of their transportation. Typically refers to individuals without access to a personal vehicle.

Transportation improvement program (TIP)

Required by the ISTEA legislation as a prioritized fiscally constrained list of transportation projects that covers, at a minimum, a three-year period. TIPs are compiled by a metropolitan planning organization in order to program authorized levels of federal funding.

Transportation Planning Rule (TPR)

A state planning administrative rule, adopted by the Land Conservation and Development Commission in 1991 and amended in 1995 and 1998, to implement state land use planning Goal 12, *Transportation*. The TPR requires metropolitan areas to show measurable progress towards reducing reliance on the automobile.

Transportation pricing measures

Market-based user fees used to manage traffic congestion and to partially support financing of future infrastructure and transportation services.

Transportation Rule Implementation Project (TRIP)

Document that contains recommended amendments to the Eugene code to address the requirements of the Transportation Planning Rule. The recommendations were prepared by a multijurisdictional team that consisted of staff from the City of Eugene, Lane County, and Lane Transit District.

Transportation System Improvements (TSI)

Supply side improvements of the transportation system. Strategies include the full range of system improvements from improving the capacity and efficiency of the existing system to the construction or expansion of a new facility. TSI strategies are not limited to improvements for the automobile but also incorporate system improvements, expansion, and construction for transit, bicycles, and pedestrians.

Transportation system plan (TSP)

A plan for one or more transportation facilities that are planned, developed, operated, and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas. Specific requirements are detailed in the Transportation Planning Rule.

Travel forecasting model

A technique for predicting future human choices in travel by using current travel trends in conjunction with future population, employment, and land use projections.

Unified Planning Work Program (UPWP)

An annual document that describes the transportation planning activities for a metropolitan area. ISTEA requires that each metropolitan planning organization develop this document as a prerequisite to obtaining federal planning funds.

Urban standards

Standards for all arterial and collector streets that include curb, gutter, underground drainage, and sidewalks, unless otherwise noted. When provisions for bicycles are anticipated, they are specifically mentioned.

Vehicle miles of travel (VMT)

Each mile traveled by a private vehicle. For example, one vehicle that makes a five-mile car trip would generate five vehicle miles of travel. A requirement of the state Transportation Planning Rule is to reduce vehicle miles traveled per capita.

Vehicle trip

Each time a private vehicle goes from one address to another for a purpose, a vehicle trip is counted, regardless of the number of people in the vehicle.

List of Acronyms

ADA	Americans with Disabilities Act
ADT	Average daily traffic
BRT	Bus Rapid Transit
CAAA	Clean Air Act Amendments of 1990
CATS	Central Area Transportation Study
CIP	Capital improvement program
Decision Package	Policy Makers' Decision Package for Draft Plan Direction
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
EPA	U.S. Environmental Protection Agency
EQC	Environmental Quality Commission
ESATS	Eugene-Springfield Area Transportation Study
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HOV	High-occupancy vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent transportation systems technology
LCDC	Land Conservation and Development Commission
LCOG	Lane Council of Governments
LOS	Level of service
LRAPA	Lane Regional Air Pollution Authority
LTD	Lane Transit District
LUM	Land use measures
Metro Plan	Eugene-Springfield Metropolitan Area General Plan
MIS	Major investment study
MPC	Metropolitan Policy Committee
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
O&M	Operations and maintenance
OM&P	Operations, maintenance, and preservation
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
OHP	1991 Oregon Highway Plan

ORFS	Oregon Roads Finance Study
OTC	Oregon Transit Commission
OTP	Oregon Transportation Plan
PCR	Pavement Condition Rating
RAC	Lane County Roads Advisory Committee
RCI	Roadway Congestion Index
ROW	Right-of-way
SDC	Systems development charge
SHTF	State Highway Trust Fund
SIP	State Implementation Plan
SOV	Single-occupant vehicle
STA	Special transportation areas
STFAC	Special Transportation Fund Advisory Committee
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TCM	Transportation control measure
TDM	Transportation demand management
TEA 21	Transportation Equity Act for the 21st Century
TIP	Transportation improvement program
TMA	Transportation Management Association
TOD	Transit-oriented development
TPC	Transportation Planning Committee
TPR	Transportation Planning Rule
TRIP	Transportation Rule Implementation Project
TSI	Transportation system improvements
TSP	Transportation system plan
TUF	Transportation utility fee
UGB	Urban growth boundary
UPWP	Unified Planning Work Program
V/C	Volume to capacity
VMT	Vehicle miles of travel

CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

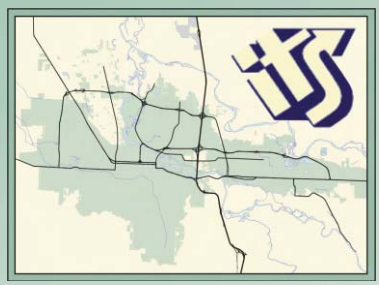
MPO

Moving Transportation into the Future

APPENDIX E

EXECUTIVE SUMMARY:

REGIONAL ITS OPERATIONS & IMPLEMENTATION PLAN FOR THE EUGENE-SPRINGFIELD METROPOLITAN AREA



Regional ITS Operations & Implementation Plan for The Eugene-Springfield Metropolitan Area

Executive Summary

November 2003

Prepared by

DKS Associates
TRANSPORTATION SOLUTIONS
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In association with
ODOT
Lane County
City of Eugene
City of Springfield
Lane Council of Governments
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Project Background

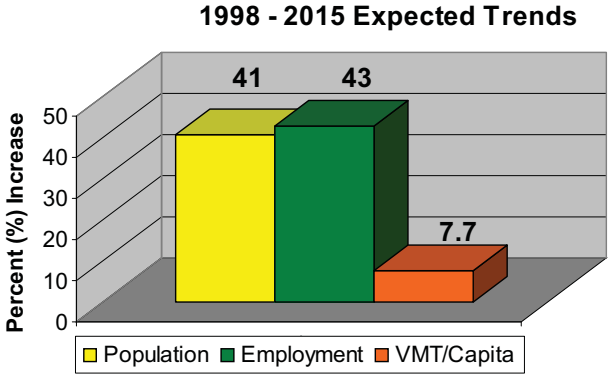
A collective effort by the Oregon Department of Transportation (ODOT), Lane County, the City of Eugene, the City of Springfield, the Lane Council of Governments (LCOG), and the Lane Transit District (LTD) has led to the *Regional Intelligent Transportation System (ITS) Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area*. This plan strives to deploy ITS projects, which include advanced technologies and management techniques, to improve the safety and efficiency of the transportation system over the long term. It is also consistent with similar efforts in other regions and statewide to ensure the ITS strategies utilized are integrated and complementary. This document provides the Executive Summary of the Final Report.

The Problem

From 1996 to 2001, the amount of annual delay increased from 595 to 1,236 person-hours in the Eugene-Springfield metropolitan area, according to an annual urban mobility report[1]. The report also estimates that the annual cost of congestion increased from $10 to $25 million during that same time period. Congestion results in travel delay, reduced productivity, and a frustrated driving public.

The population in Lane County grew 14 percent from 1990 to 2000 according to the *2000 Census*, and LCOG's forecasts in the *TransPlan* indicate that from 1998 to 2015 the population in the Eugene-Springfield metropolitan area will grow 41 percent and employment will grow 43 percent. Other trends predicted by LCOG include a 7.7 percent increase in vehicle miles traveled per capita and a 293 percent increase in congested miles traveled as a percent of total miles traveled (a jump from 2.7 percent of total miles traveled to 10.6 percent). The expected growth in population, employment, and vehicle miles of travel will place an enormous burden on the existing transportation infrastructure.

At the same time, public agencies have come to realize that building new transportation infrastructure as the single means of relieving congestion is not feasible, particularly due to high land and construction costs and environmental constraints. Therefore, a systematic approach is necessary to effectively manage the region's transportation system and capitalize on the existing infrastructure as the region grows. This includes applying Intelligent Transportation Systems (ITS) in conjunction with new roadway construction.



The Opportunity

ITS applications provide a viable opportunity for improving the safety and efficiency of the surface transportation system in the Eugene-Springfield metropolitan area. These applications help improve transportation system operations by performing a function more quickly or reliably or by providing a service that was not previously available. In effect, ITS improves the mobility of people and goods on the existing roadways and also provides the potential for substantial savings on future construction, particularly of highways. It is often easy to overlook the importance of investing in operations, but it is necessary to ensure that the traveling public makes safe and efficient use of existing roadways.

[1] Schrank, David and Tim Lomax. The 2003 Annual Urban Mobility Report, Texas Transportation Institute, Texas A&M University System, Sept. 2003.

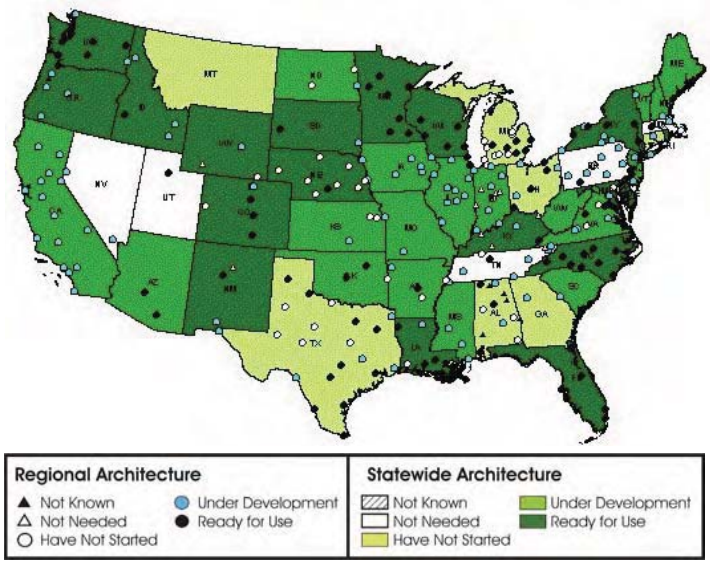
Project Background

What is ITS?

Intelligent Transportation Systems (ITS) involve the application of advanced technologies and proven management techniques to solve transportation problems, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g., travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system.

Why Develop an ITS Plan?

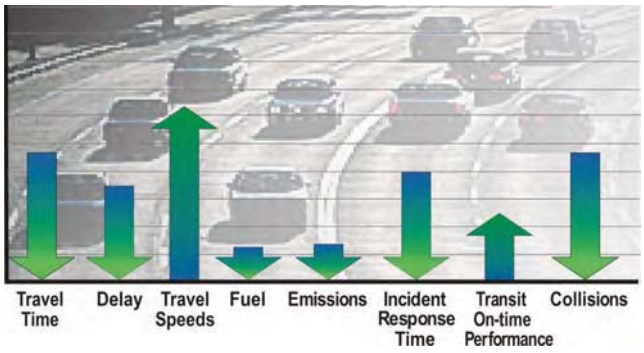
An ITS plan provides a framework of policies, procedures, and strategies for integration of a region's existing resources to effectively meet future regional transportation needs and expectations. The following reasons provide the basis for developing an ITS plan for the Eugene-Springfield metropolitan area:



- The region cannot build itself out of congestion.
- The region endeavors to maximize the efficiencies and improve the safety of the existing infrastructure.
- The public demands better information about traffic congestion.
- The plan fosters mulit-agency coordination for system operations.
- The Federal Highway Administration requires that all ITS projects funded through the Highway Trust Fund shall be in conformance with the National ITS Architecture and applicable standards.

What are the Expected Benefits?

Intelligent Transportation System projects are aimed at improving the safety and operational efficiency of our existing transportation infrastructure by reducing vehicle delays related to recurrent and non-recurrent congestion, reducing accidents and incident response times, and providing travelers with real-time information to make informed route and mode choice decisions. Quantifiable benefits resulting from Intelligent Transportation Systems include:



- Reduced vehicle delays
- Reduced accidents
- Improved air quality
- Reduced fuel consumption
- Improved travel times

Other accrued benefits, which are more difficult to quantify, include reduced driver frustration and reduced driver anxiety from having real-time travel information. Additionally, improved efficiency due to coordinated and cooperative agency actions can produce long term savings, particularly in relation to coordinating regional projects and a coordinated regional response to incidents.

Project Background

To estimate the potential benefits resulting from the proposed projects within this plan, the ITS Deployment Analysis System (IDAS), developed by the Federal Highway Administration, was used. This software uses the regional travel demand model for the base conditions and proposed ITS projects can be deployed onto the existing Eugene-Springfield network. The software identifies the resulting potential reduction in delays, fuel consumption, emissions and accidents deployed within the network. Based on this benefits analysis, the potential benefits associated with the proposed 10-year deployment plan are significant. Overall, the expected benefit-to-cost ratio for the implementation of the full 10-year plan is approximately 10 to 1. The table at right summarizes the expected benefits for the forecast year 2015 as they relate to our project goals. This section also includes example benefits from other projects around the State and the County.

Benefits from 10-Year ITS Deployment Plan

Project Goal	Projected Benefit/Day
Improve and Maintain a Safe Transportation System	✓ 9 Percent Reduction in Crashes
Improve the Efficiency of the Transportation System	✓ 100 Hours Saved Daily by Travelers ✓ 24,000 Gallons Fuel Saved ✓ 10 Percent Reduction in Emissions ✓ Travel Time Reliability Improved 67 Percent
Deploy Functional and Cost Effective ITS Infrastructure	✓ 10-to-1 Benefit-to-Cost Ratio

Coordinated Signal Timings

State-of-the-art traffic signal systems, with communication to a central computer and coordinated signal timing plans have proven to produce substantial benefits to the public. Examples from local coordinated signal timing projects in Oregon have produced the following benefits:

- 10- to 40-percent reduction in stops
- 5- to 25-percent reduction in travel time
- 15- to 45-percent reduction in delay
- Up to 15-percent reduction in fuel consumption

Ramp Meters

Ramp meters are used to regulate the flow of traffic onto a freeway. The purpose of a ramp meter is to smooth the flow of traffic on the freeway and to reduce accidents resulting from merging conflicts. In 2000, Minneapolis, Minnesota shut down all of its ramp meters and performed a benefits assessment. The results of this assessment showed ramp meters were responsible for:

- 21-percent reduction in crashes
- 22-percent decrease in travel times
- 10-percent increase in the volume of traffic accommodated by area freeways

Incident Management

The Oregon Department of Transportation in association with the Oregon State Police currently operates an incident management program in Region 2 to assist disabled vehicles. The incident management program includes incident response vehicles that patrol the Region 2 roadways to assist motorists and reduce the duration of incidents and reduce the resulting traffic congestion. Based on a recent evaluation of the program[2], the following benefits have been produced:

- 15-percent reduction in average incident duration
- 35-percent reduction in vehicle-hours incident delay

[2] *Evaluation of Region 2 Incident Response Program Using Archived Data*, Portland State University, June 30, 2001.

Project Background

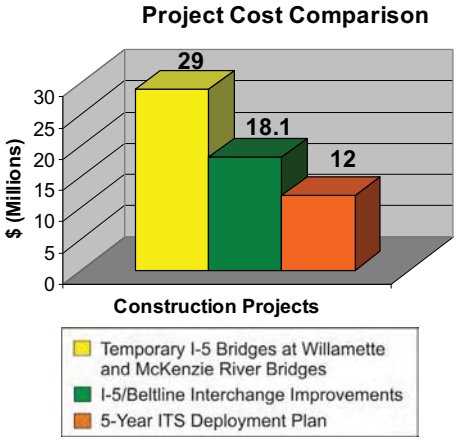
Traveler Information

The dissemination of real-time traveler information provides travelers the ability to make informed travel choices, which could include changing a route, or selecting an alternate mode of travel. The resulting benefits include:

- 7- to 12- percent reduction in travel time
- Up to 33- percent reduction in emissions

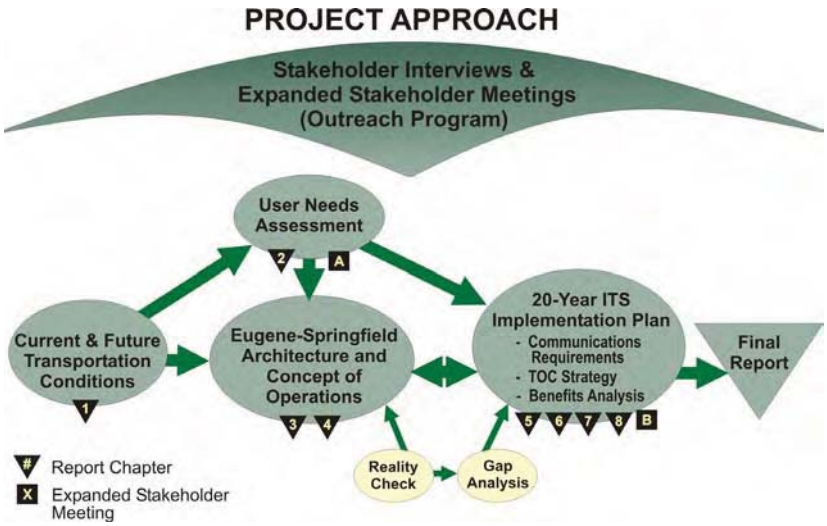
Cost Comparison

ITS components can be deployed throughout the Eugene-Springfield Metropolitan area for a fraction of the cost of large construction projects.



Project Approach

The figure below illustrates the project approach for the development of an ITS plan for the Eugene-Springfield metropolitan area. The stakeholder outreach program has been an integral part of developing a cooperative plan that meets regional needs regardless of jurisdiction.



A Steering Committee composed of key stakeholders from regional transportation agencies guided the project with additional input from expanded stakeholders that represented local emergency management agencies, the City of Coburg, and the University of Oregon. Key stakeholder outreach activities included the following:

- Monthly Steering Committee meetings
- Interviews with key stakeholders to collect transportation user needs information
- Two expanded stakeholder meetings (User Needs and Deployment Plan)

The following sections describe the results of the plan process for the 20-year Eugene-Springfield ITS Plan,with particular focus on these six interest areas:

- Travel &Traffic Management
- Communications
- Public Transportation Management
- Emergency Management
- Information Management
- Maintenance & Construction Management

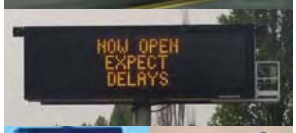
Key Stakeholders	Expanded Stakeholders
Oregon Department of Transportation	City of Coburg
Lane County	University of Oregon
City of Eugene	Public Agency Network
City of Springfield	Central Lane Communications
Lane Council of Governments	Oregon State Police
Lane Transit District	City of Eugene Police Department
Federal Highway Administration	City of Eugene Fire & EMS Department
	City of Springfield Police Department
	City of Springfield Fire & Life Safety

Mission, Goals & Objectives

Our Mission Statement is:

The Eugene-Springfield area strives to enhance the safety and efficiency of multi-modal travel through the use of advanced technologies, transportation management techniques, agency coordination, and partnerships.

The following project goals and objectives were developed to obtain our mission:



Goal #1: Build consensus and improve coordination among project stakeholders.

Build consensus among the Steering Committee members.
Build a coalition among all ITS stakeholders in the Eugene-Springfield metropolitan area.
Share resources between local and regional agencies.
Coordinate and integrate projects with other agencies.
Promote public and private partnerships for ITS deployment, operations, and maintenance.
Develop a concept of operations with a seamless interface between agencies.

Goal #2: Improve and maintain a safe transportation system.

Reduce frequency, duration, and effects of incidents.
Reduce emergency response times.
Reduce recurrent congestion.
Coordinate incident response with other local and regional agencies.

Goal #3: Improve the efficiency of the transportation system.

Improve travel time for vehicles, including transit vehicles.
Reduce travel time variability.
Reduce fuel consumption and environmental impacts.
Improve transit service reliability.
Improve maintenance and operations efficiencies.

Goal #4: Deploy functional and cost efficient ITS infrastructure.

Deploy systems that fit in with future improvements.
Deploy systems with a high benefit-to-cost ratio.
Deploy systems that maximize the use of existing infrastructure.
Deploy systems with minimal use of maintenance and operational support.
Integrate deployments with other local and regional projects.

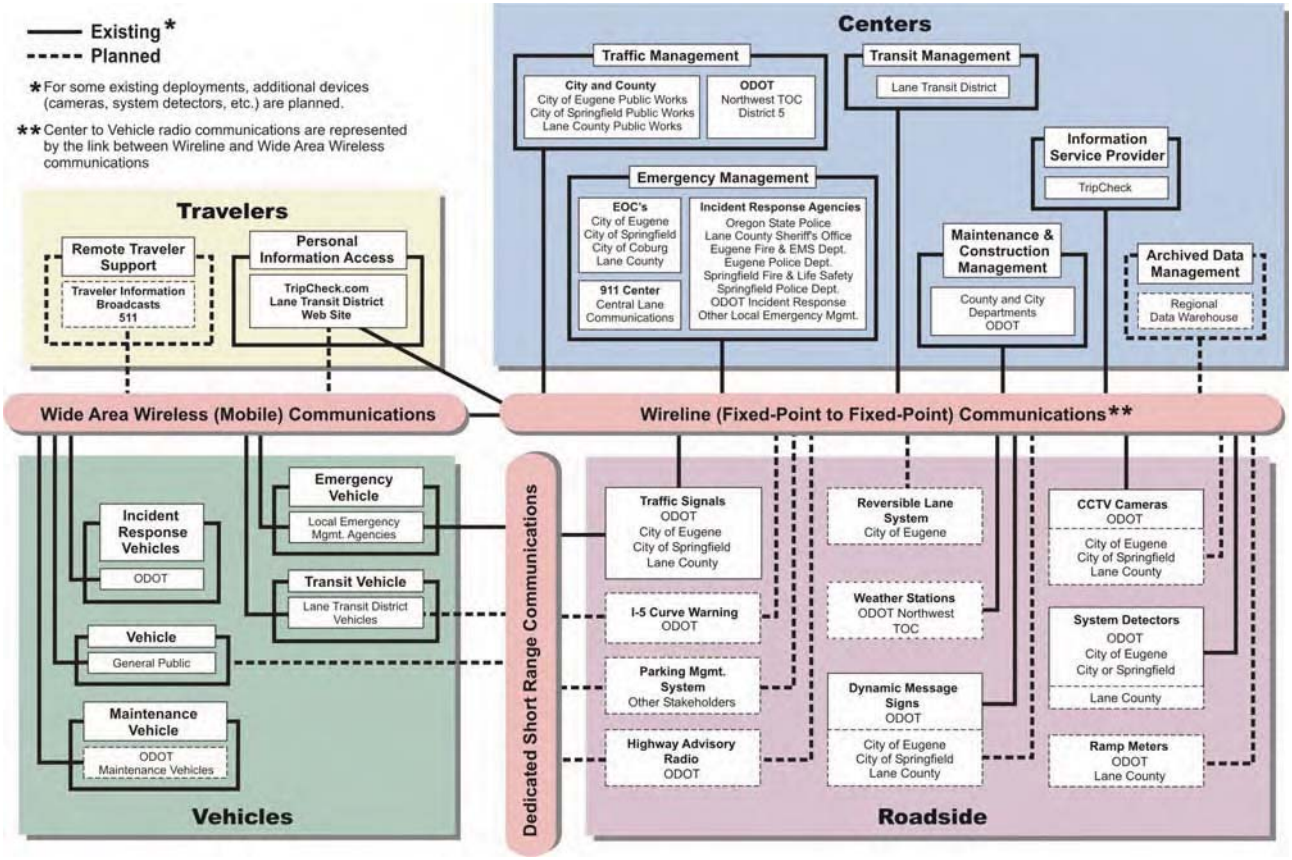
Goal #5: Develop a commitment to ITS deployment in the Eugene-Springfield area.

Create a regional architecture that complements the statewide architecture.
Develop a phased implementation process based on a prioritized project list.
Identify unique funding in addition to utilizing traditional funding sources.
Develop a process that ensures program continuation.
Integrate the ITS Plan with the Central Lane TMA regional transportation plan and other transportation plans in the region.

Eugene-Springfield ITS Architecture

The National ITS Architecture and the Oregon Statewide ITS Architecture provide the basis for the Eugene-Springfield ITS Architecture. The figure below depicts the physical architecture for the Eugene-Springfield metropolitan area and includes key stakeholders, existing and desired services (or ITS elements), and the necessary interconnections and information flows required to ensure system compatibility and interoperability.

Providing compatibility amongst jurisdictions will enable the region to fully maximize the use of ITS technologies. For example, an LTD bus traveling along ORE 126 must be able to communicate with the traffic signals in both the cities of Eugene and Springfield to allow for transit signal priority. The physical architecture ensures this happens by identifying the connection to the appropriate agencies (ie. LTD, City of Eugene, and City of Springfield) and their equipment (ie. traffic signals and transit vehicles) and the information required to provide the desired service (ie. transit signal priority).



Eugene-Springfield Physical ITS Architecture

Concept of Operations

The concept of operations, which supplements the ITS physical architecture, defines the roles and responsibilities of the participating transportation and public safety agencies and identifies information flows between the agencies in the Eugene-Springfield metropolitan area. The concept of operations defines the responsibilities of the various agencies providing ITS services in the region for activities such as design, construction, integration, planning, operations and maintenance. In addition, the concept of operations defines the level and types of information shared between agencies such as data, video, status, request and control.

ITS Deployment Plan

The Eugene-Springfield Deployment Plan is organized into three time frames: 0-5 years, 6-10 years, and 11-20 years. Based on stakeholder input and key findings from system evaluations, the projects recommended for implementation in the Eugene-Springfield metropolitan area have been organized and described by the following program areas:

- Travel & Traffic Management (TM)
- Communications (CO)
- Public Transportation Management (PTM)
- Emergency Management (EM)
- Information Management (IM)
- Maintenance & Construction Management (MC)

Each program area is described on the following pages, with additional details in Tables 1 - 4 about projects included in the 5-Year Plan. A key component of the 5-Year Plan is the implementation of traveler information collection devices on the primary corridors.

Table 5 summarizes the complete list of projects along with pertinent details. The project numbers used in this table are for reference purposes only and do not indicate any type of priority. A priority of high (H), medium (M), or low (L) is assigned to each project in the table and correlates to the 5-Year Plan, 10-Year Plan, and 20-Year Plan, respectively. Priorities are based on existing and future corridor operation, focusing on recurrent congestion, traffic data, bottlenecks and accident data. Figure 1 provides a graphic summary of the full 20-Year ITS Plan.

Travel & Traffic Management

Projects within this Program Area are focused on improving the efficiency and safety of our existing roadway system by providing tools to better manage the existing infrastructure, to coordinate with regional partners and to provide traveler information to the public. The following projects are part of the 5-Year Plan.

Regional Freeway Congestion Management

The purpose for these projects is to improve travel time, to reduce incident response time, and to reduce crashes and the effects of crashes. To accomplish this purpose the following items will be deployed in the 5-Year Plan.

Table 1. Capital Costs for 5-Year Regional Freeway Congestion Management Plan

Surveillance, Traffic Control & Management	Capital Cost
Beltline Highway (Install CCTV, dynamic message signs, ramp meters, system detectors, and communications from River Rd to I-5)	$3,250,000
I-5 (Install CCTV, dynamic message signs, and communications)	$1,400,000
I-105 (Install CCTV and communications)	$320,000
ORE 126 (Install CCTV, system detectors, and communications)	$820,000
Traveler Information	**Capital Cost**
Display CCTV images and congestion/incident information on TripCheck	$150,000
Install Highway Advisory Radio (HAR) for the metropolitan area	$350,000
Communications	**Capital Cost**
Install fiber optic communications to interconnect agencies as the base for the Virtual TOC	$2,000,000
Planning	**Capital Cost**
Develop Incident Management Operational Plans	$200,000
Develop an Evacuation Route Plan	$120,000
TOTAL:	**$8,610,000**

Northwest Transportation Operations Center (NWTOC)

Permanent Dynamic Message Sign

CCTV Camera

Regional Arterial Congestion Management

These projects are intended to improve travel time and reduce crashes and the effects of crashes. To accomplish this purpose the following 5-Year Plan items will be deployed.

Table 2. Capital Costs for 5-Year Regional Arterial Congestion Management Plan

Surveillance, Traffic Control & Management	Capital Cost
Coburg Road (Install CCTV at key intersections, count stations for collection of congestion information, and fiber optic communications to traffic signals on Coburg Road and between Coburg Road and the City of Eugene; Update coordinated signal timings)	$500,000
Gateway Street (Install traffic responsive signal timings, count stations and fiber optic communications; Transmit existing video detection images to the City of Springfield)	$125,000
30th Avenue (Install coordinated signal timings near I-5)	$10,000
Traveler Information	**Capital Cost**
Display CCTV images and congestion/incident information on TripCheck	$100,000
TOTAL:	**$735,000**

Beltline Rd at Gateway St

Coburg Rd at Beltline Hwy

Fiber Optic Cable Terminations

Communications

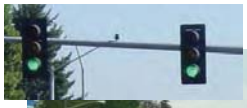
The Communications system plays an integral part in the deployment of the projects in the other five program areas by providing a network for information flows to and from field devices and stakeholder agencies. There are two projects slated for deployment during the 5-Year Plan: (1) the documentation of communications standards to ensure standardization and compatibility throughout the region and (2) the integration of radio infrastructure amongst regional agencies. For the most part, the communications network needed to support the ITS Plan will be deployed on a project-by-project basis throughout the next 20 years.

Public Transportation Management

Public Transportation Management technologies address two major aspects of transit operations: (1) transit traveler information systems and (2) transit agency operations and management. The projects in this category build off of the current LTD effort to deploy vehicle location technologies and a new computer aided dispatch system. Some of the benefits of these projects include more reliable bus travel times and improved transit traveler information. These 5-Year Plan projects include:

Table 3. Capital Costs for 5-Year Public Transportation Management Plan

Management	Capital Cost
Deploy automated vechicle locators (AVL), automatic passenger counters (APC), and a computer-aided dispatch (CAD) system on all main fleet coaches	$1,800,000
Traveler Information	**Capital Cost**
Provide real-time transit arrival information at key bus stops/transit centers and at special events	$500,000
Provide real-time transit information on the Internet	$350,000
Provide automated passenger information systems	$500,000
Traffic Control	**Capital Cost**
Deploy transit priority on Franklin Boulevard, Coburg Road and Pioneer/MLK Parkway	$600,000
TOTAL:	**$3,750,000**



Transit Priority

Real-Time Customer Information Displays

ITS Deployment Plan

Emergency Management

Central Lane 911

ODOT Region 2 Incident Response

The purpose of the Emergency Management projects is to reduce emergency response times and to integrate emergency management with transportation and transit management. The emergency response projects included in the ITS Plan are highly dependent on the deployment of key travel and traffic management and communications projects, therefore none of these projects are included in the 5-Year Plan.

Information Management

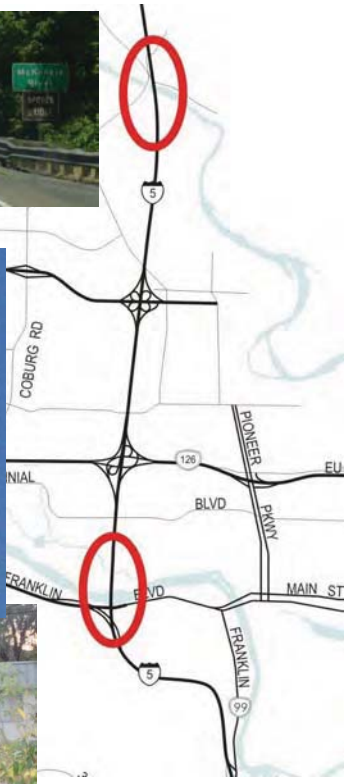
A critical part of this ITS Plan includes collecting, archiving, and managing all sorts of transportation-related data. Since much of the data collection is closely tied to projects that deploy field devices and systems to collect data, the main information management project has been included in the 10-Year Plan.

Maintenance & Construction Management

These projects are aimed at improving the safety of motorists and workers in construction zones. In addition, these projects are aimed at improving the efficiency of work zone management and control.

Table 4. Capital Costs for 5-Year Maintenance & Construction Management Plan

Surveillance	Capital Cost
Install CCTV on I-5 to monitor bridge reconstruction work zones and to provide traveler information	$75,000
Traveler Information	**Capital Cost**
Include driver feedback signs to display speed information and alert drivers traveling at a high rate of speed; Install portable dynamic message signs and install variable speed limit signs to dynamically adjust the speed limit through the work zones on I-5	$200,000
Communications	**Capital Cost**
Install fiber optic communications across the new bridges to connect to field devices on I-5	$125,000
Planning	**Capital Cost**
Develop work zone management standards	$50,000
TOTAL:	**$450,000**



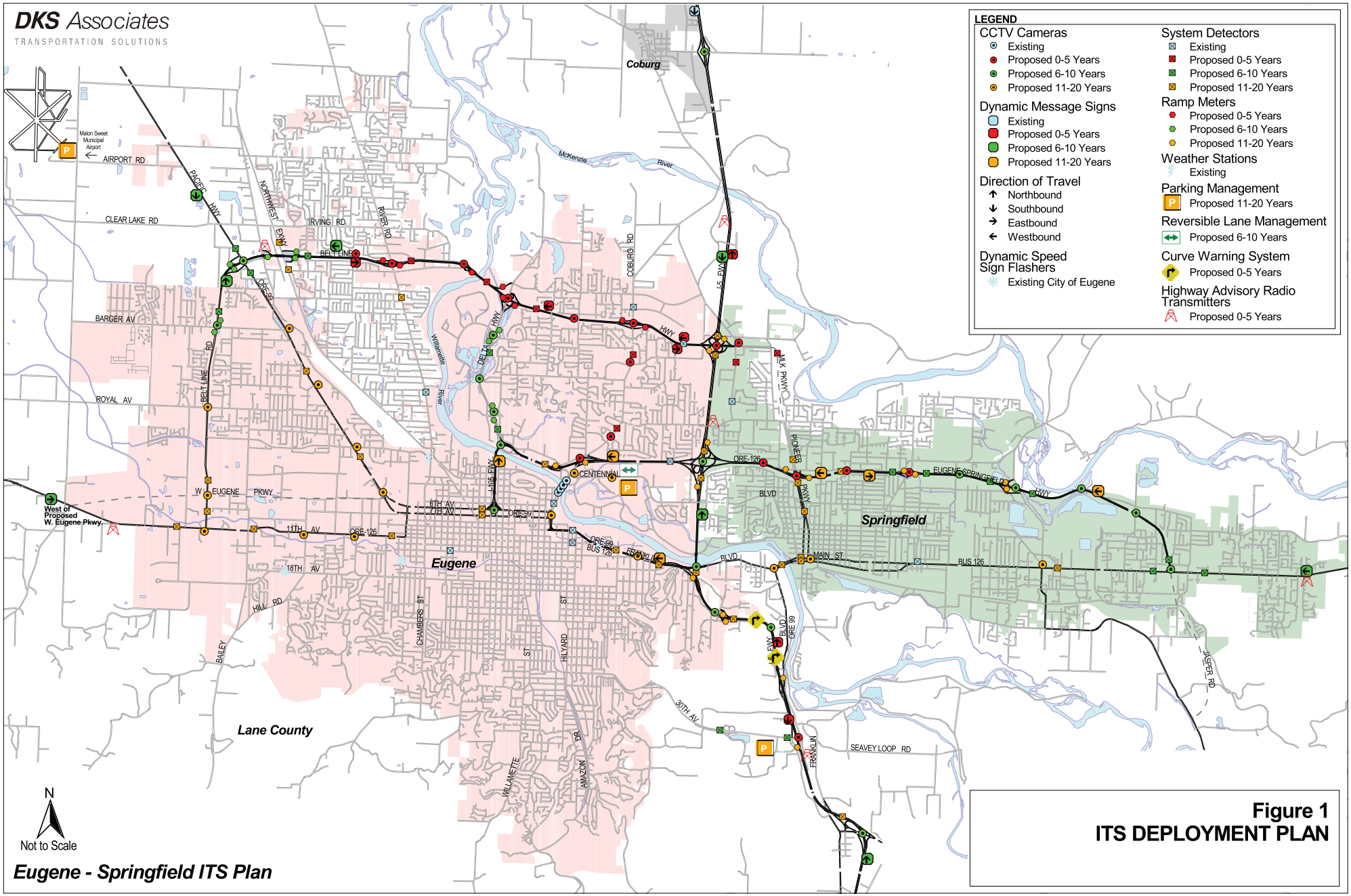


Figure 1
ITS DEPLOYMENT PLAN

Eugene - Springfield ITS Plan

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
Travel & Traffic Management (TM)								
ES-TM-01	Regional Virtual Transportation Operations Center (TOC)	Project will determine the functional requirements for systems interfaces to traffic and transit management agencies, emergency management agencies, the NWTOC in Salem, and regional field devices.	M	ODOT Statewide TOC Software Project; This project relates to most of the Travel & Traffic Management projects included in this plan.	Depends on the planned communications installed between the NWTOC and ODOT District 5. Also depends on communications installed to field devices.	$200,000/ $125,000	● Information sharing capabilities ● Back-up capabilities ● More effective traffic management, incident management, and maintenance management ● Safety and efficiency improvements	Requires communications between City of Eugene, City of Springfield, Lane County, ODOT District 5, and the NWTOC.
ES-TM-02	Regional Freeway Surveillance and Management	Project will develop and deploy an integrated multi-jurisdictional regional freeway surveillance and management system that provides for traffic-responsive freeway control and sharing of roadside subsystems.	H, M, L	See Related ES-TM-02 Projects.	See Related ES-TM-02 Projects.	See Related ES-TM-02 Projects.	● Integration of multi-jurisdictional freeway and arterial systems ● Improved safety and efficiency of freeways, therefore reducing delay and emergency response times ● More effective traffic management, incident management, and maintenance management ● Timely and cost-effective complaint response ● Increase in information available to travelers through DMS and the TripCheck web site ● Availability of additional volume, speed, and occupancy data	See Related ES-TM-02 Projects.
ES-TM-02A	I-5 Freeway Surveillance and Management	Project includes the installation of the following devices on I-5:		*TransPlan* Projects #250 & 606; ES-TM-07A	Requires communications connection to the NWTOC and ODOT District 5.	$4,900,000/ $125,000		Improvements at I-5/Beltline Hwy can be incorporated with planned capital improvements.
		● CCTV Cameras	H, M, L					
		● DMS	H, M					
		● System-Wide Ramp Meters & System Detection	L					
		● Curve Warning System	H					
ES-TM-02B	Beltline Highway Freeway Surveillance and Management	Project includes CCTV cameras, DMS, system-wide ramp meters, and system detection on the following corridors:		*TransPlan* Projects #312, 409, 506, 606, 607, 622 & 638; ES-TM-07C	Requires communications connection to the NWTOC and ODOT District 5.	$6,100,000/ $175,000		Parts of this project can be incorporated with planned capital improvements.
		● River Rd to I-5	H					
		● Barger Rd to NW Expressway	M					
		● W 11th Ave to Barger Rd	L					
ES-TM-02C	Eugene-Springfield Highway (OR 126) Freeway Surveillance and Management	Project includes the installation of the following field devices:		*TransPlan* Projects #96, 821 & 835; ES-TM-07B	Requires communications connection to the NWTOC and ODOT District 5.	$3,400,000/ $100,000		Parts of this project can be incorporated with planned capital improvements.
		● CCTV Cameras	H, M					
		● DMS	L					
		● System-Wide Ramp Meters & System Detection	L					
ES-TM-02D	I-105 Freeway Surveillance and Management	Project includes CCTV cameras, DMS, system-wide ramp meters, and system detection at the following locations:		*TransPlan* Project #151; ES-TM-07B	Requires communications connection to the NWTOC and ODOT District 5.	$1,620,000/ $40,000		Parts of this project can be incorporated with planned capital improvements.
		● Delta Hwy Interchange	M, L					
		● Coburg Rd Interchange	M, L					
ES-TM-02E	Delta Highway Freeway Surveillance and Management	Project includes CCTV cameras, ramp meters, and system detection.	M	*TransPlan* Project #638	Requires communications connection to the NWTOC and Lane County.	$980,000/ $35,000		The close proximity of Lane County's offices to Delta Highway will cut down on communications costs.
ES-TM-03	Regional Arterial Surveillance and Management	Project will develop and deploy an integrated multi-jurisdictional regional arterial surveillance and management system that provides for traffic-responsive corridor management and sharing of roadside subsystems.	H, M, L	See Related ES-TM-03 Projects.	See Related ES-TM-03 Projects.	See Related ES-TM-03 Projects.	● Integration of multi-jurisdictional arterial systems	See Related ES-TM-03 Projects.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-03A	Pacific Highway (OR 99) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Replacement of Twisted-Pair Copper with Fiber Interconnect ● Signal Timing Coordination	 M, L M M, L M M, L	ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$940,000/ $40,000	● Improved safety and efficiency of arterial corridors, therefore reducing delay and emergency response times ● More effective traffic management, incident management, and maintenance management ● Timely and cost-effective complaint response ● Increase in information available to travelers through DMS and the TripCheck web site ● Availability of additional volume, speed, and occupancy data	The City of Eugene is currently planning to replace their twisted-pair copper interconnect with fiber.
ES-TM-03B	River Road Arterial Surveillance and Management	Project includes the following deployment elements: ● System Detection ● Signal Timing Coordination	 L M, L	Lane County *CIP* Projects; ES-TM-07C	None	$110,000/ $15,000		Parts of this project can be incorporated with planned capital improvements.
ES-TM-03C	Coburg Road Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● System Detection ● Signal Timing Coordination	 H H H	*TransPlan* Project #619; ES-TM-07A; ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$470,000/ $30,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03D	6th Avenue/7th Avenue Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● System Detection	 M, L L	*TransPlan* Project #133; ES-TM-07A; ES-TM-07B; ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$90,000/ $6,000		The traffic signals are already connected to the City of Eugene's QuicNet traffic signal system.
ES-TM-03E	W 11th Avenue (OR 126) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 L M L L	*TransPlan* Projects #332 & 333	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$780,000/ $35,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03F	Franklin Boulevard (OR 126 Bus) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 L L L M, L	City of Eugene *Downtown Vision Study*; ES-TM-07A; ES-TM-07B	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$500,000/ $20,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03G	Main Street/A Street (OR 126 Bus) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 M, L M M, L M, L	*TransPlan* Projects #69, 75 & 838; ES-TM-07A; ES-TM-07B; ES-TM-10	Requires interconnect to signals east of 28th St and communications to the City of Springfield Public Works Office and the NWTOC.	$1,220,000/ $60,000		The traffic signals west of 28th St are already interconnected and are part of the City of Springfield's QuicNet traffic signal system.
ES-TM-03H	Pioneer/MLK Parkway Arterial Surveillance and Management	Project includes system detection.	L	*TransPlan* Project #768; ES-TM-07A; ES-TM-07B	None	$510,000/ $25,000		Part of this project can be incorporated with the planned MLK Parkway construction.
ES-TM-03I	West Eugene Parkway Arterial Surveillance and Management	Project includes CCTV cameras, signal interconnect, and system detection that should be incorporated in the design of the West Eugene Parkway.	H, M	*TransPlan* Project #336	None	$360,000/ $20,000		This project can be incorporated with the design of West Eugene Parkway, a brand new roadway.
ES-TM-04	Reversible Lane Management on MLK/Centennial Boulevard	Project includes the deployment of reversible lane controls on MLK/ Centennial Boulevard for special events or emergency situations.	M	*TransPlan* Projects #818, 924, 927, & 930	Requires communications to the City of Eugene Public Works Office and an interface with affected traffic signals.	$600,000/ $5,000	● Improved use of existing capacity ● Improved safety and efficiency during special event management	This project will require software training.
ES-TM-05	Gateway Area Traffic Responsive Signal Timing	Project includes traffic responsive signal timing development, system detection deployment, and transmission of existing video detection images back to the City of Springfield's Public Works' office.	H	None	None	$130,000/ $7,500	● Improved safety and efficiency of the corridor, therefore reducing delay and emergency response times ● Reduced congestion	The traffic signals along Gateway Street are already interconnected as well as connected to the City of Springfield's central signal system.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-06	30th Avenue Signal Timing Coordination near I-5	Project includes signal timing coordination of the two traffic signals on 30th Avenue at the east end of Lane Community College. Conduit currently exists between these two signals.	H	None	None	$10,000/ $750	● Improved safety and efficiency ● Reduced congestion and delay	Empty conduit is available between these two signals for the installation of interconnect cable.
ES-TM-07	Incident Management Operational Plans	Project includes the development of an incident management operational plan that includes the operational protocol for field devices (ie. CCTV cameras, DMS, and system detection on mainline and alternate routes), the development of incident signal timing plans on alternate arterial routes, and clearly defined agency roles and responsibilities for the following corridors:	H, M, L	ES-TM-01; ES-TM-02; ES-TM-03	Requires deployment of field devices and communications infrastructure. Some field devices or communications equipment may be installed as part of other freeway and arterial surveillance and management projects.	Note: All costs for field devices are included in ES-TM-02 and ES-TM-03.	● Availability of real-time freeway and arterial corridor information during incidents ● Increased capacity and throughput during incident conditions ● Improved integration of regional freeway systems with local signal systems ● Reduction in congestion and delay due to incidents ● Reduced incident response times ● Improved safety and efficiency	ODOT Region 1 and the City of Portland have successfully developed and deployed an incident management operational plan on the I-5/Barbur Boulevard corridor. - Alternate routes and some operational procedures have already been established for I-5 as part of the Major Incident Management Plan. The operational plan for I-5 can expand on this and focus on the metropolitan area.
ES-TM-07A		● I-5 (Alternate routes previously identified by local agencies)				$65,000/ $0		
ES-TM-07B		● Eugene-Springfield Highway				$55,000/ $0		
ES-TM-07C		● Beltline Highway				$85,000/ $0		
ES-TM-08	Incident Notification System	Develop an incident notification system that alerts subscribers when incidents occur as well as the location, the transportation impacts, and the expected duration. Subscribers may include public agencies as well as private companies such as companies representing the media.	H	None	Requires deployment of field devices and communications infrastructure to detect and verify incidents.	$70,000/ $0	● Availability of real-time incident information ● Media broadcast capabilities ● Reduced congestion and delay ● Customer satisfaction	ODOT Region 1 has successfully implemented a pager-based notification system that could be used as a model for the Eugene-Springfield metropolitan area.
ES-TM-09	Transit Signal Priority	Give priority at traffic signals only to buses that are behind schedule to support transit operations and schedule adherence. This project includes installing transit priority on the transit fleet as well as upgrading Opticom and traffic signal controllers (as needed) at traffic signals and developing signal timing plans on key corridors.		None	Requires upgrade to 700 series Opticom detectors at traffic signal with older models. Also requires the installation of emitters on the transit fleet.		● Reduced transit delay ● Schedule adherence and reliability ● Reduced operational costs ● Enhanced transit service ● Increased ridership	TriMet and the City of Portland have successfully deployed the technology on several corridors in the City of Portland.
		● Outfit transit fleet with transit priority emitters.	H,M,L			$500,000/ $7,500		
		● Franklin Blvd, Main St/S A St, Pioneer/MLK Pkwy, Gateway St, Game Farm Rd N, Harlow Rd	H			$300,000/ $1,000		
		● Coburg Rd, Crescent Ave, Harlow Rd	M			$55,000/ $1,000		
		● Centennial/MLK Blvd, Pacific Hwy, W 11th Av, W 13th Av, W 18th Av, River Rd, Pearl St, Willamette St, Amazon	L			$95,000/ $1,000		
ES-TM-10	Traffic Signal Interconnect	Install traffic signal interconnect and connect the signals to the QuicNet system at the following locations:	H, M, L		None	$1,000,000/ $10,000	● Capability for advanced operations and more flexibility ● Provides technology needed for other ITS projects in this plan	Sections of traffic signal interconnect can be added to the main system when other nearby projects are constructed. - Traffic signal interconnect should be included as part of the design of the new Jasper Road extension.
		● Valley River Dr/Willagillespie Rd/ Goodspasture Island Rd		ES-TM-02E				
		● Barger Rd		ES-TM-03A				
		● Royal Av/Roosevelt Blvd		ES-TM-03A				
		● Cal Young Rd/Gilham Rd		ES-TM-03C				
		● Green Acres Rd/Crescent Av		ES-TM-02E				
		● Chambers St		None				
		● Main St (28th Av to 69th Av)		ES-TM-03G				
		● Jasper Rd Extension		*TransPlan* Project #66				

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-11	Integrate Regional Virtual TOC with UO SOS Room	Provide an interface between the Regional Virtual TOC and the UO SOS Room that allows for two-way information sharing, monitoring, and control functions.	M	ES-TM-01; ES-TM-04	Requires communications between the Regional Virtual TOC and the UO SOS Room.	$100,000/ $1,000	● Information sharing capabilities ● More effective special event management	The development of the interface will be similar to the emergency management systems interface that will be developed as part of ES-EM-01
ES-TM-12	Beltline Highway Queue Warning System	Deploy a queue warning system on eastbound and westbound Beltline Highway near the Willamette River that includes dynamic signing to warn drivers of upcoming queues.	H, M	ES-TM-02B	None	$85,000/ $7,000	● Improved safety ● Reduced amount of rear-end collisions	This project only requires communications between field devices and only requires communications to the NWTOC if permanent DMS are incorporated.
ES-TM-13	I-5 Bridge Security	Project includes the deployment of a bridge surveillance system on the McKenzie River and Willamette River I-5 bridges.	H	I-5 Bridge Reconstruction	Needs to be deployed during I-5 bridge reconstruction.	$430,000/ $6,000	● Surveillance and monitoring capabilities ● Improved homeland security	FHWA plans to issue a technical advisory in 2004 regarding bridge security technology.
ES-TM-14	I-5 Bridge Weather Detection and Deicing System	Project includes the installation of a weather detection system and an automatic deicing system on the McKenzie River and Willamette River I-5 bridges.	H	I-5 Bridge Reconstruction	Needs to be deployed during I-5 bridge reconstruction.	$540,000/ $22,000	● Real-time weather and pavement conditions ● More efficient allocation of maintenance resources during inclement weather	This project can be incorporated with the design of the two I-5 Bridge modifications.
ES-TM-15	Highway Advisory Radio (HAR)	Deploy a highway advisory radio system that provides traveler information. Project includes both permanent and mobile installations. Permanent installations will be deployed at the five key entry points to the metropolitan area (north, northwest, south, east, and west) and at key central locations.	H	2004 – 2007 Draft STIP Key #12942	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	$350,000/ $10,000	● Real-time traveler information ● En-route information that allows users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	WSDOT has implemented highway advisory radio in southern Washington and can be used as a resource during design and construciton.
ES-TM-16	Integrate Regional Traveler Information with TripCheck, 511, and Highway Advisory Radio	Develop an integrated system for disseminating and posting traveler information to TripCheck, 511, and HAR.	H, M, L	National/State 511 Deployment Project; ES-TM-15 (2004 - 2007 Draft STIP Key #12942)	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	$385,000/ $10,000	● Real-time and static traveler information ● Pre-trip planning capabilities and en-route information that allow users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	Requires an interface between agencies in the Eugene-Springfield metropolitan area to TripCheck, the 511 system, and the HAR system.
ES-TM-17	Congestion/ Incident Information Mapping	Develop an incident and congestion flow mapping system that shows travel speeds on study area roadways.	H, M, L	ES-TM-02; ES-TM-03	Depends on deployment of system detectors to monitor travel speeds along roadways. Also depends on an interface with incident management personnel.	$290,000/ $5,000		The WSDOT Smart Trek (www.smarttrek.org) congestion and incident mapping system can be used as a model for the Eugene-Springfield metropolitan region.
ES-TM-18	Traveler Information at Rest Areas	Provide real-time traveler information at rest areas north and south of the metropolitan area: ● Oak Grove Rest Area (MP 207) ● Gettings Creek Rest Area (MP 177)	M	ES-TM-16	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	$290,000/ $10,000	● Pre-trip planning capabilities that allow users to make informed travel decisions prior to entering the metropolitan area ● Reduced congestion and delay ● Customer satisfaction	Real-time information can be disseminated by an internet link to ODOT's TripCheck web site and/or by a sign advertising the 511 traveler information phone number.
ES-TM-19	Rest Area Surveillance System	Deploy security surveillance systems, including several cameras, at rest areas north and south of the metropolitan area: ● Oak Grove Rest Area (MP 207) ● Gettings Creek Rest Area (MP 177)	L	None	None	Cost Included in ES-TM-18	● Surveillance and monitoring capabilities ● Improved security	ODOT Region 1 is currently installing security cameras on the I-5 Columbia River Bridge and similar technology will apply to the rest areas.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-20	Advanced Parking Management and Information System	Deploy a parking management system at the following locations to collect real-time parking status information, provide en-route driver information, and electronically manage access to parking facilities: ● Planned UO Basketball/Event Center ● UO Autzen Stadium ● Lane Community College ● Eugene Airport	L	UO plans to construct a new Basketball/Event Center on their campus in downtown Eugene.	None	$750,000/ $20,000	● Real-time information so travelers can make informed decisions about mode choice and parking ● Reduced congestion and air pollution near parking lots ● More efficient use of parking spaces ● Reduced driver frustration when looking for parking	This project will require training staff at the University of Oregon, Lane Community College, and the Eugene Airport.
ES-TM-21	Road Weather Information Systems (RWIS or "Weather Stations")	Deploy road weather information sites that provide temperature and road conditions at the following locations: ● Beltline Highway on the Willamette River Bridge ● I-5 at Coburg Road	M, L	*TransPlan* Project #506	None	$140,000/ $5,000	● Real-time weather and pavement conditions ● More efficient allocation of maintenance resources during inclement weather	ODOT has previous experience with weather stations. - The Beltline Hwy RWIS can be incorporated with planned capital improvements.
ES-TM-22	Advanced Railroad At-Grade Crossings	Detection of an approaching train will allow the dissemination of advance information to emergency management personnel and travelers to allow them to make an informed decision about route choice. Deployment locations include: ● 28th St/Main St Crossing ● Centennial Blvd east of 28th St (not yet constructed) ● Olympic Blvd east of 28th St ● Irving Rd west of Northwest Expwy ● Irvington Rd west of Northwest Expwy ● 42nd St at Weyerhouser	L	*TransPlan* Project #930	None	$700,000/ $10,000	● Enhanced safety ● Real-time railroad activity information ● Alternate route information for travelers ● More efficient allocation of emergency response vehicles ● Reduced emergency response times ● More efficient transit routing	May be difficult to coordinate with railroad companies for the deployment of detectors within railroad right-of-way. Local agencies may be able to place detectors outside of the railroad right-of-way if the railroad companies are not cooperative. - The Centennial Blvd crossing can be incorporated with planned capital improvements.
ES-TM-23	Integrate Freeway Management Systems with Central Signal Systems	Integrate freeway management systems with the City of Eugene and City of Springfield central signal systems to provide seamless traffic flow between freeways and arterials, particularly during incident management.	L	ES-TM-02; ES-TM-06; ES-TM-07; ES-TM-27	This project should not be implemented until freeway management systems (Project ES-TM-02) are being deployed.	$1,100,000/ $40,000	● Integration of freeway and arterial systems ● Improved safety and efficiency, therefore reducing delay and emergency response times	The project will require software integration between freeway management systems and each City's central signal system.
ES-TM-24	Upgrade Central Signal System	Upgrade or replace the City of Eugene's and City of Springfield's central signal systems with a central signal system that can be integrated with transit systems (ie. AVL) and emergency management systems (ie. AVL)	L	ES-PTM-06	This project should not be implemented until the City of Eugene and the City of Springfield determine it is feasible to replace their current QuicNet central signal systems.	$505,000/ $20,000	● More efficient preemption of traffic signals ● Reduced emergency response times ● Improved transit schedule adherance	When the central signal system is upgraded, the technology will need to be available to integrate the signals with transit systems and emergency management systems.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-25	Special Event Management Systems	Project includes the deployment of traffic signal timing plans, portable dynamic message signs, and parking management for the following special events: ● UO Sporting Events ● Lane County Fair ● Oregon Country Fair ● Eugene Celebration ● Springfield Cruise ● Springfield Christmas Parade ● Other Regional Special Events	L	ES-TM-02; ES-TM-03; ES-TM-04; ES-TM-20	None	$350,000/ $125,000	● Improved safety and efficiency, therefore reducing delay and emergency response times ● More effective traffic management and special event management ● Increase in information available to travelers through DMS and the TripCheck web site	Many of the traffic signals in downtown Eugene and Springfield and near UO where many special events take place are already interconnected, which means special event signal timing plans can be implemented without having to deploy communications infrastructure.
ES-TM-26	Integrate Eugene Airport Traveler Information with NWTOC	Provide traveler information about Eugene-Springfield roadways at the airport and provide airport information to travelers via TripCheck and dynamic message signs operated by the NWTOC.	L	ES-TM-16	Requires communications link and interface between the Eugene Airport and the NWTOC.	$280,000/ $20,000	● Real-time and static traveler information ● Pre-trip planning capabilities and en-route information that allow users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	Other agency interfaces are being developed as part of the ITS Deployment Plan that can be used as models for interface development.
ES-TM-27	Develop Evacuation Route Plan	Develop an operational plan for an evacuation of the metropolitan area in the case of a major emergency.	H	Lane County Hazard Mitigation Plan; ES-TM-02; ES-TM-02; ES-TM-07	None	$120,000/ $0	● Increased capacity and throughput during emergency evacuation conditions ● Improved safety and efficiency	This project should be included as part of the Lane County Hazard Mitigation Plan and should address ITS elements.
Communications (CO)								
ES-CO-01	Document Communications Design Standards	Document design standards for communications in the following areas to ensure standardization, compatibility, connectivity, and reliability between multiple jurisdictional agencies: ● Conduit construction ● Cable plant description ● Minimum number of fibers ● Network technology ● Junction boxes ● Fiber termination panels ● Fiber connectors ● Communication hub design ● Fiber optic testing specification ● Fiber optic installation specification ● End electronics	H	This project is essential for ensuring that the communications deployed with other projects in this ITS plan are consistent throughout the metropolitan area and with other regional agencies such as PAN and other fiber consortiums.	None	$75,000/ $2,500	● Set of standards ready for implementation on all new projects or reconstruction projects ● Standardization for multiple regional agencies	This documentation will establish the technical aspects required for establishing a communications network.
ES-CO-02	Communications Network	Provide a communications network throughout the Eugene-Springfield metropolitan area to allow communications between regional agencies and also ITS devices in the field.	H, M, L	This project is relative to most of the projects included in this ITS plan.	Each piece of the communications network is dependent on the pieces that link the communications line and field equipment back to the NWTOC or ODOT District 5 Offices.	$5,400,000/ $50,000	● Connection between agencies will allow for multi-jurisdictional control, management, coordination, and information sharing ● Connection to ITS field devices allows for innovative strategies such as arterial management and incident management	Requires the purchase of fiber optic maintenance tools and staff training for fiber maintenance for all new capital fiber installation.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-CO-03	Radio Infrastructure Integration	Develop a system for radio infrastructure expansion and sharing amongst regional agencies.	H	LTD Planned Radio Infrastructure Expansion	None	$2,300,000/ $50,000	● Expanded communications coverage ● Infrastructure cost-sharing	Intergovernmental agreements relating to operations and maintenance will need to be set up to enable sharing of radio infrastructure.
Public Transportation Management (PTM)								
ES-PTM-01	Real-Time Customer Information Displays	Deploy real-time dynamic message signs at key locations such as transit centers, park and rides, bus stops where multiple routes pass through, and at bus stops with large bus headways.	H, M, L	None	None	$1,055,000/ $190,000	● Real-time transit information to aid travelers with en-route planning ● Better information during service disruptions ● Reduction of perceived waiting times ● Removal of traveler "uncertainty" ● Improved customer satisfaction	TriMet has successfully implemented real-time customer information displays in the Portland metropolitan area using simple wireless communications.
ES-PTM-02	Portable Real-Time Customer Information Displays	Acquire and deploy portable real-time dynamic message signs for special events that include transit service.	H	ES-PTM-01	The systems interface between the displays and the transit fleet will be developed as part of ES-PTM-01.	$30,000/ $4,000		
ES-PTM-03	Integrate Transit Traveler Information with ODOT Transit Trip Planning Project	Integrate transit traveler information with the transit trip planning web site ODOT is currently developing.	H	ODOT Regional Trip Planner Project	None	$350,000/ $2,000	● Real-time transit information to aid travelers with pre-trip planning ● Removal of traveler uncertainty ● Improved customer satisfaction	The interface with LTD will be based on the statewide infrastructure ODOT develops as part of its Transit Trip Planning Project.
ES-PTM-04	Transit Buses as Traffic Probes	Use buses as traffic probes to determine travel speeds on key corridors for congestion monitoring and data collection and analysis purposes.	M, L	The roadways designated for arterial surveillance and management as part of ES-TM-03 should be the primary locations for the collection of traffic probe data.	None	$220,000/ $2,500	● Improved surveillance and congestion information on arterials ● More effective traffic management, incident management, and maintenance management ● Reduced data collection costs	TriMet has been testing this technology in the City of Portland.
ES-PTM-05	Electronic Fare Collection	Install an electronic fare collection system on the entire fleet of LTD buses.	H	None	None	$1,000,000/ $6,000	● Ability to automate data collection process, which enhances planning efforts ● Improved service and customer satisfaction	LTD will need to research the existing technologies to determine what works best with their fleet. The RFP to begin this study is anticipated for release in 2004.
ES-PTM-06	Automated Vehicle Location (AVL), Computer Aided Dispatch (CAD) and Automated Passenger Counting (APC) System for Fixed Route	Project implementation currently underway. Systems Acceptance anticipated for 2004.	H	This project is the 2002 – 2005 STIP Key #11366	None	$2,000,000/ $5,000	● More efficient allocation of transit resources ● Improved transit travel times ● Ability to automate data collection process, which enhances planning efforts	LTD is currently testing their new AVL/CAD/APC system and has TriMet available as a resource.
ES-PTM-07	Transit Fleet Maintenance	On-board system integration with vehicle diagnostics system and on-board computer (or vehicle logic unit) and wireless communications. Back office system includes vehicle maintenance software and integration with existing systems.	M	None	None	$200,000/ $5,000	● More efficient allocation of transit resources ● Improved maintenance management	LTD is currently exploring technology options for this project.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-PTM-08	Automated Vehicle Location (AVL) System and Computer Aided Dispatch (CAD) System for Paratransit	Integration of CAD/AVL system developed by paratransit contractor with fixed route system. Expansion of vehicle location equipment to all paratransit vehicles fleet-wide.	M	ES-PTM-06	ES-PTM-06	$500,000/ $1,000	● More efficient allocation of transit resources ● Improved transit travel times	LTD paratransit contractor has developed a CAD/AVL system in-house. LTD wishes to integrate this with the fixed route system and expand fleet-wide.
ES-PTM-09	System Security and Integration of Bus Video Images with LTD Dispatch	Develop a system for transmitting video images from transit stations and buses back to LTD Dispatch for surveillance capabilities of the stations, roadway and passengers.	M	None	Requires fiber/communications connectivity between transit stations and LTD Dispatch system.	$1,500,000/ $25,000	● Improved surveillance and monitoring capabilities ● Increased security for passengers both on-board and waiting at transit stations	LTD buses and some transit facilities already include video systems. Project would require upgrade to wireless communictaions system to support video transport.
ES-PTM-10	Bus Rapid Transit (BRT)	LTD is currently developing a BRT system for the Eugene-Springfield metropolitan area that utilizes buses to increase service frequency, capacity, and speed.	H, M, L	This project is the 2002 - 2005 STIP Keys #11362, 11363, 11364, 11371, 11372, 12251, 12252, 12258	None	Final BRT system costs will be determined by LTD.	● Faster, more convenient transit service ● Alternative to single-occupant vehicle ● Customer satisfaction	LTD is currently planning and researching BRT implementation.
Emergency Management (EM)								
ES-EM-01	Integration Between Traffic/Transit Management Systems and Emergency Management Systems	Provide a two-way information flow (ie. CCTV camera images, congestion flow map, emergency calls) between transportation management systems (NWTOC, Virtual TOC, LTD, and UO SOS Room) and the metropolitan area 911 and emergency dispatch centers: ● Central Lane 911 ● Oregon State Police ● Springfield Police Department ● Coburg Police Department ● Lane County Sheriff's Office	M	ES-TM-01	A software interface will be required at the 911 and emergency dispatch centers, the traffic management centers, and the transit management systems for access between systems.	$1,350,000	● Improved real-time traffic conditions information ● Information sharing between agencies ● More efficient allocation of emergency response resources ● Reduced emergency response times	ODOT and the Bureau of Emergency Communications (BOEC) are currently working on a proof-of-concept for 911 center integration. Evaluation of this proof-of-concept will help with 911 and emergency dispatch center integration in the Eugene-Springfield metropolitan area.
ES-EM-02	Provide Interface Between Traffic Management Systems and Emergency Operations Centers (EOC's)	Provide an interface between the Regional Virtual TOC or other traffic management systems and each of the regional emergency operations centers to allow access to traffic control devices during emergency situations at the EOC's as well as to share information between agencies. This project includes workstations, monitors, and a communications interface at the following EOC's: ● Eugene EOC ● Springfield EOC ● Coburg EOC ● Lane County EOC ● Planned ODOT EOC	M	ES-TM-01; ES-EM-01	A software interface will be required at the emergency operations centers, the traffic management centers, and the transit management centers for access between systems.	$75,000	● Improved real-time traffic conditions information ● Information sharing between agencies ● More efficient allocation of emergency response resources ● Reduced emergency response times	The ES-EM-01 project regarding public safety integration will provide the basis for the deployment of regional emergency operations center integration.
ES-EM-03	Traffic Adaptive Emergency Response	Deployment of the "Right Route" en-route emergency guidance system (static route plan) throughout the metropolitan region. Project also includes interface between automated vehicle locators (AVL) on emergency vehicles and traffic signals.	M	LCOG's Right-Route Demonstration Project	Requires an interface between AVL and traffic signals.	$420,000/ $10,000	● Improved static traffic route information ● Reduced emergency response times	LCOG has already developed the technology and implemented a limited amount of equipment in rural areas. This same technology applies to the urban area.
ES-EM-04	Integration of Traffic Management Information with Mobile Data Terminals	Provide real-time traffic information to mobile data terminals housed in emergency response vehicles. Inventory existing emergency vehicle fleet to determine how many additional mobile data terminals need to be installed and install these as necessary.	L	ES-EM-03	None	$200,000/ $10,000	● Improved real-time traffic conditions information ● Reduced emergency response times	A number of emergency response vehicles already include in-vehicle mobile data terminals.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-EM-05	Incident Response Fleet Management System	Installation of automated vehicle locators (AVL) on incident response vehicles and dissemination of real-time vehicle locations at the NWTOC, and the emergency dispatch centers or EOC's for resource allocation during incidents or emergencies. Project also includes monitoring of incident response vehicle repairs and vehicle replacement schedules.	L	None	None	$350,000/ $80,000	● More efficient management of incident response fleet ● Reduced emergency response times when incident response support is needed	LTD is currently installing automated vehicle locators on its transit fleet and will be a valuable resource for project implementation.
Information Management (IM)								
ES-IM-01	Regional Data Management System	Create a data management system for archiving data, collecting real-time data, and accessing data. The system should have geospatial capabilities and data should include traffic counts, speed data, accidents (vehicles, pedestrians, and bicycles), traffic enforcement data, and incident information.	M	This project closely relates to projects that deploy field devices and systems to collect transportation related data; ES-TM-01; ES-TM-02; ES-TM-03; ES-PTM-05; ES-PTM-06; ES-PTM-09	This project is dependent on interagency communications and the deployment of field devices to collect data.	$560,000/ $50,000	● Improved resources for regional modeling, research, analysis, planning, and design ● Reduced cost of data collection	This project will make use of data already collected or planned for collection by agencies in the Eugene-Springfield metropolitan area.
ES-IM-02	Integrate Transportation Information with GIS Centerline Project	Update ITS transportation GIS data in accordance with the GIS Centerline Project once it is complete.	H, M, L	GIS Centerline Project	None	$50,000/ $5,000	● Improved mapping capabilities ● Improved resources for analysis, planning, and design	The GIS Centerline Project is in the process of combining roadway centerline data and developing regional standards for creating attributable data.
Maintenance & Construction Management (MC)								
ES-MC-01	Maintenance Fleet Management System	Installation of automated vehicle locators (AVL) on maintenance vehicles and dissemination of real-time vehicle locations at the ODOT District 5 Office and emergency dispatch centers or EOC's for resource allocation during incidents or emergencies.	L	None	None	$170,000/ $5,000	● More efficient managagement of maintenance fleet ● Reduced emergency response times when maintenance support is needed	LTD is currently installing automated vehicle locators on its transit fleet and will be a valuable resource for project implementation.
ES-MC-02	Construction Zone Safety Enhancements During I-5 Bridge Reconstruction	Deploy permanent and/or portable dynamic message signs and electronic driver feedback signs to alert motorists of their travel speed as they approach the work zone for the installation of the I-5 temporary bridges and reconstruction of the I-5 permanent bridges.	H	I-5 Bridge Reconstruction of the McKenzie and Willamette River Bridges	None	$200,000/ $45,000	● Improved construction zone safety and efficiency ● Heightened safety awareness through driver feedback	New equipment and training would be required for this project. ODOT has acquired portable changeable speed limit signs that may be available for use on this project.
ES-MC-03	Maintenance, Construction, and Special Event Coordination System	Develop an information management system that contains details about regionwide maintenance and construction activities by public agencies, utility companies, and private contractors as well as special event information, including location and event duration.	M	None	Requires data and information from public and private agencies throughout the region.	$540,000/ $10,000	● Construction and maintenance scheduling capabilities ● Improved resources for planning ● Cost savings through project coordination	The system must allow for quick and easy data input and retrieval to make it efficient for affected agencies to use.
ES-MC-04	Develop Work Zone Management Standards	Develop standards for safety enhancements and management techniques in work zones such as the following: ● Variable speed limits ● Incident detection and management ● Lane merge controls ● Queue detection and electronic driver feedback signs	H	None	None	$40,000/ $0	● Improved construction zone safety and efficiency ● Heightened safety awareness through driver feedback	The development of regional work zone management standards, that incorporate other statewide efforts, will make implementation easier during major construction projects. ODOT has acquired portable changeable speed limit signs that may be available for use in the region.

[1] The estimated operations & maintenance (O&M) costs listed in this table are for an annual basis once the project has been deployed

Table 6. DEPLOYMENT PLAN SCHEDULE (Page 1 of 2)

Ref. #	Project Title	5-Year Plan					10-Year Plan					20-Year Plan									
	Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Travel & Traffic Management																					
ES-TM-01	Regional Virtual Transportation Operations Center								■	■											
ES-TM-02	Regional Freeway Surveillance and Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-TM-03	Regional Arterial Surveillance and Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-TM-04	Reversible Lane Management on MLK/Centennial						■	■													
ES-TM-05	Gateway Area Traffic Responsive Signal Timing				■	■															
ES-TM-06	30th Avenue Signal Timing Coordination Near I-5	■																			
ES-TM-07	Incident Management Operational Plans				■	■				■	■				■	■				■	■
ES-TM-08	Incident Notification System							■	■												
ES-TM-09	Transit Signal Priority	■	■	■	■	■				■	■						■	■			
ES-TM-10	Traffic Signal Interconnect	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
ES-TM-11	Integrate Regional Virtual TOC with UO SOS Room									■	■										
ES-TM-12	Beltline Highway Queue Warning System					■	■														
ES-TM-13	I-5 Bridge Security				■	■	■	■													
ES-TM-14	I-5 Bridge Weather Detection and Deicing System				■	■	■	■													
ES-TM-15	Highway Advisory Radio (HAR)				■	■	■	■													
ES-TM-16	Integrate Traveler Information with TripCheck, 511, & Highway Advisory Radio		■	■	■	■	■	■	■	■	■	■	■								
ES-TM-17	Congestion/ Incident Information Mapping		■	■	■	■						■	■	■	■						
ES-TM-18	Traveler Information at Rest Areas									■	■										
ES-TM-19	Rest Area Surveillance System																			■	■
ES-TM-20	Advanced Parking Management & Information System											■	■			■	■			■	■
ES-TM-21	Road Weather Information Systems (RWIS)						■	■				■	■					■	■		
ES-TM-22	Advanced Railroad At-Grade Crossings											■	■								
ES-TM-23	Integrate Central Signal Systems with Transit & Emergency Management Systems																	■	■	■	■
ES-TM-24	Upgrade Central Signal System											■	■	■	■	■					
ES-TM-25	Special Event Management Systems																		■	■	■
ES-TM-26	Integrate Eugene Airport Traveler Information with Northwest Transportation Operations Center															■	■				
ES-TM-27	Develop Evacuation Route Plan		■	■																	
Communications																					
ES-CO-01	Document Communications Design Standards		■	■																	
ES-CO-02	Communications Network	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-CO-03	Radio Infrastructure Integration		■	■	■																

■ Proposed Implementation
■ Currently Funded Projects

Table 6. DEPLOYMENT PLAN SCHEDULE (Page 2 of 2)

Ref. #	Project Title	Years	5-Year Plan					10-Year Plan					20-Year Plan									
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Public Transportation Management																						
ES-PTM-01	Real-Time Customer Information Displays																					
ES-PTM-02	Portable Real-Time Customer Information Displays																					
ES-PTM-03	Integrate Transit Traveler Information with ODOT Transit Trip Planning Project																					
ES-PTM-04	Transit Buses as Traffic Probes																					
ES-PTM-05	Electronic Fare Collection																					
ES-PTM-06	Automated Veh. Location, Computer Aided Dispatch & Automated Passenger Counting Sys. for Fixed Route																					
ES-PTM-07	Transit Fleet Maintenance																					
ES-PTM-08	Automated Vehicle Location System and Computer Aided Dispatch System for Paratransit																					
ES-PTM-09	System Security & Integration of Bus Video Images with LTD Dispatch																					
ES-PTM-10	Bus Rapid Transit																					
Emergency Management																						
ES-EM-01	Integration Between Traffic/Transit Management Systems & Emergency Management Systems																					
ES-EM-02	Provide Interface Between Traffic Management Systems and Emergency Operations Centers																					
ES-EM-03	Traffic Adaptive Emergency Response																					
ES-EM-04	Integration of Traffic Management Information with Mobile Data Terminals																					
ES-EM-05	Incident Response Fleet Management System																					
Information Management																						
ES-IM-01	Regional Data Management System																					
ES-IM-02	Integrate Transportation Information with GIS Centerline Project																					
Maintenance & Construction Management																						
ES-MC-01	Maintenance Fleet Management System																					
ES-MC-02	Construction Zone Safety Enhancements During I-5 Bridge Reconstruction																					
ES-MC-03	Maintenance, Construction, and Special Event Coordination System																					
ES-MC-04	Develop Work Zone Management Standards																					

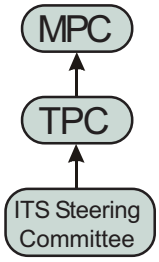
Proposed Implementation
Currently Funded Projects

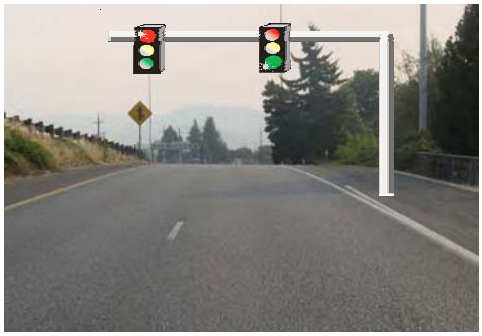
Deployment Summary

To successfully implement the proposed ITS plan, the following steps are necessary:

ITS Program Continuation

The continuation of the ITS steering committee is possibly the most important item for the successful implementation of the ITS plan. This group should include the key stakeholders from the planning process and should be organized as a new subcommittee to the Transportation Planning Committee (TPC). This group will initiate the steps outlined in this plan, plan projects that fit agencies' needs, pursue Federal funding opportunities, and monitor/report progress and effectiveness. In addition, a representative from this ITS subcommittee should report current status of the plan implementation at least annually at the Metropolitan Policy Committee (MPC).





Eastbound Beltline Hwy On-Ramp at River Rd

Deploy "Early Winner" Projects

Another key to the success of ITS in Eugene-Springfield will depend on the deployment of "early winner" projects. A potential "early winner" project includes the deployment of field devices (closed circuit television cameras, count stations, variable message signs, and ramp meters) on Beltline Highway to support regional freeway management and traveler information. This project would also support the current Statewide implementation of the 511 traveler information telephone number by providing real-time information from these field devices.

Incorporate the ITS Plan in the RTP Update Process

The ITS Steering Committee plans to incorporate this ITS Plan in the upcoming Regional Transportation Plan (RTP) update process. The ITS devices and communications infrastructure identified in this plan should be installed on corridors concurrently with traditional transportation construction and maintenance projects. This approach will minimize reconstruction, save time and money, and result in the modernization of the regional transportation system. Where applicable, relationships to currently planned regional projects have been identified in Table 5. In addition, the data collection, analysis, operational techniques and information sharing developed through the projects in this plan can become key elements of other regional efforts.

TransPlan

The Eugene-Springfield Transportation System Plan

Lane Council of Governments
99 East Broadway, Suite 400
Eugene, Oregon 97401-3111
(541) 682-4283
www.lcog.org

December 2001

Do Not Overlook Future Needs if They Fit With Current Opportunities

The region should pursue a flexible approach to implementing the plan. Opportunities may become present in early years to implement elements of the plan identified for later deployment. These opportunities may be possible due to other funding sources, coordination with roadway construction, coordination with local agency/private initiatives and/or transit priorities. These opportunities should be seized when appropriate.

Define a Revenue Stream

The Eugene-Springfield Metropolitan Area will need to define a revenue stream for construction, operations and maintenance. This plan provides the basis for the funding and identifies opportunities for regional coordination and cost-sharing. The region must dedicate funding sources to implement each increment of the 20-year plan. In addition to the traditional funding sources, other non-traditional sources for funding such as grants from non-profit agencies should be considered.

The total capital, engineering and annual operations/maintenance costs for the ITS program are provided below. The Eugene-Springfield Metropolitan Area will need an on-going commitment to operations and maintenance of the equipment and software to maximize the benefits of the ITS program. The ITS elements proposed within this program require consistent staffing for effective system operation, as well as requiring trained staff to do routine maintenance.

Implementation Stage	*Estimated Implementation Capital Costs*	*Estimated Annual Operations & Maintenance Costs*
5-Year Plan: 0 - 5 Years	$18,355,000	$735,000
10-Year Plan: 6 - 10 Years	$16,240,000	$590,000
20-Year Plan: 11 - 20 Years	$15,550,000	$660,000
TOTAL	**$50,145,000**	**$1,985,000**

Costs above are per year for the associated phase

Glossary of Terms

AVL	Automated Vehicle Location
APC	Automated Passenger Counting
BOEC	Bureau of Emergency Communications
CAD	Computer Aided Dispatch
CCTV	Closed Circuit Television
CO	Communications
DMS	Dynamic Message Sign
EM	Emergency Management
EOC	Emergency Operations Center
ES	Eugene-Springfield
FHWA	Federal Highway Administration
GIS	Geographical Information System
H	High Priority
HAR	Highway Advisory Radio
IDAS	ITS Deployment Analysis System
IM	Information Management
ITS	Intelligent Transportation System
L	Low Priority
LCOG	Lane Council of Governments
LTD	Lane Transit District
M	Medium Priority
MC	Maintenance & Construction Management
MDT	Mobile Data Terminal
MP	Milepost
MPC	Metropolitan Policy Committee
NWTOC	Northwest Transportation Operations Center
O&M	Operations and Maintenance
ODOT	Oregon Department of Transportation
PAN	Public Agency Network
PTM	Public Transportation Management
RTP	Regional Transportation Plan
RWIS	Road Weather Information System
SOS	Stadium Operaitons and Security
STIP	Statewide Transportation Improvement Plan
TOC	Transportation Operations Center
TPC	Transportation Planning Committee
TM	Travel & Traffic Management
TMA	Transportation Management Area
UO	University of Oregon
VMT	Vehicle Miles Traveled
WSDOT	Washington Department of Transportation

CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

MPO

Moving Transportation into the Future

APPENDIX F

Environmental Coordination

Appendix F: Information Developed for Environmental Coordination Requirements of SAFETEA-LU §6001

Note that the Environmental Consultation Maps are available at:
www.thempo.org/rtp

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Introduction

The maps produced for this consultation superimpose transportation projects from the long range plan of the Central Lane Metropolitan Planning Organization (MPO) (2040 RTP) on top of environmental, cultural, and social data collected from other sources over the time period January – July 2016. The intent is to provide a scan that will enable potential issues relating to future transportation projects to be identified and explored prior to costing, alignment and other decisions that must be made during project development. The alignments and extents of the projects from the 2040 RTP are only approximate at this stage. Refinements would be typically made during project development.

The MPO maintains the transportation database only; all other data are created and maintained by the source agencies. To the best of our knowledge, these data bases are up to date as of July 2016. If there is an error found in the display or implementation of any of the data bases, we request that you contact the MPO with your observations. Errors or omissions in the data per se can only be updated by the source agencies.

I. Base data

1. Context

The Central Lane Metropolitan Planning Organization (MPO) is located in the southern end of the Willamette Valley in Lane County, Oregon. The MPO contains the areas within the urban growth boundaries of the cities of Eugene, Springfield and Coburg, as well as surrounding rural lands. Under federal law, the MPO boundary is based on the urbanized area defined in the most recent Census. Since the population within this boundary exceeds 200,000, the MPO is a Transportation Management Area (TMA), and thus directly receives Federal Surface Transportation - Urban (STP-U) funds for funding transportation projects. It is the second largest MPO in Oregon, behind Portland Metro. The TMA contains 86% of jobs and 60% of the population of Lane County.

Lane Council of Governments (LCOG) was appointed by the Governor as the MPO for this area. The policy board of the MPO consists of elected representatives from Lane County, City of Eugene, City of Springfield, and City of Coburg, and appointed representatives from Oregon Department of Transportation (ODOT), and Lane Transit District (LTD).

The MPO is located at the base of the foothills of the Cascades and just east of the Coast Range at elevation of about 450 feet. It lies within the Willamette River Basin near the confluences of the McKenzie River with the main stem of the Willamette River, and the confluence of the Coast and the Middle Forks of the Willamette. The area is mostly flat with the occasional volcanic butte, and is edged by the South Hills. The climate is one of cool, wet winters and warm, dry summers. Rainfall is about 45 inches per year, falling mostly from October through May.

The historic landscape of the area was a diverse combination of wet prairie, wetlands and ash swales on the valley floor, upland prairie, oak and pine savannas, and oak/fir woodlands on the thinner soils of the foothills, with floodplain forests along the major rivers. Poorly drained clay soils in the valley bottoms held standing water for many months during winter, and the rivers and creeks frequently flooded.

In addition to the impact of the floods, landscape diversity was maintained by the Kalapuya peoples who burned the prairies and savannas to enhance camas production and grasses for the deer and elk herds. This practice maintained the biodiversity and kept the firs from encroaching. White settlement began in 1840's and in 1846 Eugene Skinner settled in what would become the City of Eugene. The early settlers turned the open prairies and savannas into farmlands, and tiled and drained wet areas. As the Kalapuya were displaced, annual burning ceased, and fir forests became established in the foothills replacing much of the oak woodland and savannas. It is estimated that over 99% of the historic prairie has been lost.

The Willamette Basin Project in the 1940's built dams on the Willamette River (Fall Creek, Dexter and Lookout Point) and the Long Tom River (Fern Ridge Reservoir), as well as in the upper McKenzie River basin. This has greatly diminished the frequency and size of floods, and has allowed control of river levels. Revetments prevent river meanders, and the logging of large trees within the riparian floodplain forest has reduced the recruitment of large woody debris. Together, all these factors have simplified the rivers and reduced the off-channels habitat that once supported the rearing of fish.

Environmental issues in the MPO area today primarily revolve around wetland impacts. A number of endangered and threatened species have been protected in the West Eugene Wetlands, and the City operates a wetland mitigation bank located inside the MPO area. USFWS has designated

critical habitat areas for three listed species (2 plants, 1 butterfly) associated with wet prairie habitats. Other significant concerns include stormwater discharge into the Willamette and McKenzie Rivers and tributaries with potential impact on the listed fish species. Interest in preserving and restoring upland prairie and oak savanna habitats is increasing within the community.

Data Sources:

Willamette River Basin Planning Atlas. Trajectories of Environmental and Ecological Change. Pacific Northwest Ecosystem Research Consortium. 2002. OSU Press.

City of Eugene, Parks and Open Space, West Eugene Wetlands:

http://www.eugene-or.gov/portal/server.pt?space=CommunityPage&cached=true&parentname=CommunityPage&parentid=7&in_hi_userid=2&control=SetCommunity&CommunityID=667&PageID=1506)

2. 2040 Regional Transportation Plan Construction Projects

The MPO's federal Regional Transportation Plan (RTP) contains a list of transportation projects that are expected to be constructed within the MPO by the horizon year 2040. The project list is developed by the MPO partner agencies: Lane County, the Cities of Eugene, Springfield and Coburg, the Oregon Department of Transportation (ODOT), and Lane Transit District (LTD). The Willamalane Parks and Recreation District also contributes projects. The MPO itself conducts planning, and does not construct projects.

The projects are primarily drawn from these partners' long range plans (including Transportation System Plans, modal components of the Oregon Transportation Plan, LTD and Willamalane strategic plans and others). There are two sets: the "fiscally constrained" list contains projects for which the anticipated cost is reasonably expected to be covered by identified sources and strategies, and the "future" (or "illustrative") list which contains projects for which no funding source is yet identified. Fiscally constrained projects are the most likely to be built.

Each list is further divided into Roadway Projects, Transit Projects, and Bike/Pedestrian Projects. Planning projects are not required to be included. The list also does not include pavement resurfacing, bridge replacement, or safety projects that arise due to unanticipated circumstances.

This map shows all construction projects listed in the RTP, excluding transit projects that are highly unlikely to require new right-of-way or lane construction, and bike/pedestrian projects that occur on existing roadways. The former includes new stops, shelters, and new bus service utilizing operational enhancements only. The latter includes striping of bike lanes.

Most projects on the list will occur on existing roadways. Some new alignments are listed and are categorized on the maps as "Off-Street Bike/Ped", "New Arterial Link", and "New Collector". A "New Interchange" would likely be built on an existing road, but would require expanded right of way, as would "Added Freeway Lanes/Major Interchange Improvements". The locations shown for the projects at this time are approximate only. *During project-level planning and development, more intensive study of the area is made and alignments or project extents can change in order to avoid or minimize impact to environmental, cultural or social resources.*

The numbers on each mapped project refer to the RTP project id (identification). The description for each project can be located using this id by referring to the lists published on the MPO's RTP web

site:www.thempo.org/rtp. These numbers are removed from all the other maps in this consultation to improve readability.

3. Federal Functional Class of Roadways

Roadways are classified as to the type of service intended and the amount of traffic they carry or will carry. Functional classification is used to determine the design standards, and also determines federal aid eligibility (federal funds cannot be used on "local roads" or "rural minor collectors"). Federal functional classification is assigned using federal guidelines, and is approved by Federal Highways Administration (FHWA). After each decennial census, the MPO consults with its partner agencies and submits updates to ODOT so as to include new roadways and reflect changes in use. Updates can also occur during interim years. This map shows the latest classifications within the Central Lane MPO.

In urbanized areas, the principal arterial system usually carries 40-65% of vehicles miles traveled (VMT); principal plus minor arterial system carries 65-80% VMT; collector street system 5-10% VMT, and local street system 10-30% VMT. In rural areas, VMT distribution is somewhat different with greater reliance on rural collectors.

Data Sources:

LCOG: Centerline Data Base, 2011.

Oregon Department of Transportation, Transportation Development – Transportation Data:
http://www.oregon.gov/ODOT/TD/TDATA/rics/FunctionalClassification.shtml

FHWA Functional Classification guidelines:
http://www.fhwa.dot.gov/planning/fcsec1_1.htm

II. Socioeconomic/Cultural Data

The MPO is required to consider the impact that projects may have on minority and low-income populations in consideration of environmental justice issues. In addition, elderly and disabled populations, zero car households, and limited English proficiency are also considered. The 2005-2009 American Community Survey has been used to obtain the majority of the demographic data for this mapping. Disability data are not available from the 2005-2009 American Community Survey data set due to changes in the disability questions in 2008. As a result, Census 2000 information has been used. (Note: at the time of the issuance of these maps, 2010 Census information is not available at the block group level, the geography used for mapping this socioeconomic data). Block groups generally contain between 600 and 3,000 people with an optimum size of 1,500 people, so that in rural areas, block groups tend to be large in area with low population density while in urban areas, block groups are smaller in area with more concentrated populations. For this analysis, all block groups intersecting the MPO boundary were considered.

4. Household Poverty Concentration

Within the MPO, slightly more than 18 percent of all households reported being in poverty status in the past 12 months. Poverty statistics in ACS products adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty.

In determining the poverty status of families and unrelated individuals, the Census Bureau uses thresholds (income cutoffs) arranged in a two-dimensional matrix. The matrix consists of family size

(from one person to nine or more people) cross-classified by presence and number of family members under 18 years old (from no children present to eight or more children present). Unrelated individuals and two-person families are further differentiated by age of reference person (RP) (under 65 years old and 65 years old and over).

To determine a person's poverty status, one compares the person's total family income in the last 12 months with the poverty threshold appropriate for that person's family size and composition (see example below). If the total income of that person's family is less than the threshold appropriate for that family, then the person is considered "below the poverty level," together with every member of his or her family. If a person is not living with anyone related by birth, marriage, or adoption, then the person's own income is compared with his or her poverty threshold. The total number of people below the poverty level is the sum of people in families and the number of unrelated individuals with incomes in the last 12 months below the poverty threshold.

Since ACS is a continuous survey, people respond throughout the year. Because the income questions specify a period covering the last 12 months, the appropriate poverty thresholds are determined by multiplying the base-year poverty thresholds (1982) by the average of the monthly inflation factors for the 12 months preceding the data collection. See the table in Appendix A titled "Poverty Thresholds in 1982, by Size of Family and Number of Related Children Under 18 Years (Dollars)," for appropriate base thresholds.

Under this methodology, the 2009 (as of December 2009) poverty status for a family of four with two children under 18 years old is $21,698

This map shows the distribution of these populations overlaid with the RTP projects. The block groups were arranged in descending order of the percent of households in poverty within the block group. The darker the color is, the greater the density of poor households.

The actual distance of a low income household from a particular project cannot be deduced from this map, since there is no information in the census data as to the location of the household within the block group. However, due to the density, the likelihood of impact is greatest in the darkest areas on this map.

Data Sources:

American Community Survey, 2005-2009. Table B17017, Sequence Number 50: POVERTY STATUS IN THE PAST 12 MONTHS BY HOUSEHOLD TYPE BY AGE OF HOUSEHOLDER:

http://www.census.gov/main/www/cen2000.html

U.S. Census Bureau, Household Income and Persons Below Poverty:

http://quickfacts.census.gov/qfd/meta/long_IPE120204.htm

5. Senior Citizen Population Concentration

This map utilizes 2005-2009 American Community Survey block group data to map elderly population concentrations within the MPO. For this analysis "senior citizen" was assumed to consist of persons 65 years and older. Within the MPO, slightly more than 12 percent of the population was senior citizen. As was done for the Household Poverty mapping, block groups with the highest percent of elderly population were mapped in the darkest color.

Data Source:

American Community Survey, 2005-2009. Table B01001, Sequence Number 10: SEX BY AGE::
http://www.census.gov/main/www/cen2000.html

6. Minority Population Concentration

This map utilizes 2005-2009 American Community Survey block group data to map minority population concentrations within the MPO. For this analysis, "minority" was defined to be all persons who identified themselves as non-white or Hispanic. Within the MPO as a whole, approximately 14.9% percent of the population belongs to a minority group. As was done for the Household Poverty mapping, block groups with the highest percent minority population were mapped in the darkest color.

Data Source:

American Community Survey, 2005-2009. Table B03002: HISPANIC OR LATINO ORIGIN BY RACE
http://www.census.gov/main/www/cen2000.html

7. Disabled Population Concentration

This map utilizes Census 2000 block group data to map disabled population concentrations within the MPO. For this analysis, "disabled" was defined to be all civilian non-institutionalized persons 5 years and older. Within the MPO as a whole, 18 percent of the population was identified as disabled. As was done for the Household Poverty mapping, block groups with the highest percent disabled population were mapped in the darkest color.

Data Source:

U.S. Census Bureau, Census 2000. Summary file SF3, table P42: Sex by Age by Disability Status by Employment Status for the Civilian Non-institutionalized Population 5 Years and Over:
http://www.census.gov/main/www/cen2000.html

8. Zero Car Household

These data show the number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for non-business purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are excluded.

The availability of vehicles provides information for numerous transportation programs; specifically, the absence of a vehicle available to household helps to identify those households that rely on alternative modes of transportation for their mobility needs, including transit, biking, and walking.

As was done for the Household Poverty mapping, block groups with the highest percent of households without access to a vehicle were mapped in the darkest color.

Data Source:

U.S. Census Bureau, Census 2000. Summary file SF3, table H44. TENURE BY VEHICLES AVAILABLE [15] - Universe: Occupied housing units
http://www.census.gov/main/www/cen2000.html

9. Limited English Proficiency

Respondents who reported speaking a language other than English were asked to indicate their English-speaking ability based on one of the following categories: "Very well," "Well," "Not well," or "Not at all." Respondents were not instructed on how to interpret the response categories in Question 14c. The map depicts those areas with a higher concentration of speakers who indicated that they spoke English less than "Well".

The data on ability to speak English represent the person's own perception about his or her own ability or, because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member. Respondents were not instructed on how to interpret the response categories in Question 14c.

People who reported that they spoke a language other than English at home, but whose ability to speak English was not reported, were assigned by the Census the English-language ability of a randomly selected person of the same age, Hispanic origin, nativity and year of entry, and language group.

People who use English as a second language come from a variety of lingual and cultural backgrounds. The Census groups these languages into three primary collectives including 'Spanish', 'Other Indo-European' language, and 'Asian and Pacific Island' languages. There is an additional category for Other. In both Lane County and the TMA areas, Spanish is the predominant second language to English. Asian and Pacific languages were spoken slightly more than Other Indo-European languages.

As was done for the Household Poverty mapping, block groups with the highest percent limited English proficient speakers were mapped in the darkest color.

Data Source: American Community Survey, 2005-2009. Table B16004, Sequence 42: AGE BY LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER

10. Communities of Concern

Transportation disadvantaged citizens are those who because of physical or mental disability, income status, or age are unable to go where they need or want to and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities. This includes children. Disadvantaged status is multi-dimensional. Disadvantaged status evaluation should take into account the degree and number of these factors that apply. The greater their degree and the more factors that apply, the more disadvantaged an individual or group can be considered. Block groups with the highest number of potential disadvantages were mapped in the darkest color.

This map displays American Community Survey 2005-2009 or Census 2000 block groups for which a number of attributes (minority, poverty, disabled, elderly, no cars. Limited English Proficiency) exceed the MPO average.

Data Source: Same as Items 4 through 9 above.

11. National Register Historic Districts and Historic Properties

There are five National Register Historic Districts within the Central Lane MPO boundary.

- Coburg Historic District
- East Skinner Butte Historic District, Eugene

- Eugene Blair Boulevard Commercial Historic District
- Washburne Historic District, Springfield
- Dorris Ranch, Springfield

There are 70 National Register Historic Properties within the Central Lane MPO boundary, including Coburg, Eugene, Springfield and portions of Lane County. See Appendix for list.

In Oregon the National Register program is administered by the Oregon State Historic Preservation Office (SHPO). In some localities, which the National Park Service has designated Certified Local Governments (CLGs), the local government also manages aspects of the National Register program.

Eugene is a Certified Local Government, so the City's Historic Preservation Program is responsible for nominating local properties to the National Register and for monitoring compliance with regulations placed on Register properties. The S-H Historic Zoning designation is used selectively to help ensure the conservation of historic properties in Eugene. Before a property can receive the S-H Historic zoning designation it must first be designated as a City Landmark or be listed in the National Register of Historic Places. Eugene also regulates Heritage Trees in the rights-of-way and prohibits removal of trees for street widening within the historic city limits of 1915.

Springfield's Landmark Inventory consists of individual historic resources that the City of Springfield has determined, through historic resource surveys and subsequent additional research, have one or more characteristics of citywide, statewide, or national significance for their historic, cultural, archaeological, or architectural merit. Currently, there are 11 resources on the Landmark Inventory. All resources on the Landmark Inventory are subject to the Historic Overlay District regulations contained in the Springfield Development Code.

Data Sources:

Oregon Parks & Recreation Department, Heritage Programs: National Register:

http://www.oregon.gov/OPRD/HCD/NATREG/

National Register of Historic Places:

http://www.nationalregisterofhistoricplaces.com/OR/Lane/districts.html

City of Eugene, Planning and Development. Historic Preservation:

http://www.eugene-or.gov/portal/server.pt?space=CommunityPage&cached=true&parentname=CommunityPage&parentid=0&in_hi_userid=2&control=SetCommunity&CommunityID=318&PageID=0

City of Springfield, City Landmark Inventory

http://springfield-or.gov/dsd/Planning/hcommission/Site%26Bldgs/LandmarkInv.html

Staff Sources:

Julie Osborne, SHPO Preservation Specialist; Petra Schuetz, Coburg Planner; Kelly Whitmill, Lane Use & Planning Counter Specialist, City of Eugene

III. Environmental Quality

12. Air Quality

An MPO must make an air quality conformity determination for all regional transportation plans (RTPs) and all transportation improvement programs (TIPs) where an air quality management area

has been defined and transportation sources have been identified as significant contributors to air pollution. USEPA, USDOT, and Oregon regulations describe the requirements.

In the Central Lane MPO area, an air quality management area (AQMA) was defined for carbon monoxide (CO) in 1980 and a transportation CO budget was established for a sub-area, the Eugene central business district. In 1993, the area was designated as in attainment of the national ambient air quality standards (NAAQS) for CO, and is now designated as a "maintenance area" for CO. There has not been a violation since 1980, and monitored data shows a steady decline in measured CO to almost background levels. There are no transportation control measures specified in the State Implementation Plan (SIP). Projects must comply with Lane Regional Air Protection Agency's Indirect Source rules (Title 20) prior to construction. Hot spot analyses are required for project-levels conformity. These studies are carried out by the agencies managing the project.

The Eugene-Springfield region was designated as a non-attainment area for PM 10 (particulate matter, 10 microns and less) in 1987. Analyses of sources revealed that home wood heating was the major source of this pollution. Emissions from motor vehicles were found to be insignificant. Transportation conformity is thus not required for PM10. Hot spot analyses are required.

Data Sources:

State Implementation Plans (SIPS), U.S. EPA Region 10:
http://yosemite.epa.gov/R10/AIRPAGE.NSF/webpage/SIP+-+General+Page

Transportation Air Quality Conformity, Central Lane MPO:
http://www.thempo.org/what_we_do/clean_air.cfm

Lane Regional Air Protection Agency. Title 20, Indirect Source rules:
http://www.lrapa.org/rules_and_regulations/title_20-Indirect_Sources.php

13. Environmental Cleanup Sites

This map shows the location where a release of hazardous substances has been documented as of April 21, 2011, and where, based on DEQ on-line data bases, a certificate of "No further action" has not yet been issued. The release sites are numbered using the ID provided within the DEQ data base referenced below. These sites can be entered into the search form for the ECSI Inventory to obtain further details.

The locations shown on the map are those of the actual release addresses. However, contamination may be spread over an area. In particular, ***Site 312*** (Eugene) refers to the Union Pacific Railroad – Eugene Yards. A ground water contamination plume has been mapped in this area. (See the Appendix for a map). ***Site 1713*** (Springfield) refers to the Weyerhaeuser mill site. A ground water contamination plume was detected in this area, with ongoing remedial action of ground water monitoring, maintenance and operation of the groundwater treatment system located at the SUB/Rainbow Water District well field.

Also shown on this map are leaking underground storage tanks (LUSTs) where releases of petroleum products have been reported through April 2001. These sites are numbered according to the DEQ LUST data base.

Finally, the map also depicts EPA-listed Treatment, Storage, Disposal facilities under the RCRA program, as well as EPA Brownfield Program sites.

Data Sources:

Oregon Department of Environmental Quality, Land Quality, Environmental Cleanup:

http://www.deq.state.or.us/lq/ecsi/ecsi.htm

Oregon Department of Environmental Quality, Environmental Cleanup, ECSI Search Form:

http://www.deq.state.or.us/lq/ecsi/ecsiquery.asp?listtype=ecsiinv.asp&listtitle=Inventory

Oregon Department of Environmental Quality, Land Quality, Leaking Underground Storage Tank (LUST) Program:

http://www.deq.state.or.us/lq/tanks/lust/index.htm

Oregon Department of Environmental Quality, Tanks, LUST Cleanup Site Database:

http://www.deq.state.or.us/lq/tanks/lust/LustPublicLookup.asp

U.S. Environmental Protection Agency, Geospatial Data Access Project

http://www.epa.gov/enviro/geo_data.html

14. Toxic Release Inventory Permitted Sites

The source for this data is the EPA Geospatial Data Download Service website which contains information about facilities or sites subject to environmental regulation, including the Toxic Release Inventory System.

Data are retrieved from EPA source databases and posted to the EPA Geospatial Data Download Service at various intervals. The information was collected through August 2, 2011.

Data Source:

U.S. Environmental Protection Agency, Geospatial Data Download Service

http://www.epa.gov/enviro/geo_data.html

IV. Waterways and Water Quality

15. DEQ 303d listed Streams and Southern Willamette Valley Groundwater Management Area

SWV Groundwater Management Area

Groundwater in the Willamette Valley between Eugene and Albany shows signs of contamination by human activities. Oregon Department of Environmental Quality (DEQ) declared a Groundwater Management Area (GWMA) on May 10, 2004 because of high concentrations of nitrate in the water. Oregon law requires that DEQ declare a groundwater management area when there is confirmation of nitrate contamination in the groundwater above 7.0 milligrams per liter (mg/L) and the suspected sources of nitrate are not facilities with permits, such as landfills or incinerators.

The Southern Willamette Valley Groundwater Management Area (GWMA) Action Plan has been finalized and will now serve to guide activities aimed at reducing nitrate contamination in the area's groundwater. The Action Plan is available at the following website:
http://gwma.oregonstate.edu/sites/default/files/documents/GWMAActionPlan.pdf

Data Sources:

Southern Willamette Valley Groundwater Management Area:

http://www.deq.state.or.us/wq/groundwater/swvgwma.htm

LCOG: G:\projects\DEQ\GWMA_06

DEQ 303d listed Streams

Every two years, DEQ is required to assess water quality and report to EPA on the condition of Oregon's waters. DEQ prepares an integrated report that meets the requirements of the federal Clean Water Act (CWA) for Section 305(b) and Section 303(d).

- CWA Section 305(b) requires a report on the overall condition of Oregon's waters.
- CWA Section 303(d) requires identifying waters that do not meet water quality standards where a Total Maximum Daily Load (TMDL*) needs to be developed.

The Integrated Report includes an assessment of each water body where data are available, and the list of waters identified under Section 303(d) as water quality limited needing a TMDL.

DEQ completed an Integrated Report in May 2006 that was reviewed and approved by EPA in February 2007. The 2004/2006 Integrated Report Database contains the current and effective assessment information and 303(d) list. A draft 2010 Integrated Report has been released, but has not been approved by EPA as of the issuance of this analysis.

DEQ evaluated water quality data for Oregon's waters using the "decision rules" in the Assessment Methodology for Oregon's 2004/2006 Integrated Report on Water Quality Status. DEQ assigned an assessment status category to each water body where data were available to evaluate. Water bodies that do not meet water quality standards are Water Quality Limited and are assigned Category 4 or Category 5. Water bodies in Category 5 need pollutant Total Maximum Daily Loads (TMDLs) developed and comprise the Section 303(d) list.

Other Water Quality Limited Water Bodies

A water body in Oregon may be "water quality limited," but not included on the State's 303(d) List. This may occur because:

1. The segment has a TMDL approved by the EPA. Segments that have TMDLs established are removed from the 303(d) List but retain their Water Quality Limited status (per OAR 340-41-006(30)) until they meet water quality standards. Often TMDLs are developed on a watershed scale. All water bodies within these watersheds would be addressed by the TMDL and can be moved to the "TMDL Approved" category.

2. A pollutant does not cause the water body impairment. The EPA defines a pollutant according to Section 502(6) of the Clean Water Act. The DEQ previously placed water bodies on the 303(d) List based on habitat modification and flow modification. Habitat modification listings were based on information indicating inadequate pool frequency and lack of large woody debris. Flow modification listings were based on inadequate flow to maintain in stream water rights (IWR) purchased by Oregon Department of Fish and Wildlife. Because flow and habitat are not considered pollutants under the Clean Water Act, these water bodies can be removed from the 303(d) List and placed in the category "water quality limited but a pollutant does not cause the impairment."

Data Source:

Oregon Department of Environmental Quality, Water Quality Assessment:

http://www.deq.state.or.us/wq/assessment/assessment.htm

Staff Source:

Karla Urbanowicz, Oregon Department of Environmental Quality

TMDLs

A TMDL is the calculated pollutant amount that a waterbody can receive and still meet Oregon water quality standards. The Central Lane MPO Boundary intersects four subbasins as defined in the TMDL Order These subbasins are the Upper Willamette (portions of Long Tom and Muddy Creek Watersheds), McKenzie (Mohawk River and Lower McKenzie Watersheds), Middle Fork Willamette (Lower Middle Fork Willamette Watershed), and Coast Fork Willamette (Lower Coast Fork Watershed). See Map # 18 Watershed Boundaries and Stormwater Basins for these watershed boundaries.

The Willamette Basin TMDL Order was approved by the U.S. Environmental Protection Agency (EPA) on Sept. 29, 2006. The Willamette Basin TMDL Executive Summary and details about each subbasin can be found at: http://www.deq.state.or.us/wq/tmdls/willamette.htm#w

16. Navigable Rivers and Metro Waterways Study Areas

Navigable Rivers

The Corps of Engineers is mandated to maintain navigation channels and harbors in a safe, cost-effective, environmentally acceptable manner. The Portland District of the U.S. Army Corps of Engineers provides a list of "Navigable Riverways within the State of Oregon" dated October 1993. Portions of two rivers within the Central Lane MPO boundary are classified as Navigable Riverways. These include the McKenzie River from its confluence with the Willamette River up to approximately 1.2 miles downstream of Leaburg Dam, declared navigable by 9th Circuit Court decision in 1982, and the Willamette River up to 1 mile upstream of I-5 bridge.

Data Source:

Navigable Rivers within the State of Oregon, Portland District Corps of Engineers, October 1993:

https://www.nwp.usace.army.mil/op/g/docs/Navigable%20Waterways%20Within%20the%20State%20of%20Oregon.pdf

Metro Waterways Study Areas

The purpose of the ***Metro Waterways Study*** is to provide a better understanding of existing problems and opportunities related to area waterways and to identify solutions to improve their function. The U.S. Army Corps of Engineers, in partnership with the cities of Eugene and Springfield, Eugene Water & Electric Board, and Lane County, with the Bureau of Land Management as a Cooperating Agency (2009), has been conducting a multi-year study in the Eugene-Springfield metropolitan area and surrounding rural lands.

The first phase of the study has focused on the Amazon Creek watershed in the Eugene area and the Cedar Creek watershed in the Springfield area, based on local sponsor priorities. A *Draft Feasibility Report with Integrated Programmatic Environmental Assessment* is currently in review.

Data Source:

Metro Waterways: A Study of the Eugene-Springfield Metropolitan Region:

http://www.metrowaterways.org/

17. FEMA Flood Hazard

The Flood Zones depicted on this map are derived from the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Maps in the area of the Central Lane MPO. Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area. The label "100-year floodplain" denotes areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage as defined by FEMA. The areas labeled "Floodway" are river or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet.

Data Sources:

Federal Emergency Management Agency (FEMA):

http://www.fema.gov/

FEMA, Definitions of FEMA Flood Zone Designations:

http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations

18. Watershed Boundaries and Stormwater Basins

(For discussion of TMDLs—See Map #15)

The MPO area is located within the Willamette River Basin. It lies within the fifth field watersheds of the Long Tom River (17090301), the Mohawk River (17090402), the Lower Coast Fork Willamette River (17090205), the Lower McKenzie River (17090401), the Lower Middle Fork Willamette River (17090101), and Muddy Creek (17090302). In the developed areas, the stormwater system of pipes and drainage ditches can direct runoff across natural watershed boundaries to drain into a different river system. This map overlays the natural watershed boundaries with the storm drain basins of the cities of Eugene and Springfield.

In Eugene, sub-basins have been mapped and sub-basin plans are in place for the entire area within the urban growth boundary. The map shows the receiving water and the relevant plan for each sub-basin.

Springfield's stormwater drainage system has two major drainages, one that flows to the Willamette River, and one that flows to the McKenzie River. The City is further broken down into 15 separate subbasins. A drainage basin can be described as a geographic area within which stormwater drains from many small systems converging on larger drainageways, ultimately culminating in outfalls to rivers or major drainageways. The character and condition of the drainageways varies significantly throughout the basins, depending on surrounding land uses and contributing drainages.

Sanitary sewers: Eugene and Springfield have sewer systems that transport wastewater to the regional treatment plant located at 410 River Avenue, Eugene. Here wastewater is treated in four separate processes before being discharged into the Willamette River. The removed solids are treated and converted for use as compost or fertilizer for agricultural fields. The treatment plant cleans 30 million gallons of wastewater a day for more than 220,000 customers in the Eugene-Springfield area.

The City of Coburg does not have a sewer system and, currently, all wastewater is treated by septic tanks. Development of a decentralized waste water system (STEP-effluent sewer system) is underway: this will involve city-wide collection of septic tank outflow with wastewater treatment and effluent reuse. At the plant, a Membrane Bio-reactor (MBR) system will treat the waste water before it is released back into the environment. This system will result in Class A effluent, the highest level possible in the Oregon Department of Environmental Quality's effluent rating system. Most of this effluent will be used for irrigation.

Data Sources:

Oregon Spatial Data Library:

http://spatialdata.oregonexplorer.info/GPT9/catalog/main/home.page

Oregon Division of State Lands, Fourth and Fifth Field Hucs within State of OR:

http://www.oregon.gov/DSL/PERMITS/docs/huc5.pdf

City of Eugene, Stormwater Planning, Stormwater Basin Master Plans:

http://www.eugene-or.gov/portal/server.pt?open=514&objID=4250&parentname=CommunityPage&parentid=1&mode=2&in_hi_userid=2&cached=true

City of Springfield, Environmental Services Division, Stormwater Management Plan:

http://springfield-or.gov/ESD/StormwaterMasterPlan.htm

Metropolitan Wastewater Management Commission:

http://www.mwmcpartners.org/

City of Coburg, wastewater project:

http://www.coburgoregon.org/home/cob/smartlist_144/wastewater__project.html

V. Fish & Wildlife Habitat

The State of Oregon and the federal government maintain separate lists of Threatened and Endangered (T & E) species. These are species whose status is such that they are at some degree of risk of becoming extinct.

Under State law (ORS 496.171-496.192) the Fish and Wildlife Commission through ODFW maintains the list of native wildlife species in Oregon that have been determined to be either "threatened" or "endangered" according to criteria set forth by rule (OAR 635-100-0105) (pdf).

Plant listings are handled through the Oregon Department of Agriculture.
Most invertebrate listings are handled through the Oregon Biodiversity Information Center.

Under federal law the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration share responsibility for implementing the federal Endangered Species Act of 1973 (Public Law 93-205, 16 U.S.C. § 1531) (pdf), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous species. In addition to information about species already listed, the USFWS-Oregon Field Office maintains a list of Species of Concern.

Because of the number of Threatened and Endangered (T&E) Species that occur within the Central Lane MPO boundary, the set of maps concerning fish and wildlife habitats is designed to cover a range of issues. Map #19.1 shows Designated Critical Habitat for the three species of Federally-listed T&E species. The critical habitat for the species overlap in many cases, therefore to increase readability of the maps, the Essential Fish Habitat (distribution) data are shown on Map 19.2. Designated Critical Habitat

for non-fish (plant and animal) T&E species were shown on Map #20.1. Map 20.2 depicts current distribution and high quality habitat for these non-fish species. Map #21 includes available GIS data showing potential and current habitats for all federal and state species listed as threatened, endangered, sensitive, or species of concern. Map #22 shows the context for the Central Lane MPO environmental issues in the Oregon Conservation Strategy, both the Conservation Opportunity Areas and the Conservation Strategy Habitats. Map #23 depicts ODFW's fish barriers data.

19.1. Threatened & Endangered Fish-Critical Habitat

The Endangered Species Act (ESA) requires the Federal government to designate "critical habitat" for any species it lists under the ESA. Critical habitat is defined as:

1. Specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and
2. Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Federally listed Threatened & Endangered Fish species within the Central Lane MPO Boundary include:

- Chinook salmon (Upper Willamette River),
- Oregon chub
- Bull trout (Columbia River Basin).

Available recovery and conservation plans:

- Proposed Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead, October 22, 2010
  http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Willamette-Lower-Columbia/Will/Will-plan.cfm
- Oregon Chub (Oregonichthys crameri) Recovery Plan 09/03/1998
  http://ecos.fws.gov/docs/recovery_plans/1998/980903b.pdf
- Bull Trout -- U.S.A., conterminous, lower 48 states Draft Recovery Plan for Three of the Five Distinct Population Segments of Bull Trout (Salvelinus confluentus) 11/29/2002
  http://ecos.fws.gov/docs/recovery_plans/2002/021129.pdf

Data Sources:

NOAA National Marine Fisheries Service, ESA Critical Habitat:
http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm

U.S. Fish & Wildlife Service Critical Habitat Portal
http://criticalhabitat.fws.gov/crithab/

19.2. Threatened & Endangered Fish-Distribution

The Magnuson-Stevens Act mandates identification of essential fish habitat for managed species. The act also requires measures to conserve and enhance the habitat needed by fish to carry out their life cycles. The Magnuson-Stevens Act requires cooperation among NOAA Fisheries Service,

fishery management councils, fishing participants, federal and state agencies, and others in achieving EFH protection, conservation and enhancement.

Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The EFH guidelines further interpret the EFH definition as:

- Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate
- Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities
- Necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and
- "Spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle.

Essential fish habitat for Chinook and coho salmon was first established by the Pacific Fishery Management Council (Council) in 1999, in Appendix A to Amendment 14 of the Pacific coast salmon FMP (http://www.pcouncil.org/salmon/fishery-management-plan/adoptedapproved-amendments/amendment-14-to-the-pacific-coast-salmon-plan-1997/), and modified in 2008 as a result of the Idaho County versus Commerce court case.

The implementing regulations to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) as amended in 2007, require regional fishery management councils and the National Marine Fisheries Service (NMFS) to periodically review the essential fish habitat (EFH) provisions of their fishery management plans (FMPs), and to revise or amend those provisions as warranted, based on available information (50 CFR 600.815(a)(10)). A complete review should be conducted at least once every five years. The review has been started, but no changes have been made to EFH provisions at this time.

Data Sources:

NOAA National Marine Fisheries Service, Northwest Regional Office, Salmon Essential Fish Habitat:

http://www.nwr.noaa.gov/Salmon-Habitat/Salmon-EFH/maps-GIS.cfm

20. Federal and/or State listed Threatened and Endangered Species (non-fish)

Federally listed Threatened & Endangered plant and animal species (non-fish) within the Central Lane MPO Boundary:

Northern Spotted Owl*	T	*Also listed by the State of Oregon as Threatened
Fender's Blue Butterfly	E	
Oregon Silverspot Butterfly	T	
Bradshaw's desert-parsley	E	
Kincaid's Lupine	T	*Also listed by the State of Oregon as Threatened
Willamette Daisy	E	

Note: Although Northern Spotted Owl habitat does not occur within the MPO boundary, recent habitat occurs just outside the boundary and is included in the map.

USFWS has designated Final Critical Habitat (CH) for Fender's Blue Butterfly, Kincaid's Lupine, and Willamette Daisy.

- Approximately 484 acres of Fender's Blue Butterfly Critical Habitat exist within the MPO boundary in the West Eugene wetlands area, next to approximately 200 acres which lie outside the boundary to the northwest. Approximately 54 acres of Fender's Blue Butterfly CH lie in the Coburg Hills approximately 1.2 miles from the MPO boundary to the northeast.
- In contiguous or overlapping locations, approximately 140 acres of Kincaid's Lupine exist within the MPO boundary, next to approximately 65 acres outside the boundary to the northeast.
- Approximately 378 acres of Willamette Daisy Critical Habitat lie within the MPO boundary in West Eugene wetlands, near approximately 38 acres outside the boundary to the southwest in the Coyote Creek watershed.

USFWS has also designated Critical Habitat for Oregon Silverspot Butterfly. The data used is a preliminary dataset that has not be finalized by the authoritative FWS field office.

Available recovery and conservation plans:

- Bradshaw's desert-parsley , Willamette daisy, Kincaid's Lupine, and Fender's blue butterfly:

  Final Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington
  http://www.fws.gov/oregonfwo/Species/PrairieSpecies/Documents/PrairieSpeciesFinalRecoveryPlan.pdf
- Northern spotted owl (OR, WA, CA) (Not within Central Lane MPO Boundary)
  Revised Recovery Plan for the Northern Spotted Owl

  http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Recovery/Library/Documents/RevisedNSORecPlan2011.pdf
- Revised Recovery Plan for the Oregon Silverspot Butterfly (Speyeria zerene hippolyta)
  http://ecos.fws.gov/docs/recovery_plans/2001/010822.pdf

Data Sources:

U.S. Fish & Wildlife Service Threatened and Endangered Species System (TESS):
http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=OR&status=listed

U.S. Fish & Wildlife Service Critical Habitat Portal:

http://crithab.fws.gov

LCOG: G:\projects\onhp\OHNP2005

21. Federal & State Threatened & Endangered Species, Sensitive Species, and Species of Concern

This map includes all listed species, Federal and State, which occur or potentially occur in the Central Lane MPO area. See Appendix for the Oregon Sensitive Species list and USFW Federally Listed Threatened, Endangered, Candidate Species of Concern which may occur in the area of the Central Lane MPO.

Data Sources: Same as Maps #20.1 and 20.2.

22. Oregon Conservation Strategy

ODFW's Wildlife Conservation Strategy is an ambitious effort to synthesize the best available data, science, and knowledge into a broad vision and conceptual framework for long-term conservation of Oregon's native wildlife (including fish, wildlife (vertebrates and invertebrates) and plants.) It incorporates information and insights from a broad range of natural resources assessments and conservation plans, supplemented by the professional expertise and practical experiences of a cross-section of Oregon's resource managers and conservation interests.

The Conservation Strategy follows a "coarse filter" (habitat) – "fine filter" (species) approach to conservation planning. Conservation actions focused on the maintenance of natural habitats are likely to benefit a wider range of organisms than conservation actions developed for single species. It is the best way to maintain diverse and healthy wildlife communities. In addition, conserving larger areas of terrestrial or freshwater habitat preserves system-wide ecological processes critical to the viability of the ecosystems and the survival of wildlife species inhabiting them. These services benefit people as well. Strategy Habitats are the "coarse filters."

Species dependent on multiple habitats at different times during their life cycle, those that occur in a small geographic area, those with highly specialized needs, or those that travel across a large geographic area may require special attention. To ensure that the needs of "low and declining species" were addressed, Strategy Species include rare and/or at-risk fish, wildlife, invertebrates, and plants. Strategy Species are the "fine filters." In addition, the Conservation Strategy examines vulnerable animal concentrations and "Specialized and Local Habitats" that address particular landscape features. Used together, this "coarse filter/fine filter" approach is designed to best account for a wide variety of species and habitats in need of conservation attention.

Data Source:

Oregon Department of Fish and Wildlife (Wildlife Division) Conservation Strategy for Oregon:
http://www.dfw.state.or.us/conservationstrategy/contents.asp

23. Barriers to Fish Passage

This dataset depicts passable and impassable barriers to native migratory fish. Data from multiple agencies have been compiled into this standardized dataset that is stewarded by ODFW. Separate datasets exist for current barriers and removed / replaced barriers. Barrier types including dams, culverts, hatchery facilities and related structures, and the set of features described as cascades, gradient, velocity are represented in the dataset.

Data Source:

Oregon Department of Fish and Wildlife Natural Resources Information Management Program:
http://nrimp.dfw.state.or.us/nrimp/default.aspx?pn=fishbarrierdata

VI. Land Use/Planning

24. Comprehensive Plans

Currently, three comprehensive plans guide land use within the Central Lane MPO boundary. The jurisdictional plans cover Coburg, Eugene/Springfield Metropolitan Area, and Lane County.

Data Source:

LCOG: X:\data\boundary\plans\mtpds

25. Goal 3 & 4 Farm and Forest Lands

Properties that would potentially require goals exceptions are designated agricultural or forest resource lands. Goals 3 and 4 apply to lands outside of urban growth boundaries.

Data Source:

LCOG: X:\data\boundary\plans\lcpds

26. Goal 5 Natural Resources

Coburg, Eugene, and Springfield have designated Goal 5 natural resource areas, and Lane County takes the Safe Harbor approach to Goal 5 natural resource protection.

Within and outside the city limits of Eugene, the West Eugene Wetlands are recognized as a protected resource. Eugene has also designated other Goal 5 wetlands, as well as riparian and upland resources. In, 2005, the Eugene City Council adopted and applied the /WR Water Resources Conservation Overlay Zone measures to implement Statewide Planning Goal 5 inside Eugene city limits. The provisions went into effect on January 1, 2006. In 2006, the Lane County Board of Commissioners adopted Ordinance No. PA 1234, adopting the /WR Water Resources Conservation Overlay Zone and applying it to 463 tax lots between the Eugene city limits and the urban growth boundary. The new provisions went into affect in January 2007.

Springfield has designated Goal 5 uplands and wetlands, and has defined specific buffering formulas for protecting Goal 5 riparian resources. Coburg has designated Goal 5 wetlands. Lane County does not have a Local Wetland Inventory; therefore the map depicts the National Wetland Inventory for Lane County areas outside of UGBs. The safe harbor riparian areas within Lane County but outside the Metropolitan Plan boundary and outside the Coburg UGB are shown as designated buffer widths on fish-bearing streams.

For more information on protection status of Eugene Goal 5 resources:
http://www.eugene-or.gov/portal/server.pt?open=514&objID=4111&qid=32559554&rank=1&parentname=SearchResult&parentid=13&mode=2&in_hi_userid=2&cached=true

Springfield resources: http://www.ci.springfield.or.us/dsd/Planning/index.htm

Coburg resources:
http://www.coburgoregon.org/home/cob/smartlist_35/coburg_planning_department.html

Lane County resources: http://www.lcog.org/metro/default.htm#metdoc

Data Sources:

U.S. Fish & Wildlife Service Branch of Habitat Assessment Wetlands Information:
http://wetlandsfws.er.usgs.gov

LCOG, City of Eugene, City of Springfield, City of Coburg.

27. Goal 15 Greenway – Recreation and Conservation Lands

Lands protected by Section 4(f) include publicly-owned parks, recreation areas, and wildlife and waterfowl refuges. There are no National Wildlife Refuges within or near the MPO boundary. Federal restrictions apply to Land & Water Conservation Funds properties owned by the USDA BLM. State land use Goal 15 protections apply to the Willamette River Greenway. Privately-owned conservation lands (The Nature Conservancy and McKenzie River Trust) are included to show context of other wildlife conservation habitat.

Data Sources:

U.S. Department of Agriculture Forest Service Lands and Realty Management:

http://www.fs.fed.us/land/staff/LWCF/

U.S. Department of the Interior National Park Service Land & Water Conservation Fund:

http://www.nps.gov/ncrc/programs/lwcf/

McKenzie River Trust:

http://www.mckenzieriver.org/

The Nature Conservancy:

http://www.nature.org/wherewework/northamerica/states/oregon/

LCOG: X:\data\parcel\taxlot

28. Soils

The most recent NRCS Lane County Soil Survey data are shown. This map represents general soil map units which typically consist of one or more major soils and some minor soils.

Data Sources:

U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey:

http://soils.usda.gov/survey

LCOG: X:\data\natural\soils\NRCS_Soils

29. Natural Hazards – Seismic Zones

These data are from the Oregon Department of Geology and Mineral Industries series "Relative Earthquake Hazard Maps for Selected Urban Areas in Western Oregon."

Data Source:

Oregon Department of Geology and Mineral Industries, Earthquakes and Other Natural Hazards in the Pacific Northwest:

http://www.oregongeology.com/sub/earthquakes/earthquakehome.htm

VII. Wetlands

30. Wetlands—West Eugene Wetlands, LWI, NWI

Local Wetlands Inventories (LWIs) are comprehensive maps and information about wetlands throughout a city which are approved by Oregon DSL. The LWIs replace the National Wetlands Inventory (NWI) in urban areas. An LWI aims to map all wetlands at least 0.5 acres or larger at an accuracy of approximately 25 feet on a parcel-based map. Actual map accuracy varies, and areas that could not be field verified will be less accurate. (The LWI is not a substitute for a detailed delineation of wetland boundaries.)

Note: For more information about protection status of wetlands or significant wetlands, refer to individual cities: http://www.eugene-or.gov/portal/server.pt?open=17&objID=15757&parentname=CommunityPage&parentid=14&mode=2&in_hi_userid=2&cached=true
http://www.ci.springfield.or.us/dsd/Planning/index.htm
http://www.coburgoregon.org/home/cob/smartlist_35/coburg_planning_department.html

Data Sources:

Oregon Department of State Lands Wetlands Program:

http://statelands.dsl.state.or.us/DSL/WETLAND/index.shtml

31. Wetland Mitigation Bank Service Areas

The Central Lane MPO Boundary overlaps eight existing Mitigation Bank Services Areas: Wilbur, City of Eugene, Evergreen, Muddy Creek, Mid Valley, Long Tom, Coyote Prairie North and Oak Creek.

Data Sources:

Oregon Department of State Lands Mitigation Banks Status Report and Contact Information:

http://www.oregon.gov/DSL/PERMITS/mitbank_status.shtml

Staff Sources:

Dana Field, Department of State Lands

32. Wetland Mitigation Bank—Existing Sites

Existing mitigation sites in or nearest to the Central Lane MPO boundary are West Eugene (over 200 ac.), Coyote Prairie North (approx. 165 acres), and Long Tom (approx. 135 acres) Another Mitigation Bank in progress is the Oregon Trail Heritage Bank near Junction City.

These banks may have various elevation limits within their service area.

Data Sources:

Oregon Department of State Lands Mitigation Banks Status Report and Contact Information:

http://www.oregon.gov/DSL/PERMITS/mitbank_status.shtml

Staff Sources:

Dana Field, Department of State Lands

Trevor Taylor and Paul Gordon, City of Eugene

APPENDIX

11. National Register Historic Districts and Historic Properties

Coburg Historic District
(added 1986 - **Lane County** - #86000036)
Also known as **See Also: Mathews, Nelson and Margaret, House**
Roughly bounded by Van Duyn Road, Diamond and Miller Streets, Dixon Street and Tax lots 1700 and 201, and Bottom Loop Road, Coburg
(1364 acres, 99 buildings)

Dorris Ranch
(added 1988 - **Lane County** - #88000724)
South Second Street at Dorris Avenue, Springfield
(1090 acres, 5 buildings, and 1 structure)

East Skinner Butte Historic District
(added 1982 - **Lane County** - #82003732)
Pearl and High Streets, and 2nd and 3rd Avenues, Eugene
(100 acres, 27 buildings)

Eugene Blair Boulevard Historic Commercial Area
(added 1993 - **Lane County** - #93000928)
Also known as **Blair Island; See Also: Hayse Blacksmith Shop**
Blair Boulevard between West 3rd and West 5th Avenues, including Van Buren Street between Blair and West 3rd, Eugene
(68 acres, 19 buildings, 3 structures)

Washburne Historic District
(added 1987 - **Lane County** - #87000042)
Roughly bounded by G, North Tenth, A, and North Second Streets, Springfield
(840 acres, 246 buildings)

Source: http://www.nationalregisterofhistoricplaces.com/OR/Lane/districts.html

City of Eugene Historic Properties

Hse No.	Suffix	Dir.	Street Name	St. Type	Map/Tax Lot #	Nat'l Reg	City Landmark	Historical Name	Neighborhood
AMAZON NEIGHBORHOOD									
2601			University	Street	18-03-05-42-04700	X	X	Masonic Cemetery	Amazon
2601			University	Street	18-03-05-42-04700	X	X	Hope Abbey Mausoleum	Amazon
CAL YOUNG NEIGHBORHOOD									
1610			Cal Young	Road	17-03-19-14-02212		X	Cal Young House	Cal Young
CREST NEIGHBORHOOD									
595			Crest	Drive	18-03-07-21-05200	X		Wayne Morse Farm	Crest
814			Lorane	Hwy	18-03-07-22-03501		X	Young-Pallett House /Kjaer House	Crest
DOWNTOWN NEIGHBORHOOD									
27		E	5th	Avenue	17-03-31-11-13801	X	X	Oregon Electric Railway Station	Downtown
182		W	5th	Avenue	17-03-31-12-05300	X	X	Pacific Coop Poultry Producers	Downtown
291		W	8th	Avenue	17-03-31-12-13600	X	X	Woodmen of the World Hall	Downtown
146		E	12th	Avenue	17-03-31-41-10700		X	Edward L Zimmerman House	Downtown

170		E	12th	Avenue	17-03-31-41-09800	X	X	Christian House	Downtown
160		E	Broadway		17-03-31-14-07500	X	X	Quackenbush Hardware	Downtown
222		E	Broadway		17-03-31-14-07800	X	X	Eugene Hotel	Downtown
614			Lawrence	Street	17-03-31-21-06901		X	Working Flats	Downtown
1143			Oak	Street	17-03-31-41-10500	X	X	Alpha Tau Omega House	Downtown
1263			Oak	Street	17-03-31-41-11100	X		Peterson Apartments	Downtown
532			Olive	Street	17-03-31-12-05300	X	X	Lane Co. Farmers Union	Downtown
449			Willamette	Street	17-03-30-44-09500	X	X	Southern Pacific Depot	Downtown
488			Willamette	Street	17-03-31-12-00300	X	X	Palace Hotel	Downtown
507			Willamette	Street	17-03-31-11-01200		X	Booth-Kelly Building	Downtown
DOWNTOWN NEIGHBORHOOD (Continued)									
520			Willamette	Street	17-03-31-12-06100	X	X	US Post Office	Downtown
767			Willamette	Street	17-03-31-11-09200	X	X	Smeede Hotel	Downtown
795			Willamette	Street	17-03-31-11-09400	X	X	McMorran & Washburne Store	Downtown
973			Willamette	Street	17-03-31-14-05700	X	X	Ax Billy Dept. Store	Downtown
1015			Willamette	Street	17-03-31-14-12500	X	X	Schaefers Building	Downtown
1004			Willamette	Street	17-03-31-13-01900	X	X	McDonald Theatre	Downtown
1280			Willamette	Street	17-03-31-42-		X	Kennell Ellis Building	Downtown

					01400				
FAIRMOUNT NEIGHBORHOOD									
1910		E	15th	Avenue	17-03-33-33-05300		X	Fairmount Presbyterian Church/Maude Kerns Art Center	Fairmount
1973			Garden	Avenue	17-03-32-32-10300	X		C S Williams House	Fairmount
1991			Garden	Avenue	17-03-33-32-10400	X		Howard Hall House	Fairmount
1662			Villard	Street	17-03-33-33-06600		X	Maude Shoup House	Fairmount
FRIENDLY NEIGHBORHOOD									
96		W	20th	Avenue	18-03-06-12-11000		X	Edgar Moore House	Friendly
447		W	22nd	Avenue	18-03-06-24-01400		X	Kerns/Chase House	Friendly
2050			Madison	Street	18-03-06-22-11200		X	Masterson House	Friendly
2077			Willamette	Street	18-03-06-11-08505	X		Civic Stadium	Friendly
HARLOW NEIGHBORHOOD									
2491			Harlow	Road	17-03-21-33-10500	X	X	Harlow House	Harlow
110		S	Garden	Way	17-03-28-40-01101	X		Jack Chase House	Harlow
274		S	Garden	Way	17-03-28-40-01900	X		Frank Chase House	Harlow
242		S	Garden	Way	17-03-28-40-02000	X		Gladys Chase House	Harlow

158		S	Garden	Way	17-03-28-40-02103	X		Harry Chase House	Harlow
HARLOW NEIGHBORHOOD (Continued)									
132		S	Garden	Way	17-03-28-40-02200	X		Chase Brenanen House	Harlow
150		N	Garden	Way	17-03-28-13-00104		X	Pengra House	Harlow
3055			Willakenzie	Road	17-03-21-22-00800	X	X	Willakenzie Grange	Harlow
JEFFERSON NEIGHBORHOOD									
360		W	13th	Avenue	17-03-31-42-09000	X		Rice Apartments	Jefferson
590		W	13th	Avenue	17-03-31-31-12900		X	Skinner Residence	Jefferson
740		W	13th	Avenue	17-03-31-32-09900	X	X	Lane County Clerk's Building	Jefferson
1308			Jefferson	Street	17-03-31-31-13000		X	G W Hunter Residence	Jefferson
1312			Lincoln	Street	17-03-31-42-10600	X	X	Ball House Ensemble	Jefferson
1330			Lincoln	Street	17-03-31-42-10500		X	Ball House Ensemble	Jefferson
1338			Lincoln	Street	17-03-31-42-10400		X	Ball House Ensemble	Jefferson
1611			Lincoln	Street	17-03-31-43-07800	X	X	Peters-Liston House	Jefferson
1718			Lincoln	Street	17-03-31-43-05200	X		Marx-Schaefer House	Jefferson
RIVER ROAD									

NEIGHBORHOOD									
120			Fir	Lane	17-04-25-12-02800	X		Potter House	River Road
370			River	Road	17-04-25-21-07404		X	Johansen/Moody House	River Road
390			River	Road	17-04-25-21-05404		X	Elgaard House	River Road
405			River	Road	17-04-25-12-01200		X	Lombard/Potter House	River Road
1410			River	Road	17-04-13-33-04602		X	Brunner-Schmitz House	River Road
SANTA CLARA NEIGHBORHOOD									
1151			Irving	Road	17-04-10-42-03000		X	Fred Chambers House	Santa Clara
3650			River	Road	17-04-02-34-14100	X		Jamieson House	Santa Clara
UNIVERSITY OF OREGON									
1098		E	13th	Avenue	17-03-32-00-00100	X	X	Johnson Hall	U of O
1170		E	13th	Avenue	17-03-32-00-00100		X	Collier House	U of O
		E	13th	Avenue	17-03-32-00-00100	X		Dad's Gates	U of O
1430			Johnson	Lane	17-03-32-00-00100	X	X	Museum of Art	U of O
1431			Johnson	Lane	17-03-32-00-00100	X		Susan Campbell Hall	U of O
1109			Old Campus	Lane	17-03-32-00-00100	X	X	Villard Hall	U of O
1201			Old Campus	Lane	17-03-32-00-00100	X	X	Deady Hall	U of O

1408			University	Street	17-03-32-00-00100	X		Hendricks Hall	U of O
1468			University	Street	17-03-32-00-00100	X		Gerlinger Hall	U of O
			University of Oregon		17-03-32-00-00100	X		Women's Memorial Quadrangle Ensemble	U of O
			University of Oregon		17-03-32-00-00100	X		Library/Memorial Quadrangle Ensemble	U of O
980		E	16th	Avenue	17-03-32-00-00600	X	X	Eugene Pioneer Cemetary	
SOUTH UNIVERSITY NEIGHBORHOOD									
1138		E	22nd	Avenue	18-03-05-13-07000	X		Boyer House	S. Univ.
1886			University	Street	18-03-05-12-02500		X	Beaver Club	S. Univ.
WEST UNIVERSITY NEIGHBORHOOD									
322		E	11th	Avenue	17-03-31-41-00200	X		Fuller/Slattery House	W. Univ.
588		E	11th	Avenue	17-03-32-32-02900	X	X	Calkins House	W. Univ.
379		E	12th	Avenue	17-03-32-32-19100	X		Beta Theta Pi House	W. Univ.
511		E	12th	Avenue	17-03-32-32-04600		X	Schwering House	W. Univ.
259		E	13th	Avenue	17-03-31-41-04200	X		Wilder Apartments	W. Univ.

492		E	13th	Avenue	17-03-32-32-11600	X	X	First Congregational Church	W. Univ.
WEST UNIVERSITY NEIGHBORHOOD (Continued)									
544		E	13th	Avenue	17-03-32-32-11900	X	X	Thompson-Roach Building	W. Univ.
244		E	16th	Avenue	17-03-31-44-10300	X	X	Christian/Patterson Rental	W. Univ.
707		E	17th	Avenue	17-03-32-34-04500	X		Benjamin Franklin Dorris House	W. Univ.
1461			Alder	Street	17-03-32-34-00400	X		PSI Alpha Chi Omega Sorority	W. Univ.
963			Ferry	Lane	17-03-32-23-04700	X		Dorris Apartments	W. Univ.
1018			Hilyard	Street	17-03-32-23-07700	X		Chi Psi Fraternity House	W. Univ.
1021			Hilyard	Street	17-03-32-24-02800	X		Gamma Phi Beta Sorority House	W. Univ.
1050			Hilyard	Street	17-03-32-23-07800	X		Alpha Phi Sorority House	W. Univ.
1280			Mill	Street	17-03-32-32-11000		X	Wetherbee/Winnard House	W. Univ.
1412			Pearl	Street	17-03-31-41-08500		X	Soults-Westfall Duplex	W. Univ.
1605			Pearl	Street	17-03-31-44-10400		X	Patterson/Stratton House	W. Univ.
WESTSIDE NEIGHBORHOOD									
673		W	10th	Avenue	17-03-31-24-09300		X	Beardsley House	Westside
650		W	12th	Avenue	17-03-31-31-05202	X		Lincoln School	Westside
531		W	Broadway		17-03-31-24-02300		X	Stickles/Schaefres House	Westside

996			Jefferson	Street	17-03-31-24-09200		X	Kaufman House	Westside
765			Monroe	Street	17-03-31-22-12100	X	X	Baldwin Market	Westside
1006			Taylor	Street	17-04-36-13-15300	X	X	Chambers House	Westside
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT									
205		E	2nd	Avenue	17-03-30-44-00600	X	X	Structure	Whiteaker
208		E	2nd	Avenue	17-03-30-44-03900	X	X	Colonial Bungalow	Whiteaker
215		E	2nd	Avenue	17-03-30-44-00700	X	X	Transitional Box	Whiteaker
215	1/2	E	2nd	Avenue	17-03-30-44-00700	X	X	Apartments	Whiteaker
224		E	2nd	Avenue	17-03-30-44-03800	X	X	Colonial Bungalow	Whiteaker
235		E	2nd	Avenue	17-03-30-44-00800	X	X	Apartments	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
240		E	2nd	Avenue	17-03-30-44-03700	X	X	Colonial Bungalow	Whiteaker
259		E	2nd	Avenue	17-03-30-44-01100	X	X	Colonial Bungalow	Whiteaker
260		E	2nd	Avenue	17-03-30-44-02800	X	X	Apartment	Whiteaker
175		E	3rd	Avenue	17-03-30-44-04300	X		Campbell Property Cottage	Whiteaker
205		E	3rd	Avenue	17-03-30-44-03500	X	X	Koppe House	Whiteaker
210		E	3rd	Avenu	17-03-30-44-	X	X	Apartment	Whiteaker

				e	06400				
211		E	3rd	Avenue	17-03-30-44-03500	X	X	Koppe House	Whiteaker
221		E	3rd	Avenue	17-03-30-44-03300	X	X	Koppe Carriage House	Whiteaker
221		E	3rd	Avenue	17-03-30-44-03300	X	X	Paul & Grace Koppe House	Whiteaker
235		E	3rd	Avenue	17-03-30-44-03200	X	X	Pironi House	Whiteaker
246		E	3rd	Avenue	17-03-30-44-06600	X	X	Cogswell-Miller House	Whiteaker
258		E	3rd	Avenue	17-03-30-44-06700	X	X	Bungalow	Whiteaker
340		E	3rd	Avenue	17-03-30-44-07700	X	X	Gothic Commercial Farmhouse	Whiteaker
344		E	3rd	Avenue	17-03-30-44-07700	X		Italianate Cottage	Whiteaker
347		E	3rd	Alley	17-03-30-44-80003	X		Ham House	Whiteaker
200			Cheshire	Avenue	17-03-30-44-00401		X	Apartments	Whiteaker
200			Cheshire	Avenue	17-03-30-44-00500		X	Vacant	Whiteaker
106			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
108			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
110			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
112			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
114			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
116			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker

118			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
120			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
122			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
124			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
126			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
128			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
130			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
132			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
134			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
136			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
138			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
140			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
140			High	Street	17-03-30-44-00400		X	Vacant	Whiteaker
188			High	Street	17-03-30-44-01201	X	X	Victorian Cottage	Whiteaker
188			High	Street	17-03-30-44-01202	X	X	Vacant	Whiteaker
212			High	Street	17-03-30-44-02800	X	X	Hanson House	Whiteaker
240			High	Street	17-03-30-44-	X	X	Queen Ann Victorian	Whiteaker

					02900				
242			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
244			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
246			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
248			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
260			High	Street	17-03-30-44-03000	X	X	Henderson House	Whiteaker
262			High	Street	17-03-30-44-03000	X	X	Duplex	Whiteaker
264			High	Street	17-03-30-44-03000	X	X	Duplex	Whiteaker
286			High	Street	17-03-30-44-03100	X	X	McAlister House	Whiteaker
306			High	Street	17-03-30-44-06800	X	X	Hurschel Smith House	Whiteaker
315			High	Street	17-03-30-44-07700	X		A-1 Auto Glass	Whiteaker
320			High	Street	17-03-30-44-06900	X	X	Dixon Daughters House	Whiteaker
330			High	Street	17-03-30-44-07000	X	X	Mims House	Whiteaker
336			High	Street	17-03-30-44-07000	X	X	Mims House II	Whiteaker
341			High	Street	17-03-30-44-80001	X		Peoples Market	Whiteaker
343			High	Street	17-03-30-44-80002	X		Peoples Market	Whiteaker
347	1/2		High	Street	17-04-30-44-80003	X		Ham House	Whiteaker
212			Pearl	Street	17-03-30-44-04000	X	X	Ankeny House	Whiteaker

212			Pearl	Street	17-03-30-44-04000	X	X	Ankeny Garage	Whiteaker
245			Pearl	Street	17-03-30-44-03600	X	X	Wheeler House	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
245			Pearl	Street	17-03-30-44-03600	X	X	Wheeler House II	Whiteaker
252			Pearl	Street	17-03-30-44-04400	X		Campbell Property/Cottage	Whiteaker
252			Pearl	Street	17-03-30-44-04100	X	X	Campbell House	Whiteaker
284			Pearl	Street	17-03-30-44-04200	X	X	Bungalow	Whiteaker
298			Pearl	Street	17-03-30-44-04600	X	X	E and N Chase House	Whiteaker
335			Pearl	Street	17-03-30-44-06300	X	X	Watts House	Whiteaker
335			Pearl	Street	17-03-30-44-06300	X	X	Watts House Propery/Apartment	Whiteaker
WHITEAKER NEIGHBORHOOD: BLAIR BLVD. HISTORIC COMMERCIAL AREA									
1080		W	3rd	Avenue	17-04-25-44-02200	X	X	C O and F A Stratton House	Whiteaker
1110		W	3rd	Avenue	17-04-25-44-02400	X	X	Henzler House and Shop	Whiteaker
1211		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1213		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1215		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker

1217		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1219		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1022		W	4TH	Avenue	17-04-25-44-03900	X	X	Cash O. Smith House	Whiteaker
1100		W	4th	Avenue	17-04-25-44-10600	X	X	English Cottage Revival Res.	Whiteaker
1180		W	4th	Avenue	17-04-25-44-10601	X	X	Scobert Park	Whiteaker
1001		W	5th	Avenue	17-04-36-11-00200	X	X	Gibson House	Whiteaker
1125		W	5th	Avenue	17-04-36-11-01000	X	X	C W Powell House	Whiteaker
302			Blair	Blvd	17-04-25-44-07700	X	X	Surata Soy Foods	Whiteaker
312			Blair	Blvd	17-04-25-44-07802	X	X	F P Allen House	Whiteaker
314			Blair	Blvd	17-04-25-44-07802	X	X	Apartments	Whiteaker
325			Blair	Blvd	17-04-25-44-02500	X	X	Old Texas Steak House	Whiteaker
340			Blair	Blvd	17-04-25-44-07801	X	X	JESCO Club	Whiteaker
358			Blair	Blvd	17-04-25-44-10000	X	X	Earl Peterson House	Whiteaker
WHITEAKER NEIGHBORHOOD: BLAIR BLVD. HISTORIC COMMERCIAL AREA (Continued)									
400			Blair	Blvd	17-04-25-44-10201	X	X	Original Tiny Tavern	Whiteaker
407			Blair	Blvd	17-04-25-44-04301	X	X	Sam Bond's Garage	Whiteaker
440			Blair	Blvd	17-04-25-44-10202	X	X	Scobert House	Whiteaker
440	1/2		Blair	Blvd	17-04-25-44-	X	X	Agricultural Outbuildings	Whiteaker

					10600				
442			Blair	Blvd	17-04-25-44-10202	X	X	King Gillette Realty Office	Whiteaker
449			Blair	Blvd	17-04-25-44-04100	X	X	Burton's Saw Factory	Whiteaker
450	1/2		Blair	Blvd	17-04-25-44-10500	X	X	Bungalow	Whiteaker
450			Blair	Blvd	17-04-25-44-10600	X	X	Scobert Property	Whiteaker
451			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
458			Blair	Blvd	17-04-25-44-10300	X	X	Koepp Family House	Whiteaker
461			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
471			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
341			Van Buren	Street	17-04-25-44-02300	X	X	Ben White's Vulcanizing	Whiteaker
345			Van Buren	Street	17-04-25-44-02300	X	X	New Day Bakery	Whiteaker
357			Van Buren	Street	17-04-25-44-02300	X	X	Hayes Blacksmith Shop	Whiteaker
	Parking Lot on 4th Avenue				17-04-25-44-04201	X	X	Nedco Parking Lot	Whiteaker
	Parking Lot on 4th Avenue				17-04-25-44-04201	X	X	Nedco Parking Lot	Whiteaker
	Eugene to Booneville Territorial Highway/Blair Blvd.					X	X	Eugene to Booneville Territorial Hwy	Whiteaker
WHITEAKER NEIGHBORHOOD: INDIVIDUAL WHITEAKER NEIGHBORHOOD LISTINGS									
375		W	4th	Avenue	17-03-30-34-11000	X		McCracken Brothers Building	Whiteaker

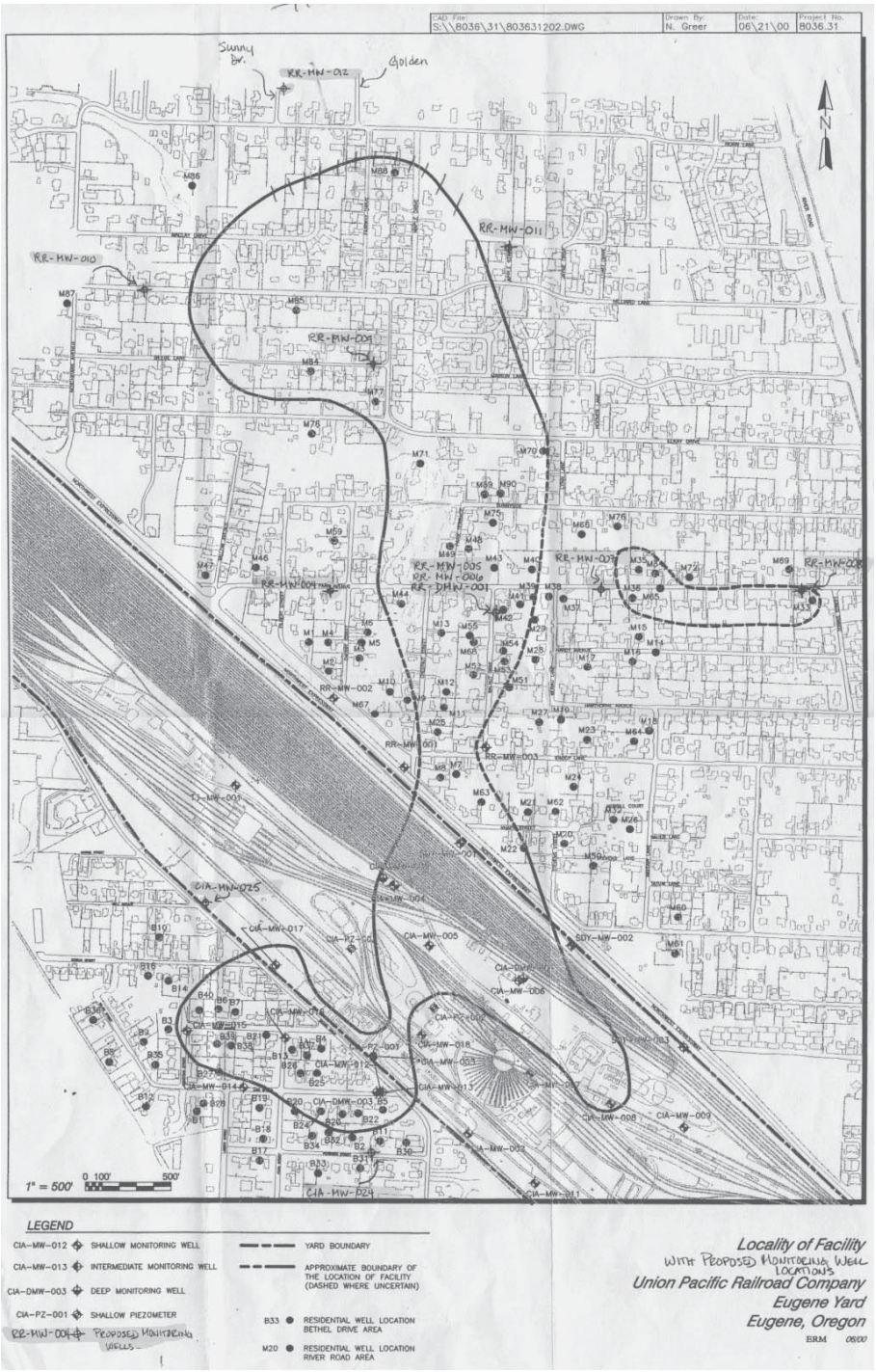
437			Lawrence	Street	17-03-30-34-13501		X	Eakins/Snodgrass House	Whiteaker
303			Willamette	Street	07-03-30-44-09200	X	X	Shelton-McMurphey House	Whiteaker
			Skinner Butte Park			X		The Big "O"	Whiteaker

City of Springfield Historic Properties

Hse No.	Suffix	Dir.	Street Name	St. Type	Map/Tax Lot #	Nat'l Reg	City Landmark	Historical Name
702		**N**	**A**	**Street**		**XX**		Springfield Buick Motors Dealership
1260			Main	Street		XX	XX	Brattain-Hadley House
890			Aspen	Drive		XX		Campbell House
590			Main	Street		XX	XX	Pacific Power and Light Building
101		S	A	Street		XX	XX	Southern Pacific Railroad Depot
846			F	Street		XX	XX	Springfield General Hospital
		S	2nd	Avenue		XX		Dorris Ranch
						XX		All properties within Washburne Historic District
532			C	Street			XX	Ebbert Memorial United Methodist
606			D	Street			XX	McKlin House
330			Main	Street			XX	Stevens & Perkins Building
342-346			Main	Street			XX	I.O.O.F. Building
214			Pioneer Parkway West				XX	Stewart House
6590			Thurston	Road			XX	Thurston Grange [Community] Hall
3362			Osage				XX	Douglas House

13. Environmental Cleanup Sites

Site 312 (Eugene) refers to the Union Pacific Railroad – Eugene Yards. A ground water contamination plume has been mapped in this area. This map was downloaded from Oregon Toxics Alliance web site: http://www.oregontoxics.org/railyard/rr_home.html, and is attributed on that site to ERM, UPRR's environmental consultant firm.



14. Toxic Release Inventory Permitted Sites –

FACILITY ID NUMBER	FACILITY NAME	ADDRESS	Map Label
97408GGSND952CB	EGGE SAND & GRAVEL	90520 COBURG RD	3
97402PTRSN2948A	PETERSON PACIFIC CORP	29408 AIRPORT RD	18
97402LDMCF90049	MCFARLAND CASCADE POLE & LUMBER CO	90049 HWY 99 N	14
97402GRGPC2665H	GEORGIA-PACIFIC CHEMICALS LLC	2665 HWY 99 N	7
97402GRGPC2665A	MURPHY PLYWOOD CO EUGENE OPERATIONS	2350 PRAIRIE RD	16
97404MDRSR11DIV	MDU RESOURCES EUGENE ASPHALT	1001 DIVISION AVE	15
97401GHNRR12438	GHEEN IRRIGATION WORKS INC	1248 WILLAGILLESPIE RD	8
97402BHMPR50NDA	FLAKEBOARD AMERICA LTD - EUGENE MDF	50 N DANEBO AVE	4
97402CSCDP3790C	CASCADE PLATING & MACHINE	3790 CROSS ST	2
97402JHBXT85NBA	J H BAXTER & CO	85 N BAXTER RD	11
97477SFTYK55SHE	SAFETY-KLEEN SYSTEMS (705401)	550 SHELLY ST SPACE A-E	20
97440PRCCR10NOR	PIERCE FITTINGS	10 N GARFIELD ST	19
97478KNGSF3315M	KINGSFORD MANUFACTURING CO	3315 MARCOLA RD	13
97402RGNRB3595W	OREGON RUBBER CO	3595 W 1ST AVE	17
97402SCNTF175SD	SCIENTIFIC DEVELOPMENTS INC	175 S DANEBO	21
97402WLLMT586MC	WILLAMETTE VALLEY CO	586 MCKINLEY ST	23
97402FRBDH4248W	FORBO ADHESIVES LLC	4248 W 6TH AVE	5
97402FRRST1011M	FORREST PAINT CO	1011 MCKINLEY ST	6
97477CHMBN475NO	ARCLIN USA LLC	475 28TH ST	1
97405CDRPD86470	JOHNSON CRUSHERS INTERNATIONAL INC	86470 FRANKLIN BLVD	12
97477BRDNN470SO	HEXION SPECIALTY CHEMICALS INC	470 S 2ND ST	9
97478WYRHS785N4	INTERNATIONAL PAPER CO	801 42ND ST	10
97402TRSJS195NB	VENEER TECHNOLOGIES EUGENE PLANT	195 N BERTELSEN RD	22

20. Federal and State T&E Species, Sensitive Species and Species of Concern

FEDERALLY LISTED THREATENED, ENDANGERED, CANDIDATE SPECIES AND SPECIES OF CONCERN

OREGON DEPARTMENT OF FISH AND WILDLIFE SENSITIVE SPECIES WHICH MAY OCCUR WITHIN OR NEAR CENTRAL LANE MPO BOUNDARY

Native American Tribal Interests

There is no Native American/Indian reservation within or adjacent to the Central Lane MPO area. The following tribes may have an interest in activities occurring within the Central Lane MPO area: Confederated Tribes of the Siletz Reservation, Cow Creek Band of Umpqua Indians of Oregon, and the Confederated Tribes of the Grand Ronde Community of Oregon

Potential Mitigation Strategies

SAFETEA-LU requirements include the provision that the MPO's RTP shall provide information on potential environmental mitigation strategies and activities, and potential areas for those activities. This requirement has been met through the MPO's discussions and consultations with the Federal, State and local resource agencies. Two outcomes of these consultations are maps 31 and 32, related to mitigation bank activities.

Furthermore, the region needs to develop strategies and activities to minimize the impact of transportation projects on the environment. Given that budgets for transportation planning, construction, and maintenance are pinched already and concerns for climate change are on the rise, it would benefit the jurisdictions of the region to continue to support and enhance existing policies or strategies and develop new ones that reduce use of automobiles and encourage use of mass transit, carpooling, walking, bicycling, and telecommuting. Many of these strategies are discussed in the RTP and are promoted in the MPO area, as well as the surrounding area, by point2point Solutions, which is administered by the Lane Transit District.

One of the most effective ways to reduce costs, benefit the environment, and manage complex regulatory issues is to consider options at the outset that can reduce or eliminate environmental impacts and thus regulatory requirements. The Clean Water Act requires that those proposing projects focus first on avoiding impacts to water resources that may impact wetlands, streams, or rivers. Considering location and landscape features early in project placement and design can reduce the negative effects of construction activities and ultimately the use of a given facility, whether street, road, or bridge. Thoughtful planning to reduce erosion and sedimentation, impervious surface and other infiltration impediments, and wetland and stream impacts can eliminate the need for permits, saving time, money, and environmental degradation.

When impacts are unavoidable, there are a number of ways to improve the value of project mitigation. Traditionally, mitigation has been on a project-by-project basis to replace the same type of resource that was impacted by the development. More recent mitigation strategies have focused on the concept of mitigation banking. It may be beneficial for the MPO area to further develop wetland or conservation banks to be used for public and or private development mitigation as the area develops. The first step in determining the desirability of banking is to calculate the scale and type of development and the commensurate need for mitigation over the next several decades. Then, a determination of the number of credits that are likely to be coming online during that period and their anticipated costs will be made. If the number of credits required is equal to or greater than the number of credits available at the existing banks, it may be in the region's interest to develop a regional mitigation bank for all future projects.

Currently, the Department of State Lands and US Army Corps of Engineers require that when a project impacts a stream, the project owner (either the city or a private developer) must restore the adjacent

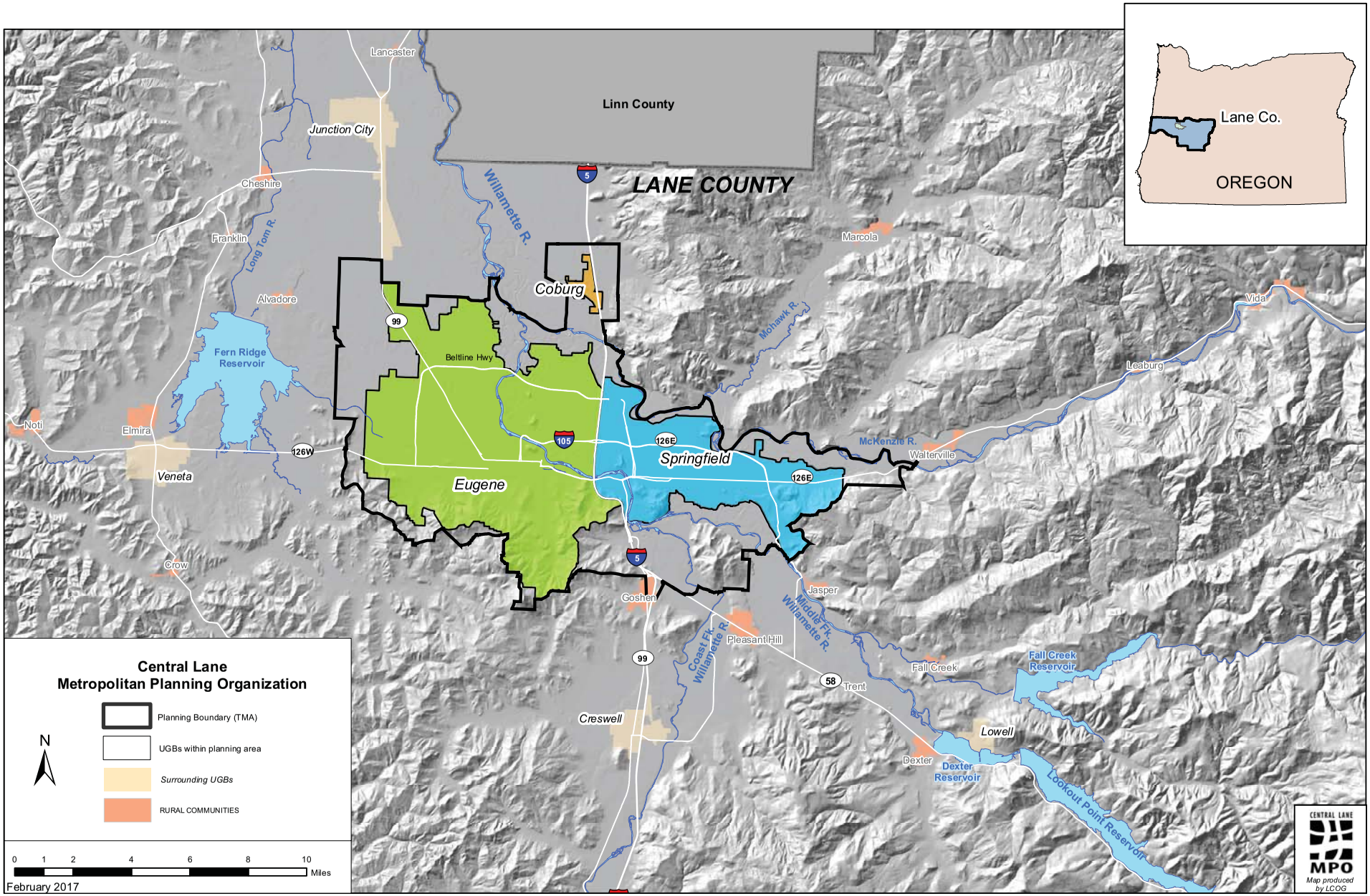
150-foot section of stream. The city or developer is then required to maintain that section for five years. One possible downfall of this policy is that it can create 150' pockets of restored but isolated habitat that are adjacent to weed patches. A new approach wherein a broader range of mitigation needs can be met by restoring streams at key sites may be preferable.

Thus far, there are few opportunities for conservation banking in Oregon. ODOT has developed a program in which they hope to mitigate for a variety of resources on several high value sites they have purchased throughout the state. At present, they are developing methods for valuing credits and creating the "currency" for these banks, a challenging endeavor. It would be wise for the MPO area to explore possible collaboration with ODOT, and certainly to explore the model that ODOT is developing. Once again, the jurisdictions within the region need to collectively assess their anticipated growth and mitigation need and make a cost/benefit analysis.

Over the past decade there have been many innovative approaches taken in constructing transportation systems to prevent negative effects on wildlife. Transportation planners have teamed with wildlife researchers to develop structures that help terrestrial wildlife cross roads, ranging from overpasses and underpasses to open-bottom culverts that function much like natural streambeds. In much of Oregon, transportation agencies are systematically removing barriers to fish migration. However, according to the Oregon Department of Fish and Wildlife, the MPO area will be hampered in providing wildlife habitat connectivity so long as there is no detailed species and habitat inventory for the metropolitan area. Such an inventory can help the region prioritize key habitats and natural areas and identify linkages and corridors to wildlife migration for both large and small species. State and federal wildlife management agencies encourage transportation planners to consult with them early and throughout project planning to identify need for accommodating wildlife movement and avoid other impacts to habitat.

<u>Note that the Environmental Consultation Maps are available at:</u>

www.thempo.org/rtp



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2040 Regional Transportation Plan Planned Construction Projects

excluding all on-road bike/ped and transit projects

Fiscally Constrained Projects

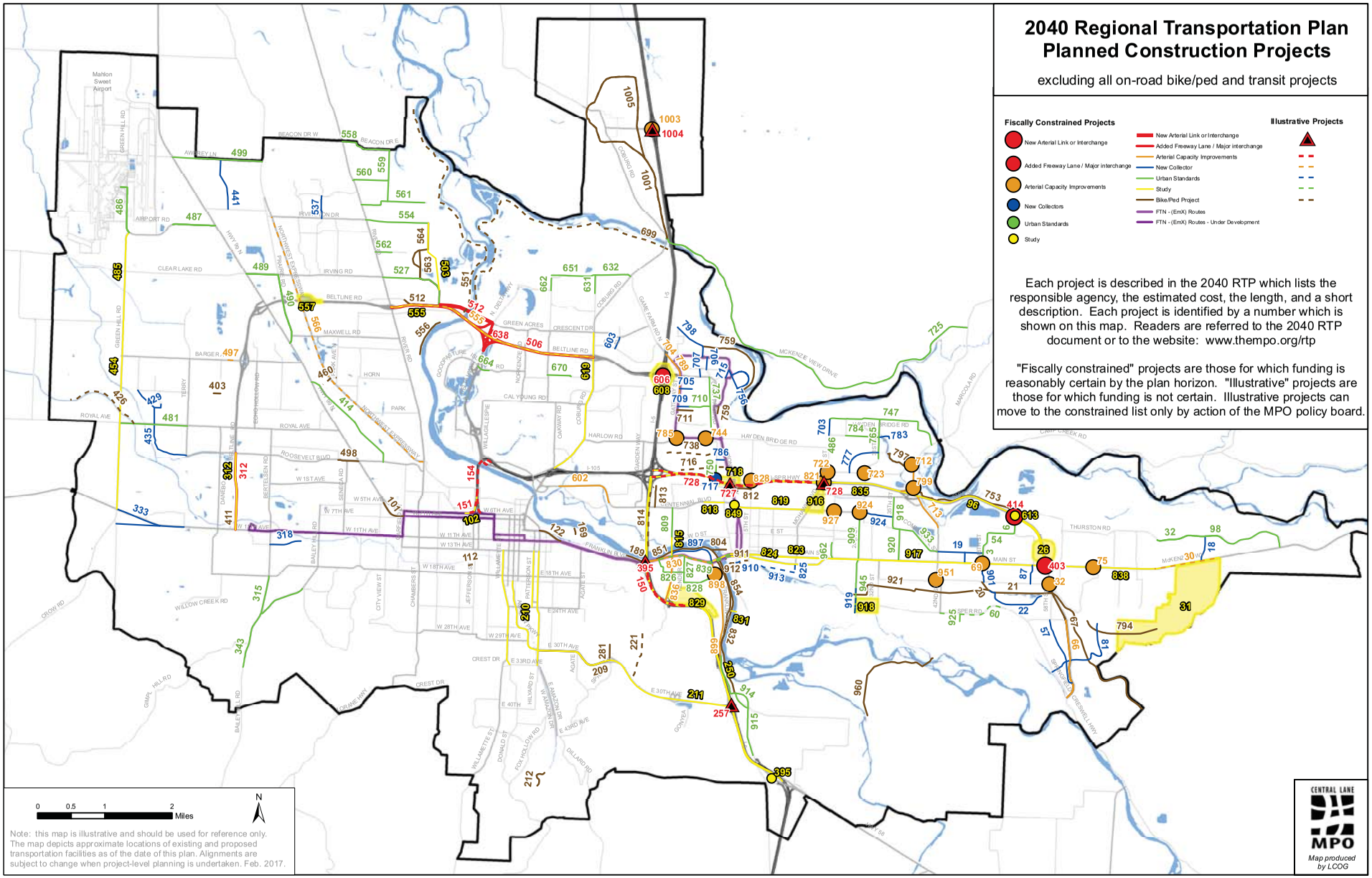
- New Arterial Link or Interchange
- Added Freeway Lane / Major interchange
- Arterial Capacity Improvements
- New Collectors
- Urban Standards
- Study

Illustrative Projects

- New Arterial Link or Interchange
- Added Freeway Lane / Major interchange
- Arterial Capacity Improvements
- New Collector
- Urban Standards
- Study
- Bike/Ped Project
- FTN - (EmX) Routes
- FTN - (EmX) Routes - Under Development

Each project is described in the 2040 RTP which lists the responsible agency, the estimated cost, the length, and a short description. Each project is identified by a number which is shown on this map. Readers are referred to the 2040 RTP document or to the website: www.thempo.org/rtp

"Fiscally constrained" projects are those for which funding is reasonably certain by the plan horizon. "Illustrative" projects are those for which funding is not certain. Illustrative projects can move to the constrained list only by action of the MPO policy board.



0 0.5 1 2 Miles

N

Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Feb. 2017.

CENTRAL LANE MPO

Map produced by LCOG

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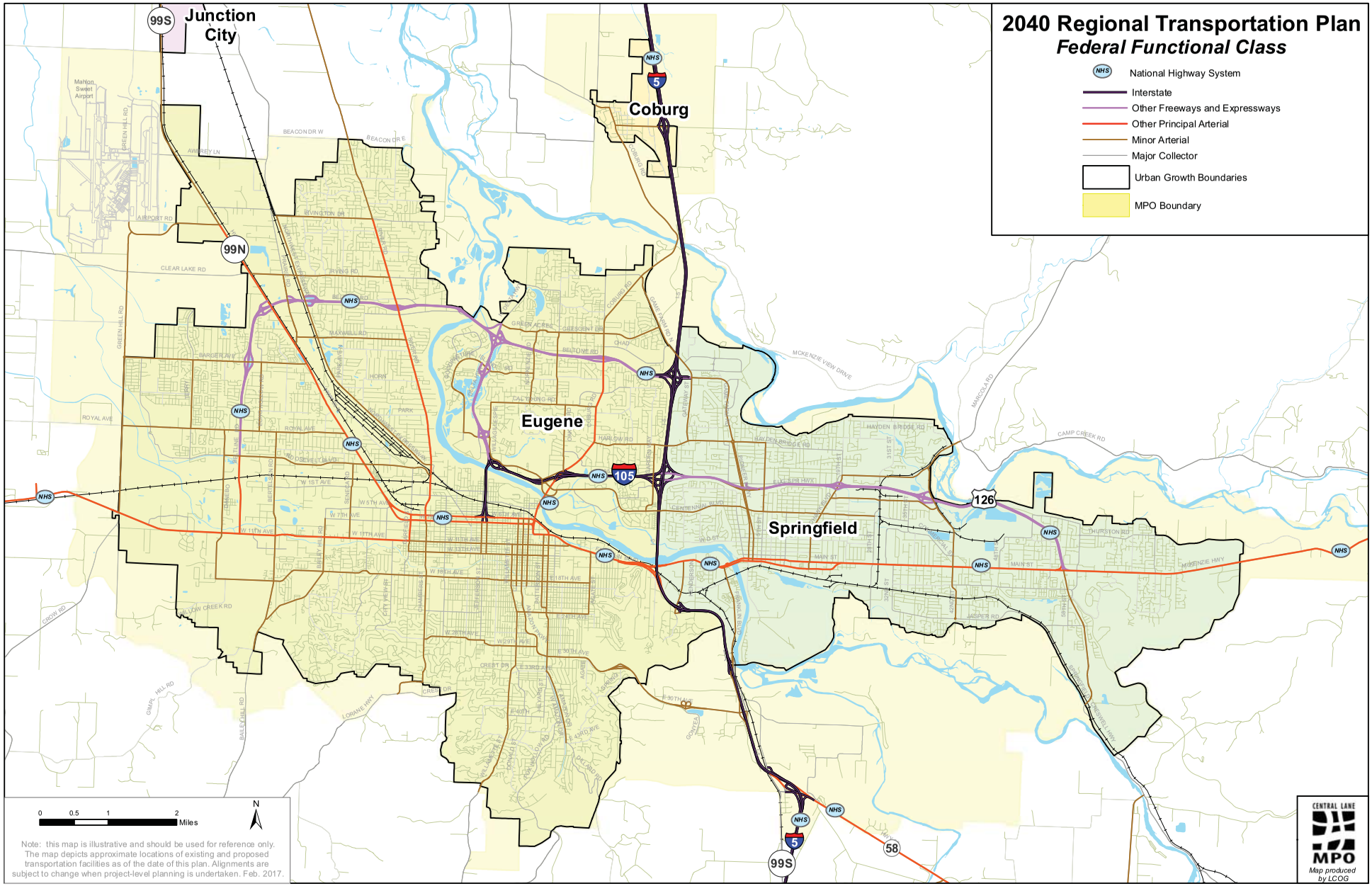

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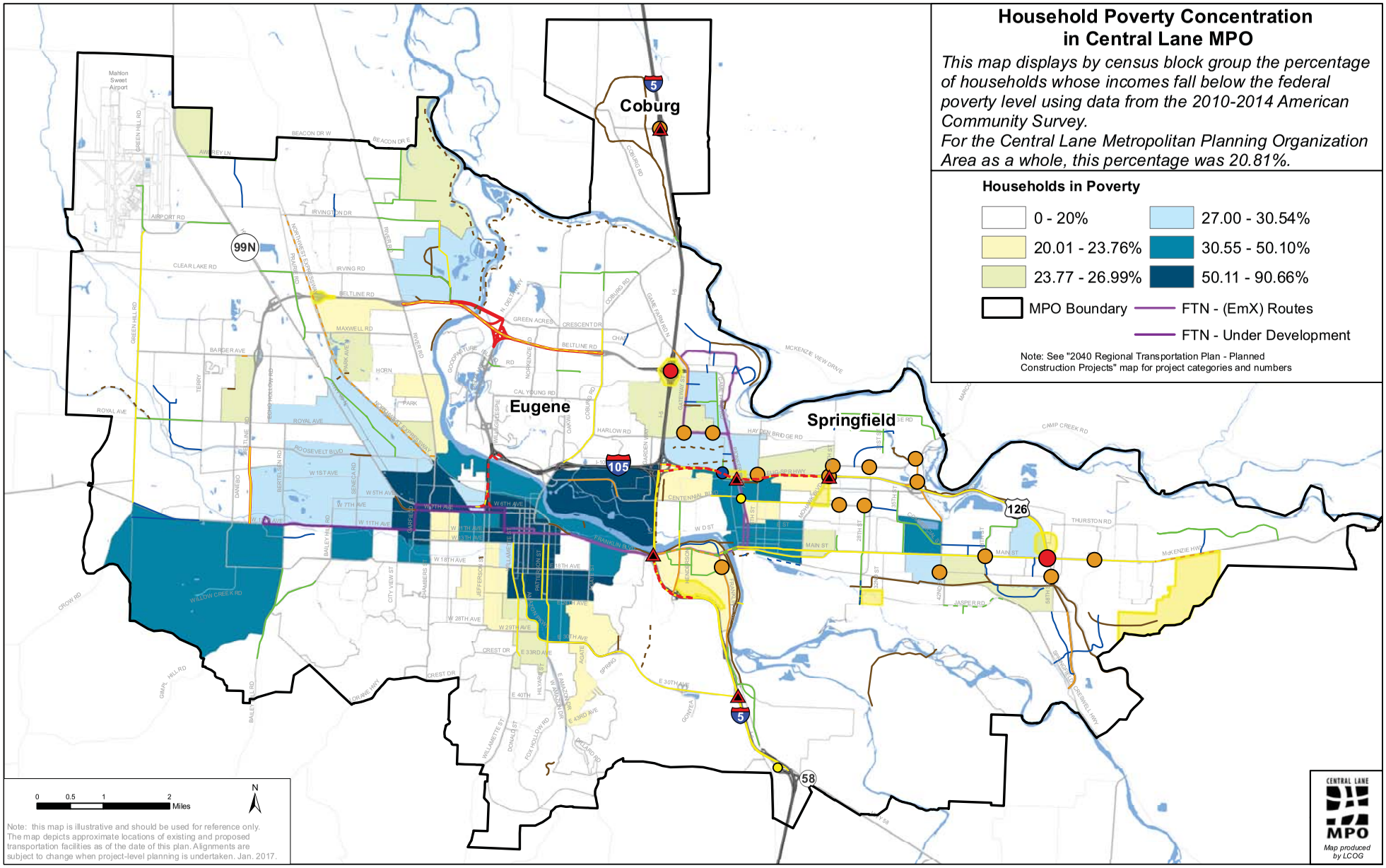

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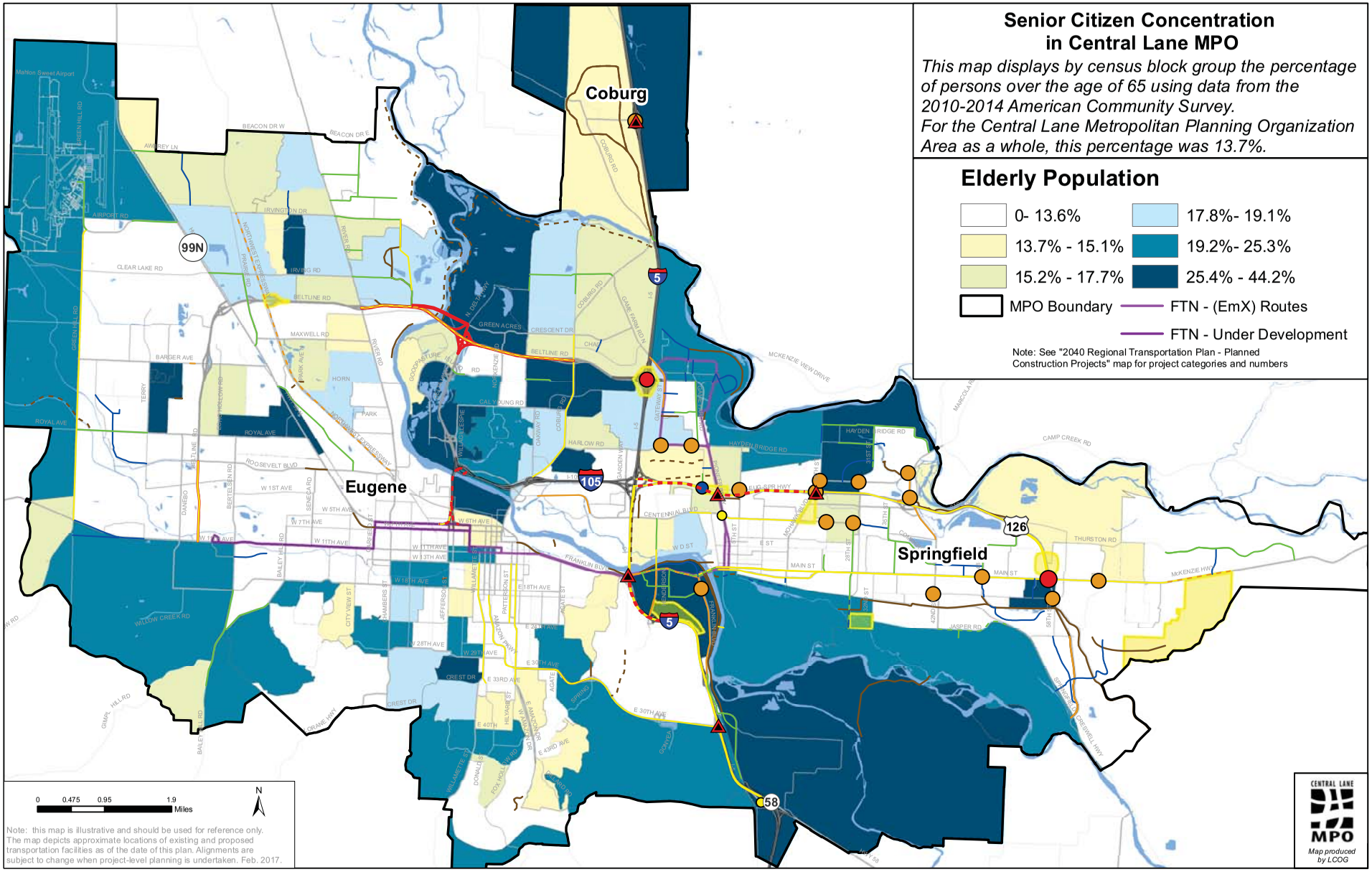

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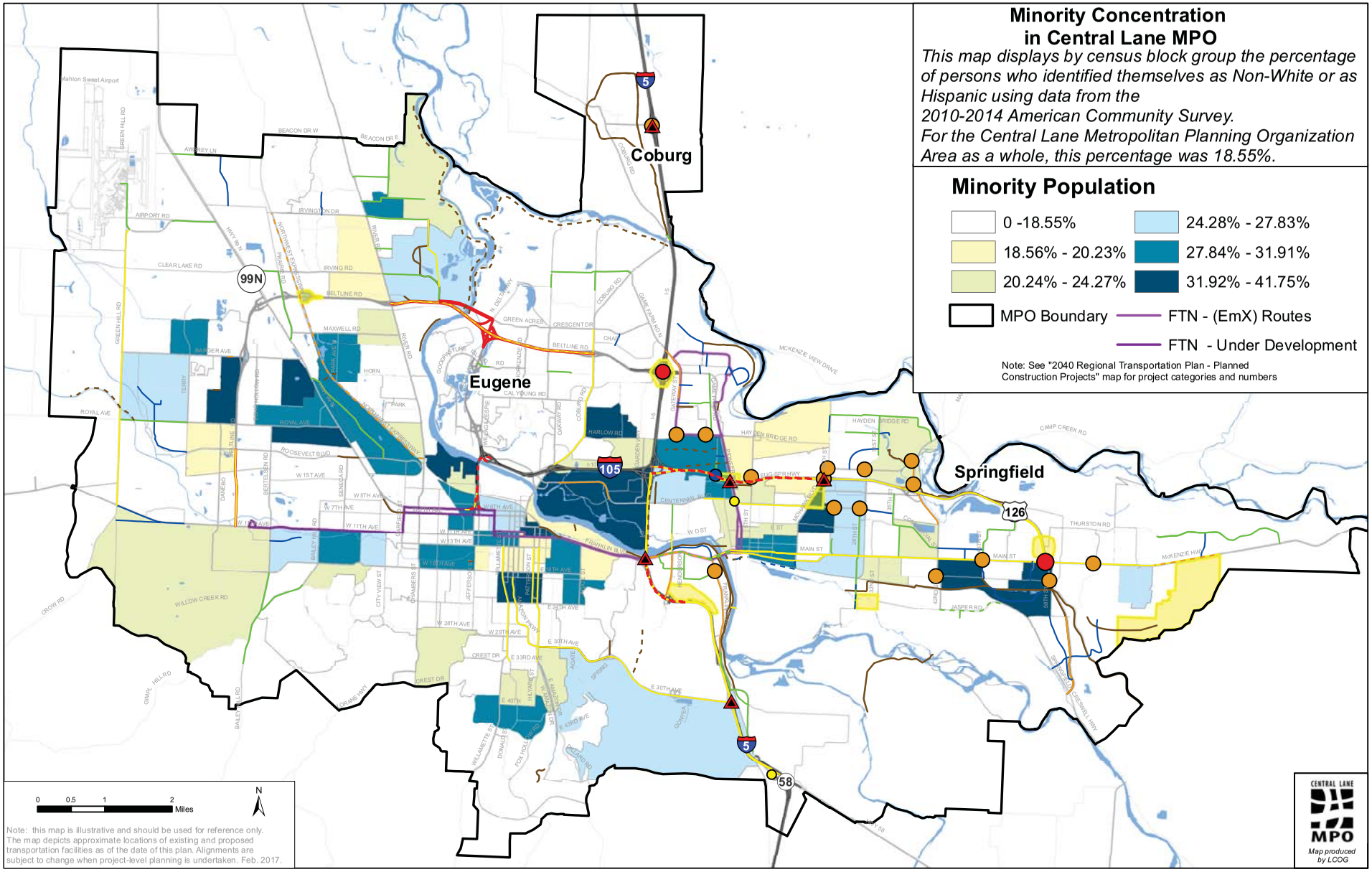

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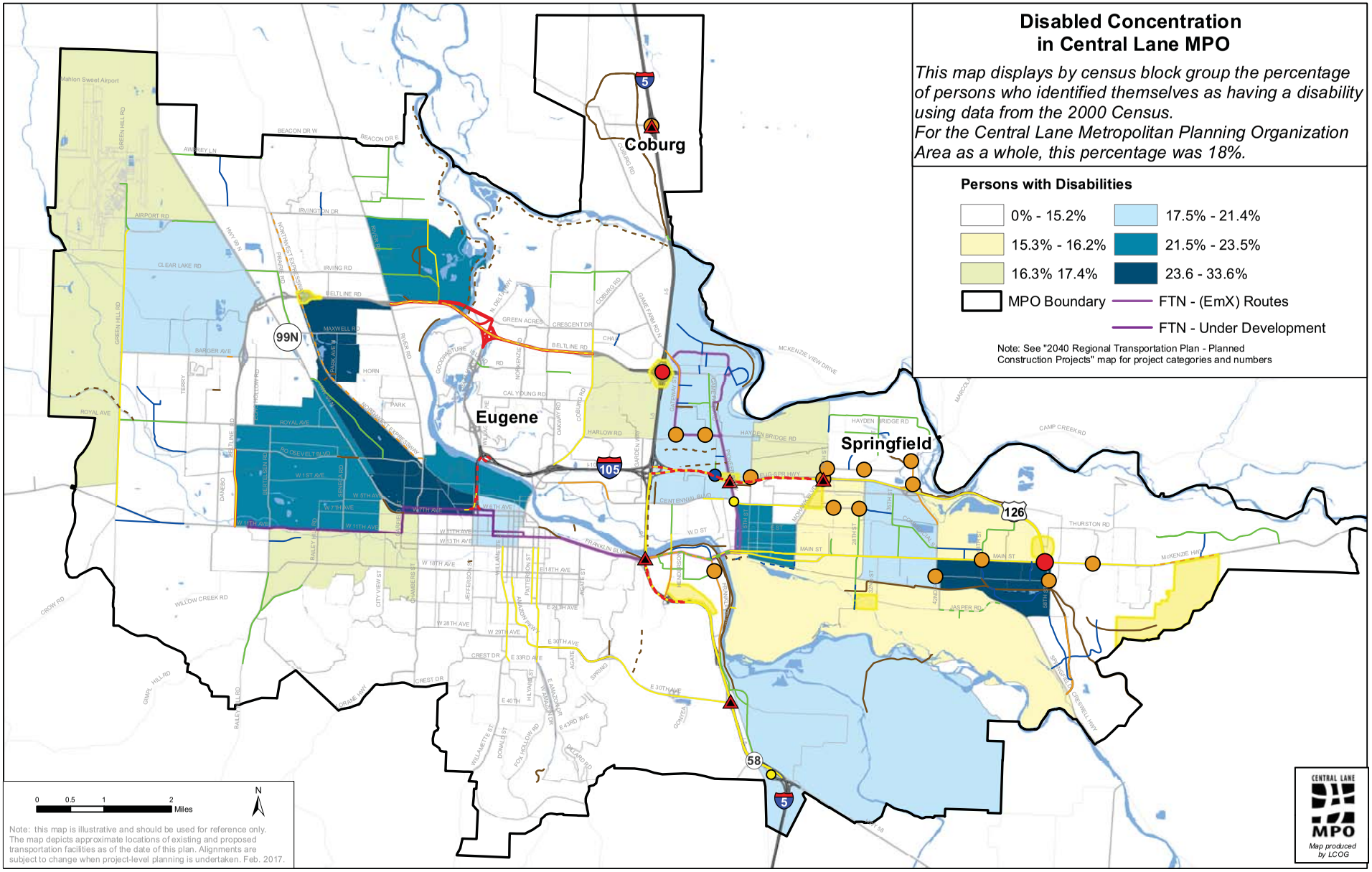

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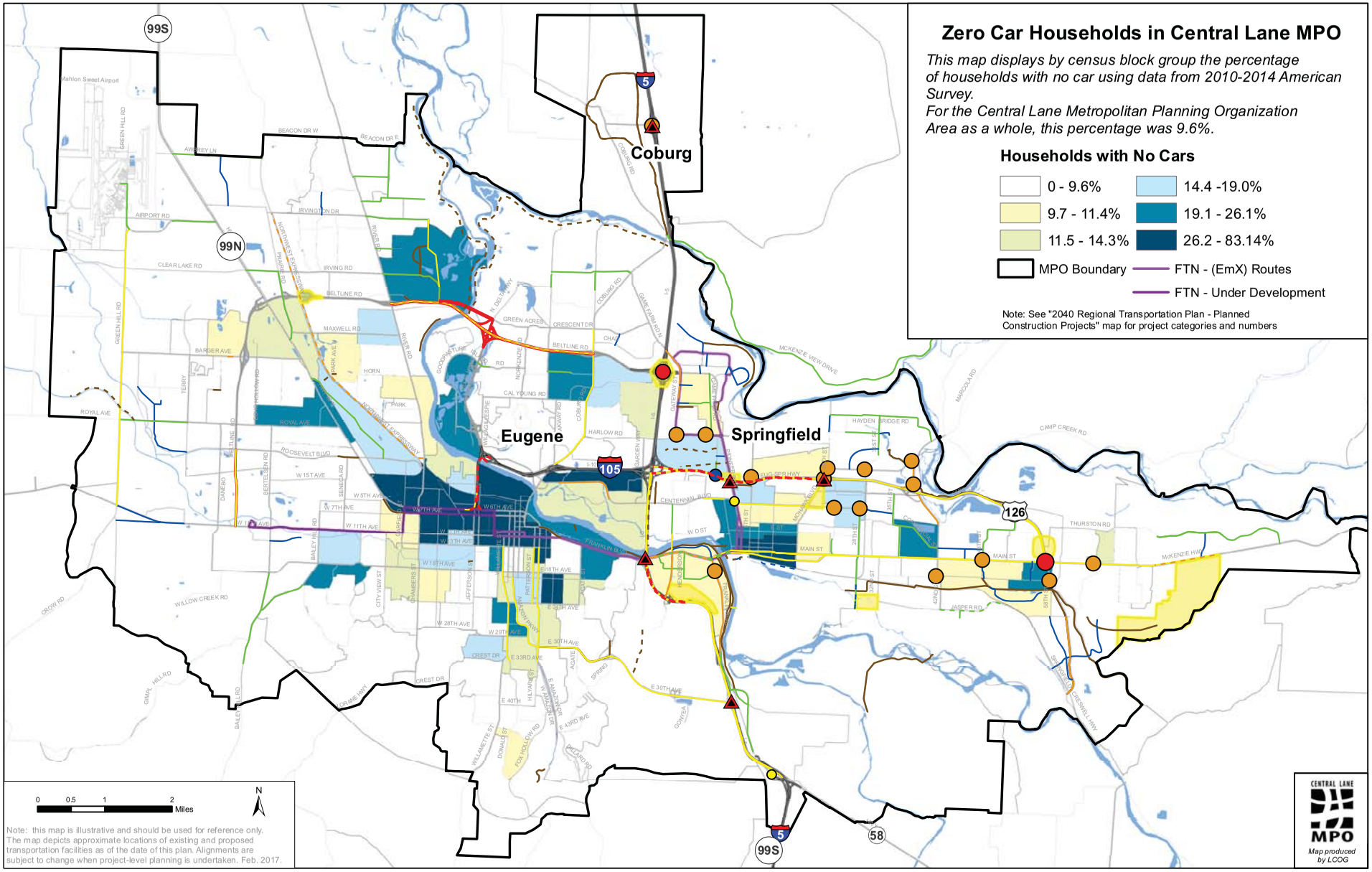

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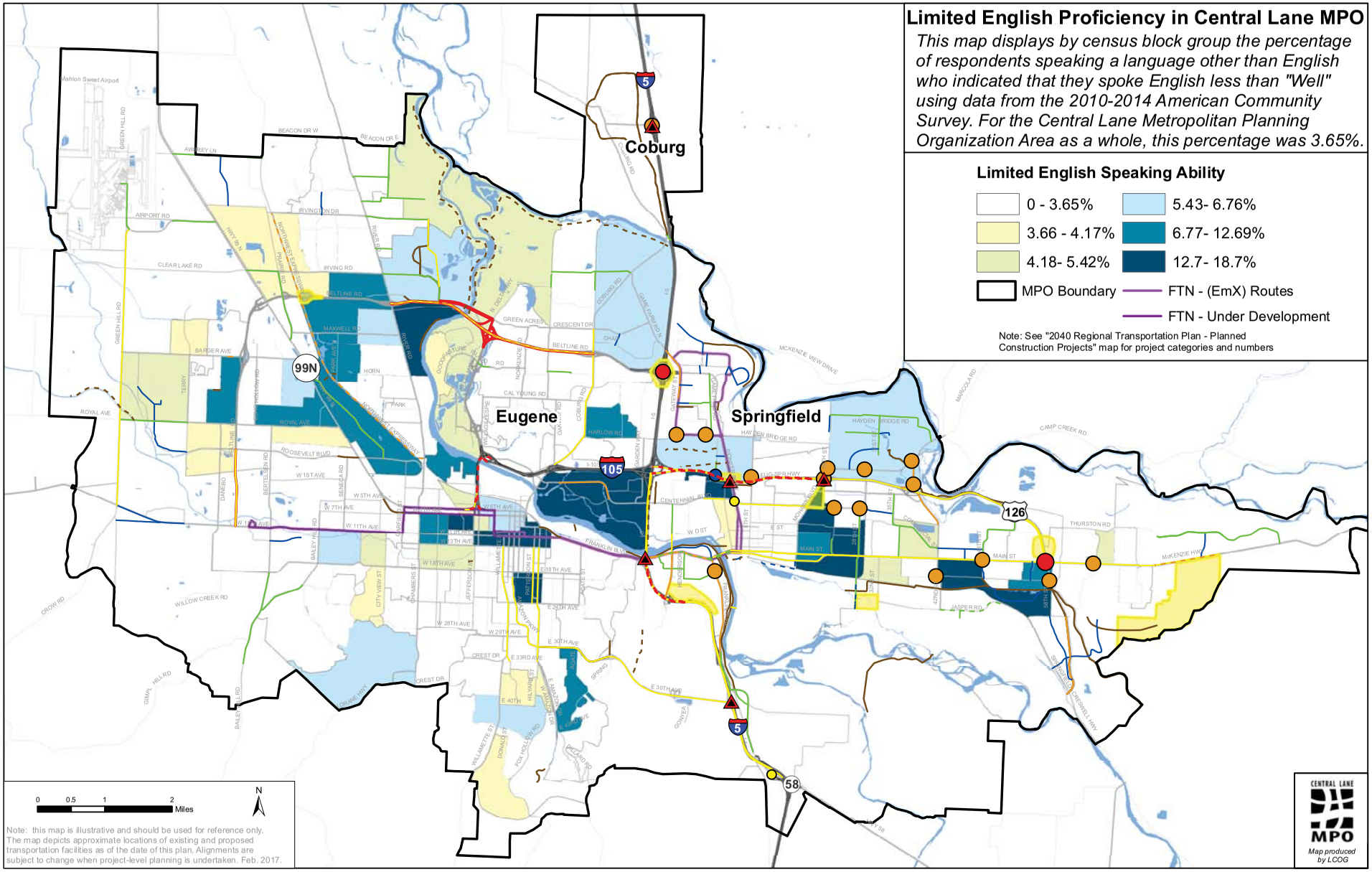
Limited English Proficiency in Central Lane MPO
This map displays by census block group the percentage of respondents speaking a language other than English who indicated that they spoke English less than "Well" using data from the 2010-2014 American Community Survey. For the Central Lane Metropolitan Planning Organization Area as a whole, this percentage was 3.65%.
Limited English Speaking Ability
0 - 3.65%
3.66 - 4.17%
4.18- 5.42%
5.43- 6.76%
6.77- 12.69%
12.7- 18.7%
MPO Boundary
FTN - (EmX) Routes
FTN - Under Development
Note: See "2040 Regional Transportation Plan - Planned Construction Projects" map for project categories and numbers
Coburg
Eugene
Springfield
99N
105
126
58
5
0 0.5 1 2 Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Feb. 2017.
CENTRAL LANE MPO
Map produced by LCOG
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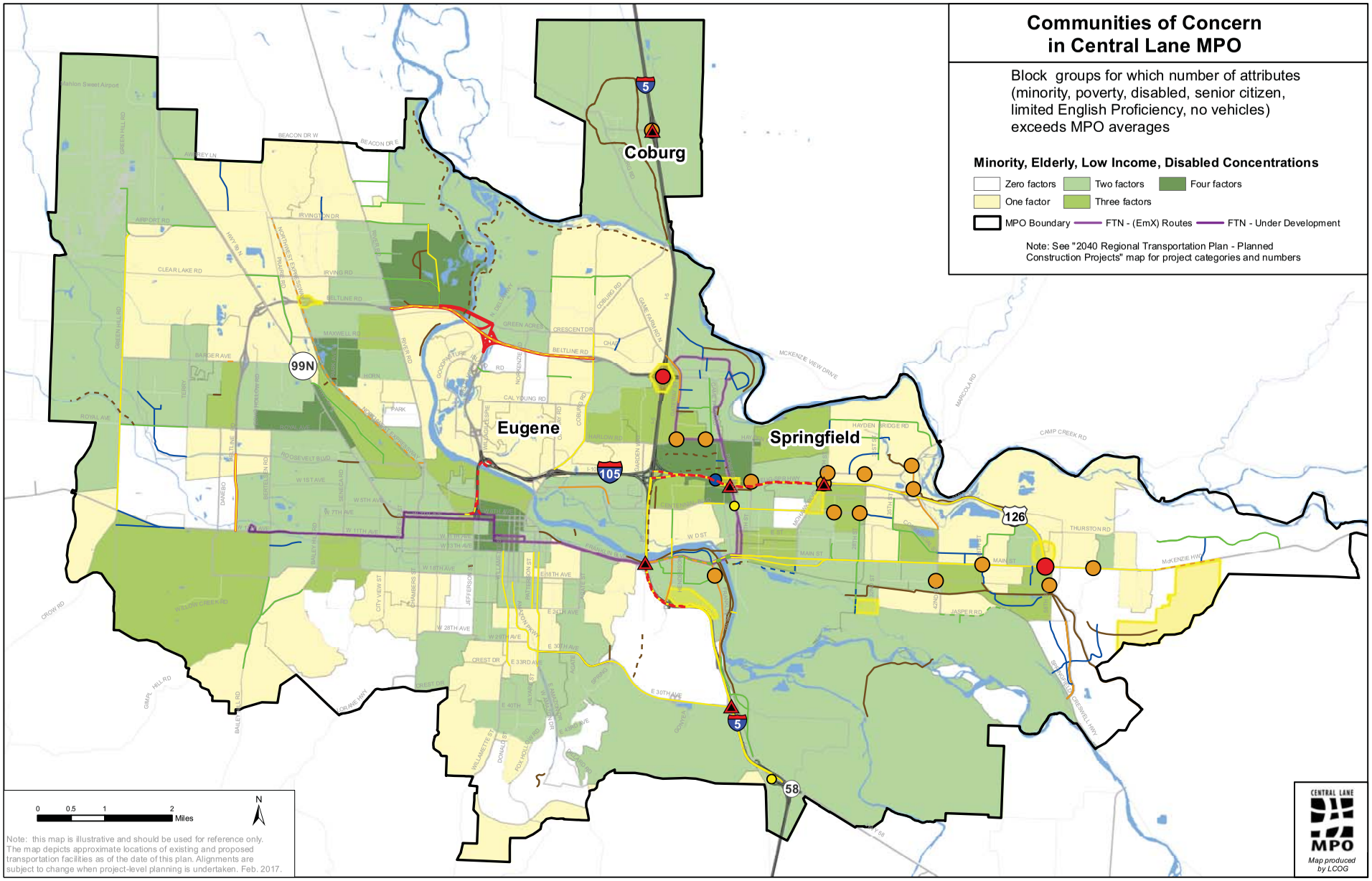

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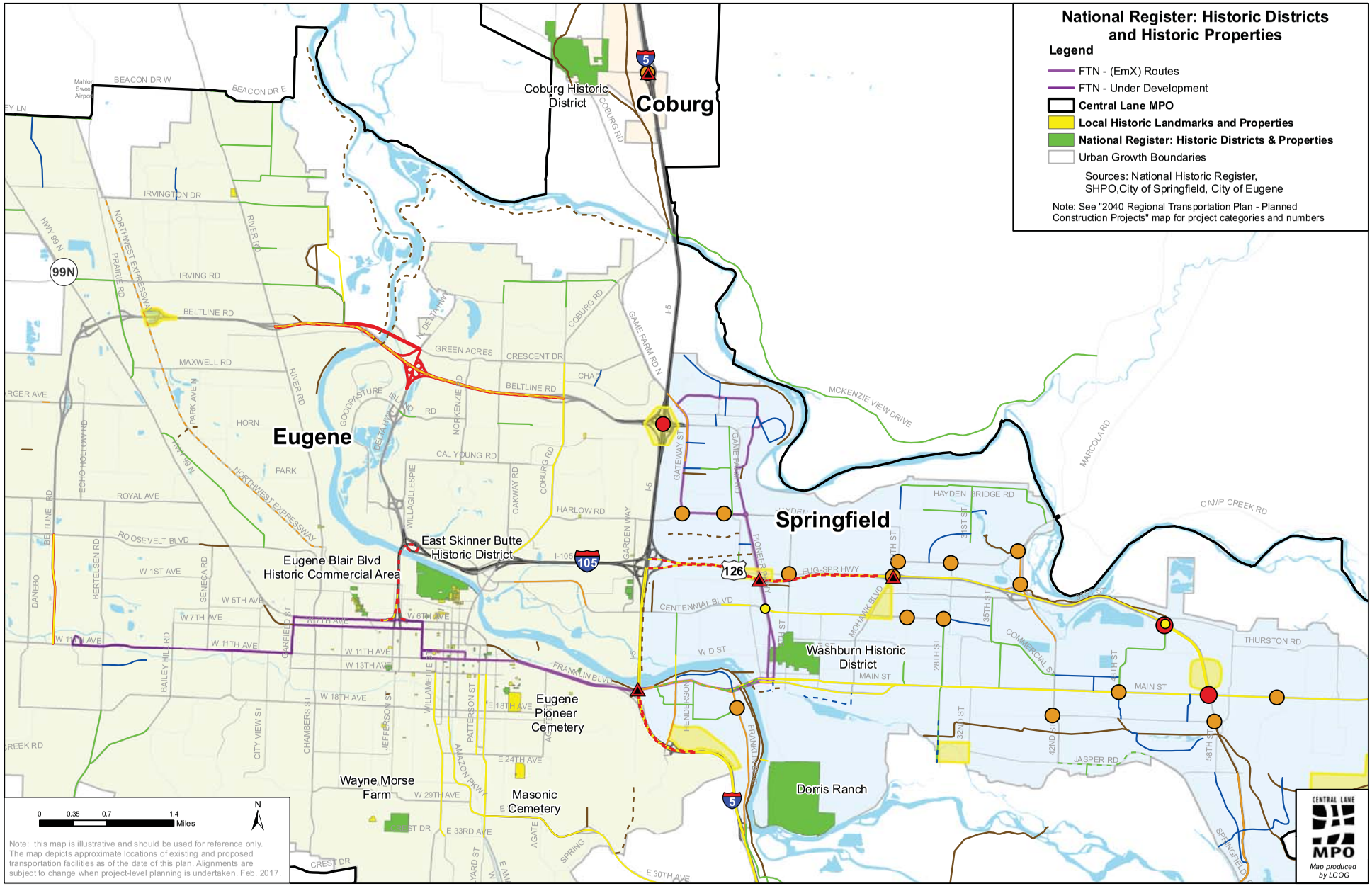

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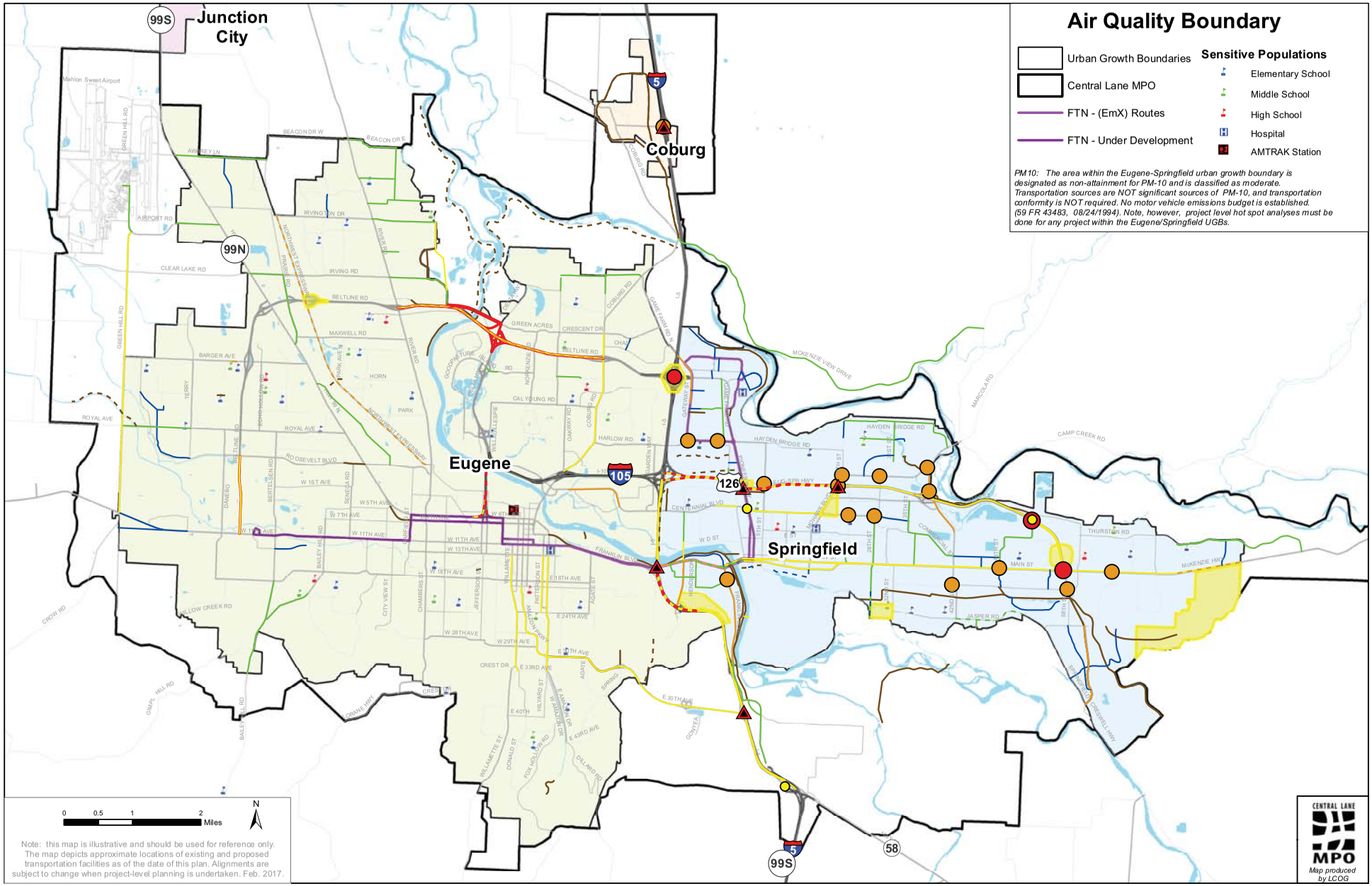

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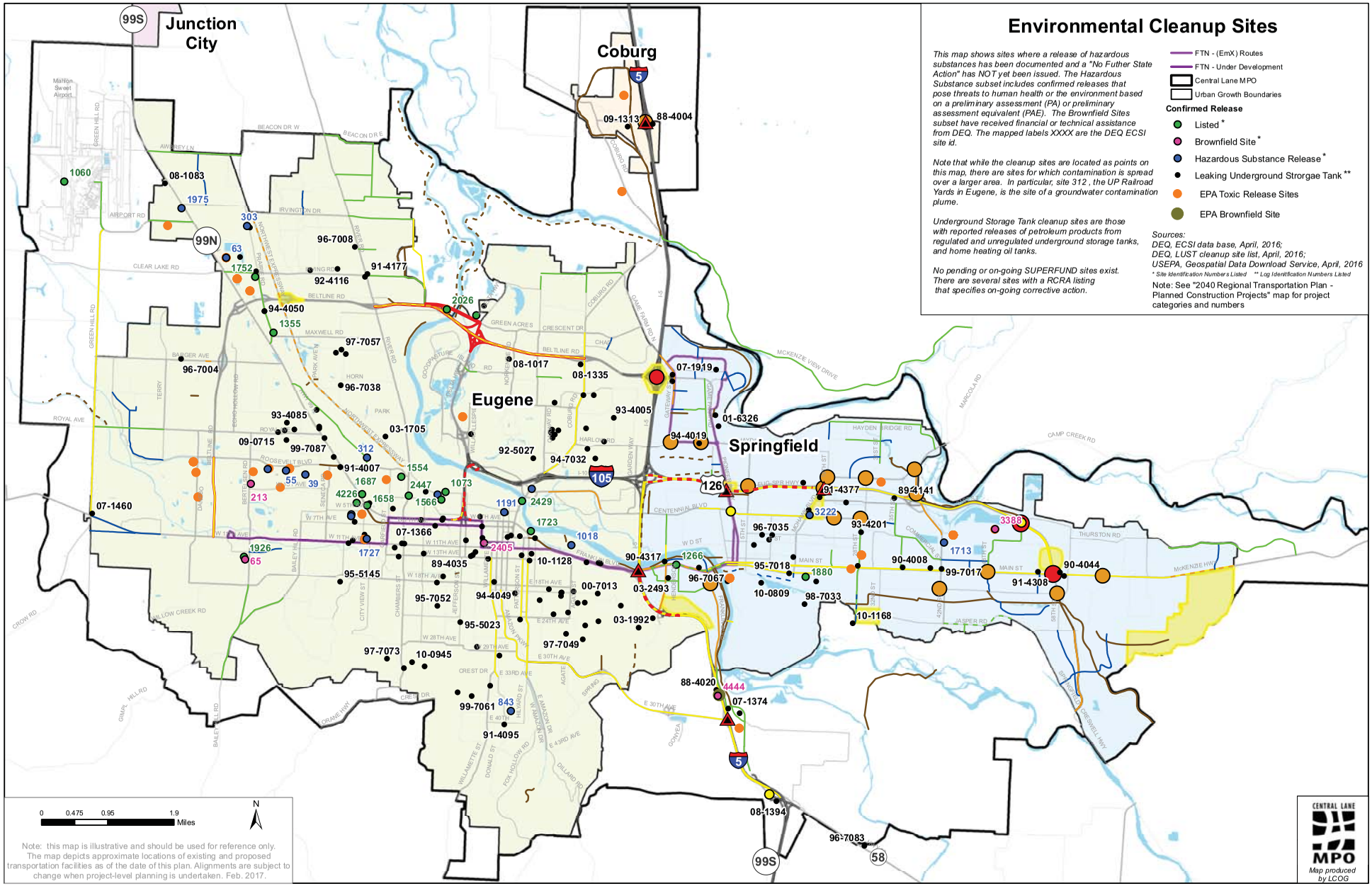

Environmental Cleanup Sites

This map shows sites where a release of hazardous substances has been documented and a "No Futher State Action" has NOT yet been issued. The Hazardous Substance subset includes confirmed releases that pose threats to human health or the environment based on a preliminary assessment (PA) or preliminary assessment equivalent (PAE). The Brownfield Sites subset have received financial or technical assistance from DEQ. The mapped labels XXXX are the DEQ ECSI site id.

Note that while the cleanup sites are located as points on this map, there are sites for which contamination is spread over a larger area. In particular, site 312 , the UP Railroad Yards in Eugene, is the site of a groundwater contamination plume.

Underground Storage Tank cleanup sites are those with reported releases of petroleum products from regulated and unregulated underground storage tanks, and home heating oil tanks.

No pending or on-going SUPERFUND sites exist. There are several sites with a RCRA listing that specifies on-going corrective action.

FTN - (EmX) Routes
FTN - Under Development
Central Lane MPO
Urban Growth Boundaries

Confirmed Release

- Listed *
- Brownfield Site *
- Hazardous Substance Release *
- Leaking Underground Strorgae Tank **
- EPA Toxic Release Sites
- EPA Brownfield Site

Sources:
DEQ, ECSI data base, April, 2016;
DEQ, LUST cleanup site list, April, 2016;
USEPA, Geospatial Data Download Service, April, 2016

** Site Identification Numbers Listed ** Log Identification Numbers Listed*

Note: See "2040 Regional Transportation Plan - Planned Construction Projects" map for project categories and numbers

0 0.475 0.95 1.9 Miles

N

Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Feb. 2017.

CENTRAL LANE MPO

Map produced by LCOG

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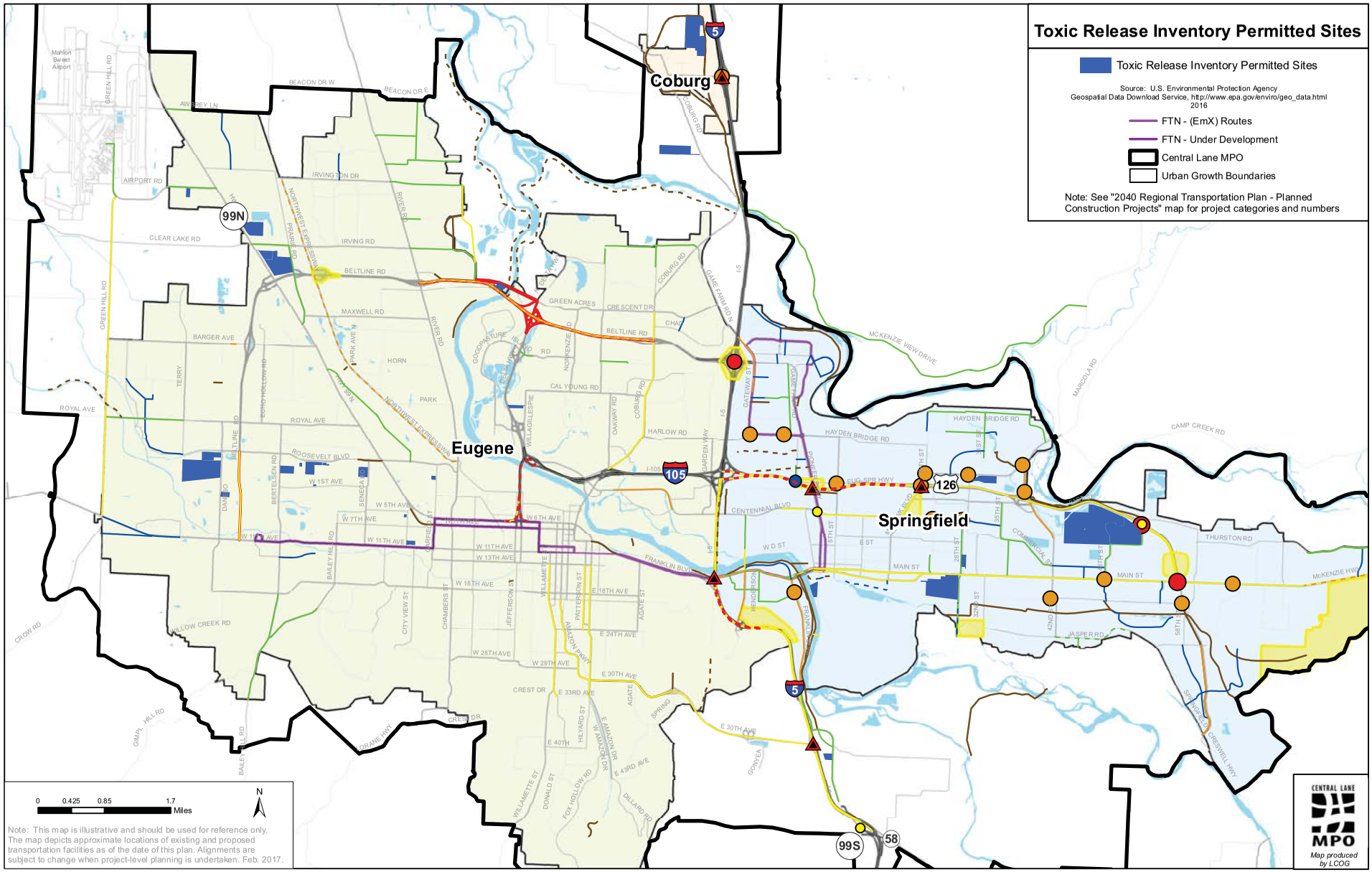

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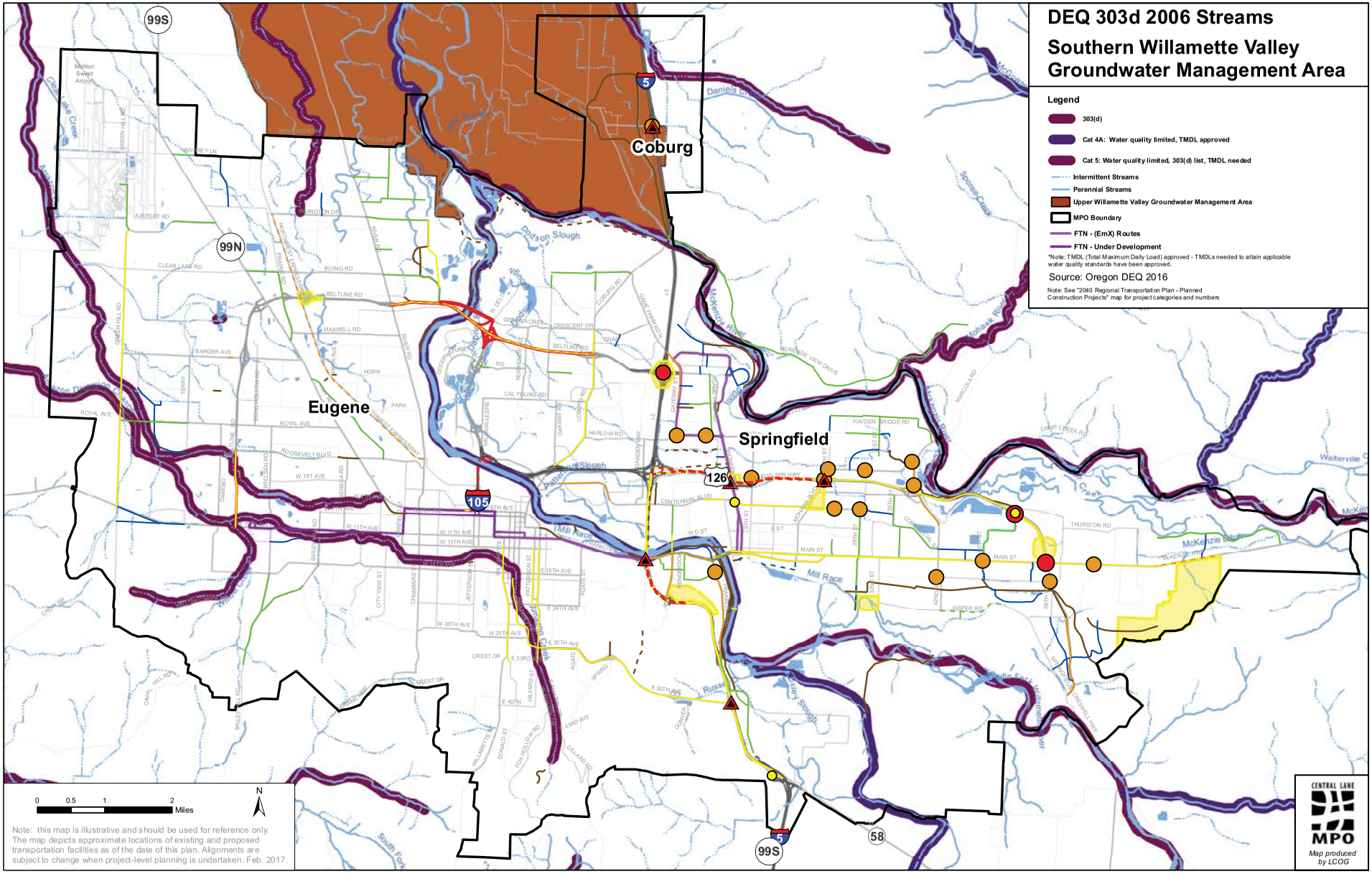

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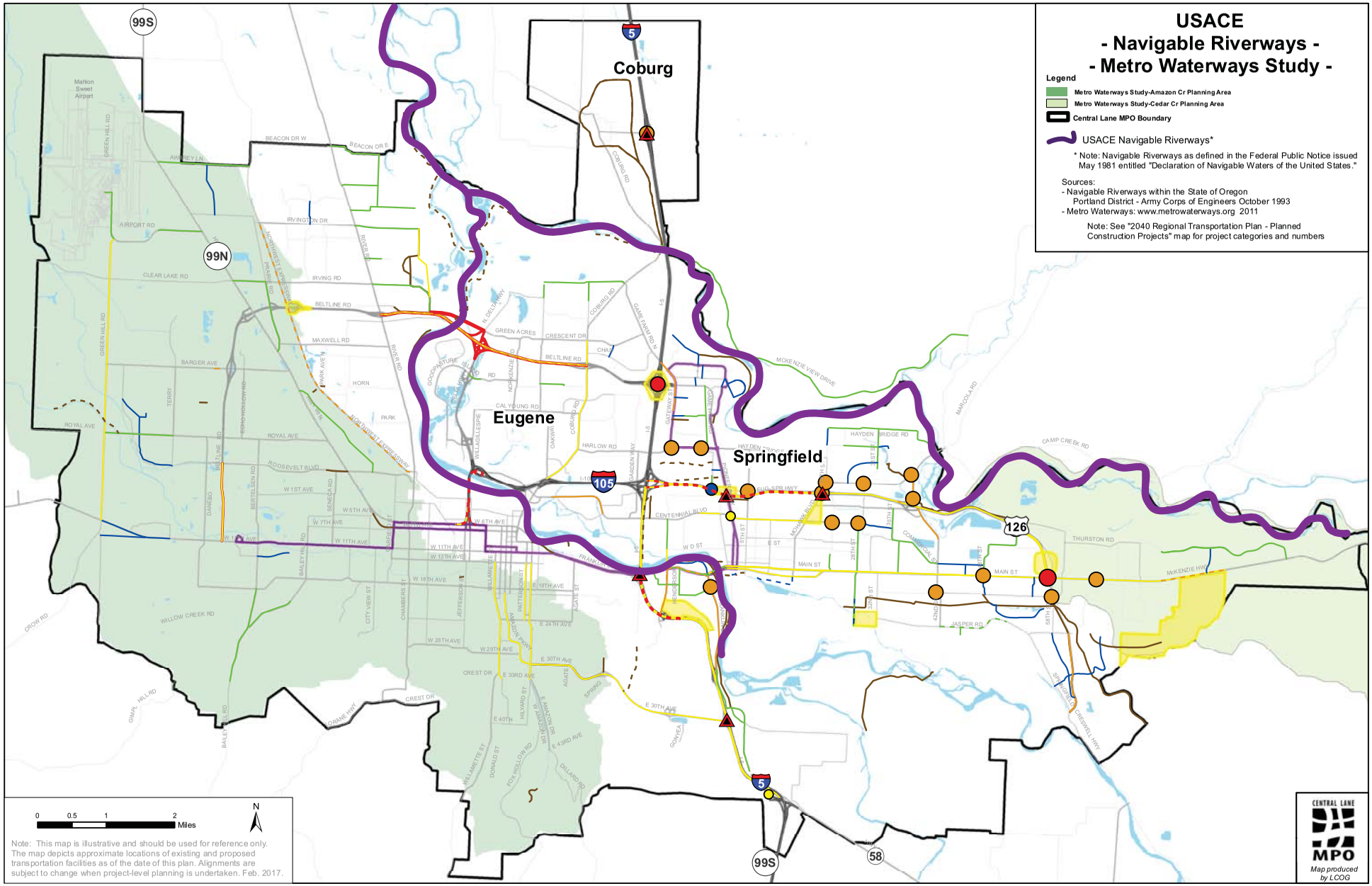

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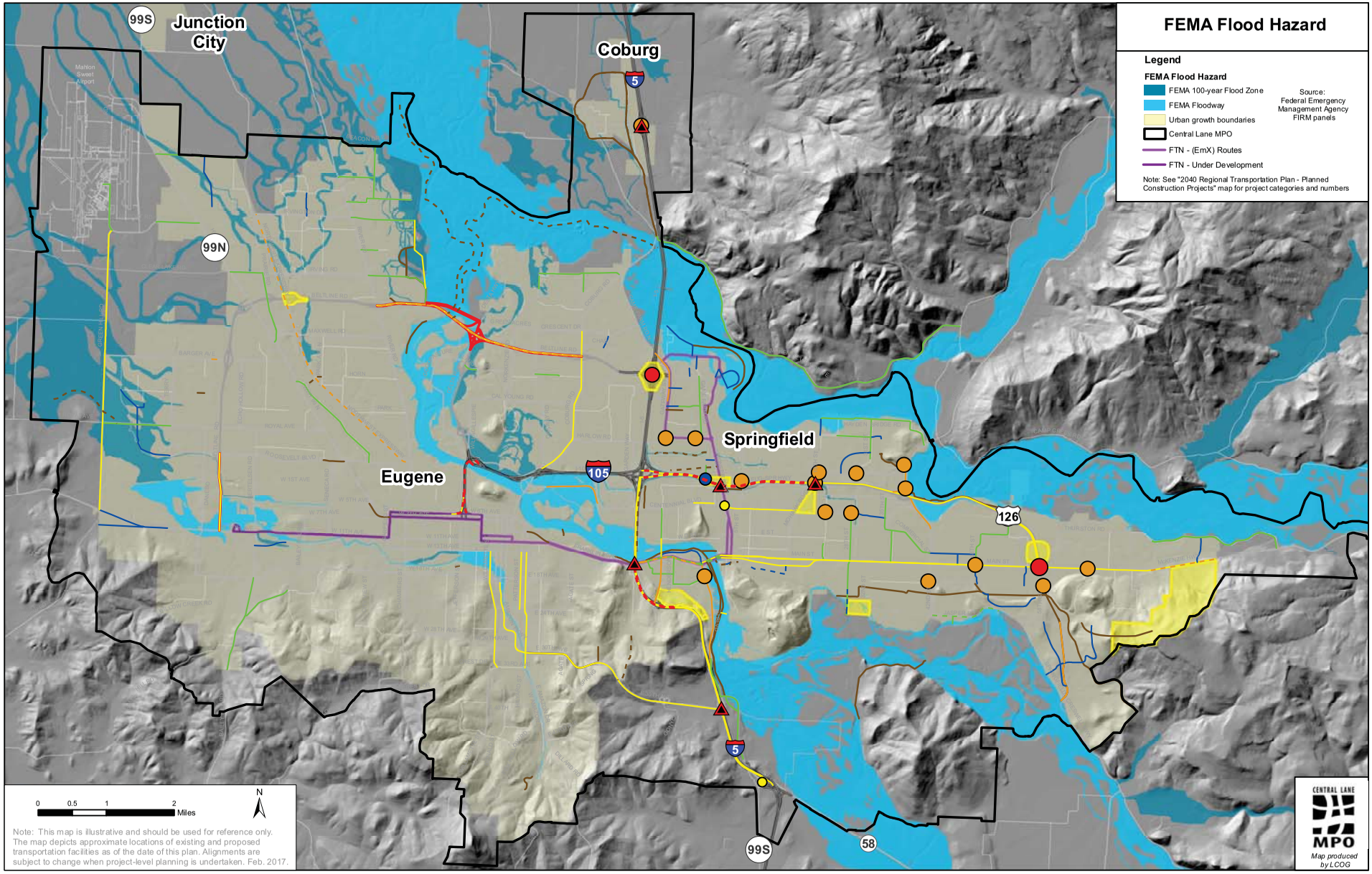

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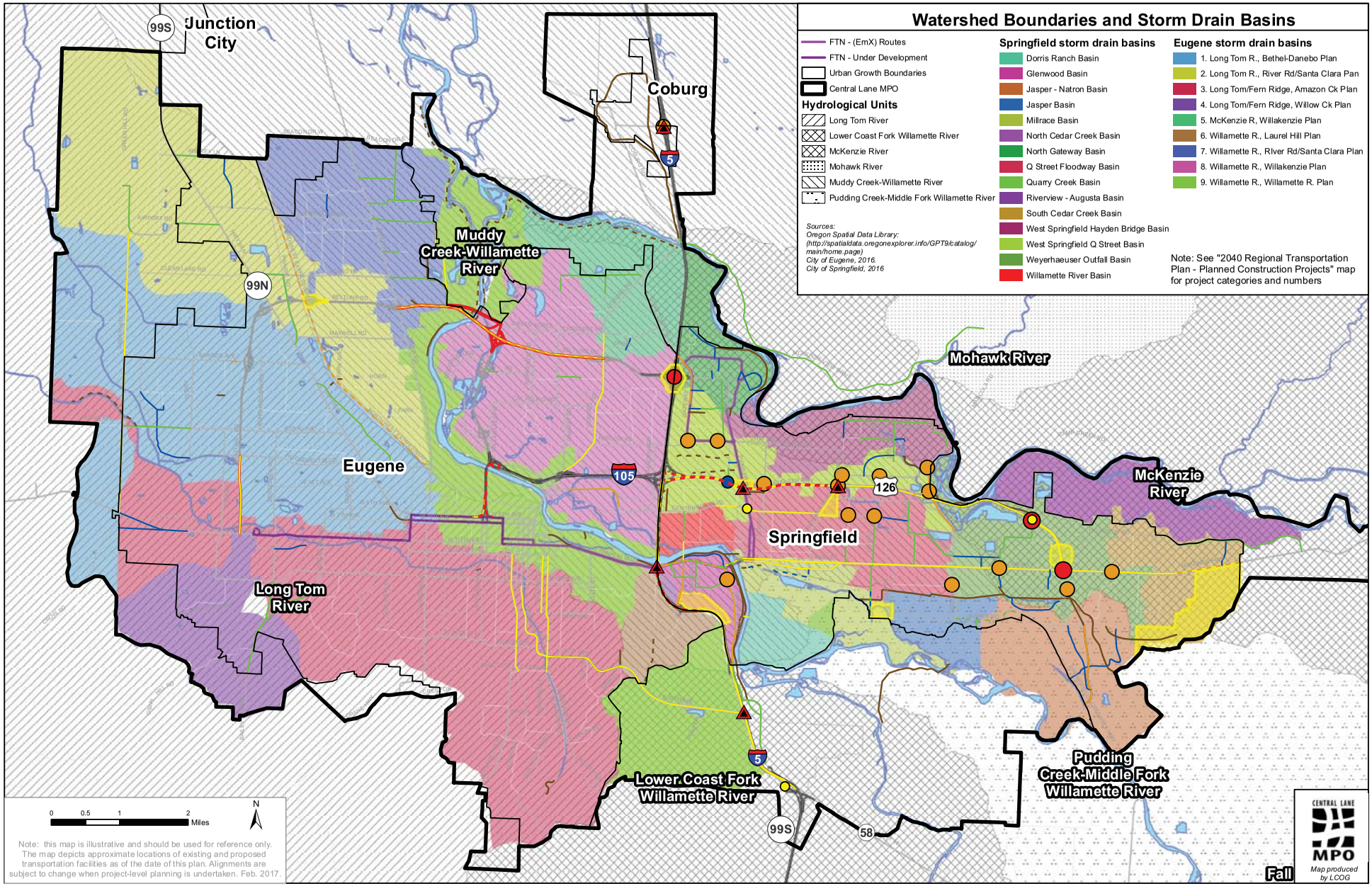

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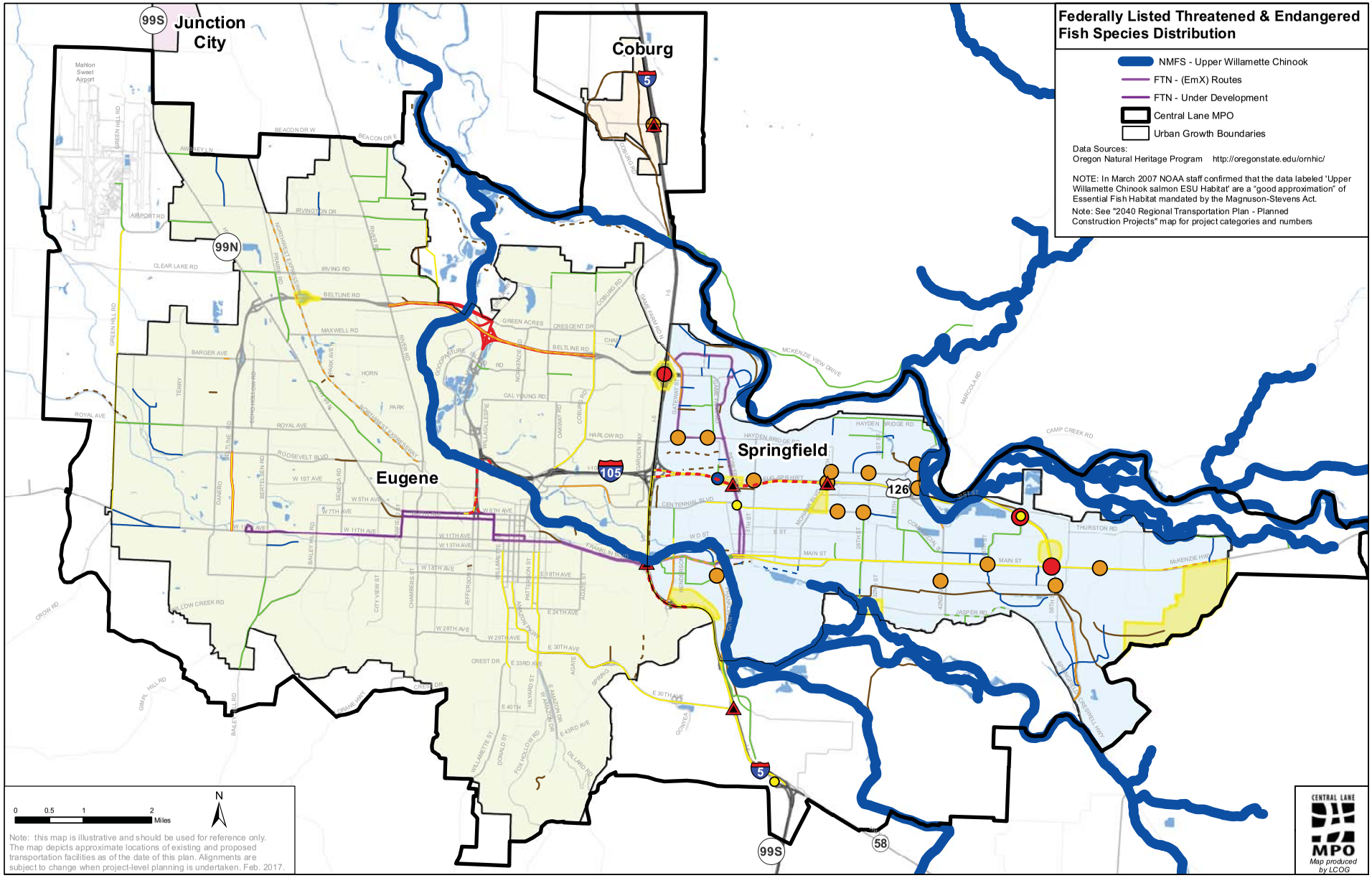

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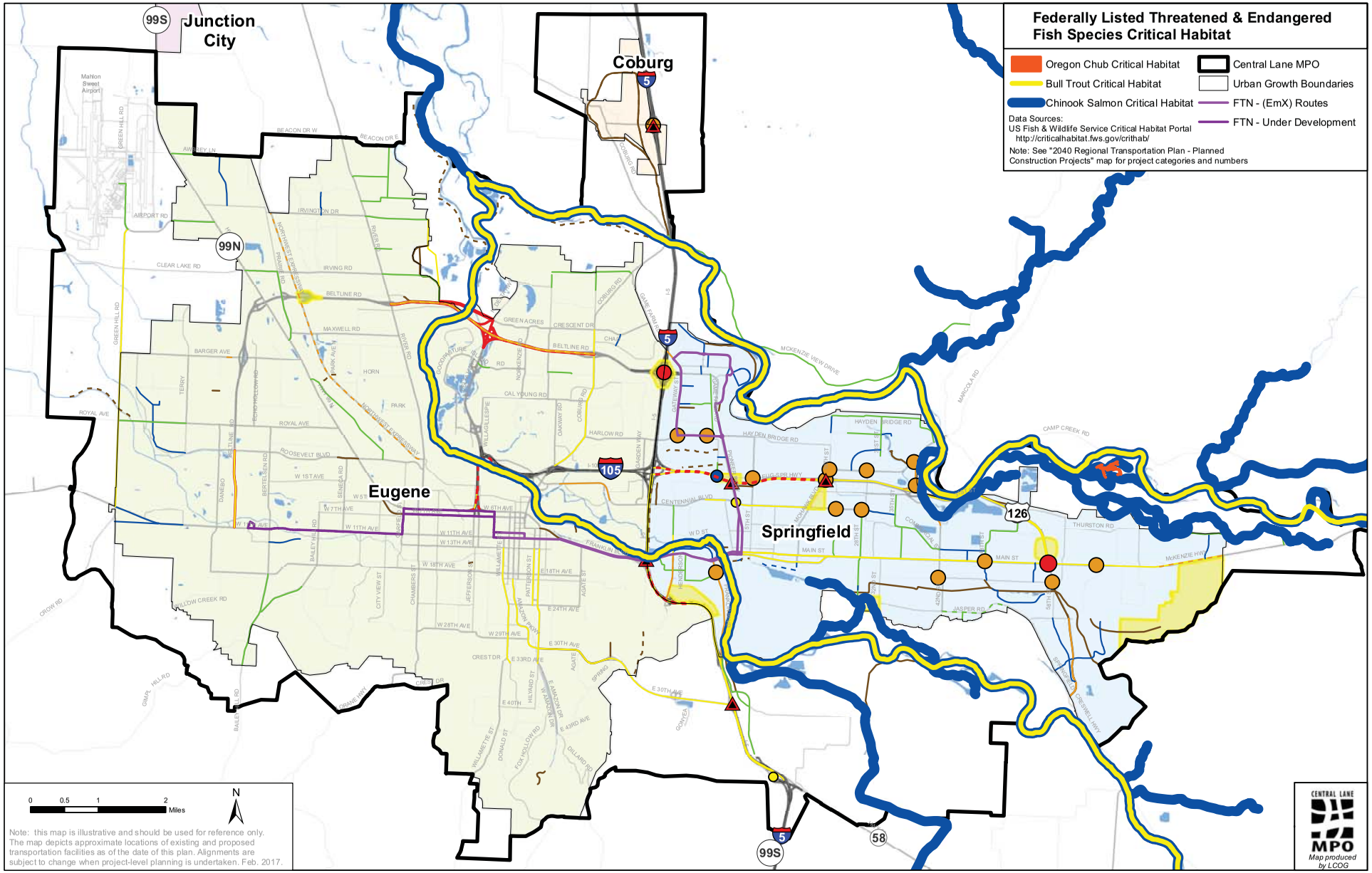

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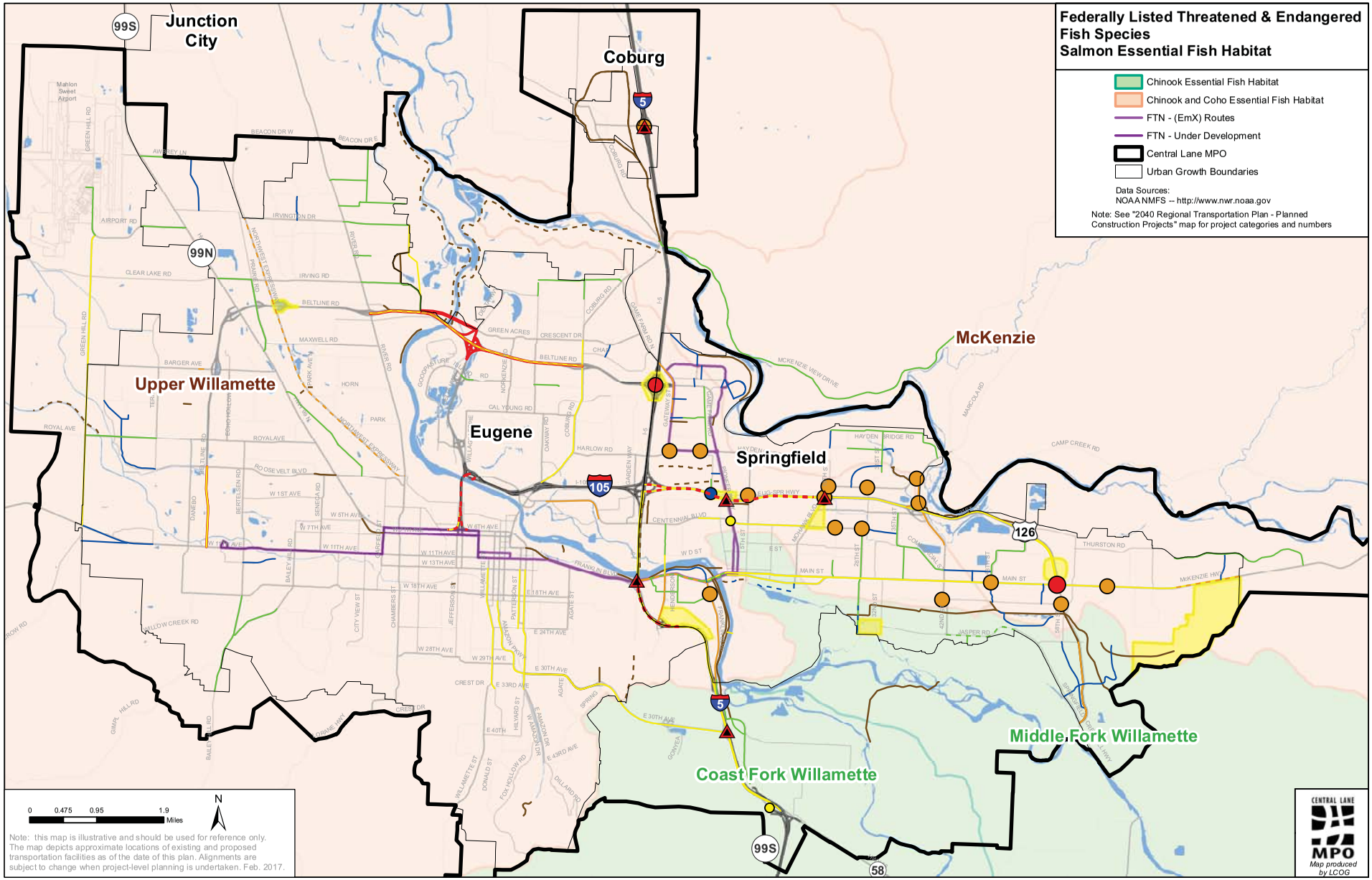

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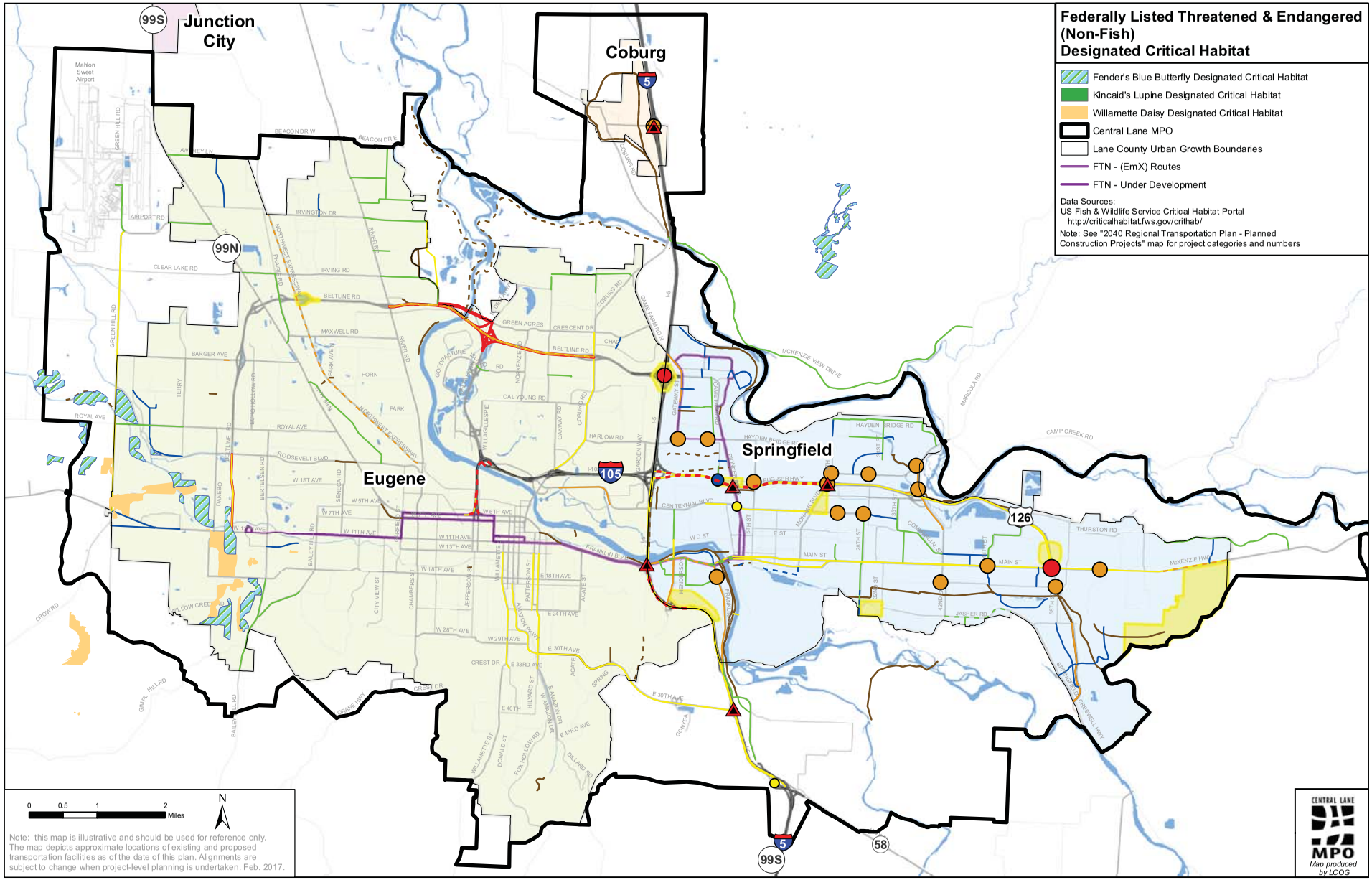

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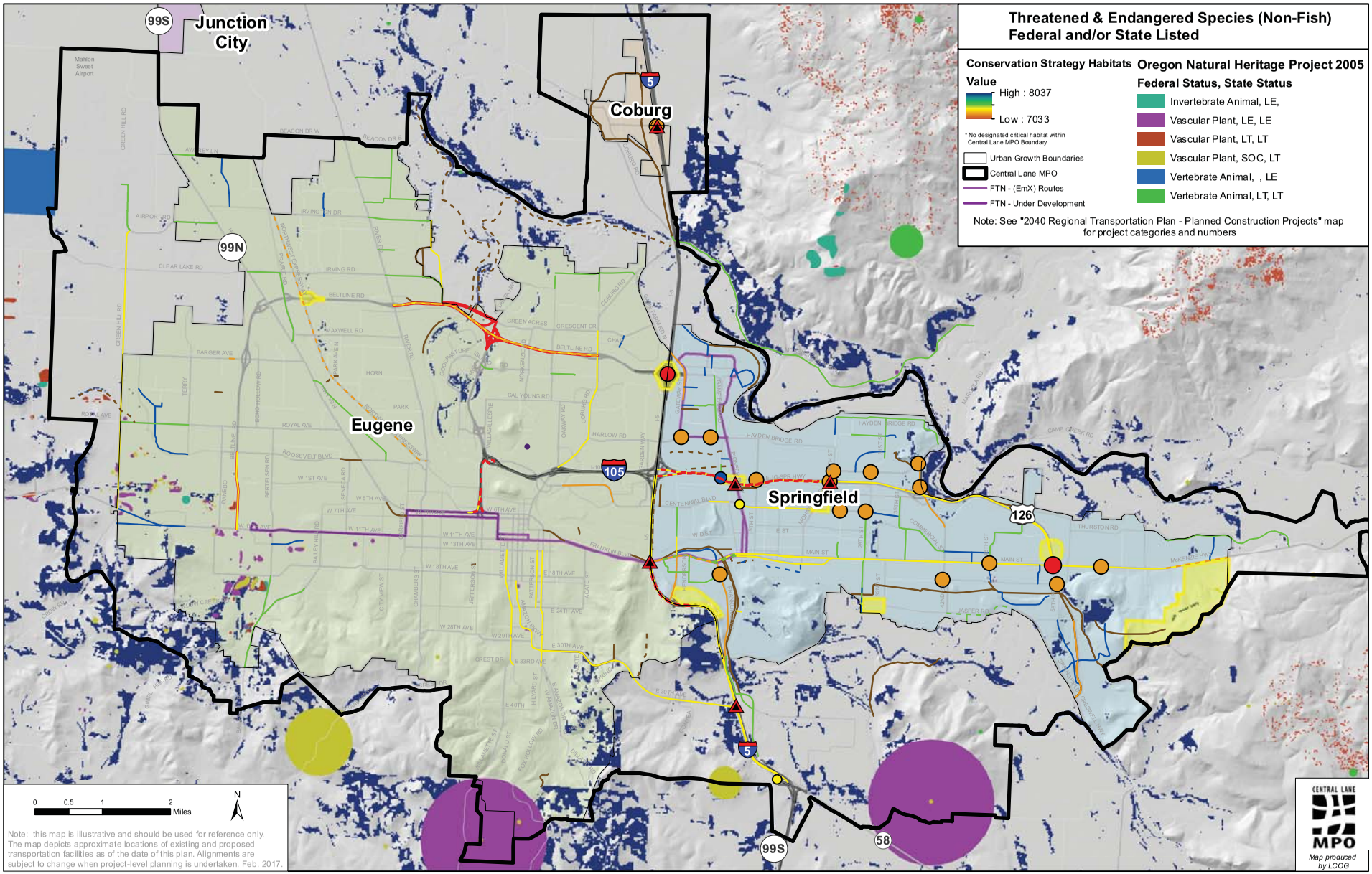

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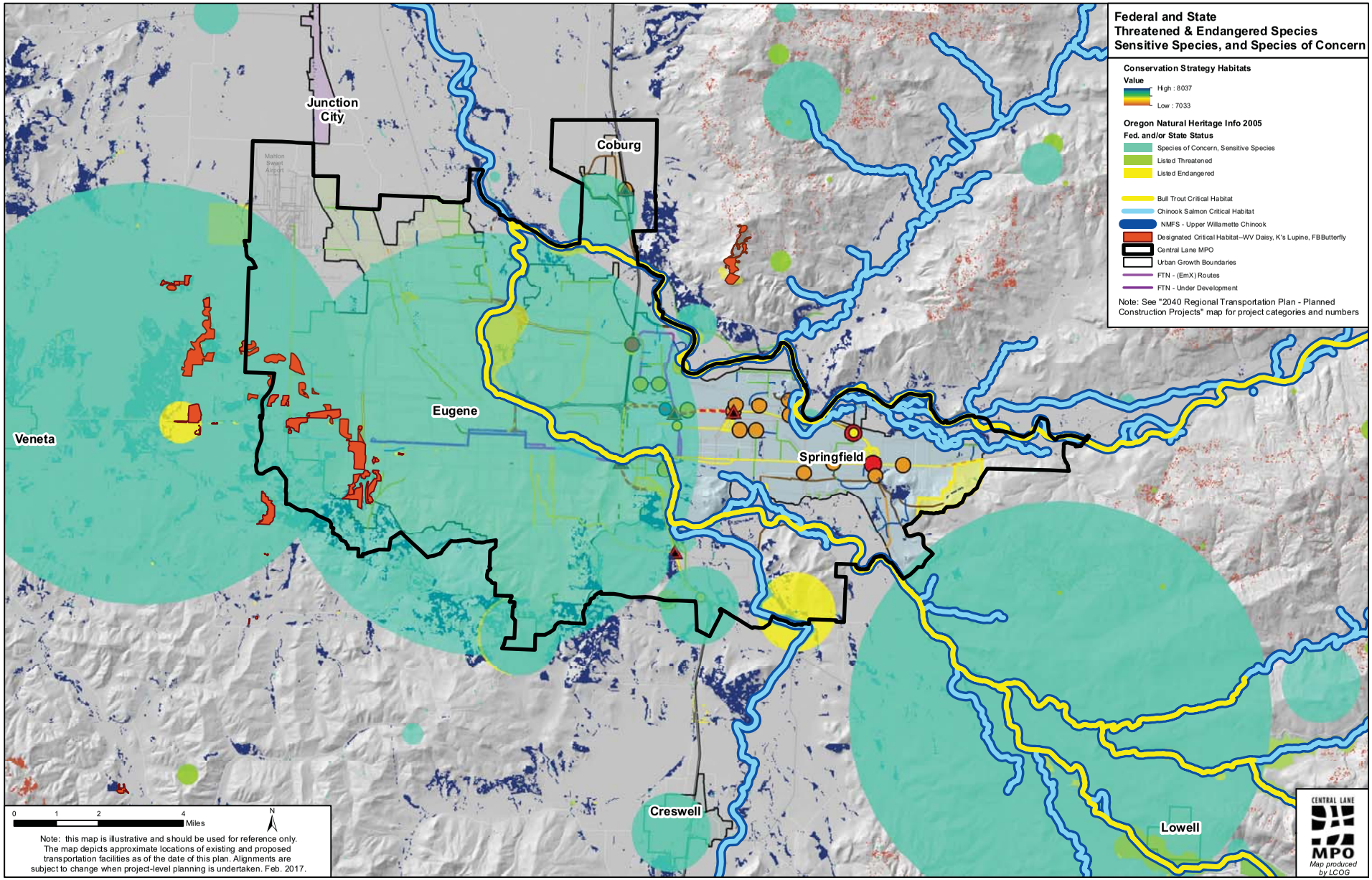

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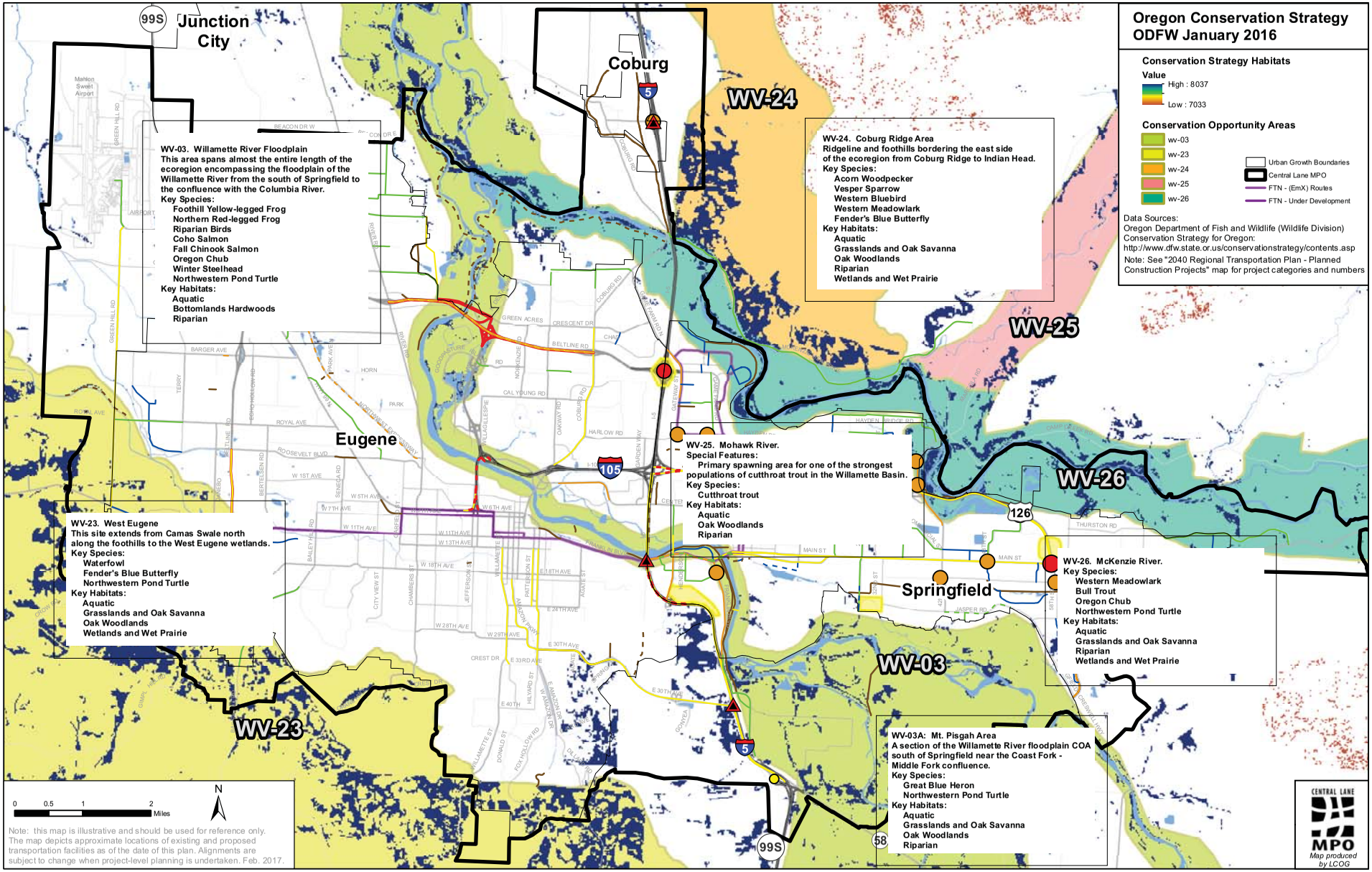

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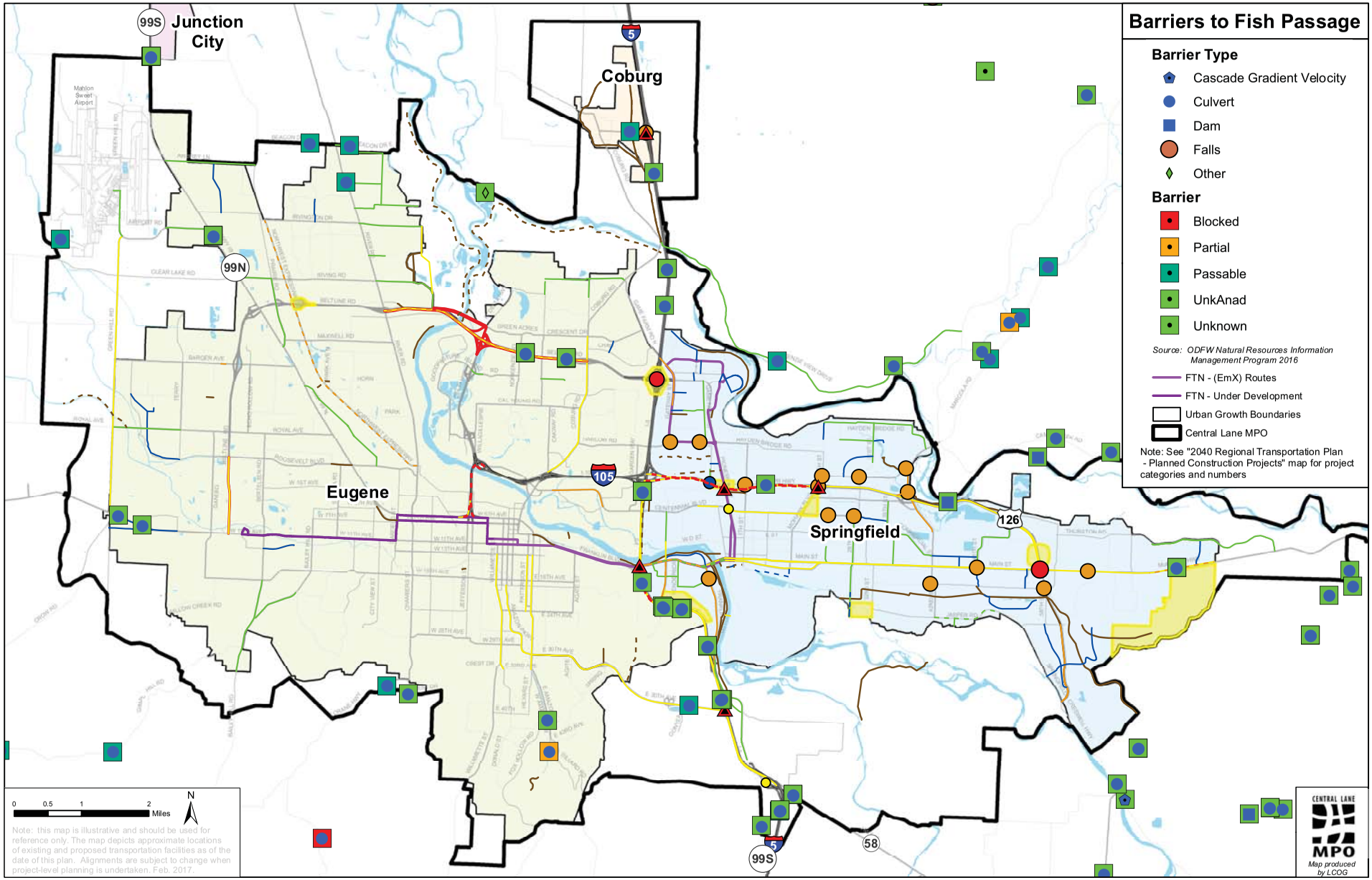

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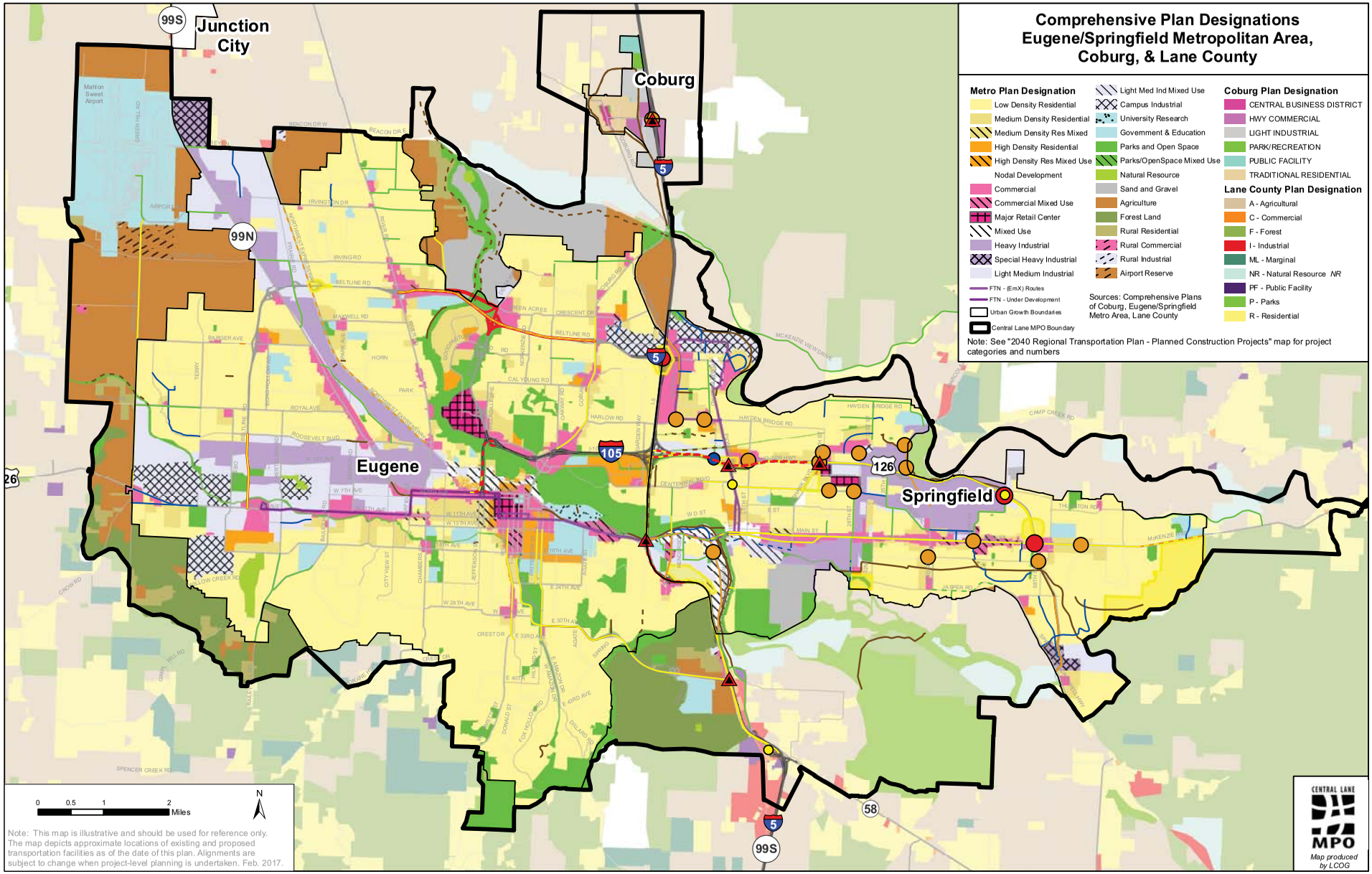

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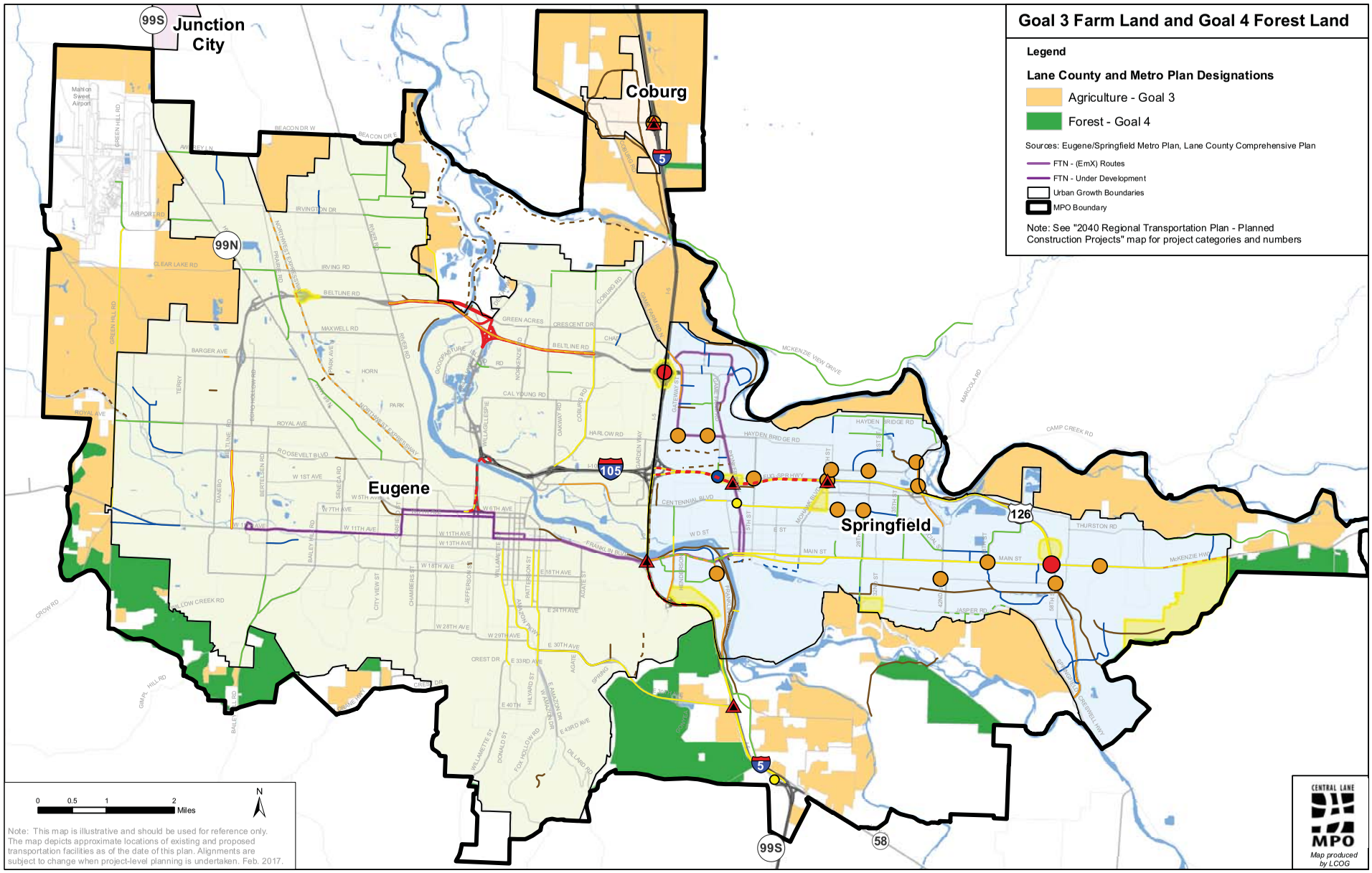

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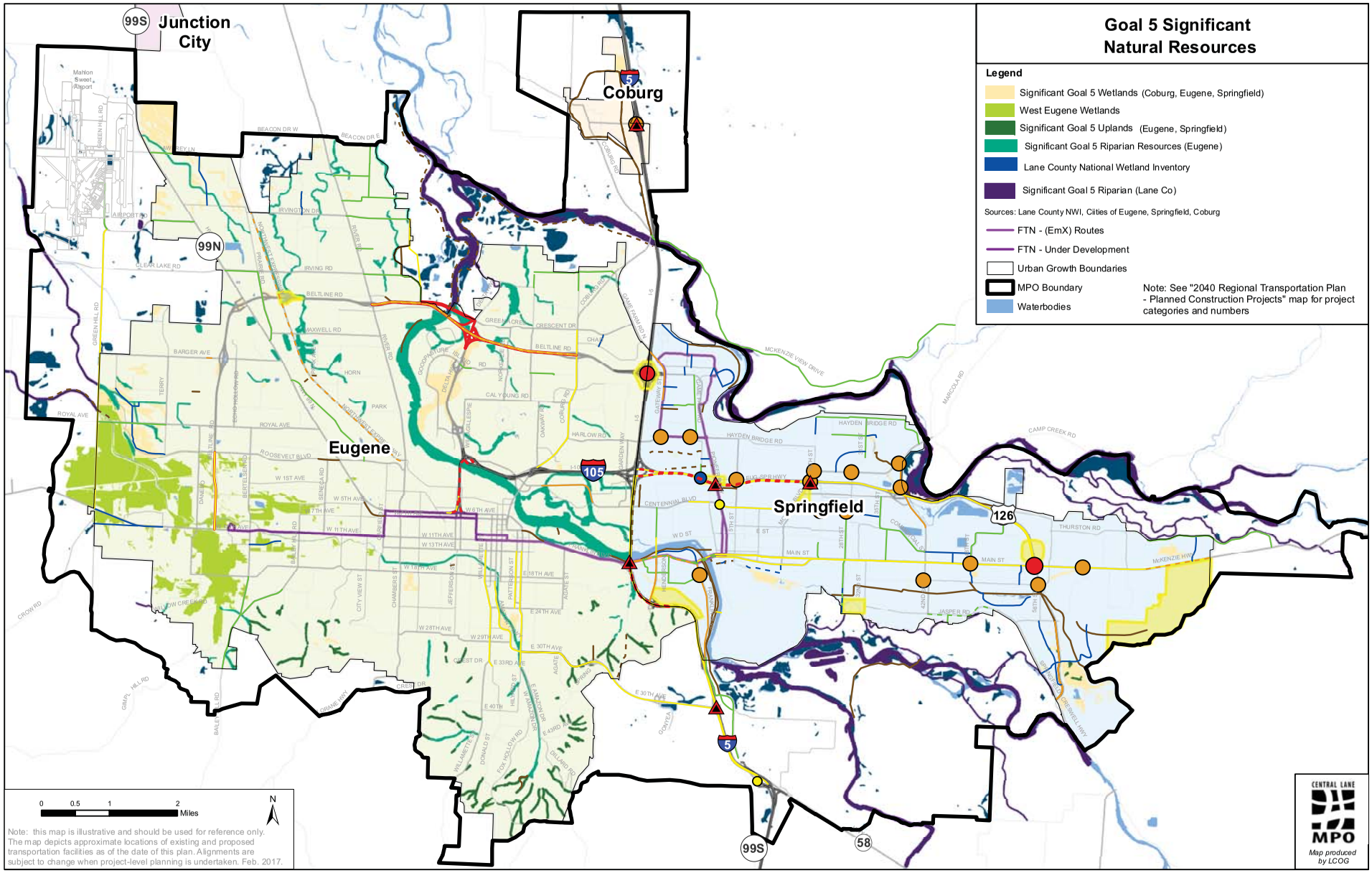

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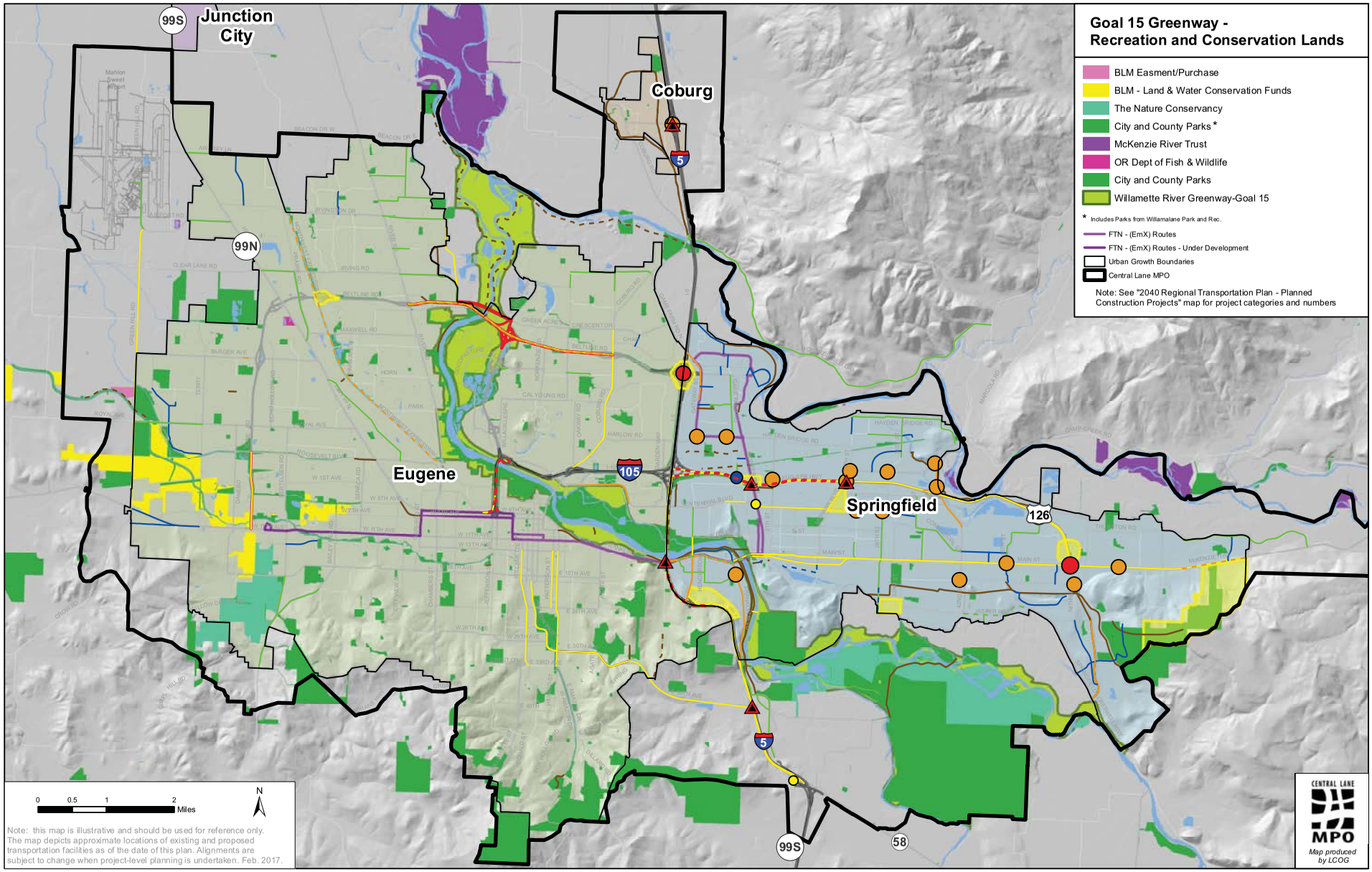

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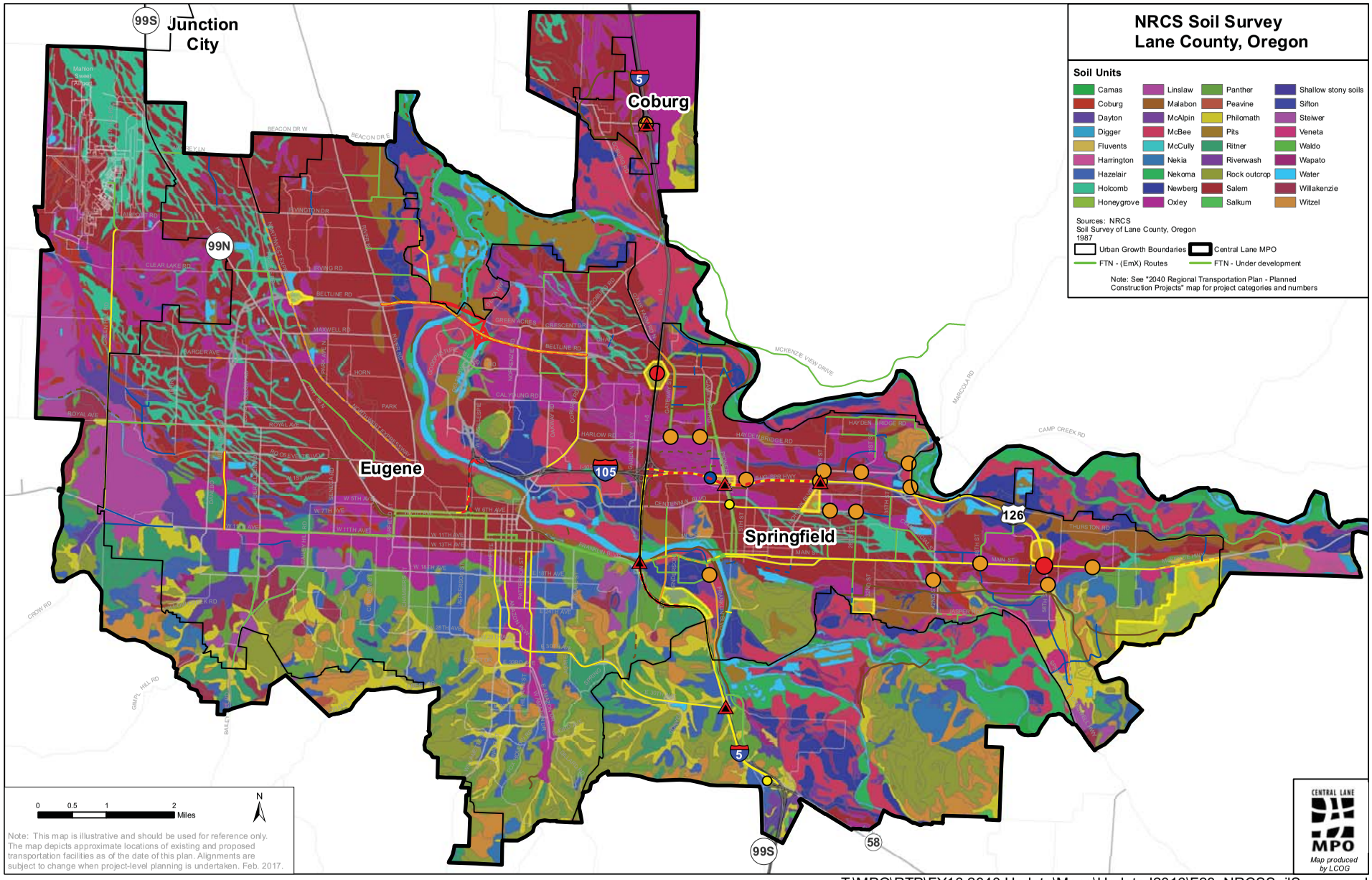

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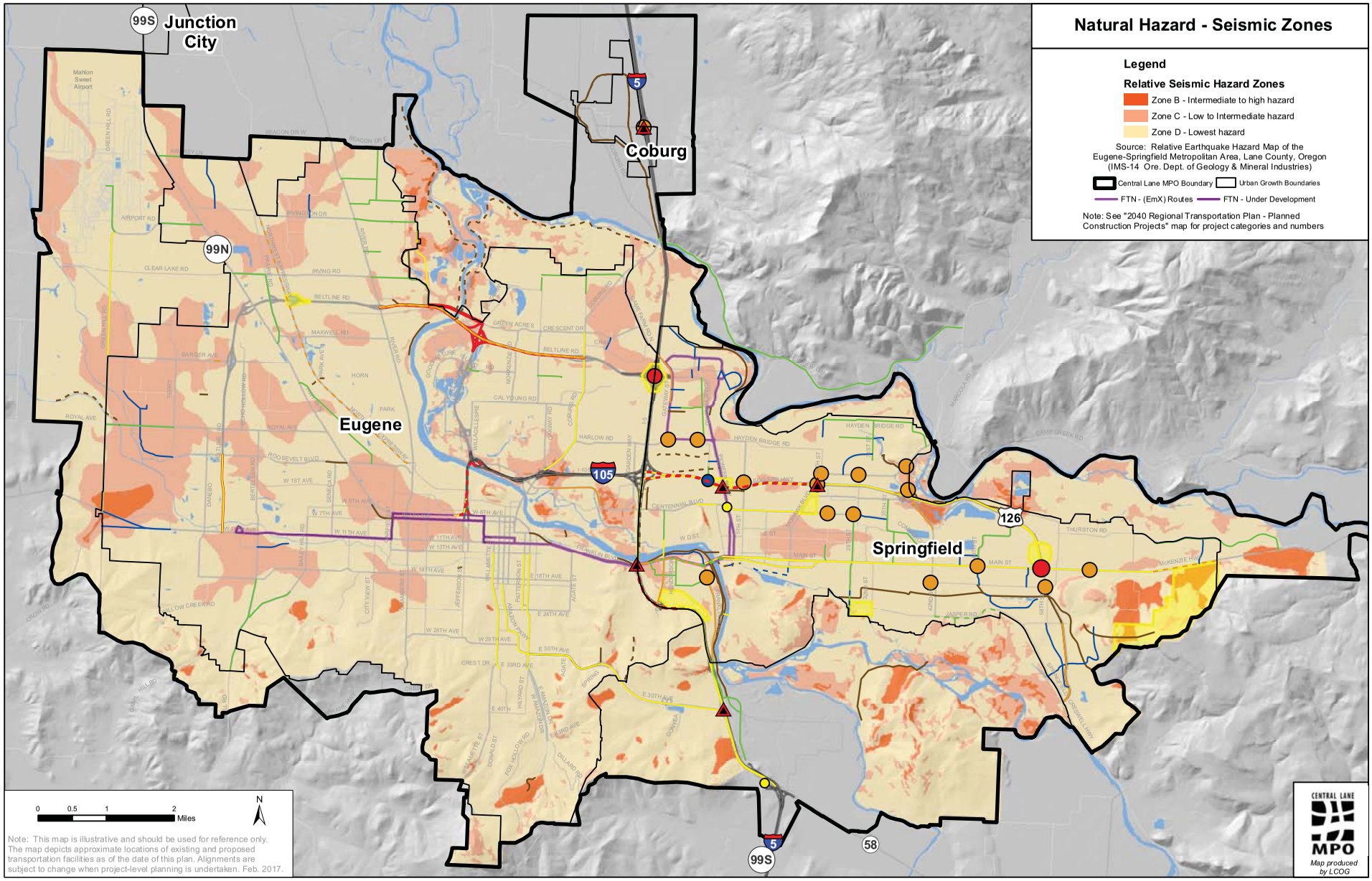

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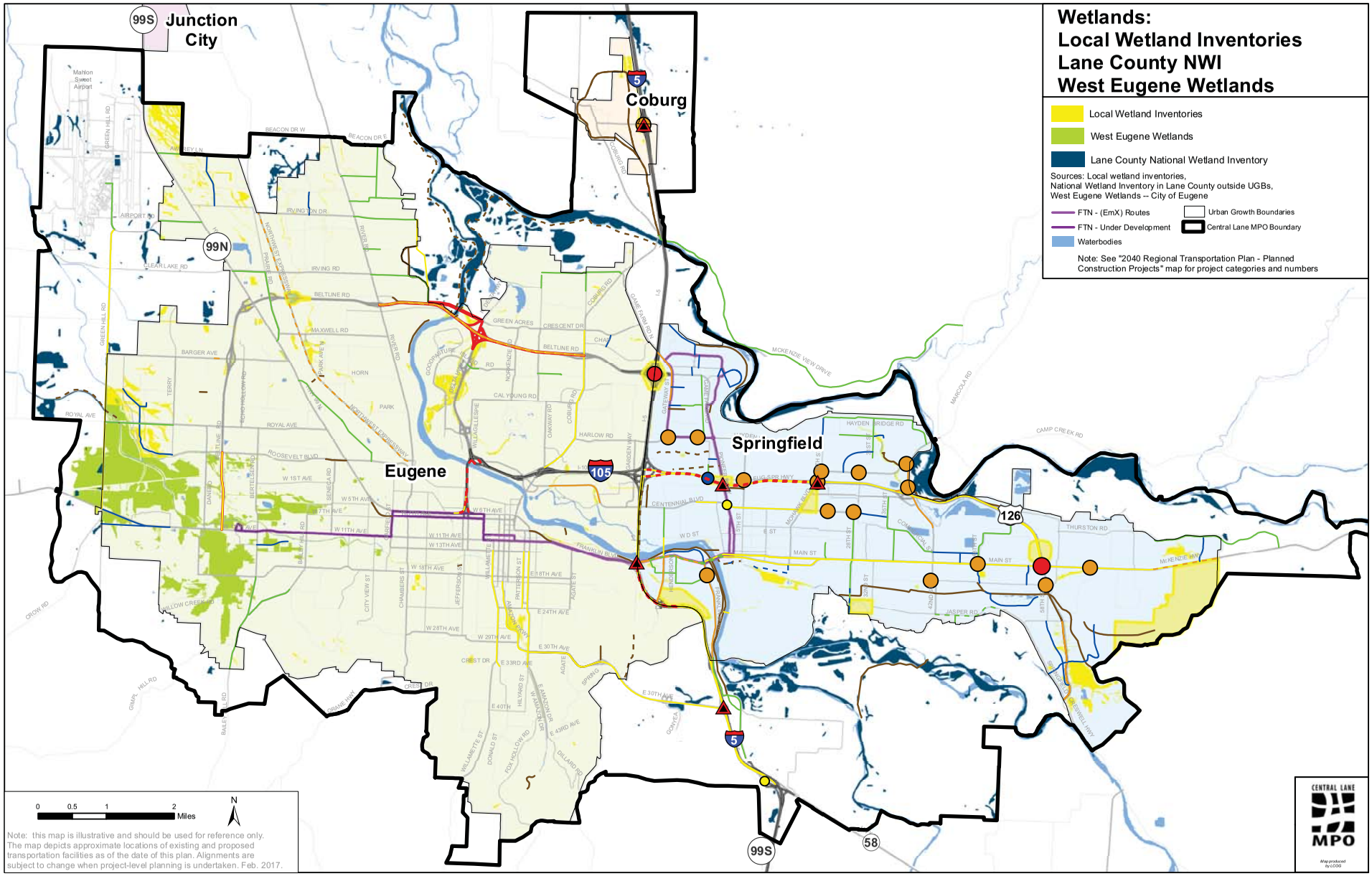

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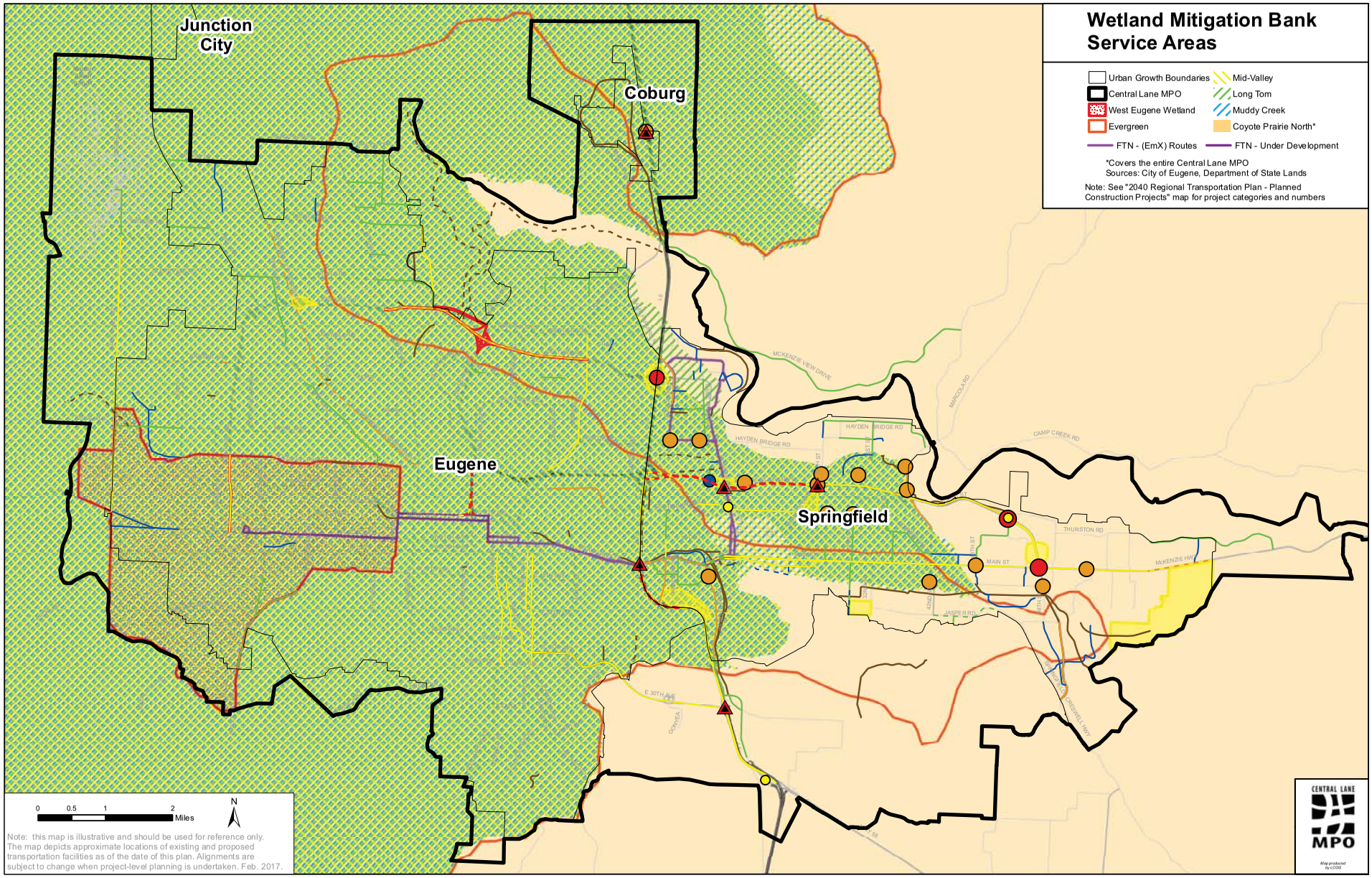

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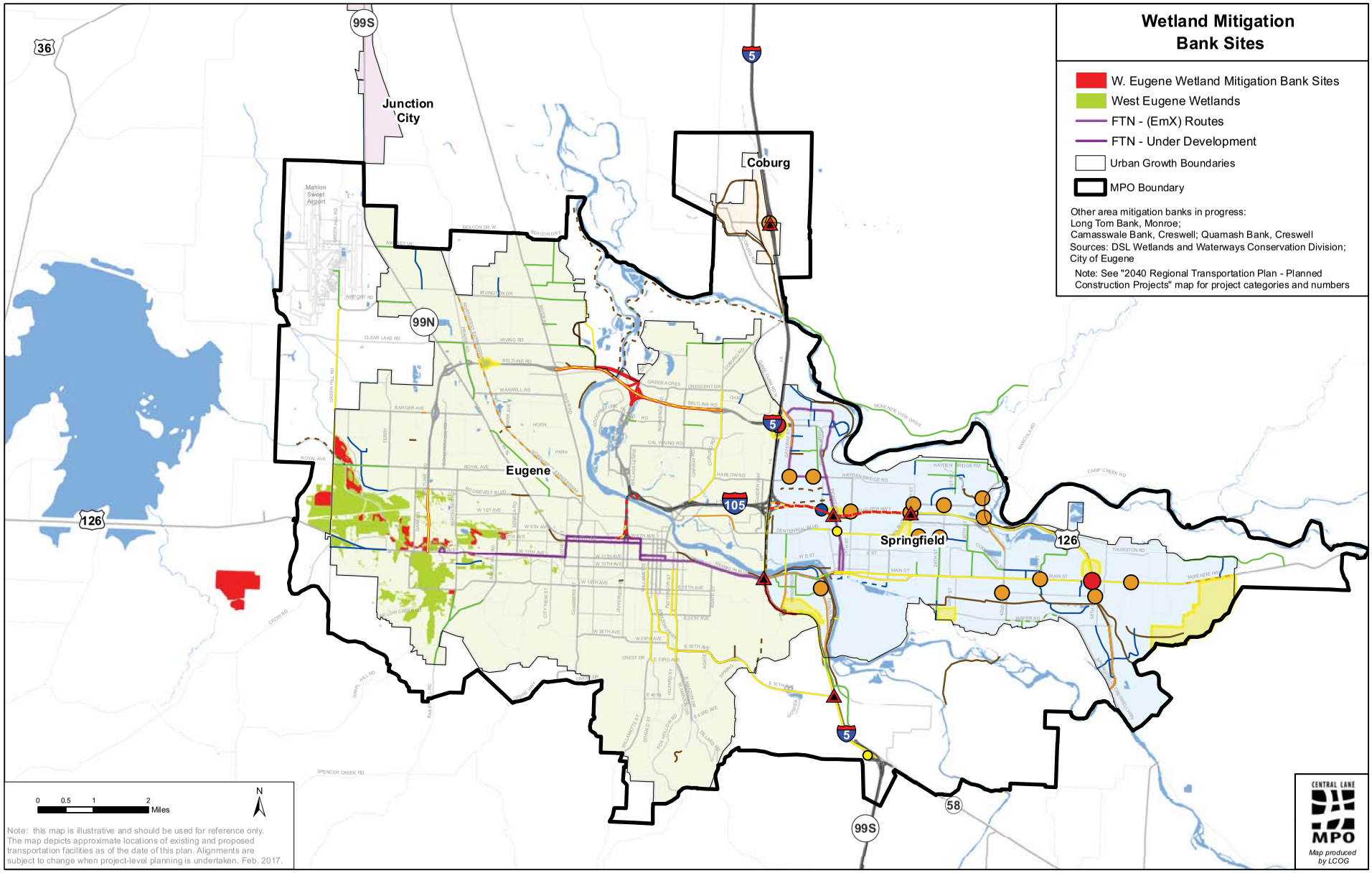

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CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

MPO

Moving Transportation into the Future

APPENDIX G

Congestion Management Process

CMP
Congestion Management Process

Prepared by:

Central Lane Metropolitan Planning Organization

March 2017

INTRODUCTION

As Eugene and Springfield and surrounding communities continue to grow, traffic congestion will need to be addressed and appropriately managed. Over the years the area has successfully employed a number of strategies to reduce overall demand on our highways and to efficiently manage our existing transportation system, reducing our need to rely solely upon expensive capacity building projects to alleviate traffic. The Central Lane MPO is committed to documenting these ongoing strategies and to implementing a congestion management process (CMP) for ensuring that the area continues to get the maximum benefit from both our existing and new transportation system.

This document describes the many elements of the Central Lane CMP – a comprehensive set of policies, performance measures, ongoing activities and recommended future actions designed to manage traffic congestion and to maintain high levels of transportation service in the Central Lane County metropolitan area.

Background

One of the eight planning factors that every Metropolitan Planning Organization must consider is the promotion of efficient system management and operations. Strategies to improve the performance of existing transportation facilities to relieve congestion and to maximize the safety and mobility must be included in the area's Regional Transportation Plan (RTP). To this end, a process has to be developed that provides a framework to recognize, track, address and monitor congested roadways and corridors. This is the Congestion Management Process.

Purpose

The purpose of the CMP is to identify and target congested areas and to bring an objective basis to the process of developing those strategies that will allow the region to achieve the greatest benefit for its investment. A CMP must:

- Measure multi-modal transportation system performance
- Identify the causes of congestion
- Assess alternative actions
- Implement cost-effective actions; and
- Evaluate the effectiveness of implemented actions.

To accomplish these objectives, the CMP features a significant component of data collection and monitoring activities and sets forward performance measures or criteria for identifying when action is needed and for identified management strategies that will be most effective.

Definition of Congestion

For the purposes of this document, congestion is defined as *the level at which transportation system performance is no longer acceptable due to traffic interference*. Determining what is ***acceptable*** system performance considers a number of factors, including the type of transportation facility, location within the region and time of day. Transportation and development goals for a region and public perception of traffic interference are also important considerations.

Regulations

The United States Fixing America's Surface Transportation Act (FAST Act) requires the development, establishment and implementation of a Congestion Management Process which is fully integrated into the regional transportation planning process. The Federal Highway Administration defines the congestion management process as a systematic approach that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy of new and existing transportation facilities and through the use of operational management strategies.

In 2015, the Federal Highways Administration conducted a certification review of the Central Lane MPO. It determined that the MPO had developed a Congestion Management Process (CMP) for the Central Lane region. The MPO acknowledged that work was needed to more fully develop a CMP that is integrated into transportation decision making. This document, and subsequent regular updates of it, are a result of this determination, and demonstrate the MPO's commitment to enhance and refine the MPO's CMP, and continue to monitor its effectiveness in the MPO's overall work.

Document Overview

The CMP provides the MPO with the opportunity to compile a variety of ongoing strategies and activities already under way, and to present an expanded range of recommended actions within a formally recognized Congestion Management Process. The first section of the document describes progress to-date within four key MPO program areas, including long range planning, transportation system modeling and data maintenance, transportation options (also referred to as transportation demand management), and programming and implementation. Significant efforts relating to the Congestion Management Process include the Congestion Management System presented in the Regional Transportation Plan adopted in November 2007, the adopted Intelligent Transportation System Plan, and the Transportation Demand Management programs operated primarily through point2point Solutions.

In developing Recommended Actions, the CMP also looks at enhancing work elements of the four program areas to meet the following objectives:

- Improve regional and local collection and management of congestion-relevant data, including travel time, accident occurrence and duration, and traffic counts;
- Review and update performance measures to evaluate acceptable and unacceptable levels of congestion;
- Maintain an updated identification of roadways and corridors within the MPO that are negatively impacted by congestion;
- Review and update policies, criteria and procedures to address and manage congestion; and
- Evaluate the effectiveness of congestion management actions as well as specific transportation system improvement projects.

CMP Development Process

The CMP is a combined effort of the partner agencies of the Central Lane MPO, notably Lane Council of Governments, the Cities of Eugene, Springfield, and Coburg, Lane County, Lane

Transit District, and point2point Solutions. Staff has developed this document for review and acknowledgement by the MPO's Transportation Planning Committee and Citizens Advisory Committee. Based on their feedback, the document will be presented to the Metropolitan Policy Committee (the MPO Policy Board) for their review and consideration as a component of the next Regional Transportation Plan in 2016.

Part I CONGESTION MANAGEMENT PROCESS – CURRENT ELEMENTS

The CMP provides the MPO with the opportunity to compile a variety of ongoing strategies and activities already under way within the framework of a Congestion Management Process. Significant efforts relating to congestion management include the Congestion Management System report originally prepared and adopted in September, 2004 and updated in the Regional Transportation Plan (RTP) adopted in November 2007, the adopted Intelligent Transportation System Plan, and the Transportation Demand Management programs operated primarily through point2point Solutions.

In addition, the following are all major efforts under the umbrella of the CMP:

- Alternative Mobility Standards Report (2005) – Among other aspects of this report, the analysis of existing and future highway system performance at the corridor level, and of current and future congestion and mobility, are significant elements of the MPO's CMP.
- Developed *2005-2010 Strategic Plan* for the MPO's TDM program (then *Commuter Solutions*, now *point2point Solutions*).
- Identification of Key Transportation Demand Management Corridors – combining the results of the Congestion Managements System's identification of congested corridors with other analysis such as the location and concentration of employment centers, the regional TDM program identified and prioritized "Key TDM Corridors" where a focus on implementing demand management strategies would be most likely to produce the greatest positive outcomes.
- Obtained traffic crash data for Lane County.
- Successfully launched the travel data probe project with ODOT.
- Implemented process at the Oregon Modeling Steering Committee (OMSC) to determine a common database for storing traffic count data for region/state.
- Began development of a comprehensive traffic count plan effort.
-
- Adopted the Regional Transportation Options Plan (RTOP) in 2014, a long-range plan that will result in updated TDM policies and strategies for the area, providing an effective approach to meeting mobility needs, prioritizing and evaluating projects, and meeting social and environmental targets in the region.

This first section of this document describes progress to-date within four of the key MPO program areas, including:

- Regional Transportation Plan and Long Range Planning
- Transportation System Modeling and Data Maintenance
- Transportation Options (also referred to as transportation demand management)
- Programming and Implementation.

Regional Transportation Plan (RTP) and Long Range Planning

The RTP guides planning and development of the transportation system within the Central Lane MPO. The federally-required RTP includes provisions for meeting the transportation demand of residents over at least a 20-year planning horizon while addressing transportation issues and making changes that can contribute to improvements in the region's quality of life and economic

vitality. It includes consideration of all transportation modes, including roadways, transit, bikeways and pedestrian circulation, as well as freight movement and regional aspects of air, rail and inter-city bus service. The RTP must be updated at least every four years, and must include participation by the citizens of the region. The current Central Lane RTP was adopted in December 2011. It includes a number of Congestion Management Process components, including the following:

Congestion Management System

A Congestion Management System (CMS) Baseline Report was originally developed in September 2004 and represents the region's first product within the overall CMP. The purpose of a Congestion Management Process is to provide a framework for addressing congestion on the regional transportation system. While in some cases congestion may be eliminated or significantly reduced, a more realistic goal is to improve the way we *manag*e congestion, now and in the future. A CMP is meant to aid in better understanding where the worst congestion is located and what the best mix of strategies is likely to be for each situation.

The 2004 Baseline CMS report was structured around three main concepts:

- Build on existing plans and capabilities. The CMS makes use of the adopted Regional Transportation Plan, adopted Goals, Objectives and Policies, adopted performance measures, and the regional traffic forecasting model to define the level of congestion on the system and evaluate alternative congestion management strategies.
- Focus on major corridors and a range of strategies. The CMS identifies major congested corridors and a set of strategies for each congested corridor. The strategies include both short range and longer term actions, and a wide array of options including operations, TDM, access management, land use measures, and adding new capacity.
- Improve the techniques for obtaining and analyzing information. The CMS incorporates a process for monitoring and evaluating transportation system performance on a more systematic basis. Future efforts will focus on improved data collection and analysis, better modeling tools, and ongoing coordination among individual agencies that operate different pieces of the overall system.

The CMS collects and organizes various pieces of the RTP that are related to congestion—in effect, providing a view of the RTP through a "congestion filter" to better define the different components and their connections with one another.

Using the most up-to-date inputs for land use allocation and network assumptions, the model was used to simulate traffic flow on the major roadway network and compare each roadway section with the level of service or volume-to-capacity measures discussed earlier. Based on a review of this information, nine roadways were identified as congestion management corridors for the initial CMS:

Table 1. CONGESTION MANAGEMENT CORRIDORS

CORRIDOR	SEGMENT
Interstate 5	OR 58 interchange at Goshen to north boundary of the MPO at Coburg
OR 126/I-105	Garfield Street in Eugene to Main Street/McKenzie Highway

	in Springfield
	• 6 -7th couplet from Garfield to Jefferson
	• Washington-Jefferson Bridge (I-105) from 7th to Delta Highway
	• I-105 from Delta Highway to Interstate 5
Eugene-Springfield Highway	I-5 to Main Street/McKenzie Highway
Beltline Highway	Highway 99 to Interstate 5
Main Street/McKenzie Highway	Mill Street in downtown Springfield to 70th Street
Broadway/Franklin Boulevard	Mill Street in Eugene to Springfield Bridge
	• Broadway from Mill Street to Alder Street
	• Franklin Boulevard from Alder Street to I-5
	• Franklin Boulevard from I-5 to Springfield Bridge
West 11 Avenue	Terry Street to Chambers Street
Ferry Street Bridge/Coburg Road	Broadway to Crescent Avenue
Southeast Eugene corridor	Hilyard, Patterson, Amazon Parkway, and Willamette from 13 to 33rd Avenue
18th Avenue	Bertelsen Road to Agate Street

The 2004 CMS report discussed a set of strategies for addressing congestion within each corridor, including land use strategies; transportation demand management (TDM); intelligent transportation system (ITS) techniques and operational tools; roadway projects to add capacity; transit strategies; and bicycle/pedestrian strategies. For each corridor, the list includes projects and actions from the adopted *TransPlan* as well as additional work being done in ongoing efforts, such as the ITS plan for the area.

In addition to specific corridors, the CMS also served the purpose of monitoring congestion on the overall network of major roadways.

For the 2035 RTP update adopted in December 2011, the regional travel model was utilized to produce updated values for four Key Performance Measures on all of the Congestion Management Corridors: congested miles of travel, roadway congestion index, network vehicle hours of delay, and percent transit mode share on congested corridors. The MPO will continue to use the Congestion Management System to update and analyze information related to the Congestion Management Corridors during each update of the MPO's RTP.

In addition to identification of the Congestion Management Corridors, the CMS report, and its subsequent updates, contains an assessment of each of the Corridors, including:

- The location and severity of congestion in the corridor
- The type(s) of congestion on each corridor
- The main factors contributing to the congestion
- A summary of proposed projects or major studies for the corridor
- A summary of other adopted strategies directed at addressing congestion in the corridor

- An assessment of the potential for additional strategies to address congestion in the corridor, including land use measures, transit, bike/pedestrian improvements/measures, transportation demand management, ITS or operational measures, or other tools.

Intelligent Transportation System Planning

In 2003 the *Regional Intelligent Transportation System (ITS) Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area* was presented to MPC. The plan represents a collective effort by the Oregon Department of Transportation (ODOT), Lane County, the City of Eugene, the City of Springfield, Lane Council of Governments (LCOG), and the Lane Transit District (LTD). The plan outlines the deployment of ITS projects, which include advanced technologies and management techniques, to improve the safety and efficiency of the transportation system over the long term.

Intelligent Transportation Systems (ITS) involve the application of advanced technologies and proven management techniques to solve transportation problems, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g., travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system. ITS applications provide a viable opportunity for improving the safety and efficiency of the surface transportation system in the Eugene-Springfield metropolitan area. These applications help improve transportation system operations by performing a function more quickly or reliably or by providing a service that was not previously available. In effect, ITS improves the mobility of people and goods on the existing roadways and also provides the potential for substantial savings on future construction, particularly of highways. It is often easy to overlook the importance of investing in operations, but it is necessary to ensure that the traveling public makes safe and efficient use of existing roadways.

The ITS Operations and Implementation Plan identified several potential ITS projects to be implemented as part of existing projects or as funding becomes available. In addition, the plan identifies the following steps as necessary for successful ITS plan implementation:

- Continue the ITS Steering Committee. This action was identified as the most important item for the successful implementation of the ITS plan. This group included the key stakeholders from the planning process and will be organized as a new subcommittee to the Transportation Planning Committee (TPC). This group initiated the ITS Plan implementation, including planning projects that fit agency needs, and successfully pursued funding opportunities for ITS projects. The group also was responsible for monitoring and report progress and effectiveness.
- Deploy "Early Winner" Projects. Another key to the success of ITS in Eugene-Springfield will depend on the deployment of successful projects within a short time frame. A potential early winner project includes the deployment of field devices such as closed circuit television cameras, count stations, variable message signs, and ramp meters on Beltline Highway.

- Incorporate the ITS Plan in the RTP Update Process. The ITS Plan has been incorporated within the Regional Transportation Plan.

Performance and Monitoring

An important component of the Regional Transportation Plan relates to plan performance and implementation monitoring. Findings that result from analysis of these performance measures will allow for informed decisions to be made as to how best implement the plan. For example, priorities or emphasis for implementation actions may be adjusted, policies may be amended and additional policies or implementation actions may be recommended due to performance measure outcomes. Findings may also influence budgeting and the type and phasing of capital projects included in the region's TIP.

The RTP includes the following performance measures directly relating to traffic congestion:

- Congested miles of travel;
- Roadway congestion index;
- Daily vehicle hours of delay; and
- Percent transit mode share on congested corridors.

During each update of the RTP, in addition to assessing the RTP's on the full set of performance measures across the transportation system as a whole, the assessment will include specific analysis of the four congestion performance measures above on each of the Congestion Management Corridors.

Programming and Implementation

STP-U Fund Allocation Process

The Central Lane MPO is required to develop a process for allocating the MPO's Federal Surface Transportation Program Urban (STP-U) funds. STP-U funds are allocated and programmed for eligible projects at the discretion of the MPO, following federal guidelines. The MPO Policy Board has approved a process for the use of a set of screening or eligibility criteria and a set of evaluation criteria and guidelines to be applied to applications for STP-U funding. MPC approved the process and sets target funding levels for 3 categories of need. Transportation Demand Management (TDM) & Transportation Options (TO) programs receive a minimum of ten percent of the annual STP-U funds, to support TDM and TO efforts to address congestion management. Planning program activities receive 25% of the annual STP-U funds to address regional planning priorities including:

- Priorities established in the UPWP;
- Compliance with FAST Act including the Congestion Management Process;
- Planning for Public Outreach and Participation, including E-MPO development and coordination;
- State system regional project planning and NEPA activities;
- Coordinated public transit and human services planning;
- RTP implementation; and
- Local transportation planning and coordination as part of regional system.

The remaining 65% of STP-U annual allocations are programmed for Preservation, Project Development and Modernization Activities. Applications for funding of these activities are

assessed and prioritized based on a set of eligibility factors and prioritization criteria approved by the MPO Policy Board. The four primary *Regional Priority Factors* include whether the proposed project:

- Preserves or Enhances Transit Services
- Reduces Greenhouse Gas Emissions by Reducing Congestion, Increasing Operational Efficiency, Supporting Alternative Modes, and Managing Transportation Demand
- Preserves Existing Transportation Assets
- Improves Safety

In addition, the STP-U application and prioritization process requires each jurisdiction to specifically describe how proposed projects address the following:

- Congestion Reduction
- Connectivity
- Benefits to Multiple Modes
- Benefits to the Freight System and Freight Movement
- Public Health

Metropolitan Transportation Improvement Program (MTIP)

The MTIP is a set of transportation improvements and projects which are scheduled to occur within the Central Lane MPO area over a four-year time period. The MTIP primarily lists projects for which application of certain federal funds will be made or which will require USDOT approval to proceed. Priorities for the use of STP-U funds administered by the MPO are established during the development of the MTIP. All MTIP projects are determined by the transportation needs identified in the Regional Transportation Plan (RTP). The MTIP project list itemizes for each project the anticipated year in which each phase will be undertaken, the funds source and amount, and the responsible agency.

Transportation System Modeling and Data Maintenance

The ability to acquire, maintain and analyze traffic data is critical to implementing a successful Congestion Management Process. Central Lane MPO staff is constantly obtaining and updating performance information and other characteristics of the regional transportation system. These include:

- Roadway network data
- Traffic counts
- Travel speed data
- VMT estimates
- Traffic safety data
- Transit passenger counts
- Route descriptions
- Vehicle operations data
- Data pertaining to the movement of freight within and through the region
- Bicycle and pedestrian network data and counts

Modeling and data activities specifically related to the Congestion Management Process include the following:

- Implementation of a 1500-household activity and travel survey

- Continual development and enhancement of the regional traffic count database
- Obtaining vehicle classification counts and travel time studies
- Implementation of a new commercial vehicle model for truck model calibration
- Travel time studies for forecasting network delay and reliability issues for the Congestion Management Process

LCOG continues to work with point2point Solutions and other partners on implementing and expanding the TMA's Congestion Management Process. The process draws together the relevant regional Goals, Objectives and Policies, and information on congested corridors, measures of congestion, various management alternatives, and ongoing data needs. The MPO is working to expand data, surveillance, and modeling element of the work program, specifically expanding data gathering to meet the needs identified in the CMP, and will continue to explore modeling software and methods to better represent queues, signal delays, and the effects of ITS projects in congested corridors. Results from the 2006 TGM-funded Alternative Mobility Standards continue to provide insight into feasible CMP analyses and data needs.

Working with Lane County, LCOG updated traffic counts at all external stations entering the TMA model area in FY07. We have continued to obtain traffic count data from our regional partners, and are continuing work to ultimately incorporate counts into a regional database. In FY08-09, ODOT conducted counts on all ramps of all limited-access highways in the TMA. Additional counts will be undertaken by the MPO at roadway locations identified through the regional model as being critical to the movement of people and goods.

Expansion of the bicycle and pedestrian networks within the MPO area and changes in the format of the GIS databases have resulted in an incomplete and geographically poor representation of these networks. These networks are important in supporting mode choice modeling, assessing alternate mode accessibility and mobility, identifying land use and infrastructure issues that may affect use, and in particular, for assisting in the Safe Routes to Schools program. The MPO has been working to review and update the current coverages so that an accurate network description is obtained. The MPO is also developing a process whereby future additions can be incorporated more seamlessly.

Transportation Options

Transportation Options (TO), otherwise known as Transportation Demand Management (TDM), is a set of strategies, plans, and programs that influence travel behavior for the purpose of reducing or redistributing the demand on roads. It also looks at strategies that improve the efficiency of the existing transportation system. The primary purpose of TO or TDM is to reduce the number of single-occupant vehicles using road facilities while providing a wide variety of mobility options. For example, an important way to reduce demand is to promote and implement projects that support bike, pedestrian, transit infrastructure and programs. Central Lane MPO contributes to and coordinates regional TO projects and programs by providing information, resources, and tools to help metro-area residents, employers, and employees make good choices about how to get around. The regional TO program, point2point Solutions, is a program of the Central Lane MPO. This program offers a coordinated menu of tools, encouragement, information, and activities to promote walking,

biking, transit use, carpooling, and carsharing. Point2point Solutions targets several populations including employers, commuters, schools, and bike/walk advocates through the following:

- Employer/Employee Transportation Benefits;
- Rideshare;
- Valley Vanpool; and
- Smart Ways to School.

Congestion Mitigation Program

Another component of the MPO's congestion management program is the website KeepUsMoving.info. The site includes an interactive map that highlights large transportation projects and events that are being constructed within a year and that have a large potential impact on the Eugene-Springfield Metro Area. KeepUsMoving.info provides user-friendly information about current road construction projects with anticipated congestion and provides direct access to transportation options resources.

Transportation Options Advisory Committee (TOAC)

Providing planning and leadership for the areas transportation options activities is the primary charge of the Transportation Options Advisory Committee. This Committee is comprised of individuals from the various MPO partner agencies and meets on a monthly basis. This Committee is currently inactive.

Part 2 RECOMMENDED ADDITIONAL ELEMENTS

The following are currently being pursued, subject to funding, data availability, and staff capacity, to further integrate the ongoing congestion management process and activities into the planning operations of the Central Lane MPO.

Action 1 *Conduct an Update of the ITS Plan*. The MPO is working to identify funding and other resources to conduct an update of the MPO's ITS Plan. A major focus of this update will be to improve the data collection, storage, and analysis to support the MPO's Congestion Management Process.

Action 2 *Review and Update CMP Performance Measures*.

Action 3 *Incorporate CMP Criteria into STP-U Process*. The MPO has overhauled the STP-U funding criteria in part to reflect the goals of the CMP. This is described in more detail in Part 1 of this document under *STP-U Fund Allocation Process*.

Action 4 *Incorporate CMP Criteria into MTIP project Assessment*. The MPO is working toward a more comprehensive analysis of the implementation of each MTIP. This will use not only the CMP Performance Measures, but also the full set of the RTP Performance Measures, as well as other criteria. The MPO Policy Board has directed the MPO to provide the Policy Board with metrics illustrating the impact the MPO's projects and programs are having toward achieving not only the performance measure outcomes, but also in achieving the *Regional Priority* factors used by the MPO to determine project funding priorities.

Action 5 *Coordinate Regional Traffic Counts*. Continue improving the regional traffic count program.

Action 6 *Update Transportation Options Strategic Plan*. The *Central Lane Metropolitan Regional Transportation Options Plan* (RTOP) was adopted in November, 2014. Work to implement this plan is underway.

Action 7 Lane Transit District adopted a *Develop Long-Range Transit Plan* in 2014. While a project of the Lane Transit District, the development of a *Long-Range Transit Plan* provides a crucial element of the overall CMP planning framework.

Action 8 *Complete Household Activity and Travel Survey*. Work towards a Household Activity and Travel Survey, likely to take place in 2020, has been initiated. Results from the Survey will provide crucial information necessary for the accurate modeling of the congested corridors and analysis of the performance measures.

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Alternative Mobility Standards Report
Commuter Solutions Strategic Plan 2005-2010
ITS Strategic Plan Executive Summary
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