Coburg / Interstate 5 Interchange Area Management Plan

JANUARY 2010




Prepared for

Oregon Department of Transportation

Prepared by

CH2MHILL

traffic mobility logistics.

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January 2010

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Insert: Memorializing Compatibility Between the City of Coburg and Lane County Adopted Coburg IAMP Language

On October 20, 2009 the Lane County Commission adopted the Coburg Interchange Area Management Plan (IAMP). Their adoption included several amendments to the final IAMP previously adopted by the City of Coburg in April 2009. Because Coburg's City Limits and Urban Growth Boundary (UGB) are co-terminus, Lane County and Coburg share no common jurisdiction. As a result, Lane County has no specific regulatory authority within the existing Coburg City Limits or UGB. Consequently, ODOT has determined that the County's changes can apply within the limits of the County's jurisdiction and authority without affecting the City's April adoption and are, therefore, otherwise compatible with the final draft adopted by the City of Coburg.

The principal affect of the changes associated with the County's adoption is that it slightly modifies the function statement in Chapter 1 of the IAMP. The document adopted by the City states that *"it is not the primary function of the Coburg/I-5 interchange to serve additional or expanded commercial land uses (beyond the existing zoned potential) or regional commercial development."* In its adoption action, the County amended this to state that *"it is not the function of the Coburg/I-5 interchange to serve additional or expanded commercial development within the interchange management area beyond those uses currently allowed on land currently in the existing Industrial and Highway Commercial zones."*

As the City had previously adopted the original IAMP language and because the County only has authority within its own jurisdiction and not within the Coburg City Limits or UGB, the change made by the county simply means that any land use actions proposed within the County's portion of the IAMP management area overlay will be subject to the County's interpretation of their modified function statement. Consequently, the County version of the function statement applies solely to land that is presently zoned County EFU, outside of the City Limits and UGB. As a more stringent expression of the intent of the function statement adopted by the City that does not apply to land within the City Limits or UGB, ODOT has determined that this statement is compatible with the City's previous action and with the final draft adopted by the City of Coburg in April 2009.

The slight change to the function statement in Chapter 1 also resulted in a County change to Policy 5 in Chapter 6. Policy 5 in the final draft adopted by the City of Coburg in April 2009 read as follows:

> If the City expands its urban growth boundary and updates its comprehensive plan and zoning to fully accommodate its adopted population and employment forecasts after construction of the interchange and local access and circulation improvements described herein as the Recommended Alternative (Alternative B), ODOT will work with the City and Lane County to amend the IAMP, as necessary, to recognize and support those updates. This amendment shall include adjustment of the Alternative Mobility Standards at the interchange ramps to accommodate the additional growth, but not to exceed the mobility standards in the OHP that apply to the Coburg/I-5 interchange

(ramp terminal V/C $\leq$ 0.8). ODOT will also work with the County to modify the alternative mobility standards set for the Pearl Street/Coburg Industrial Way intersection.

In their adoption, the County modified this policy to read as follows (changes highlighted):

> If the City expands its urban growth boundary and updates its comprehensive plan and zoning to accommodate its adopted population and employment forecasts after construction of the interchange and local access and circulation improvements described herein as the Recommended Alterative (Alternative B), OOOT will work with the City and Lane County to amend the IAMP, as necessary, to ~~recognize and~~ *support those updates provided those updates are consistent with the planned function of the interchange as stated in the Goals and Objectives of the IAMP*. This amendment shall include adjustment of the Alternative Mobility Standards at the interchange ramps to accommodate the additional growth, but not to exceed the mobility standards in the OHP that apply to the Coburg/I-5 interchange (ramp terminal V/C $\leq$ 0.8). ODOT will also work with the County to modify the alternative mobility standards set for the Pearl Street/Coburg Industrial Way intersection.

As is the case with the function statement in Chapter 1, this modified language is only applicable to the County EFU land within the IAMP management area overlay. Because any change to the City Limits or UGB proposed by a private applicant or the City will be subject to County approval, linking this policy to the function statement preferred by the County for the EFU land within its jurisdiction is compatible with the final draft adopted by the City of Coburg in April 2009.

Finally, discussions with property owners and the County regarding the extent of access control purchase on Van Duyn Road east of I-5 yielded one additional change to the Coburg IAMP as per Lane County's adoption action in October 2009. Rather than extending future purchase of access control along VanDuyn Road all the way to Hereford Road, as stated in the Coburg IAMP adopted by the City of Coburg in April 2009, ODOT agreed to limit the future purchase of access control, north and south of Van Duyn Road, to a point coinciding with the northwestern boundary of the Diamond Ridge subdivision (Tax Lot 16-03-34-00400) at Station "V" 43+63.23 which is approximately 2,000 feet east of the northbound ramp terminal. This distance still greatly exceeds the OHP and Division 51 access safety spacing standard of 1320 feet for an Interstate cross road and, because the portion of Van Duyn Road that will now be excluded from future access control purchase is fully within Lane County's jurisdiction and affects nothing within the City of Coburg's jurisdiction, this difference remains compatible with the adoption action taken by the City in April 2009.

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Acronyms and Abbreviations

ADT	average daily traffic
AM	morning
ATR	automatic traffic recorder
BRT	bus rapid transit
CLMPO	Central Lane Metropolitan Planning Organization
DLCD	Department of Land Conservation and Development
FEMA	Federal Emergency Management Agency
HDM	Highway Design Manual
I-5	Interstate 5
IAMP	Interchange Area Management Plan
LCOG	Lane Council of Governments
LOS	level of service
LTD	Lane Transit District
LWI	Local Wetland Inventory
MEV	million entering vehicles
MOU	Memorandum of Understanding
MP	milepost
MPO	Metropolitan Planning Organization
NHS	National Highway System
NWI	National Wetlands Inventory
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
OHP	*Oregon Highway Plan*
OTC	Oregon Transportation Commission
OTIA	Oregon Transportation Investment Act
OTP	*Oregon Transportation Plan*
PM	afternoon/evening
PMT	Project Management Team
RTP	Regional Transportation Plan
SPIS	Safety Priority Index System

STIP	State Transportation Improvement Program
TAZ	Transportation Analysis Zone
TDM	transportation demand management
TIA	traffic impact analysis
TMC	turning movement count
TPR	Transportation Planning Rule
TSP	Transportation System Plan
UGB	urban growth boundary
V/C	volume-to-capacity ratio
VMT	vehicle miles traveled

Executive Summary

The Coburg/Interstate 5 (I-5) interchange, located on I-5 at milepost 199.15 adjacent to the City of Coburg, is no longer able to meet existing and forecast travel demand and is in need of modifications and improvements. This Interchange Area Management Plan (IAMP) documents the land use and transportation strategies developed to protect the function[1] of the Coburg/I-5 interchange over the long-term (20-plus years) in light of these planned improvements, as directed by Oregon Administrative Rule (OAR) 734-051-0155(6). The Coburg/I-5 interchange is of interest for protection because much of the adjacent land is vacant and could potentially be developed, adding more traffic to the interchange area.

This document includes a complete description of the IAMP development process, including existing conditions analysis, no-build future analysis, alternative analysis, and description of the Recommended Alternative, including physical, access management, and policy and code recommendations. Recommendations for the Coburg/I-5 interchange area are presented as short-term, medium-term, and long-term. This IAMP was prepared collaboratively with the Oregon Department of Transportation (ODOT), Lane County, and the City of Coburg in coordination with the Lane Council of Governments (LCOG).

Background

The Coburg/I-5 interchange was proposed for reconstruction in the 1999 *Coburg-Interstate 5 Interchange Refinement Plan* (Refinement Plan), which was adopted as part of the 1999 *City of Coburg Transportation System Plan* (Coburg TSP). This IAMP re-examines the recommended conceptual design outlined in the Refinement Plan, given changes in land uses and population and employment forecasts in the interchange area, along with changes in highway policy regarding interchange improvements, since 1999.

Primary infrastructure improvements included in the Refinement Plan are the reconstruction of a standard diamond interchange and the realignment of Roberts Road to intersect with Coburg Industrial Way at a signalized intersection. This IAMP concludes that the original Preferred Concept included in the Refinement Plan is generally sufficient to address congestion problems for the planning horizon of 2031—when the Refinement Plan interchange design concept is slightly modified with a four-lane bridge and when it is paired with policy and management tools.

Existing and Future Conditions

The existing Coburg interchange facility is not adequate to accommodate anticipated employment and population growth as outlined in Coburg's 2005 *Comprehensive Plan* and consistent with Regional Transportation Plan (RTP) employment and population forecasts.

[1] As used in the state IAMP Guidelines (David Evans and Associates, Inc., with Angelo Eaton & Associates, July 2006), the term "function" refers to the intended role of the interchange in the transportation system. Although functional classification of the intersecting roads is one element that determines the overall function of an interchange, the term "function" also relates to its context (e.g. urban, rural, surrounding land uses it is intended to serve).

Traffic operations analysis performed for this IAMP shows that by study planning horizon year 2031, three of five study area intersections (Pearl Street/Industrial Way, Pearl Street/ Roberts Road, I-5 Southbound Ramps/Pearl Street) are expected to not meet accepted mobility standards during the peak PM travel hour if no additional transportation infrastructure is constructed and no policy measures are enacted. Two of the five study area intersections (Pearl Street/Industrial Way and Pearl Street/Roberts Road) are anticipated to operate under conditions where volume would exceed capacity during the peak PM travel hour. This would generate high levels of delay and congestion, and vehicles would be expected to queue onto the I-5 mainline. Operations analysis shows that a new traffic signal will be required by 2031 at the I-5 Southbound Ramps/Pearl Street intersection to meet mobility standards. Existing and future conditions are discussed in greater detail in Sections 2 and 3 of this IAMP.

Alternatives Developed and Analyzed

Alternatives development and analysis for this IAMP were based on traffic forecasts built from population and employment forecasts consistent with the land use patterns in Coburg's existing Comprehensive Plan.

Alternatives developed are also consistent with the 2031 federal Regional Transportation Plan (RTP) for the Central Lane Metropolitan Planning Organization (CLMPO) and the *2004 Coburg Urbanization Study.* The *Coburg Urbanization Study* is a document that was adopted by Coburg City Council, but never formally incorporated into the Comprehensive Plan. The RTP and the *Urbanization Study* both outline greater population and employment growth than could be accommodated under the City's current Comprehensive Plan land use designations. Consistency of alternative development with these plans is important in order to (1) be consistent with regional planning, and (2) provide realistic solutions, given the likelihood of urban growth boundary (UGB) amendments.

The existing UGB will not accommodate the City's 2025 population and employment forecasts extrapolated to 2031, as identified in the RTP. However, pending resolution about how to develop a municipal wastewater system for Coburg, UGB amendments will likely be proposed by the City. The extent and location of these amendments are yet to be determined. Currently, the *Coburg Comprehensive Plan* provides for growth within the City's existing UGB west of I-5. If amended, an expanded UGB (regardless of whether it is expanded west of I-5 or east of I-5) is expected to provide for the full growth anticipated in the RTP and commensurate with the City's regionally adopted population and employment forecasts.

Physical interchange improvement alternatives focused on several conceptual designs:

- Alternative A: Diamond interchange with three-lane bridge
- Alternative B: Diamond interchange with four-lane bridge
- Alternative C: Loop ramp (northbound) interchange with four-lane bridge

Analysis of all of the physical alternatives considered the following common components:

- Bicycle and pedestrian facilities on the bridge
- Access management that supports interchange function and operations on Pearl Street/ Van Duyn Road east and west of the interchange
- Realignment of Roberts Road at a signalized intersection with Coburg Industrial Way
- Closure of the existing Roberts Road at Pearl Street
- A new signal at the I-5 Southbound Ramps/Pearl Street intersection
- The eventual development of a local street system west of I-5 off Coburg Industrial Way to reduce demand for direct access to Pearl Street

All physical alternatives also were assumed to be paired with policy and development code language intended to protect the function and operations of the interchange (e.g., an alternate mobility standard to protect any excess capacity provided by an improvement, traffic impact analysis requirements, and encouragement of transit and transportation demand management (TDM)).

Alternative B—the diamond interchange with a four-lane bridge—was ultimately recommended by the Project Management Team (PMT) as the Recommended Alternative for this IAMP.

Analysis regarding population and employment growth scenarios different from those in the Comprehensive Plan (e.g., UGB expansion and population and employment growth patterns east of I-5) is included as a point of reference for the City of Coburg in Appendix K. If a UGB expansion and subsequent Comprehensive Plan amendment were to occur, this IAMP would need to be updated accordingly.

The alternatives analysis is discussed in greater detail in Section 4 of this IAMP.

Interchange Area Management Plan

A Recommended Alternative was agreed to by ODOT, the City, and Lane County. *The IAMP concludes that the original Preferred Concept included in the Refinement Plan is generally sufficient to address congestion problems for the planning horizon of 2031—if the interchange design concept is slightly modified and when it is paired with policy and management tools.* To maximize the operation of the interchange and accommodate planned future growth, the IAMP identifies a Recommended Alternative that includes: (1) operational and physical improvements, including access management, and (2) local policy and development code changes.

Recommended Alternative—Operational and Physical Improvements

The Recommended Alternative infrastructure improvements include physical improvements that accommodate the anticipated traffic growth related to the population and employment growth outlined in the *Coburg Comprehensive Plan*, including a diamond interchange with a four-lane bridge structure (see Figure 5-1). Although a three-lane bridge would accommodate traffic levels anticipated for 2031, a four-lane bridge is preferred because it will better accommodate the heavy north-to-west movement from the I-5 northbound off-ramp, in addition to extending the life of the bridge structure past 2031 for minimal additional cost. A four-lane bridge would also provide future flexibility for the addition of a loop ramp if determined necessary at some point after the 2031 planning horizon, for example, if greater levels of growth are anticipated in the area.

The Recommended Alternative includes the following physical improvements and associated actions to be implemented by ODOT, the City, and Lane County:[2]

- Reconstruct the Coburg/I-5 interchange bridge structure to four lanes, with full standard pedestrian and bicycle facilities, and an appropriate height standard. The bridge is to include two westbound lanes with a turn pocket leading to the I-5 southbound on-ramp, one eastbound through lane, and one eastbound left-turn lane leading to the I-5 northbound on-ramp (ODOT).
- I-5 northbound ramps: Add a new I-5 northbound on-ramp receiving lane. Add new exclusive eastbound left-turn lane to I-5 northbound off-ramp (ODOT).
- I-5 Southbound ramps: Install a new exclusive eastbound right-turn lane on Pearl Street and southbound on-ramp receiving lane (ODOT).
- Signalize the I-5 southbound ramp terminals by 2031 or sooner if signal warrants are met and the signal is approved by the State Traffic Engineer (ODOT).
- Realign Roberts Road to meet the existing signalized Coburg Industrial Way intersection. The newly realigned Roberts Road would be constructed to road standards that accommodate freight vehicles (ODOT).
- Add a new connection between the aligned Roberts Road and original Roberts Road (ODOT).
- Purchase access control and do not allow any new private accesses west of I-5 along Pearl Street from the interchange ramp to a point 1,000 feet west of Coburg Industrial Way. In the interim, allow the Stuart Way driveway access at Pearl Street. Upon redevelopment of the Truck and Travel site (located east and west of Stuart Way), realign Stuart Way west of its current location to improve spacing with Coburg Industrial Way.
- Close access to the original Roberts Road at Pearl Street. This closure would only occur after or at the same time as the opening of the new Roberts Road/Coburg Industrial Way intersection to ensure continuous business access. A cul-de-sac will be constructed at the north termination of the original Roberts Road that is navigable for WB-67 trucks[3] (ODOT).
- Coordinate traffic signal operations along Pearl Street and at interchange ramp terminal intersections (ODOT/Lane County).

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[2] ODOT would purchase impacted private property or private accesses as a result of any of the physical improvements within the interchange management area identified as ODOT's responsibility in this IAMP. Access and circulation plans will be coordinated with affected property owners.

[3] A truck with approximately 67 feet between the front and rear wheel axle.

- Install a new southbound left-turn lane and northbound left-turn pocket on Coburg Industrial Way (and realigned Roberts Road) at Pearl Street (ODOT).
- Purchase access control and do not allow any new private access east of I-5 along Van Duyn Road from the interchange ramp terminal to Hereford Road and do not allow any full accesses within 1,320 feet of the interchange ramp terminal (ODOT). In the interim, allow the properties within the UGB to continue to access Van Duyn directly from within the UGB. Upon redevelopment of one or more of these properties within the current UGB, implement changes to this access as needed to address safety issues or seek development and use of the access road right-of-way purchased by ODOT during the initial phase of the interchange project if it has not already been developed as part of a subsequent phase of the interchange project (ODOT).
- Consolidate all accesses on the southern side of Van Duyn Road to a point at least 1,320 feet from the north-bound ramp terminal intersection. Close accesses less than 1,320 feet from this location and construct an alternate access road. This road may be constructed by ODOT and maintained as a public road by Lane County or the City of Coburg, or it may be constructed privately in conjunction with redevelopment of properties within the Coburg UGB east of I-5, depending on the timing and availability of funds to construct future phases of the interchange project
- The eventual construction of this access road will require an exception to Goal 3 of the Statewide Land Use Planning Goals, the reasons for which are summarized in Appendix L. If an exception is not granted by Lane County, ODOT will need to develop another alternative access for urban properties east of the interstate (ODOT, other responsible parties).
- Work with Lane Transit District to expand bus rapid transit to Coburg (City of Coburg).
- Market Lane Transit District's Group Pass Program to employers, and promote carpool and vanpool services (City of Coburg).
- Implement local circulation improvements consistent with the Coburg TSP that provide alternative circulation and access for the lane north of Pearl Street and west of I-5 within the IAMP study area (City of Coburg).
- Design and construct the northern and southern connection alignments (extending Coburg Industrial Way north and Roberts Road south) as depicted in Map 16 of the Coburg TSP (City of Coburg).
- As Coburg develops, monitor the need for a park-and-ride (City of Coburg).

The Recommended Alternative physical and operational recommendations are discussed in greater detail in Section 5 of this IAMP.

Recommended Alternative—Access Management

To protect these infrastructure investments, access management recommendations were also developed as part of the Recommended Alternative, as shown in Figure 5-1. The Access Management Plan reduces by 11 the number of private and public accesses onto Pearl Street and Van Duyn Road by the year 2031. The Access Management Plan identifies access management actions that improve safety and circulation in the interchange management area by moving access spacing along Pearl Street and Van Duyn Road to more closely align with access management standards as defined in the Oregon Highway Plan. For the Coburg/I-5 IAMP, the target spacing standard is 1,320 feet from the ramp terminal intersection for placement of the next road or driveway.

The Access Management Plan identifies driveways and local road connections that will need to be relocated, consolidated, or closed to achieve the safety and mobility objectives of the state's access management standards. Relocation, consolidation, or closure of driveways will be paired with enhancement of the local street circulation system.

These access recommendations are discussed in greater detail in Section 5, Recommended Alternative—Operational, Physical and Access Improvements.

Recommended Alternative—Policy and Development Code

To accompany the infrastructure and access recommendations, the Recommended Alternative also includes policy and implementation measures. Some of these implementing measures are intended to protect the interchange infrastructure investments through management of access within the interchange study area. Others require that future development mitigate traffic impacts associated with development proposals that are projected to create more traffic growth than planned for in the *Coburg Comprehensive Plan*. The IAMP also includes policies that are to be adopted by the Oregon Transportation Commission (OTC), City of Coburg, and Lane County.

The IAMP policies specifically address access management and also special interchange and local road mobility standards intended to protect the function of the interchange until such time as the City of Coburg resolves its wastewater service issues and amends its Urban Growth Boundary and Comprehensive Plan.

The IAMP also includes recommendations for development code changes in the City of Coburg related to Traffic Impact Analysis. The recommended alternative policy and development code recommendations are discussed in greater detail in Sections 6 and 7 of this IAMP.

SECTION 1

Background

1.1 Purpose and Intent

The *Coburg/Interstate 5 Interchange Area Management Plan* (IAMP) documents a plan for protecting the function[4] of the Coburg/Interstate 5 (I-5) interchange. The purpose of this IAMP is to ensure that public investments in state infrastructure are protected through an integration of transportation and land use planning at the city, county and state levels.

Oregon Administrative Rule (OAR) 734-051-0155(6) states: "Interchange Area Management Plans are required for new interchanges and should be developed for significant modifications to existing interchanges…" This IAMP addresses the planned reconstruction of the Coburg/I-5 interchange, located at milepost (MP) 199.15 along I-5 adjacent to the City of Coburg (City; Coburg) in Lane County, Oregon. The reconstruction is intended to address existing and future safety and congestion issues.

The Coburg/I-5 interchange initially was proposed for reconstruction in the 1999 *Coburg-Interstate 5 Interchange Refinement Plan* (Refinement Plan).[5] This IAMP re-examines the recommended conceptual design outlined in the *Refinement Plan,* given changes in land uses and population and employment forecasts in the interchange area, along with highway policy regarding interchange improvements, since 1999.

The IAMP recommends: (1) operational and physical improvements, including access management, and (2) local policy and development code changes.

This IAMP is a collaborative document and reflects coordination among the Oregon Department of Transportation (ODOT), the City of Coburg, and Lane County. Preparation of this document was conducted in accordance with state IAMP guidelines.[6]

1.2 Problem Statement

Without improvements to the Coburg/I-5 interchange and transportation infrastructure in the interchange area, future PM peak hour traffic is expected to exceed available road capacity at many intersections in the interchange area, leading to highly congested conditions by 2031. Congestion is expected to affect the I-5 mainline and nearby intersections along Pearl Street/Van Duyn Road, the interchange's local crossroad and Coburg's primary east-west arterial road. Additional congestion is expected to contribute to travel delay and more potential safety conflicts.

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[4] As used in the state IAMP Guidelines (David Evans and Associates, Inc., with Angelo Eaton & Associates, July 2006), the term "function" refers to the intended role of the interchange in the transportation system. Although functional classification of the intersecting roads is one element that determines the overall function of an interchange, the term "function" also relates to its context (e.g., urban, rural, surrounding land uses it is intended to serve).

[5] *Coburg-Interstate 5 Interchange Refinement Plan*. ODOT. October 1999.

[6] *Interchange Area Management Plan Guidelines (Final Draft).* David Evans and Associates, Inc., with Angelo Eaton & Associates. July 2006.

The Coburg/I-5 interchange serves as the primary access to the city of Coburg. Significant numbers of regional residents residing outside of Coburg currently travel to employment in the City using the Coburg/I-5 interchange. Most of the existing Coburg employment centers are located near the Coburg/I-5 interchange.

The existing interchange ramps and bridge are not anticipated to be able to accommodate anticipated future (year 2031) traffic growth. Intersections located close to the interchange also are expected to contribute to congestion, due to queuing and delay related to vehicles turning onto or from Pearl Street. During the PM peak hour, three of the five intersections in the study area (I-5 Southbound Ramps/Van Duyn Road, Pearl Street/Coburg Industrial Way, Pearl Street/Roberts Road) are anticipated to not meet operational standards by 2031 without infrastructure or policy improvements. The addition of a traffic signal at the I-5 northbound ramps intersection was a recent effort to improve traffic operations in the interchange study area.

Along with congestion, there are safety concerns in the interchange study area. The sight distance at the interchange ramp terminals and grades approaching the interchange bridge restrict motorist line of sight and create navigation problems for trucks. The bridge structure is very narrow, and allows virtually no room for pedestrians, bicyclists, or vehicular emergencies. Particularly problematic is the queuing on the northbound interchange off-ramp during the AM peak hour where traffic routinely backs up onto I-5, creating a speed differential hazard. This problem will worsen over time.

This IAMP describes the improvements and other strategies needed in the interchange area to safely accommodate anticipated planned traffic growth. State law requires that the Coburg IAMP is completed before any funding can be released for the interchange project.

1.3 Project History

In 1999, the *Coburg/Interstate 5 Interchange Refinement Plan* was adopted as part of the *Coburg Transportation System Plan (TSP)*. The *Refinement Plan* and the *Coburg TSP* recommended improvements to the interchange structure and the surrounding road network in order to accommodate future traffic growth in the Coburg/I-5 interchange area and address safety concerns.

Recommended transportation improvements in the Preferred Concept of the *Refinement Plan* and in the *Coburg TSP* included the following:

- Three-lane interchange bridge structure with pedestrian and bicycle facilities and improvement to profile grade and ramps
- Realignment of Roberts Road to line up with Coburg Industrial Way at a signalized intersection[7]
- Access closure of the original Roberts Road at Pearl Street
- New connection between realigned Roberts Road and original Roberts Road

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[7] The realignment of Roberts Road and Coburg Industrial Way was to occur at the same time as access to the campground parcel located south of Truck and Travel shifts from Stuart Street to the realigned Roberts Road.

- New extension of McKenzie Street east to Coburg Industrial Way (one way heading east)
- New extension of Shane Court south to Pearl Street
- Signalization at I-5 ramps when warranted
- Stuart Way realigned or vacated
- Enhanced local road network north of Pearl Street immediately west of the interchange

Since the *Coburg TSP* and *Refinement Plan* were completed, land use changes have occurred in the Coburg/I-5 interchange area that are anticipated to affect the levels of future population and employment growth , and highway policy has changed regarding interchange improvements. This has driven the need for this IAMP.

Improvements to date within the interchange management area include a new signal at the I-5 northbound ramps/Van Duyn Road intersection, modification of the northbound ramps, the vacation of Stuart Way and a portion of E. Delaney Street, and an upgrade of Pearl Street to include pedestrian and bicycle facilities.

1.4 Functional Classification and Interchange Function

Functional classifications generally define the intended purpose of a roadway as part of a hierarchy of roadways. The Coburg/I-5 interchange is an urban service interchange. The interchange connects I-5 with Pearl Street/Van Duyn Road, which serves Coburg to the west, and primarily unincorporated Lane County to the east.

According to Policy 1A of the Oregon Highway Plan (OHP), the primary function of interstate freeways is to provide connections to major cities, regions of the state, and other states. The secondary function is to provide connections for regional trips within a metropolitan area. Interstates are major freight routes, and are intended to provide mobility. I-5 is part of the National Highway System (NHS). It is classified by the OHP as an Interstate Highway—NHS. I-5 is a designated North American Free Trade Agreement (NAFTA) route. I-5 stretches from the Canadian to Mexican borders, and is the major north-south interstate and freight route for the west coast states (Washington, Oregon, and California).

The local crossroad at the interchange, Pearl Street/Van Duyn Road, is the primary east-west road connection in the area, and is the only direct connection to Coburg residences and commercial and industrial land uses from I-5. Pearl Street, located west of the interchange, is classified as a County Arterial by the City of Coburg and as a Minor Arterial by Lane County. According to the *Lane County TSP*, Minor Arterials in urban areas provide for intra-community traffic flow to principal arterials. Van Duyn Road, located east of the interchange, is classified as a Local Roadway. According to the Lane County TSP, Local Roads are intended solely for the purpose of providing access to adjacent properties.

Several existing highway-oriented commercial facilities are located within the interchange study area, and some of the undeveloped land in the interchange area is zoned Highway Commercial.

Functional classifications of roads in the vicinity of the Coburg/I-5 interchange are summarized in Table 1-1.

TABLE 1-1
Coburg/I-5 IAMP Ownership and City of Coburg/Lane County Functional Classification*

Road	Jurisdiction (Ownership)	Functional Classification
Interstate 5	ODOT	Interstate Highway (NHS)
Van Duyn Road	Lane County	Local Roadway
Pearl Street	Lane County	County Arterial (Coburg)
		Minor Arterial (Lane County)
Coburg Industrial Way	Lane County and City of Coburg	Minor Collector (Lane County)
		City Collector (Coburg)
Roberts Road	City of Coburg	City Collector (Coburg)
N. and S. Coleman Street	City of Coburg	City Collector and Local Roadway
E. Mill Street	City of Coburg	City Collector and Local Roadway
E. Dixon Street	City of Coburg	City Collector and Local Roadway
N. Miller Street	City of Coburg	Local Roadway
Stuart Way	Private Road	Vacated
Daray Street	Lane County	Local Roadway (Lane County)
Sarah Lane	City of Coburg	Local Roadway
N. Emerald Street	City of Coburg	Local Roadway
E. McKenzie Street	City of Coburg	Local Roadway
E. Lincoln Way	City of Coburg	Local Roadway
E. Delaney Street	City of Coburg	Local Roadway
E. Maple Street	City of Coburg	Local Roadway
E. Thomas Street	City of Coburg	Local Roadway
Rustic Court	City of Coburg	Local Roadway
Shane Court	City of Coburg	Local Roadway

*Jurisdictional transfers of local roads may occur resulting in changes to the jurisdictional information in this table. The jurisdictional transfer process is independent of this document and does not require an amendment to this document in order to occur.

In addition to the functional classification of the area roadways, the interchange itself has a role or function that it serves with the broader transportation system. The broad intended function of the Coburg/I-5 interchange is to safely and efficiently move traffic between I-5 and the local crossroad, accommodate planned future traffic demands in the interchange area, and preserve mobility along I-5.

More specifically, the Coburg/I-5 interchange is an important facility for the community of Coburg, and also serves the following functions:

- **Commercial Access:** The interchange directly serves the downtown of Coburg, and Coburg businesses, including businesses off Coburg Industrial Way and Pearl Street. Several businesses off Pearl Street in the interchange study area are oriented to highway travelers, and much of the land is zoned Highway Commercial to serve the traveling public. It is not the primary function of the Coburg/I-5 interchange to serve additional or expanded commercial land uses (beyond the existing zoned potential) or regional commercial development.

- **Industrial Access:** The interchange provides access to industrial manufacturing and industrial retail sales businesses, as well as a route for industrial and business freight. As the industrial-zoned areas of Coburg continue to develop, the Coburg/I-5 interchange will continue to be a key economic development factor.
- **Freight Movement:** Freight vehicles use the Coburg/I-5 interchange to access freight generators located off Coburg Industrial Way (e.g., Truck and Travel, Monaco Coach and Marathon) as well as northwest of Coburg (e.g., timber industry facilities).
- **Commuting:** A significant number of regional residents utilize the interchange to access employment in Coburg. This number will continue to rise as employment increases in the interchange management area.
- **Local Access to the Region:** Many Coburg residents use the interchange to travel to other communities, such as Eugene, Springfield, or Salem, for employment, shopping, or other personal trips.

Interchange modifications and associated local improvements must be planned and implemented to accommodate the multi-functional nature of the interchange.

1.5 Goal and Objectives

The goal of this IAMP is to reflect collaborative work with ODOT, Lane County, and the City of Coburg and outline recommendations for transportation improvements and policy and implementation measures that will maximize the operation of the interchange and accommodate future growth (as planned for in the *Coburg Comprehensive Plan*) in the interchange management area.

Policy 3C of the 1999 OHP states, *"it is the policy of the State of Oregon to plan for and manage grade-separated interchange areas to ensure safe and efficient operation between connecting roadways."* Consistent with this policy and consideration of project-specific local transportation issues, the objectives of the Coburg/I-5 IAMP are to:

- Protect long-term safety and operations of the interstate and local road network
- Build on the work in the *Refinement Plan* as adopted in the *Coburg TSP*
- Accommodate 2031 planned growth for the Coburg/I-5 interchange management area (described in Section 1.6) as outlined in the *Coburg Comprehensive Plan*
- Preserve public investments in the Coburg/I-5 interchange and adjacent transportation network
- Plan for future management of the interchange and adjacent land uses within the interchange management area (described in Section 1.6)

- Work with Coburg and Lane County to develop a plan for road network, right-of-way, and access within the interchange management area (described in Section 1.6)
- Provide recommendations for enhancement of the pedestrian and bicycle system
- Provide recommendations that allow for expanded use of transit and other transportation demand management (TDM) measures
- Provide for Oregon Transportation Commission (OTC) adoption of a plan so existing funds can be accessed for interchange reconstruction
- Ensure integration of land use and transportation planning
- Provide certainty for property and business owners and local governments

1.6 IAMP Interchange Management Area

The Coburg/I-5 interchange management area is centered on the Coburg/I-5 interchange, an urban interchange located in the eastern portion of the city of Coburg, Oregon, just north of Eugene along I-5. Figure 1-1 depicts the Coburg/I-5 interchange management area.

The interchange management area (Figure 1-1) differs from the IAMP study area, which was used for the traffic operational forecasting and analysis. The study area included all land within the City of Coburg, plus unincorporated adjacent areas, while the management area includes land closer to the interchange. The IAMP interchange management area encompasses land within ½ mile of the interchange, and is consistent with provisions in the Transportation Planning Rule (TPR).

Management area boundaries are based on recent TPR changes related to the establishment of interchange management areas (defined in OAR 660-012-0060) as well as property boundaries, traffic patterns, and existing natural resources (creeks, etc.). The management area helps focus the development and evaluation of IAMP alternatives, as well as to delineate an area where implementation will apply.

The Coburg/I-5 interchange management area is approximately 5 miles north of Eugene and 55 miles south of Salem. The management area includes a significant portion of the city of Coburg, and a portion of unincorporated Lane County. All road facilities in the Coburg/I-5 interchange management area fall under the jurisdiction of the City of Coburg, Lane County, or ODOT. I-5 is the only major highway facility located within the interchange management area.

Land within the Coburg/I-5 interchange management area is primarily flat, with some ponds located northwest and southeast of the interchange. Land to the west of I-5 is primarily located within Coburg city limits, and includes residential, commercial and industrial land uses, including facilities for motorcoach manufacturing and distribution. Land to the east of I-5 is relatively undeveloped. The area includes an RV sales lot and RV park, and farm land. Primary industries in the Coburg/I-5 interchange management area include services and manufacturing. Major employers of note are Monaco Coach and Marathon, located northwest of the Coburg/I-5 interchange.

1.7 Related Work Products

- As of April 2006, $12,500,000 in federal earmark and local match funding was identified for interchange improvements at the Coburg/I-5 interchange in the *Regional Transportation Plan* (Project #1003).
- In October 2005, $3,000,000 was programmed into the Metropolitan Transportation Improvement Program for Coburg/I-5 interchange improvements.
- ODOT's 1999 *Coburg/Interstate 5 Interchange Refinement Plan* was central to the preparation of this IAMP. The *Refinement Plan* outlines a Preferred Concept related to interchange configuration and access. This IAMP sought to re-examine the Preferred Concept, given changes since 1999 in planned employment and population growth in the Coburg area and in statewide highway policies related to interchanges. The *Refinement Plan* provides rationale for Coburg/I-5 interchange improvements. The *Refinement Plan* was adopted as part of the *Coburg TSP*. The transportation improvements included in the *Refinement Plan* were analyzed during the alternatives decision-making process for the IAMP:
  - Three-lane interchange bridge structure with pedestrian and bicycle facilities and improvement to profile grade and ramps
  - Signalization at I-5 ramps when warranted *(already completed at northbound ramps)*
  - Stuart Way realigned or vacated (*already completed – vacated)*
  - Realignment of Roberts Road to line up with Coburg Industrial Way at a signalized intersection
  - Access closure of the original Roberts Road at Pearl Street
  - New connection between realigned Roberts Road and original Roberts Road
  - Pearl Street improvements to five-lane urban standard road with sidewalks and bicycle lanes *(already completed)*
- Map 14 of the Coburg TSP depicts several transportation system improvements located in the Coburg/I-5 interchange management area, including projects listed in the *Refinement Plan*. The projects were factored into the operational analysis and alternatives decision-making process for this IAMP.
  - Three-lane interchange bridge structure with pedestrian and bicycle facilities and improvement to profile grade and ramps
  - Signalization at Interstate 5 ramps when warranted *(already completed at northbound ramps)*
  - Stuart Way realigned or vacated *(already completed – vacated)*
  - Realignment of Roberts Road to line up with Coburg Industrial Way at a signalized intersection

  - Access closure of the original Roberts Road at Pearl Street
  - New connection between realigned Roberts Road and original Roberts Road
  - Enhanced local road network north of Pearl Street immediately west of the interchange (connecting to Pearl Street from Coburg Industrial Way)

- Map 16 of the Coburg TSP also includes alignments yet to be determined—a northern connector, located in northern Coburg near Coburg Industrial Way and a Southern Connector, located at the south end of Roberts Road. Neither of these alignments was specifically delineated on the map.
- An update to the Coburg TSP is listed in the approved *2006-2009 State Transportation Improvement Program (STIP)*. It is listed as Project #14297 for $94,000 in local STIP-U funds.

1.8 Public Involvement

The purpose of the public involvement program for the Coburg/I-5 IAMP was to build a planning process that incorporated the needs and issues of residences and businesses in the Coburg/I-5 interchange area, including those who depend on and use the interstate. A key goal of the public involvement program was to elicit public discussion regarding access changes and potential phasing of treatments. The public involvement process for the Coburg/I-5 IAMP project is summarized in Appendix A of this document.

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IAMP Management Area Boundary[1]

Rivers & Streams[2]

Coburg City Limits[2]

Urban Growth Boundary[2]

2005 NAIP Aerial Photography [2]

N

0 500 1,000 2,000 Feet

Map produced by:

LCOG

Figure 1-1 Coburg IAMP Management Area
Coburg/I-5 Interchange Area
Management Plan

Sources: 1. CH2M Hill 2. LCOG

Map Document: (G:\projects\coburg\IAMP_05\Fig1_CoburgIAMP_SA.mxd)
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SECTION 2

Existing Conditions Inventory and Analysis

2.1 Regulatory Framework

The Coburg/I-5 interchange management area encompasses land in the city of Coburg and Lane County. IAMP improvements are subject to applicable land use regulations for each jurisdiction, as well as state and federal regulations.

State, county, and local regulations pertaining to IAMP actions are addressed in the Plan and Policy Review, located in Appendix B. Findings of compliance with state and local plans, policies, and regulations are found in Appendix C.

2.2 Existing Land Use and Zoning

Existing land uses and zoning help to explain traffic patterns affecting the Coburg/I-5 interchange management area, as well as to identify potential transportation needs. Existing land uses/zoning can also help illuminate development potential that could affect interchange or mainline operations in the future. Significant existing patterns in the area include commute behavior relating to employees of the Monarch and Monaco factories and other employers to the west of I-5, as well as I-5 freight and other through-traffic using the travel-related services near the interchange. The relatively high amount of undeveloped land surrounding the interchange is also of significance to planning in the area. Vacant land located to the west of I-5 has the potential for development. Vacant land located to the northeast of I-5 would need to be included in Coburg's UGB and annexed into the City of Coburg before urban-level development could occur.

Figure 2-1 shows City of Coburg and Lane County Comprehensive Plan designations. City of Coburg land use designations in the interchange management area include Traditional Residential, Highway Commercial, Light Industrial, and Public Facility. Lane County land use designations include Agricultural, Residential, and Non-Resource.

Figure 2-2 shows City of Coburg and Lane County zoning districts. City of Coburg zoning districts within the interchange management area include Highway Commercial, Light Industrial, Traditional Residential, and Public Water Service. Lane County zoning designations within the interchange management area include Exclusive Farm Use, 40-acre minimum (E-40), Rural Residential, 2-acre minimum and 10-acre minimum (RR-2, RR-10), and Neighborhood Commercial (C2).

The interchange management area has been divided into northwest, southwest, northeast, and southeast quadrants for ease of description.

2.2.1 Northwest Quadrant

All of the land northwest of the interchange within the interchange management area is located within the Coburg city limits. The western-most portion of the northwest quadrant is designated on the land use map as primarily Traditional Residential, and includes traditional grid street patterns and some of the older housing stock in the city. Heading eastward toward I-5, land uses rapidly become industrial. Accessed off Coburg Industrial Way, the Light Industrial designated land is used by Monaco Coach Corporation and other employers for the development of high-end and luxury motor coaches.

Immediately northwest of the interchange, the land is currently vacant. This vacant land is designated Traditional Residential and Highway Commercial (the land adjacent to I-5) by the City of Coburg, and has significant development potential. Some of the land along E. Pearl Street is developed, including a service station and a restaurant accessed from Daray Street.

Coburg/I-5 interchange, looking west

The northwest quadrant of the interchange management area currently has the most influence on interchange and I-5/Pearl Street/Van Duyn Road traffic operations—Monaco Coach has a large number of employees working on shift schedules, which means that they often arrive at and leave from work at the same times. Many of the workers travel south on I-5 during the PM peak hour.

2.2.2 Southwest Quadrant

Much of the land within the management area southwest of the interchange is located within Coburg city limits and the Coburg UGB. Southwest of the interchange, the western-most area is residential land. Moving east, the land uses quickly become more intensive and are designated Highway Commercial and Light Industrial. This land is characterized by commercial and industrial developments, including an RV park (KampingWorld), RV factory outlets and a manufactured home outlet. Commercial uses along E. Pearl Street include service stations and uses related to the trucking industry and freeway travel (Truck-N-Travel, Shell), as well as some eateries. Several driveways access these commercial locations south of E. Pearl Street, and the area is also characterized by large parking areas for trucks and larger vehicles. There is some land designated Exclusive Farm Use located outside of city limits in this quadrant of land.

Coburg/I-5 interchange, looking east

2.2.3 Northeast Quadrant

The land northeast of the interchange within the interchange management area is located outside the Coburg UGB, and within unincorporated Lane County. The land is largely undeveloped, and is primarily designated Exclusive Farm Use. The land immediately adjacent to I-5 on the east currently has a temporary permit for temporary RV parking, and is used to stage RVs for pickup.

2.2.4 Southeast Quadrant

The land immediately southeast of the interchange within the interchange management area was recently annexed into the City of Coburg, and is designated by the City as Highway Commercial. The remainder of the land in the southeast interchange quadrant is located in unincorporated Lane County, and is designated Exclusive Farm Use and Rural Residential. Land uses in the area include a motel and an RV park (immediately southeast of the interchange) and a drainage facility, as well as some vacant land.

2.2.5 Zoning and Permitted Land Uses

Table 2-1 includes permitted land uses according to zoning district within the Coburg/I-5 IAMP management area. Appendix D includes a more detailed list of permitted uses.

TABLE 2-1
Permitted Land Uses within Coburg/I-5 Interchange Management Area

Zoning District	Permitted/Conditional Uses[1]	Minimum Lot Size/Coverage
City of Coburg Zoning Code—Ordinance No. A-199		
Traditional Residential (TR)—Article VII, A	Single family, duplexes	7,500 to 10,000 square feet
	Churches, schools, parks	Maximum lot coverage: 30-35%
	Boarding, nursing, group homes	
Highway Commercial (C-2)—Article VII, D	Retail, auto-related uses	10,000 square feet if no public sewer
	Institutional, educational, office uses	No minimum if public sewer
	Commercial recreation, restaurants	Maximum lot coverage: 60%
		For all permitted uses and structures the total ground floor space must not exceed 50,000 square feet of gross floor area per building
Light Industrial (LI)—	Commercial service, office, retail	10,000 square feet if no public sewer
Article VII, E	Manufacturing, assembly, processing	No minimum if public sewer
	Warehousing	Maximum lot coverage: 60%
Lane County Code, Chapter 10—Zoning (inside UGB)		
Neighborhood Commercial[2] (C2) Section 10.160	Bakeries, banks, small retail stores, laundries, restaurants	Full coverage allowed (with setbacks)
Lane County Code, Chapter 16—Zoning (outside UGB)[3]		
Exclusive Farm Use (E-40) Section 16.212	Farm uses, forest related uses Limited single family residential	40-acre minimum lot size
Rural Residential (RR) Section 16.290	Single family, general farming, animal husbandry Churches, schools, parks, golf courses	Minimum lot size 1 to 10 acres

1 These are general categories of uses and are not meant to be a complete list.

2 There is only one parcel zoned C2 in the interchange management area (parcel is approximately 1.45 acres).

3 All lands outside the UGB are subject to the provisions in Chapter 16 of the Lane Code and state land use provisions in OAR 660, in particular 660-025 and 660-033. Only rural land uses are permitted outside the UGB.

2.2.6 Activity Centers

Activity centers within the Coburg/I-5 interchange management area include the interchange area itself, which generates traffic—including truck traffic—with its services for truckers and travelers. The Monaco Coach Corporation development is another critical activity/employment center.

Major activity centers near the Coburg/I-5 interchange include historic downtown Coburg, located approximately 1 mile west of I-5, which features antique stores and other retail shops and restaurants. Other activity centers include the city park (east of the downtown central business district) and the school located on North Coburg Road.

2.3 Growth Patterns and Demographics

Growth patterns and demographics in the Coburg area are important to understanding the future demands and needs for the transportation system in the area, including safety and operations related to the Coburg/I-5 interchange, I-5 mainline, and connecting local road network.

2.3.1 2000 Census

According to the U.S. 2000 Census, population in Coburg was 969, there were 367 total households, and there were 481 residents aged 16 years and over employed in the civilian labor force.

Average household size was 2.64 and average family size was 3.07. 80.4 percent of housing units were owner-occupied and 19.6 percent of housing units were renter-occupied. 86.7 percent of the population 25 years and older were high school graduates or higher, and 30.5 percent had bachelor's degree or higher.

The greatest percentages of employed civilian population 16 years and over were employed in management, professional and related occupations (29.5 percent) and sales and office occupations (28.7 percent). The percentage of families in poverty status in 1999 was 7.7 percent. Median household income was $47,500, and per capita income was $21,696.

Mean travel time to work was 19.9 minutes. With regard to commuting for workers 16 years and over, 79.7 percent drove to work alone, 10.1 percent carpooled, less than 1 percent are recorded using public transportation, 3.9 percent walked, 0.6 percent used other means, and 5.8 percent worked at home. 5.8 percent of occupied housing units had no vehicles available.

2.3.2 Coburg Population/Employment Forecasts

The Recommended Alternative for this IAMP is consistent with land use assumptions in the *Coburg Comprehensive Plan*, because all IAMPs must be consistent with local Comprehensive Plans. The Recommended Alternative is also consistent with the federally required Regional Transportation Plan (RTP) for Central Lane Metropolitan Planning Organization (CLMPO) and the 2004 *Coburg Urbanization Study*. The *Coburg Urbanization Study* is a document that was adopted by Coburg City Council, but never formally adopted into the Comprehensive Plan.

The Recommended Alternative for this IAMP recognizes that the City is likely to expand its UGB. As of this writing, because of wastewater system constraints (i.e., the lack of a wastewater system) the City has not been able to expand its UGB and land base to accommodate population and employment forecasts consistent with the 2004 *Coburg Urbanization Study* and the RTP.

The Recommended Alternative includes policy measures intended to protect the function and capacity of the interchange as the City moves toward expanding its UGB to provide for a greater level of growth, such as that identified in the RTP and the *Coburg Urbanization Study*. Table 2-2 shows differences in population and employment forecasts for the Comprehensive Plan, *Coburg Urbanization Study*, and RTP.

TABLE 2-2
Comprehensive Plan, Coburg Urbanization Study and RTP Land Use Assumptions (Year 2025)

	Population	New Dwelling Units	Employment
Coburg Comprehensive Plan	1,819	322	4,672
Regional Transportation Plan	2,950	843	4,197
Coburg Urbanization Study	3,327	893	5,157

This IAMP is based on the lower Comprehensive Plan population and employment numbers, because this is required by the state. However, the IAMP process also acknowledge the existence of the regionally adopted RTP forecasts and the locally adopted *Urbanization Study* forecasts to ensure the IAMP does not become obsolete the moment the City of Coburg resolves its wastewater issues, expands its UGB, and amends its Comprehensive Plan.

Based on land use designations included the *Coburg Comprehensive Plan*, 896 total (574 existing and 322 new) dwelling units and 4,672 employees are forecast for 2025 for the purpose of this IAMP. Because the analysis year for this IAMP is 2031, the 2025 population and employment forecasts were used to generate 2025 traffic forecasts, which were in turn grown to 2031 traffic forecasts using annual average growth rates.

As demonstrated in Table 2-2, Coburg is expected to undergo a large growth increase over the next 20 years. The method used to develop the forecasts upon which the IAMP analysis is based is described in greater detail in Section 3.2.

2.4 Transportation Facilities and Traffic Operations

This section summarizes the existing transportation conditions within the interchange management area, provides assumptions and methods used for the traffic operational analyses, and catalogues existing transportation system facilities and services. To the extent possible, physical as well as operational characteristics of the roads, intersections and transportation services are described.

2.4.1 Road Facilities

A summary of road facilities and characteristics is important to understanding the transportation system in relation to the Coburg/I-5 interchange management area in order to set a baseline of information for IAMP alternatives and recommendation development. This section describes the public roads within the interchange management area.

Road Descriptions

Interstate 5 is the primary road serving the Coburg/I-5 interchange area. East Pearl Street/ Van Duyn Road is the primary east-west arterial connection serving the interchange area. Other public roads within the interchange management area include:

- West of I-5
  - Daray Street
  - Coburg Industrial Way
  - Roberts Road
  - Sarah Lane
  - N. Miller Street
  - N. and S. Coleman Street
  - N. Emerald Street
  - E. Mill Street
  - E. McKenzie Street
  - E. Lincoln Way
  - E. Delaney Street
  - E. Dixon Street
  - E. Maple Street
  - E. Thomas Street
  - Rustic Court
  - Shane Court
- East of I-5
  - Hereford Road (first public road located east of I-5)

There are also private driveways located both east and west of the interchange within the management area. The City of Coburg recently vacated Stuart Way and the easternmost portion of Delaney Street, located west of the interchange, and that right-of-way is now considered part of the Truck-N-Travel property (with access and utility easement conditions).

The following descriptions briefly characterize all the roads within the interchange management area.

Interstate 5. I-5 is a limited access Interstate Highway, classified as part of the National Highway System (NHS). I-5 is also a designated freight route and is a federal North American Free Trade Agreement (NAFTA) route. I-5 is the primary north-south interstate road facility for the Pacific Coast states (Washington, Oregon, and California).

I-5 within the study area runs along the eastern edge of the city of Coburg, and also borders unincorporated Lane County. Within the interchange management area, I-5 is a four-lane facility (two lanes in each direction, separated by a grassy median). According to ODOT's

2007 Transportation Volume Tables, average daily traffic just south of the Coburg/I-5 interchange (milepost 198.85) is approximately 45,100 vehicles.

The Coburg/I-5 interchange is a classic diamond interchange, located at milepost 199.15. According to ODOT's *2007 Interchange Ramp Volume Diagrams*, at the Coburg/I-5 (Van Duyn Road) interchange, the northbound average daily volume on I-5 immediately south of the interchange is 22,250; while immediately north of the interchange northbound average daily volume is 18,930. According to the data, southbound average daily volume is 18,930 immediately north of the interchange and 22,890 immediately south of the interchange. Average 2007 daily volume on the northbound off-ramp is 5,090 while the northbound on-ramp is 1,770. Average 2007 daily volume on the southbound off-ramp is 1,880, while on the southbound on-ramp, it is 5,480. The differences between the off-ramps and on-ramps for each direction likely point to the influence of major employment areas located northwest of the interchange on interchange volumes and operations.

Coburg/I-5 interchange, southbound on-ramp

E. Pearl Street. E. Pearl Street is a two-lane County Minor Arterial that travels east-west and turns into Van Duyn Road at the east of the Coburg/I-5 interchange. The intersection of E. Pearl and Coburg Industrial Way is signalized. E. Pearl Street provides direct access to commercial and industrial businesses, and leads west to the historic central business district in Coburg. Within the interchange management area, E. Pearl Street is classified locally as a truck route.

Looking east toward the interchange on E. Pearl

Van Duyn Road. Van Duyn Road is a two-lane local County road that travels east-west and turns into E. Pearl Street at the Coburg/I-5 interchange. There is a traffic signal at the intersection of Van Duyn Road and the northbound I-5 ramp terminal. Van Duyn Road accesses property to the east of the interchange. Within the interchange management area, Van Duyn Road is classified by Coburg as a truck route and by Lane County as a local road.

Daray Street. Daray Street is a county two-lane local road that accesses some businesses immediately north of E. Pearl Street and then dead-ends. Daray Street does not meet ODOT spacing standards for interchanges; it is less than 1,320 feet from the I-5 ramp intersection with E. Pearl Street.

Coburg Industrial Way. Coburg Industrial Way is a two-lane County Minor Collector (between E. Pearl and city limits) and City collector (north of the County road section) that travels north-south and provides access to the Monaco Coach and industrial property northwest of the interchange. Coburg Industrial Way does not meet ODOT spacing standards for interchanges; it is less than 1,320 feet from the I-5 southbound ramp intersection with E. Pearl Street.


Industrial Way, looking north toward Monaco Coach facility

Roberts Road. Roberts Road is a two-lane City collector that travels north-south and provides access to Shell, Truck-N-Travel and other commercial and light industrial uses southwest of the interchange. Roberts Road does not meet ODOT spacing standards for interchanges; it is less than 1,320 feet from the I-5 ramp intersection with E. Pearl Street.

E. Mill Street. E. Mill Street is a two-lane City road that travels east-west and is classified as a City collector between Diamond Street and Miller Street. E. Mill Street provides access to residential properties west of the interchange as well as to the city park. E. Mill Street is narrow in areas.


Looking east from Coleman Street

E. Dixon Street. E. Dixon Street is a two-lane City road that travels east-west and is classified as a collector between Willamette Street and Coleman Street and as a local road everywhere else. E. Dixon Street primarily provides access to residential properties west of the interchange.

N. and S. Coleman Street. Coleman Street is a two-lane City road that travels north-south and is classified as a City collector between Mill Street and Pearl Street, but a local road everywhere else. Coleman Street provides access to residential properties northwest of the interchange, and provides a major north-south link through town. It is characterized by a series of four-way stops at intersections.

Sarah Lane. Sarah Lane is a two-lane City local road that travels east-west and provides access to residential properties northwest of the interchange.

N. Miller Street. N. Miller Street is a two-lane City local road that travels north-south and provides access to residential properties west of the interchange.

N. Emerald Street. N. Emerald Street is a two-lane City local road that travels north-south and provides access to residential properties northwest of the interchange.

E. McKenzie Street. E. McKenzie Street is a two-lane City local road that travels east-west and provides access to residential properties west of the interchange and to the city park.

E. Lincoln Way. E. Lincoln Way is a two-lane City local road that travels east-west and provides access to residential properties west of the interchange.

E. Delaney Street. E. Delaney Street is a two- and one-lane local City road that travels east-west and provides access to residential and commercial land west of the interchange. Immediately west of Stuart Way, E. Delaney Street has been vacated and is poorly maintained.

E. Maple Street. E. Maple Street is a two-lane City local road that travels east-west and provides access to residential properties west of the interchange.

E. Thomas Street. E. Thomas Street is a two-lane City local road that travels east-west and provides access to residential properties northwest of the interchange.

Rustic Court. Rustic Court is a two-lane City local road that travels north-south and provides access to residential properties northwest of the interchange.

Shane Court. Shane Court is a two-lane local City road that travels north-south and provides access to residential properties northwest of the interchange.

Stuart Way. Stuart Way is a two-lane private road that was recently vacated by the City of Coburg. It provides access to the Truck-N-Travel site as well as the Eugene Kamping RV Park and Featherland. Stuart Way does not meet ODOT spacing standards for interchanges; it is less than 1,320 feet from the I-5 ramp intersection with E. Pearl Street.

Jurisdiction and Functional Classification

Most of the roads within the Coburg/I-5 interchange management area fall under the jurisdiction of Coburg, though other roads are owned by Lane County or ODOT, as shown in Table 2-3. Most of the roads within the interchange management area are classified by the City of Coburg as local roads, though a few are classified as arterials (Willamette Street and E. Pearl Street) or collectors. Descriptions of relevant City of Coburg functional classifications for the management area include the following:

- **Interstate Highways**—Interstate Highways are the highest classification of road, and serve larger volumes of interstate and regional traffic at higher speeds with limited access. Interstate Highways favor mobility over access.
- **County Arterials**—County Arterials also generally favor mobility over access, and provide important regional and local connections.
- **County/City Collectors**—County/City Collectors are intermediate roads that typically serve as the direct link between local streets and the arterial street system. Mobility and access functions are important for Collectors.
- **Local Roadways**—The remainder of roads are classified as local roads. Access is the most important function for local roads.

Figure 2-3 depicts both City and County functional classification, based on roadway ownership. Information is relevant for segments within the management area only.

Number of Lanes, Road Width, Marked Shoulders, Speed Limits, Parking

Physical road characteristics help to define potential road issues or problem areas. Table 2-4 lists number of lanes, road width, marked shoulder width (if any), speed limits and presence of on-street parking for roads within the interchange management area. Many of the collectors within the interchange management area are relatively narrow for the expected function of the road.

TABLE 2-3
Coburg/I-5 IAMP Ownership and City of Coburg/Lane County Functional Classification

Road	Jurisdiction (Ownership)	Functional Classification
Interstate 5	ODOT	Interstate Highway (NHS)
Van Duyn Road	Lane County	Local Roadway
Pearl Street	Lane County	County Arterial (Coburg)
		Minor Arterial (Lane County)
Coburg Industrial Way	Lane County and City of Coburg	Minor Collector (Lane County)
		City Collector (Coburg)
Roberts Road	City of Coburg	City Collector
N. and S. Coleman Street	City of Coburg	City Collector and Local Roadway
E. Mill Street	City of Coburg	City Collector and Local Roadway
E. Dixon Street	City of Coburg	City Collector and Local Roadway
N. Miller Street	City of Coburg	Local Roadway
Stuart Way	Private Road	Vacated
Daray Street	City of Coburg and Lane County	Local Roadway
Sarah Lane	City of Coburg	Local Roadway
N. Emerald Street	City of Coburg	Local Roadway
E. McKenzie Street	City of Coburg	Local Roadway
E. Lincoln Way	City of Coburg	Local Roadway
E. Delaney Street	City of Coburg	Local Roadway
E. Maple Street	City of Coburg	Local Roadway
E. Thomas Street	City of Coburg	Local Roadway
Rustic Court	City of Coburg	Local Roadway
Shane Court	City of Coburg	Local Roadway

TABLE 2-4
Coburg/I-5 IAMP Lanes, Road Width, Marked Shoulders, Speed Limit, Parking

Road	# Lanes	Road Width	Marked Shoulders (feet)	Speed (MPH)	Signed Parking
Interstate 5	4	80’	4+	65	N/A
Van Duyn Road	2	24’	4+	35	N/A
E. Pearl Street	2	26’	None	35	N/A
Coburg Industrial Way	2	42’	None	Basic Rule	No Parking
Roberts Road	2	22’	None	40	1 hour on the east; no parking on west
N. and S. Coleman Street	1	17’	Curbless	25	N/A
E. Mill Street	2	16’	Curbless	25	N/A
E. Dixon Street	2	20’	Curbless	25	N/A
N. Miller Street	2	20’	Curbless	25	N/A
Daray Street	2	36’	None	25	N/A
Sarah Lane	2	24’	None	25	No Parking
N. Emerald Street	2	20’	Curbless	25	N/A
E. McKenzie Street	2	20’	Curbless	25	N/A
E. Lincoln Way	2	20’	Curbless	25	N/A
E. Delaney Street	2	20’	Curbless	25	N/A
E. Maple Street	1	16’	Curbless	25	N/A
E. Thomas Street	1	17’	Curbless	25	N/A
Rustic Court	2	24’	None	25	N/A
Shane Court	2	24’	None	25	N/A

Note: In cases where street segments vary in terms of physical characteristics, the primary characteristic is listed in this summary table (e.g., if a road segment is primarily two lanes and is one lane for a short segment, it will be listed in the table as two lanes).

Road Condition

Road pavement condition within the interchange management area affects the coordination of projects and identifies potential improvement needs. For example, often time improvements can be coordinated with pavement overlay programs to maintain efficient and streamlined funding by completing both at once. Table 2-5 lists pavement condition ratings within the interchange management area. Figure 2-4 shows pavement condition ratings for the interchange management area.

Road condition ratings are based on ODOT standards. Conditions are not identified below the road segment level. No pavement condition ratings are available for interstate ramps. The following codes are used for roads in the interchange management area:

- **Poor**—Paved road. Areas of instability, marked evidence of structural deficiency, large crack patterns (alligatoring), heavy and numerous patches, and/or deformation very noticeable. Riding quality ranges from acceptable to poor.
- **Fair**—Paved road. Generally stable, with minor areas of structural weakness evident. Cracking easy to detect; patched but not excessively. Deformation is more pronounced and easily noticed. Good riding quality.
- **Good**—Paved road. Stable, may have minor cracking, generally hairline and hard to detect. Minor patching and some minor deformation may be evident. Very good riding surface.

TABLE 2-5
2005 Coburg/I-5 IAMP Pavement Condition

Road	Pavement Condition
Interstate 5	Good (Southbound); Very Good (Northbound)
Van Duyn Road	Fair
E. Pearl Street	Good
Coburg Industrial Way	Good
Roberts Road	Good
N. and S. Coleman Street	Good
E. Mill Street	Good
E. Dixon Street	Good
N. Miller Street	Good
Daray Street	Fair
Sarah Lane	Good
N. Emerald Street	Good
E. McKenzie Street	Good
E. Lincoln Way	Fair
E. Delaney Street	Good
E. Maple Street	Good
E. Thomas Street	Good
Rustic Court	Good
Shane Court	Good

Note: In cases where street segments vary in terms of pavement condition, the primary condition is listed in this summary table (e.g., if a road segment is primarily good, and is fair for a short segment, it will be listed in the table as good).

Signed Truck Routes

Truck route locations are important for understanding the flow of freight movement through an area. I-5 is a significant freight route, and carries interstate and international freight. Other signed designated truck routes in the interchange study area include E. Pearl Street and Van Duyn Road. West of the interchange management area, Willamette Street is a freight route that connects with freight generators (e.g., the mill) to the northwest of Coburg.

Traffic Control

Traffic control is critical for traffic flow and safety in many locations. Within the interchange management area, there are two signalized intersections:

- Northbound I-5 Ramps/Van Duyn Road; and
- E. Pearl Street/Coburg Industrial Way.

There are several stop-controlled intersections, including the following:

- E. Delaney Street/N. Miller Street (two-way stop control)
- Coleman Street/E. Maple Street (two-way stop control)
- Coleman Street/E. Dixon Street (four-way stop control)
- Coleman Street/E. Delaney Street (four-way stop control)
- Coleman Street/E. Lincoln Way (four-way stop control)
- Coleman Street/E. McKenzie Street (four-way stop control)
- Coleman Street/E. Mill Street (four-way stop control)
- N. Miller Street/E. Mill Street (three-way stop control)
- All approaches to arterials are stop controlled

2.4.2 Interchange Condition and Geometric Deficiencies

The Coburg/I-5 interchange bridge was originally built in 1960 and was raised in 1998. The bridge was rated with a Sufficiency Rating of 77.1 in 2008, which is considered Not Deficient (not considered Structurally Deficient or Functionally Obsolete). The bridge is eligible for federal funds for rehabilitation, but not for replacement.[8] The bridge is 239 feet in length, and the bridge type is reinforced concrete deck girder. Horizontal clearance is 40 feet 6 inches and vertical clearance is 16 feet 2 inches.

Primary deficiencies noted with regard to the interchange include the following:

- **Sight distance.** Sight distances are substandard; the view that motorists have from the ramp terminal of oncoming vehicles is not comprehensive. Guardrail locations restrict motorist line of sight.

- **Grades/Deceleration Length.** E. Pearl Street/Van Duyn Road approaches I-5 on the west side at 5.5 percent and Van Duyn Road approaches I-5 from the east at 5.3 percent, which is steep for trucks. The deceleration length is substandard.

- **Bridge width.** The bridge structure is narrow, and does not have room to accommodate bicyclists, pedestrians, or vehicular emergencies. The width is substandard.

- **Vertical clearance.** The bridge structure is less than the 17.5-foot ODOT standard.

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[8] A sufficiency rating of ≤ 80 percent is eligible for Federal Rehabilitation funds, and a sufficiency rating of ≤ 50 percent is eligible for Federal Replacement funds.

2.4.3 Access

Access spacing and the location of access points is critical to this IAMP planning process. The location of local streets and County roads near the interchange is a concern for the existing and future safety and operation of the Coburg/I-5 interchange. Public and private access locations along E. Pearl Street in the interchange study area are shown on Figure 2-5. Both ODOT and Lane County maintain access spacing recommendations or standards.

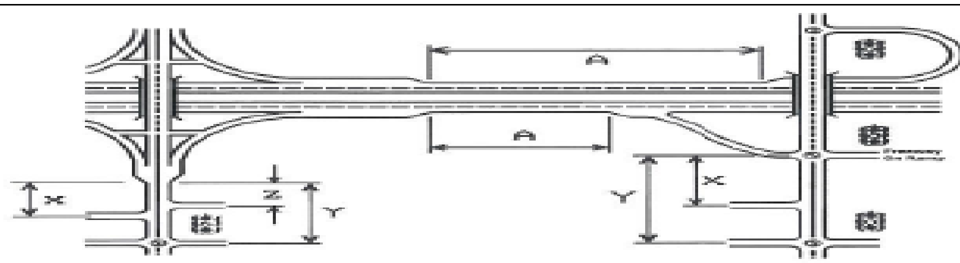
The Coburg/I-5 interchange is considered an urban interchange. There are no other interchanges along I-5 within these spacing limits; it is approximately 10 miles north to the Diamond Hill interchange, and approximately 3.5 miles south to the Beltline interchange.

The larger issue for the Coburg/I-5 interchange area is the spacing along the crossroad, Van Duyn Road/E. Pearl Street. According to the Oregon Highway Plan (OHP) Policy 3C: Interchange Access Management Areas, "When possible, access control shall be purchased on crossroads for a minimum distance of 1,320 feet (400 meters) from a ramp intersection or the end of a free flow ramp terminal merge lane taper."

ODOT standards are outlined in the OAR (OAR 734-051). The applicable standards are summarized in Table 2-6. The A, X, Y, and Z values are illustrated in Table 2-6.

TABLE 2-6
Minimum Spacing Standards Applicable to Freeway Interchanges

	Spacing Dimension			
Crossroad	**A**	**X**	**Y**	**Z**
Two-lane	1 mile	1,320 feet	1,320 feet	990 feet
Multi-lane	1 mile	1,320 feet	1,320 feet	1,320 feet



A = The distance between the start and end of tapers of adjacent interchanges.
X = The distance to the first approach on the right; right in/right out only.
Y = The distance to the first intersections where left-turns are allowed.
Z = The distance between the last right in/right out approach road and the start of the taper for the entrance ramp.
Source: Tables 5 and 6 in OAR 734-051-0125.

Lane County standards, included in the *Lane County Transportation System Plan* (June 2004), reference ODOT standards for state facilities, and also reference Lane Code sections 15.130-15.139. Lane County classifies E. Pearl Street as an Urban Minor Arterial, 30 and 35 mph, and therefore, per Lane County Code Section 15.138—Table 2, County spacing standards are 275 feet for roads and driveways (measured centerline to centerline) along E. Pearl Street.

Lane County classifies Van Duyn Road as an Urban Local Road within the UGB, and as a Rural Local Road outside the UGB. According to Lane County Code Section 15.138(2), within a UGB the spacing standard for County Local Roads is 20 feet for use of property for a single family or manufactured dwelling, duplex, or triplex, and 100 feet for other uses. According to Lane County Code Section 15.138(3), outside the UGB the spacing standard for County Local Roads is 100 feet.

According to Lane County Code Section 15.137(6)(b), minimum offsets for roads along County roads designed for +25 mph speeds should be 150 feet. The County Code also recommends joint access where possible.

Lane County has a facility permits process to manage access to County Roads through the review of land divisions and other proposed development.

The following public roads do not meet the OHP's recommended distance from an interchange:

- Daray Street
- Coburg Industrial Way
- Roberts Road

In addition, Stuart Way (vacated road), driveways at the Texaco station, the entrance to Hillside Café and the RV park access on the east side of the interchange do not meet the OHP recommended distance of 1,320 feet from the interchange.

The intersections of Daray Street, Roberts Road, and Coburg Industrial Way are not aligned with each other, and in general do not meet County spacing or road offset standards.

2.4.4 Crash Analysis

The crash analysis includes a summary of safety conditions along I-5 within the city of Coburg, and study area intersections within the Coburg/I-5 interchange management area. The ODOT Crash Analysis Unit provided crash history statistics[9] for the years 2003-2007. These data were analyzed to identify crash patterns that could be a result of existing geometric or operational deficiencies.

Interstate 5

ODOT has developed a Safety Priority Index System (SPIS), generated annually and based on the most recently available 3 years of crash data, to identify hazardous locations along state highways. The highway locations within the highest 10 percent SPIS score are evaluated for potential safety improvements. No locations along I-5 near the interchange management area (MP 198.00 to MP 200.50) were included in the most recent highest 10 percent SPIS score.

For the 5-year period, a total of 73 crashes were reported along I-5 within the interchange management area, including 13 injury crashes, 59 property damage crashes, and one fatal crash (with three fatalities). Table 2-7 provides an overview of all traffic crashes over the 5-year period.

[9] Legally reportable motor vehicle traffic crashes are those that involve death, bodily injury, or damage to personal property in excess of $1000.

TABLE 2-7
Historical Crash Data on I-5 within the Coburg/I-5 Interchange Management Area (MP 198.00 to MP 200.50)

	Severity of Crash				Type of Crash					
Year	**Injury**	**Property Damage**	**Fatal**	**Total Crashes**	**Angle**	**Rear-End**	**Fixed Object**	**Sideswipe-Overtaking**	**Turning**	**Other**
2003	3	17	1	21	0	7	9	3	0	2
2004	5	25	0	30	0	10	12	8	0	0
2005	2	13	0	15	0	4	6	4	0	1
2006	0	2	0	2	0	0	1	0	1	0
2007	3	2	0	5	0	2	1	0	2	0
Total	**13**	**59**	**1**	**73**	**0**	**23**	**29**	**15**	**3**	**3**

The rate of traffic incidents occurring along I-5 ranged between 2 and 30 crashes per year. Although there were thirty crashes in 2004, there are no trends in the data to explain the high number of crashes. The most common type of crash was fixed object crashes, which comprised roughly 39 percent (29 crashes) of all crashes over the 5-year period. This was followed by rear-end crashes, which comprised roughly 31 percent (23 crashes) of all crashes over the 5-year period. In 2003, seven of the 21 crashes occurred on the same day and were during icy conditions. The fatal crash (three fatalities) occurred in July 2003 at dawn during clear and dry conditions at MP 199.0.

Road conditions and time of day are two elements often analyzed with crash statistics. The majority (57 percent, 42 crashes) of crashes occurred on dry surface. Most of the crashes also occurred during the day—69 percent, or 51 crashes total. Table 2-8 summarizes these data. Crash incidents were comparatively higher during the work week than on weekends, and the PM peak period recorded the most number of crashes (10 crashes).

TABLE 2-8
Surface and Light Condition Summary

Surface Conditions	Crashes
Dry	42
Wet	20
Icy	11
Total	**73**
Light Conditions	**Crashes**
Day	51
Dark (Road Lighted)	14
Dawn	6
Dusk	2
Total	**73**

2.4.5 Intersection-Level Analysis

In addition to the I-5 corridor, interchange management area study intersections, including I-5 ramp termini, have been analyzed with regard to crashes from 2003-2007. Table 2-9 provides an overview of the crashes recorded by study intersection location. The most common type of crashes at the study intersections were turning, followed by rear-end crashes. Most of the crashes involved property damage only with no injury. No head-on or parking collisions were recorded. No collisions involved pedestrians or bicyclists. Twelve of the 16 intersection crashes took place during the day. Six of the intersection crashes occurred on wet pavement.

Intersection crash rates are typically reported in crashes per million entering vehicles (MEV). Most crash rates are substantially lower than 1.00, which indicates that crashes are not a significant concern at all five study intersections. The Pearl Street/Coburg Industrial Way intersection experienced the greatest number of crashes, warranting further review of geometric and operational issues.

TABLE 2-9
Intersection Crash Data (2003-2007) Coburg/I-5 IAMP

	Severity of Crash				Type of Crash		
Study Intersection	**Injury**	**Property Damage Only**	**Total Crashes**	**Crash Rate (Crashes/ MEV)**	**Sideswipe-Overtaking**	**Rear-End**	**Turning**
Pearl Street/Coburg Industrial Way	3	6	9	0.34	2	2	5
Pearl Street/ Coleman Road	0	1	1	0.08	0	1	0
Pearl Street/ Roberts Road	0	3	3	0.12	0	1	2
Van Duyn Road/I-5 Northbound Ramps	1	0	1	0.07	0	1	0
Pearl Street/I-5 Southbound Ramps	1	1	2	0.08	0	1	1
TOTALS	**5**	**11**	**16**	**-**	**2**	**6**	**8**

Note: MEV = million entering vehicles.

To reduce speeds in Coburg, traffic calming measures may be beneficial. Research has shown that narrower lanes, reduced overall road width, street trees, and speed humps along with other strategies have been successfully used to reduce travel speeds. These measures may in turn reduce the number of crashes in Coburg. Also, the incidence of crashes involving drivers not yielding indicates that some locations may benefit from better stop controls or improved sight distances.

2.4.6 Existing Operational Analysis

Existing operational analysis was conducted for intersections within the Coburg/I-5 IAMP interchange management area to identify operational issues. Figure 2-6 shows the turning movement volumes for study intersections within the interchange management area.

Traffic Operations

Manual turning movement counts were collected for five intersections within the Coburg UGB on typical weekdays in November 2002, May 2004, January 2005, and February 2007: Pearl Street/Coburg Industrial Way, Van Duyn Road/I-5 Northbound Ramps, Pearl Street/ I-5 Southbound Ramps, Pearl Street/Roberts Road, and Pearl Street/Coleman Street.

The counts completed during November 2002, May 2004, and February 2007 were 14-hour counts and the count completed during January 2005 included 3 hours in the morning and 3 hours in the evening. In February 2007, new 14-hour counts were conducted for the Van Duyn Road/I-5 Northbound Ramps and Pearl Street/I-5 Southbound Ramps intersections. This new set of counts replaced the previous counts for these two intersections. All counts included the peak period, 3:00 PM to 4:00 PM. These counts were collected to evaluate the existing road and intersection operations near and at the Coburg/I-5 interchange. Appendixes E and F provide summaries of the methodologies and the raw traffic data used for this analysis, respectively.

Average Daily Traffic Volumes and Heavy Vehicle Percentages

The average daily traffic (ADT) for facilities within Coburg varies between 7,000 and 14,000 vehicles per day. On E. Pearl Street west of Coburg Industrial Way, there are approximately 7,000 vehicles per day. East of Coburg Industrial Way on E. Pearl Street, the ADT increases to approximately 14,000 vehicles per day.

E. Pearl Street/Coburg Industrial Way Intersection

The percent of heavy vehicles for facilities within Coburg ranges from 5 percent to 30 percent. On E. Pearl Street west of Coburg Industrial Way the percent of heavy vehicles is between 5 percent and 15 percent. East of Coburg Industrial Way on Pearl Street, the percent of heavy vehicles increases from 15 percent to 30 percent. There is also a high percent heavy vehicle rate of 25 percent on the north approach of E. Pearl Street and Roberts Road.

Study Intersections and Raw Traffic Counts

Traffic data were collected for signalized and unsignalized study intersections. Since the counts were taken in various years (2002, 2004, 2005, 2007), a growth factor was applied to the 2002 and 2004 counts to come up to the existing conditions year of 2005 for intersections not at I-5 ramps. 2007 counts were used for the I-5 ramp intersections. Appendix E provides an overview of the traffic analysis methodology and explains how the growth rate was calculated. Appendix F contains raw traffic volumes for each intersection that was counted.

- Signalized
  - Pearl Street and Coburg Industrial Way
  - Van Duyn Road and I-5 Northbound Ramps

- Unsignalized
  - Pearl Street and Coleman Street
  - Pearl Street and Roberts Road
  - Van Duyn Road and I-5 Southbound Ramps

Analysis of the Automated Traffic Recorder Sites

ODOT traffic analysis procedures require the 30th highest hour traffic volumes be used to calculate volume to capacity (V/C)[10] ratios for intersections and street segments. The 30th highest hour represents the highest volume of traffic that would be expected to occur on the road, ignoring extraordinary circumstances—literally the 30th highest recorded traffic volumes. The 30th highest hour examined was a PM hour. Data from a representative automated traffic recorder (ATR) site was used to determine seasonal factors and to calculate 30th highest hour traffic volumes from traffic counts collected in November 2002, May 2004, January 2005, and February 2007. Methodologies used in this analysis are summarized in Appendix E.

Analysis Method

Operational analysis of existing conditions for the five study intersections, using 30th highest hour traffic volumes, was performed using Synchro analysis software. Appendix G provides the complete report output for each intersection.

State Highway Mobility Standards

State Highway Mobility Standards were developed for the OHP as a method to gauge reasonable and consistent standards for traffic flow along state highways. These mobility standards consider the classification (e.g., freeway, district) and location (rural, urban) of each state highway. Mobility standards are based on V/C ratios.

Two of the study intersections are governed by OHP standards with regard to existing operations.[11] These are the intersections at the I-5 northbound and southbound ramps. The two study intersections under ODOT's jurisdiction are within the UGB and inside the boundaries of a Metropolitan Planning Organization (MPO). These intersections are not within a Special Transportation Area (STA) and the intersections operate at a speed limit of less than 45 mph. The I-5 ramps therefore have a standard V/C ratio of 0.80 under the OHP. Table 2-10 lists the intersections within ODOT's jurisdiction.

The future no-build analysis will maintain the same OHP standards as the existing conditions analysis. The future build analysis will use the 20-year design standard as designated in the 2003 Highway Design Manual (HDM). The build analysis standard V/C ratio will be 0.75 for the ODOT governed study intersections because they are inside the urban growth boundary and in an MPO.

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[10] V/C ratios are defined as the number of vehicles passing through a road segment during a given period of time, divided by the capacity of that road segment

[11] OHP standards are used to evaluate operations for existing or future no-build conditions. HDM standards are used to evaluate any future build scenario options on state facilities.

Lane County Mobility Standards

Lane County standards were used to analyze the remaining three study intersections in the interchange management area because they are located along a County road (E. Pearl Street). The *Lane County TSP* (2004) and *Lane Code* outline the performance standards. The three study intersections are located inside the UGB and within the MPO area. The minimum standard V/C ratio is 0.85 and the minimum acceptable level of service (LOS) is LOS D. For two-way stop controlled intersections, the approaches that are required to stop have a standard V/C ratio of 0.95 and LOS D. Table 2-10 lists the study intersections within the County's jurisdiction.

The future no-build and future build analyses will maintain the same V/C ratio standard for the study intersections within the County's jurisdiction.

TABLE 2-10
Intersection Operational Analysis—Existing (2005) 30th Highest Hour

Study Intersection	Road Jurisdiction	LOS and V/C Ratio Standard		Observed Maximum LOS and V/C Ratio	
Signalized					
Pearl Street and Coburg Industrial Way	Lane County	(D) 0.85		(E) 0.61	
Van Duyn Road and I-5 Northbound Ramps	ODOT	0.80		0.40	
Unsignalized					
Pearl Street and I-5 Southbound Ramps	ODOT	0.80		0.66	
		Major	**Minor**	**Major**	**Minor**
Pearl Street and Coleman Street	Lane County	(D) 0.85	(D) 0.95	(A) 0.01	(C) 0.10
Pearl Street and Roberts Road	Lane County	(D) 0.85	(D) 0.95	(A) 0.14	**(F) 1.01**

Source: Synchro HCM Unsignalized and Signalized Reports

Notes: V/C standards for existing conditions on ODOT facilities are evaluated per the OHP.

For unsignalized intersections, the V/C ratio is presented for the worst movement for each street.

Numbers in **BOLD** indicate V/C ratios and levels of service not meeting OHP mobility standards.

For the intersections within ODOT's jurisdiction, no LOS will be reported.

LOS = level of service

Operational Analysis of Existing Conditions (30th Highest Hour)

Table 2-9 presents the mobility standards found in the OHP as well as the Lane County TSP and Lane Code. The table also presents the observed intersection V/C ratios for all of the study intersections and observed LOS for the intersections under City jurisdiction. These observations were made under the existing (2005) 30th highest hour traffic volumes. For signalized intersections, the overall intersection results are reported. For unsignalized intersections, the movement with the worst operating performance on both the major and minor approaches is reported.

Intersection V/C ratios greater than the mobility standards indicate areas of congestion and longer-than-acceptable vehicle delay. Intersection V/C ratios lower than the mobility standards indicate intersections operating at acceptable levels of mobility. As shown in Table 2-10, all of the study intersections except one (Pearl Street and Roberts Road) currently operate better than the OHP or County V/C thresholds.

Most of the intersections have V/C ratios well below the standard with exceptions at Pearl Street and Roberts Road and Van Duyn Road and I-5 Southbound Ramps. At Pearl Street and Roberts Road, the minor approaches are failing. The primary street volumes at this intersection are high due to the traffic traveling between I-5 and Coburg Industrial Way. The side street volumes are not large on Roberts Road, but since the intersection is a two-way stop, the vehicles have a difficult time turning onto, or getting across Pearl Street, thus making those movements fail.

Turn-Lane Queuing Analysis of Existing Conditions (30th Highest Hour)

The V/C ratio provides only one measure-of-effectiveness for intersection operation. Vehicle queuing in the turn-lanes shows where there is deficient vehicle storage at intersections. The 95th percentile queue length exceeds available storage capacity at the southbound left turn lane at E. Pearl Street and Coburg Industrial Way. However, this intersection meets Lane County mobility standards. All of the queues are shown in Table 2-11; assumptions used for the queue analysis are provided in Appendix E.

Queue lengths can impact overall intersection corridor operations by delaying and restricting upstream vehicle movements. This is true for both signalized and unsignalized intersections. The southbound left turn at E. Pearl Street and Coburg Industrial Way shares the same phase as the southbound through and right. This is beneficial, because it means that the long queues will not result in hindering through traffic from proceeding during the green signal. The long queue at Pearl Street and Coburg Industrial Way could, however, be an indication that vehicles are waiting at the signal for more than one cycle during peak periods.

TABLE 2-11
2005 30th Highest Hour Queue Analysis

Intersection	Approach	Lane Group	Existing Storage (feet)	Queue Length (feet)
Pearl Street and Coburg Industrial Way	Eastbound	Left	200	40
		Thru/Right		200
	Westbound	Left	100	80
		Thru/Right		150
	Northbound	Left/Thru/Right		60
	Southbound	Left	300	**720**
		Left/Thru/Right		630
Van Duyn Road and I-5 Northbound Ramps	Eastbound	Left/Thru		80
	Westbound	Thru/Right		40
	Northbound	Left/Thru/Right		200
Pearl Street and Coleman Street	Eastbound	Left/Thru/Right		--
	Westbound	Left/Thru/Right		--
	Northbound	Left/Thru/Right		20
	Southbound	Left/Thru/Right		30
Pearl Street and Roberts Road	Eastbound	Left/Thru/Right		--
	Westbound	Left/Thru/Right		--
	Northbound	Left/Thru/Right		190
	Southbound	Left/Thru/Right		70
Van Duyn Road and I-5 Southbound Ramps	Eastbound	Thru/Right		--
	Westbound	Left/Thru		--
	Southbound	Left/Thru/Right		90

Note:
Numbers in **BOLD** indicate the existing queue length exceeds the existing storage length.
Synchro and SimTraffic were used to calculate queue lengths; see Appendix E for more information.
Queue lengths not reported for free-flowing and uncontrolled movements.
Queue lengths rounded up to the nearest 10 feet.
Storage for through-lanes displayed only when queue is expected to surpass distance to next intersection.

2.4.7 Transit Facilities

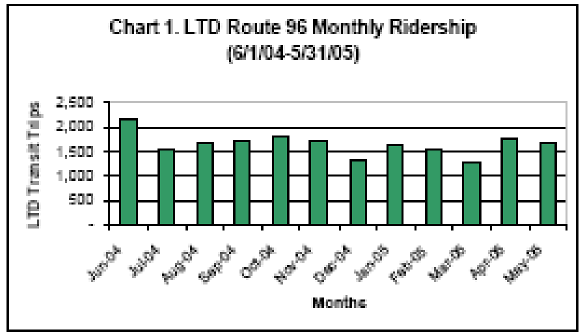
The Coburg/I-5 interchange is located within the Lane Transit District (LTD). LTD Route 96 and Route 96 Express serve areas within the Coburg/I-5 interchange management area. Figure 2-7 shows transit routes in the management area.

LTD Transit Stop

Route 96 heads north from Eugene to Coburg along Coburg Road and Willamette Street. Route 96 serves the interchange study area via E. Pearl Street and Coburg Industrial Way. There are bus stops along E. Pearl Street, as well as at Monaco and the Country Squire Inn stop, and then heads back to Eugene along Coburg Road. Service is generally every 2 hours during the weekdays.

Route 96 Express travels along I-5 between Eugene and Coburg, and services the Monaco property. The Coburg Express leaves Eugene during the weekdays one time during the morning (7:00 AM) and leaves Coburg one time during the evening (4:10 PM), intending to offer alternatives to Monaco and other industrial employers in Coburg.

From June 1, 2004, to May 31, 2005, total ridership on Route 96 was 19,934. Chart 1 shows the monthly ridership on Route 96 during 2004-2005. Ridership was highest during June 2004 (2,147 transit trips) and was the lowest during March 2005 (1,309 transit trips). Average monthly ridership for the timeframe was 1,661 transit trips. Monthly transit ridership was generally consistent.



There is no weekend or evening transit service to Coburg.

Other demand-response and transportation demand management (TDM) options are available through LTD's Commuter Solutions group. This service offers carpool and vanpool registration, SchoolPool, walking and bicycling groups, bicycling information, ideas for alternative work week schedules and a variety of employer programs. These transit and TDM strategies, if utilized, have some potential to affect operations in the interchange management area.

There is no passenger rail service within the study area. The closest Amtrak station is located in Eugene at 433 Willamette Street.

2.4.8 Pedestrian and Bicycle Transportation

Currently there is minimal pedestrian and bicycle activity in the vicinity of the Coburg/I-5 interchange. Figure 2-8 shows bicycle and pedestrian facilities, including existing crosswalks and off-street facilities in the interchange management area.

No observed bicycle parking locations exist in the interchange management area. There are two signalized crosswalks in the interchange management area, at I-5 Northbound Ramps/Van Duyn Road and E. Pearl Street/Coburg Industrial Way.

Coburg Ped/Bike Facilities

Table 2-12 lists existing bicycle and pedestrian facilities in the Coburg/I-5 interchange management area. The table also notes the existing sidewalks in the interchange management area that are less than 5 feet wide, which is the desired minimum width for sidewalk functionality (6 feet is preferred per the Oregon Bicycle and Pedestrian Plan, 1995). There is a noticeable lack of walking and bicycling facilities in the area, given the amount of employment in the area, and especially if the area is expected to grow.

The Coburg Zoning Code requires new sidewalks in the Highway Commercial and Light Industrial districts upon redevelopment. The local streets in the residential areas consciously do not require sidewalks in order to preserve the rural character of the local streets. It is a shared street design.

TABLE 2-12
Coburg/I-5 IAMP Roads—Bicycle and Pedestrian Facilities

Road	Bicycle Facilities	Pedestrian Facilities
Interstate 5	None (N/A)	None (N/A)
Van Duyn Road	None	None
E. Pearl Street	Both sides	South side; 5+ feet (both sides west of Stuart Way)
Coburg Industrial Way	None	None
Roberts Road	None	None
N. and S. Coleman Street	None	None
E. Mill Street	None	None
E. Dixon Street	None	North side; Less than 5 feet
N. Miller Street	None	None
Daray Street	None	None
Sarah Lane	None	Both sides; Less than 5 feet
N. Emerald Street	None	None
E. McKenzie Street	None	None
E. Lincoln Way	None	None
E. Delaney Street	None	None
E. Maple Street	None	None
E. Thomas Street	None	None
Rustic Court	None	Both sides; Less than 5 feet
Shane Court	None	Both sides; Less than 5 feet

2.4.9 Air Transportation

There are no air facilities located within the Coburg/I-5 interchange management area, or within the city of Coburg.

Nearby Public Air Facilities

The closest public air service is at the Mahlon Sweet Field Airport, located approximately 7 miles east of the study area in Eugene. Road access to the Mahlon Sweet Field Airport from Coburg is via Coburg Road or I-5 to Beltline Highway and OR 99W. The airport is not serviced by fixed-route transit.

Mahlon Sweet Field is owned and operated by the City of Eugene, and is open to the public. It is the fifth-largest airport in the northwest, providing commercial air service, air cargo service, and one fixed base operator to handle general aviation needs. The airport provides service to Portland, San Francisco, Seattle, and other cities.

The airport averages 223 operations per day, or over 81,000 annually, with 206 aircraft based at the field. Approximately 38 percent of the operations are transient general aviation, 30 percent are local general aviation, 20 percent are commuters, 10 percent are air carriers, and 2 percent are military. Of the 206 aircraft based on the field, 171 are single-engine airplanes, 15 are jet airplanes, 13 are multi-engine airplanes, and 7 are helicopters.

The airport has two asphalt runways, both in good condition. Runway 16/34 is 8,009 feet long by 150 feet wide and has the following weight limits: 155,000 lb for single-wheel, 190,000 lb for double-wheel, and 300,000 lb for double-tandem aircraft. Runway 3/21 is 5,228 feet long by 150 feet wide and has the following weight limits: 50,000 lb for single-wheel, 65,000 lb for double-wheel, and 100,000 lb for double-tandem aircraft.

Nearby Private Air Facilities

There are four private air facilities within 5 miles of the Coburg/I-5 interchange management area:

- Briggs Airport (located 1 mile north of Coburg, west of I-5; one aircraft based on the field)
- Pape Bros. Inc. Heliport (located 1 mile north of Coburg, just west of I-5)
- West Point Airport (located 3 miles north of Coburg, just east of I-5; two aircraft based on the field)
- Greer Airport (located 4 miles north of Coburg; west of I-5; four aircraft based on the field)

2.4.10 Rail Transportation

There are no commuter or freight rail facilities located within the Coburg/I-5 interchange management area, or within the city of Coburg. The Southern Pacific Railroad formerly owned a right-of-way within the city of Coburg, which has been since partially vacated.

The closest passenger rail service is located in Eugene (Amtrak). This service travels north-south with stops along the west coast, including Seattle; Portland; Salem; Albany; Vancouver, B.C.; and locations in California, with connections to other locations, such as Klamath Falls and Chemult.

2.4.11 Water

There are no navigable waterways located within the Coburg/I-5 interchange management area, or within the city of Coburg. The confluence of the McKenzie and Willamette Rivers is located approximately 2 miles southwest of Coburg.

2.4.12 Pipelines

There are no significant pipelines located within the Coburg/I-5 interchange management area. The closest significant pipeline is the Williams Gas Pipeline West, which is a natural gas pipeline that runs north-south through the western portion of the city of Coburg. There are no noted deficiencies.

2.4.13 Summary of Deficiencies and Issues

The following transportation and land use deficiencies or issues are relevant for the Coburg/I-5 IAMP planning process (in no particular order):

- **Land Use Changes and Expansions.** There is a lot of undeveloped and underdeveloped land within the Coburg/I-5 interchange management area. If land is to develop—or be annexed into Coburg—it would impact the transportation system. Planning for this interchange was partially initiated due to the rapid development of commercial and industrial lands near the interchange.
- **Access Spacing along E. Pearl Street.** Four public roads and multiple private driveways are closer to the interchange than ODOT standards recommend. Roads are not aligned within the interchange management area. Some access points along E. Pearl Street are located close to each other.
- **Operations at nonsignalized intersections.** Operations at the Pearl Street/Roberts Road intersection do not meet acceptable performance standards (the minor movement does not meet the standards).
- **Queuing at Pearl Street/Coburg Industrial Way.** At the Pearl Street/Coburg Industrial Way intersection, the 95th percentile queue length exceeds available storage capacity. The long queue at Pearl Street and Coburg Industrial Way could, however, be an indication that vehicles are waiting at the signal for more than one cycle during peak periods. However, the E. Pearl Street and Coburg Industrial Way intersection does not report V/C ratios higher than Lane County mobility standards.
- **Lack of Pedestrian and Bicycle Facilities.** The interchange management area is noticeably lacking in coordinated and connected bicycle and pedestrian facilities.
- **Transit Service and TDM.** Transit service (particularly Express transit service) is somewhat limited—though it may first require education for commuters using the interchange and surrounding street network. TDM strategies for large employers should be in the mix of concepts put forward.
- **Truck traffic.** Truck traffic includes freight vehicles with three or more axles, and must be accommodated, yet neighborhoods must also be shielded to the greatest extent possible from the impacts of this traffic.
- **Van Duyn Bridge and I-5 ramp geometry.** The Van Duyn Bridge is narrow, and does not offer much room for emergency management or clear visibility; widths are substandard. Some of the grades are difficult for trucks; deceleration length is substandard. The bridge does not have adequate width for pedestrians or bicyclists. Vertical clearance is substandard.

Coburg City Hall

2.5 Natural and Cultural Resources

The Coburg/I-5 interchange management area includes land in Lane County and the City of Coburg. Project improvements could potentially trigger environmental protection regulations of any of these jurisdictions, as well as state and/or federal regulations. This section provides a broad overview of natural and cultural resources in the study area and related potential project constraints presented. Future project steps will require additional environmental work.

The 1999 *Refinement Plan* included a general environmental assessment conducted by ODOT, intended to provide a rough overview of the area around the interchange. The assessment included review of the natural and built environment for any fatal flaws for an interchange project. According to the *Refinement Plan*, "There were no environmental issues at this time that constitutes a significant problem for future interchange designs." Figure 2-9 includes the Possible Environmental Constraints map from the *Refinement Plan*.

The most relevant concerns for the interchange management area appear to be related to hydrology, floodplain, and wetlands related to Muddy Creek to the west of I-5 and Urr Stream to the east of I-5.

Runoff collection in the southwest corner of the west interchange ramp has been noted by City of Coburg staff. No sites were found that contain historic structures, parks, or environmental overlays.

The area contains a number of potential hazardous material sites due to previous gas stations or existing gas stations. The ODOT assessment determined that the sites could be mitigated if they were impacted by any future interchange project.

The Coburg TSP contains information regarding other natural and cultural resources, which has been adapted for this IAMP.

2.5.1 Topography

The topography within Coburg is relatively flat and there are no designated steep slopes in the study area.

2.5.2 Soils

The Coburg Comprehensive Plan identifies significant portions within the UGB as having soil restrictions for development. Most of the Highway Commercial plan designation area shows soil limitations. Coburg is largely surrounded by Class II soils. To the north of the residential portion of Coburg lies a mix of Class I and II soils. The soil to the west of Coburg and down the bluff from the present residential areas is Class II soil, as is the area south of Coburg, west of Coburg Road. South off Roberts Road, the soil between the railroad right-of-way and Interstate 5 is Class IV soil. This Class IV soil extends west of the railroad right-of-way until it nears Muddy Creek, where it is replaced by Class II soil.

2.5.3 Hydrology

The interchange management area lies within the Willamette River Subbasin. Muddy Creek and Urr Stream are the main drainageways that flow through the study area, generally in a north-south direction. Muddy Creek is located to the west of I-5. According to the Coburg TSP, it is unlikely that development will be restricted by Muddy Creek because it has already been altered and channelized to accommodate existing and projected development. Urr Stream is located to the east of I-5 within the interchange management area.

2.5.4 Floodplains and Floodway

Coburg is located on the northeastern periphery of a 5 percent flood hazard area and the southern portion of the city is subject to a 1 to 2 percent flood hazard. Intensive land uses, such as residential developments, are subject to Federal Emergency Management Agency (FEMA) regulations and City ordinances. Proposals undergo a more extensive review and additional measures must be taken to reduce the risk of flood damage to property in these areas.

According to the FEMA map, the majority of the flood hazard area in Coburg is located along the western edge of Coburg, outside the interchange management area. Other identified flood plain areas are located in a narrow band adjacent to Muddy Creek, which extends through the interchange management area. Because this area is not extensive, it is unlikely that this will influence full development potential. However, it may influence the design of roads and need for specific engineering practices within these areas.

2.5.5 Wetlands

The presence of wetlands may influence the extent of development and/or where it occurs on both an area-wide and a site-specific basis. Development proposals that may impact wetlands are regulated and permitted by the Army Corps of Engineers and the Oregon Division of State Lands. If wetlands are located on property, before development can occur, the boundaries of the wetlands must be clearly delineated; wetland impacts should be avoided if possible; and if impacts do occur, mitigation must replace the values lost by development.

Wetland features for this report are based on the National Wetlands Inventory (NWI). The NWI provides basic data about the general characteristics and extent of wetlands in the nation. The NWI identifies the general boundaries of wetlands; however, in many instances, actual wetland boundaries and features are more extensive than what is identified through this national classification system. Coburg also has a Local Wetland Inventory (LWI). The LWI will be examined with any design-level or environmental study of the interchange management area.

Wetland features in Coburg are primarily of a linear type. The NWI also indicates the presence of three polygon-shaped wetlands in the northern portion of the interchange management area, and a small area also shown in the southern portion of the interchange management area. Potential development constraints in the interchange management area include:

- Urr Stream
- 80 to 85 percent soil limitation for three sites related to Muddy Creek
- Floodplain adjacent to Muddy Creek (one polygon site)

2.5.6 Open Space and Parks

There are no existing open spaces, as defined by OAR 660-023-0220(1), in the interchange management area. There are no existing or planned parks in the interchange management area. However, the Coburg Parks and Open Space Master Plan identifies a conceptual linear corridor to be used as a hard-surface trail that runs north-south along the west side of Coburg Industrial Way and any realignment of Roberts Road. An Implementation Strategy for this facility is targeted for completion Spring 2009.

Coburg has one community park and an elementary school playground area (totaling about 10 acres) for recreational uses. Neither is located within the interchange management area.

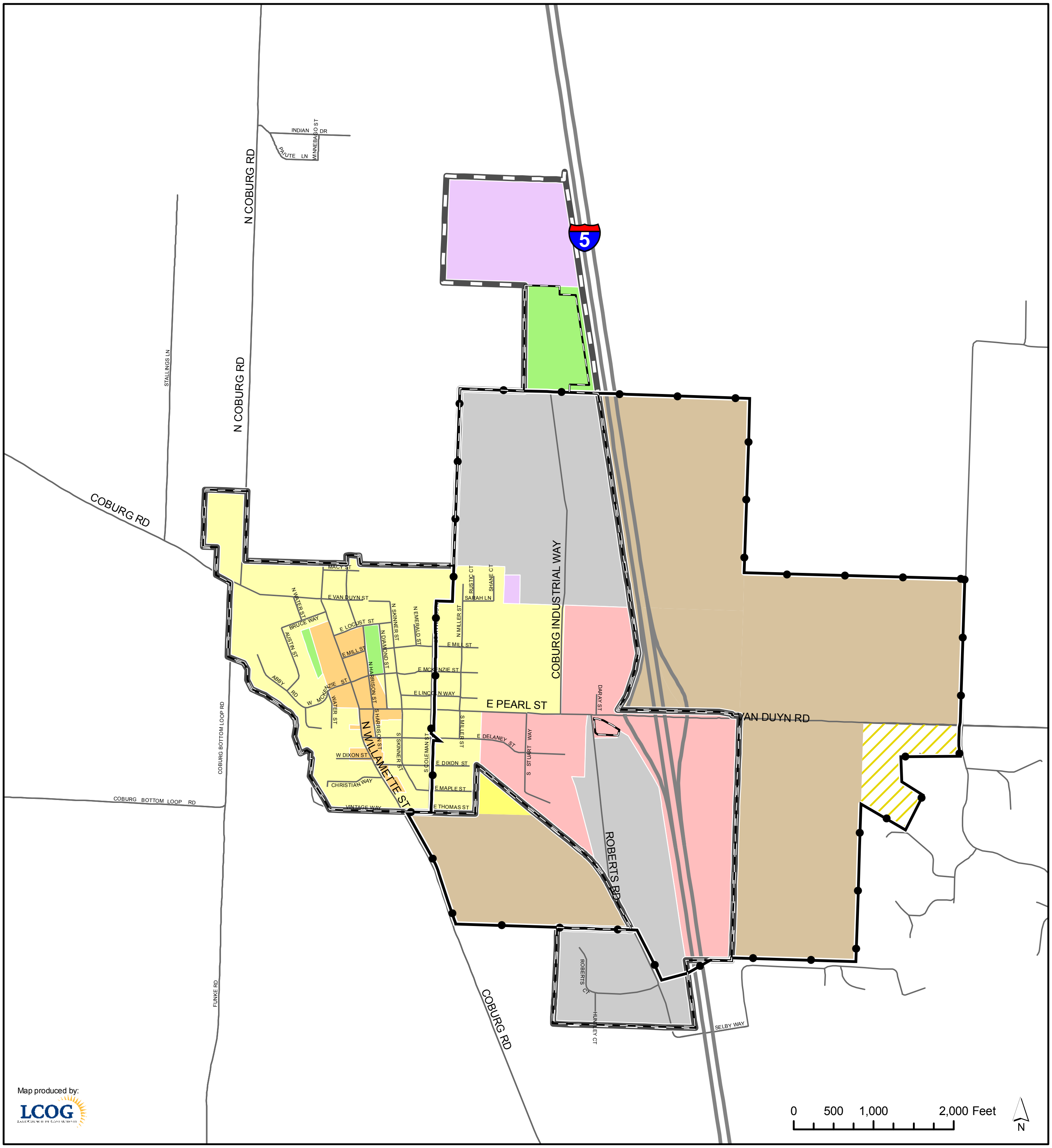
2.5.7 Historic Resources

Coburg was the second city in Oregon to be designated a national historic district. The City requires a conditional use or site plan review permit for any alteration or demolition of historical structures. None of the noted historic resources are located in the interchange management area.

2.5.8 Archaeological Resources

In 2007, archaeologists conducted a pedestrian survey for the I-5 @ Coburg Interchange Project, Key Number 14649, and recorded three precontact and historic period isolates. Additional fieldwork will be conducted after all rights-of-entry have been obtained.

ODOT is currently consulting with the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of Warm Springs, regarding the proposed project. No concerns have been noted at this time.



IAMP Management Area Boundary [1]
Coburg City Limits [3]
Urban Growth Boundary [2]

Coburg Comprehensive Plan Designations [2]

Traditional Residential
Park/Recreation
Central Business District
Highway Commercial
Public Facility
Light Industrial

Lane County Plan Designations (outside UGB) [2]

A - Agricultural
R - Residential
NRES - Non Resource

Figure 2-1
Comprehensive Plan Designations
Coburg/I-5 Interchange Area
Management Plan

Sources: 1. CH2M Hill; 2. LCOG; 3. USGS

Map Document: (G:\projects\coburg\IAMP_05\Fig1_ExistingLandUse.mxd)
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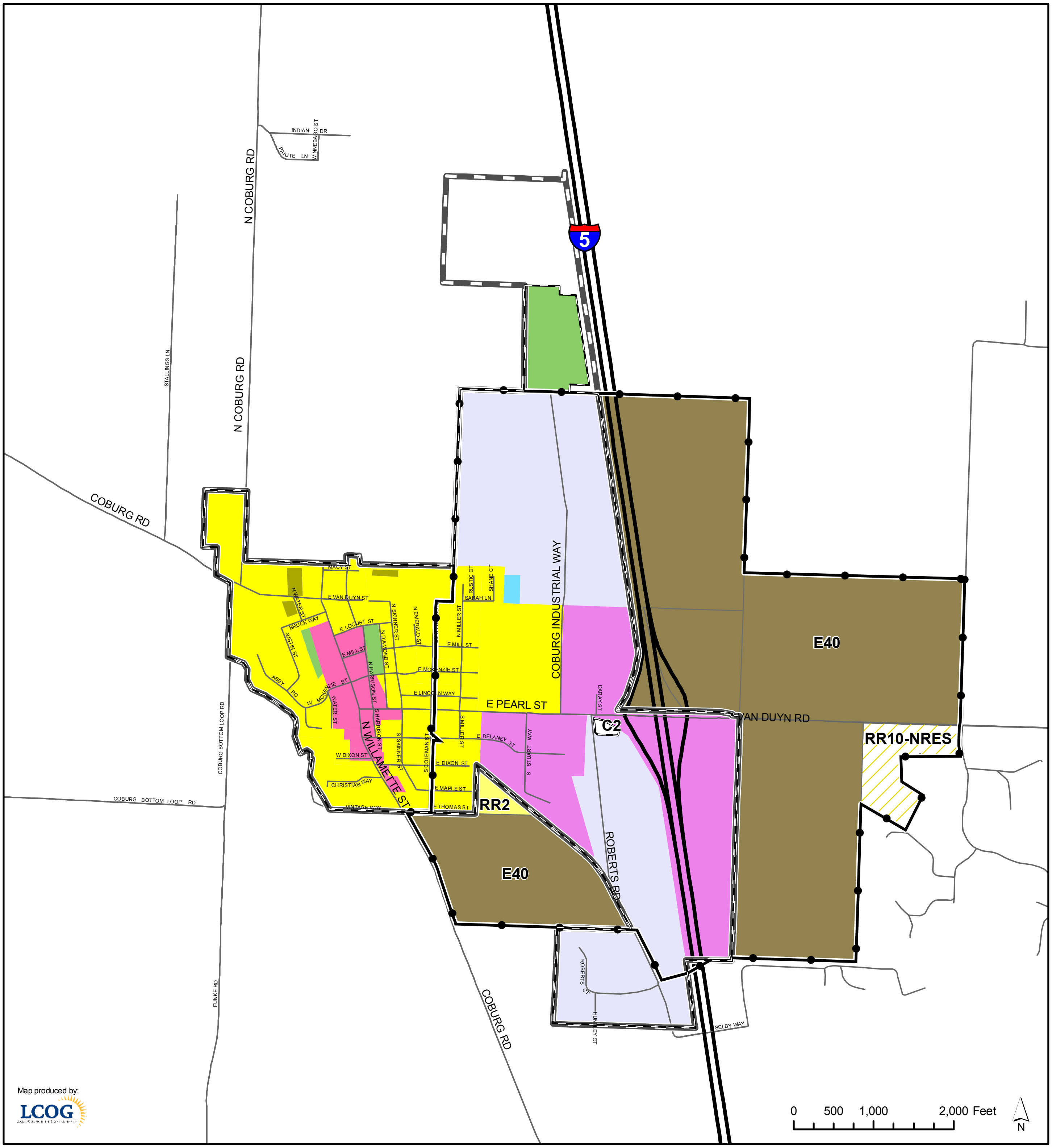

IAMP Management Area Boundary [1]
Coburg City Limits [2]
Urban Growth Boundary [2]

Coburg Zoning Districts [2]

- Central Business
- Highway Commercial
- Light Industrial
- Traditional Medium Density Residential
- Parks, Recreation, & Open Space
- Traditional Residential
- Public Water Service

Lane County Zoning Districts (outside City Limits) [2]

- E40 - Exclusive Farm Use
- PR - Public Reserve
- RR2 - Rural Residential
- RR10-NRES - Non Resource
- C2 - Neighborhood Commercial

Figure 2-2
Zoning Districts
Coburg/I-5 Interchange Area Management Plan

Sources: 1. CH2M Hill; 2. LCOG

Map Document: (G:\projects\coburg\IAMP_05\Fig2_Zoning.mxd)
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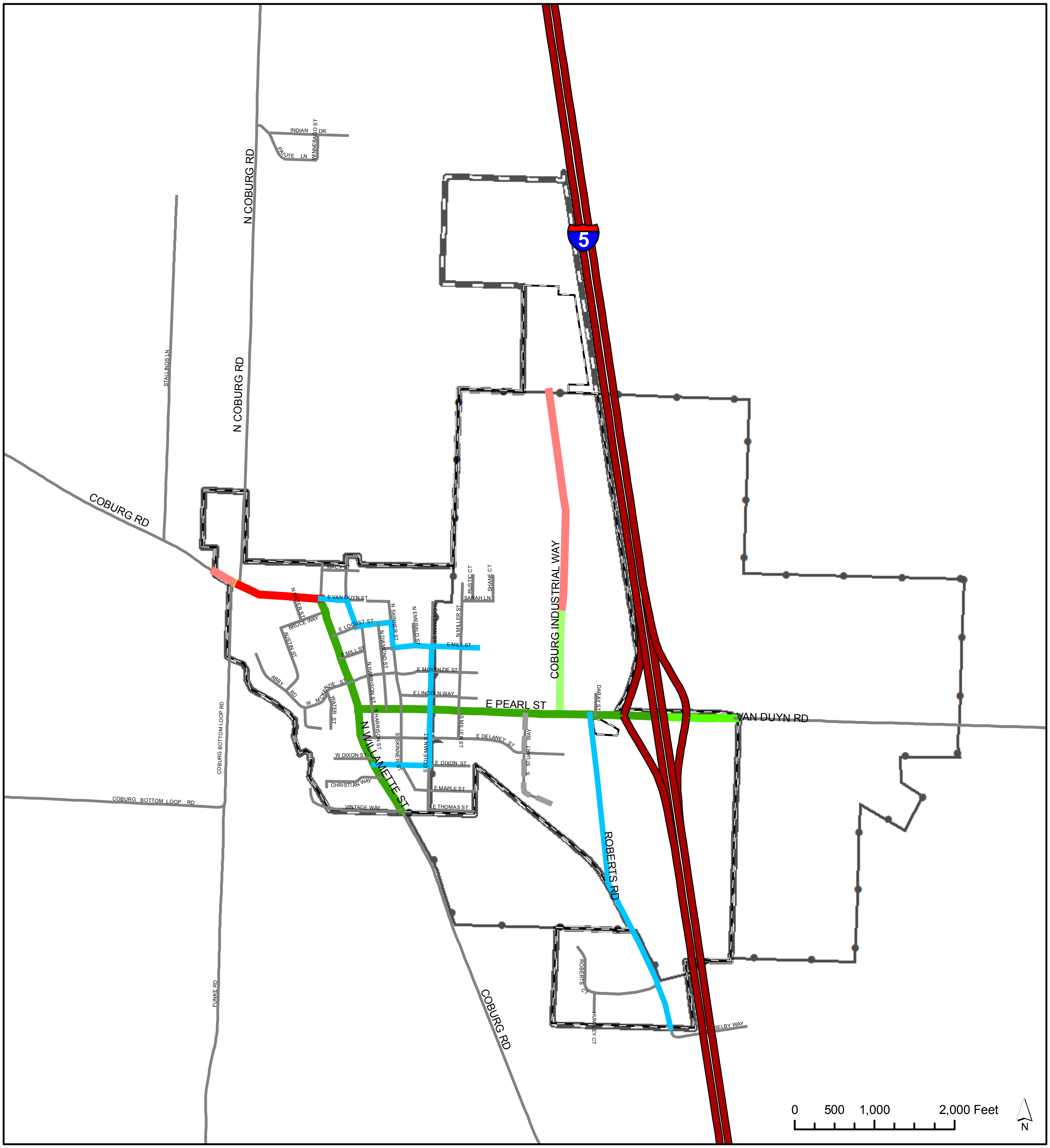

IAMP Management Area Boundary [1]

[2]

Urban Growth Boundary [2]

Map produced by:
LCOG

Coburg Functional Classifications [3]

- City Collector
- Local
- Vacated
- County Arterial
- County Collector

Lane County Functional Classifications [4]

- Major Collector
- Minor Collector
- Local Roadway
- Minor Arterial
- Local Roadway
- Other

State Functional Classification [3]

- Interstate

Figure 2-3
Functional Classification
Coburg/I-5 Interchange Area Management Plan

Sources: 1. CH2M Hill; 2. LCOG; 3. Coburg TSP 1999; 4. Lane County TSP 2004.

Map Document: (G:\projects\coburg\IAMP_05\Fig3_FunctionalClassification_081003.mxd)
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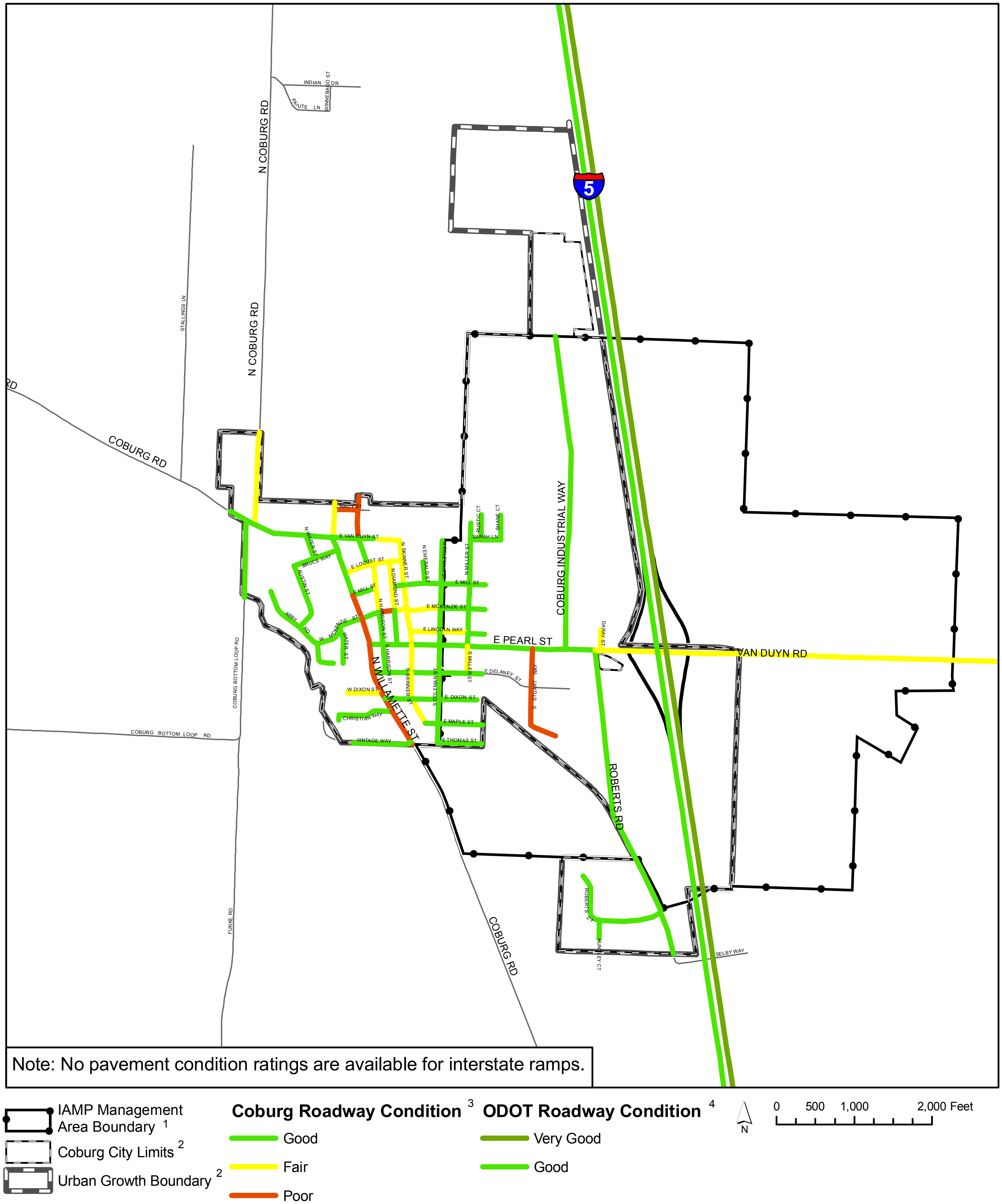

Map produced by: LCOG

Figure 2-4
Pavement Condition
Coburg/I-5 Interchange Area Management Plan

Sources: 1. CH2M Hill; 2. LCOG; 3. City of Coburg; 4. ODOT PMS 2001.

Map Document: (G:\projects\coburg\IAMP_05\Fig4_PavementCondition.mxd)
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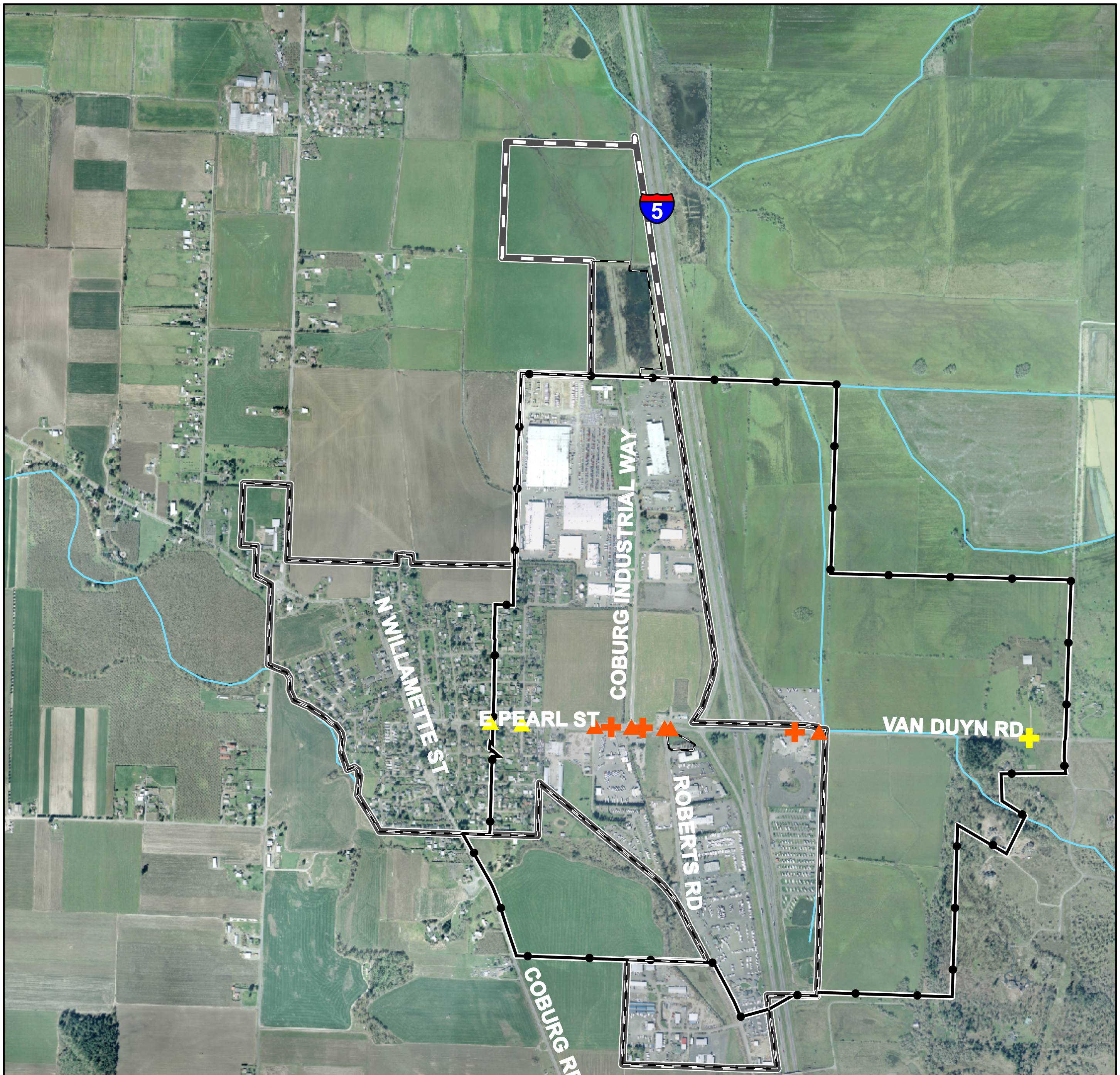
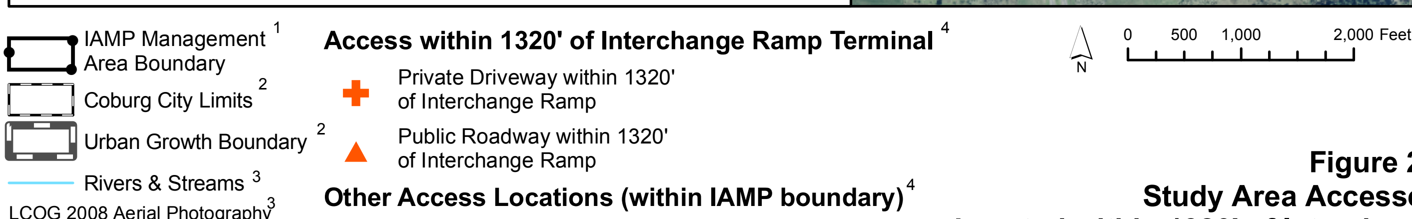


Note: OHP Policy 3C: Interchange Access Management Areas states that access control shall be purchased on interchange cross roads for a minimum distance of 1,320 feet from a ramp intersection or the end of a free flow ramp terminal merge lane taper.



Map produced by: LCOG

Figure 2-5
Study Area Accesses
Located within 1320' of Interchange
Coburg/I-5 Interchange Area
Management Plan

Sources: 1. CH2M Hill; 2. LCOG; 3. USGS; 4. CH2M Hill/LCOG

Map Document: (G:\projects\coburg\IAMP_05\Fig5_AandASD.mxd)
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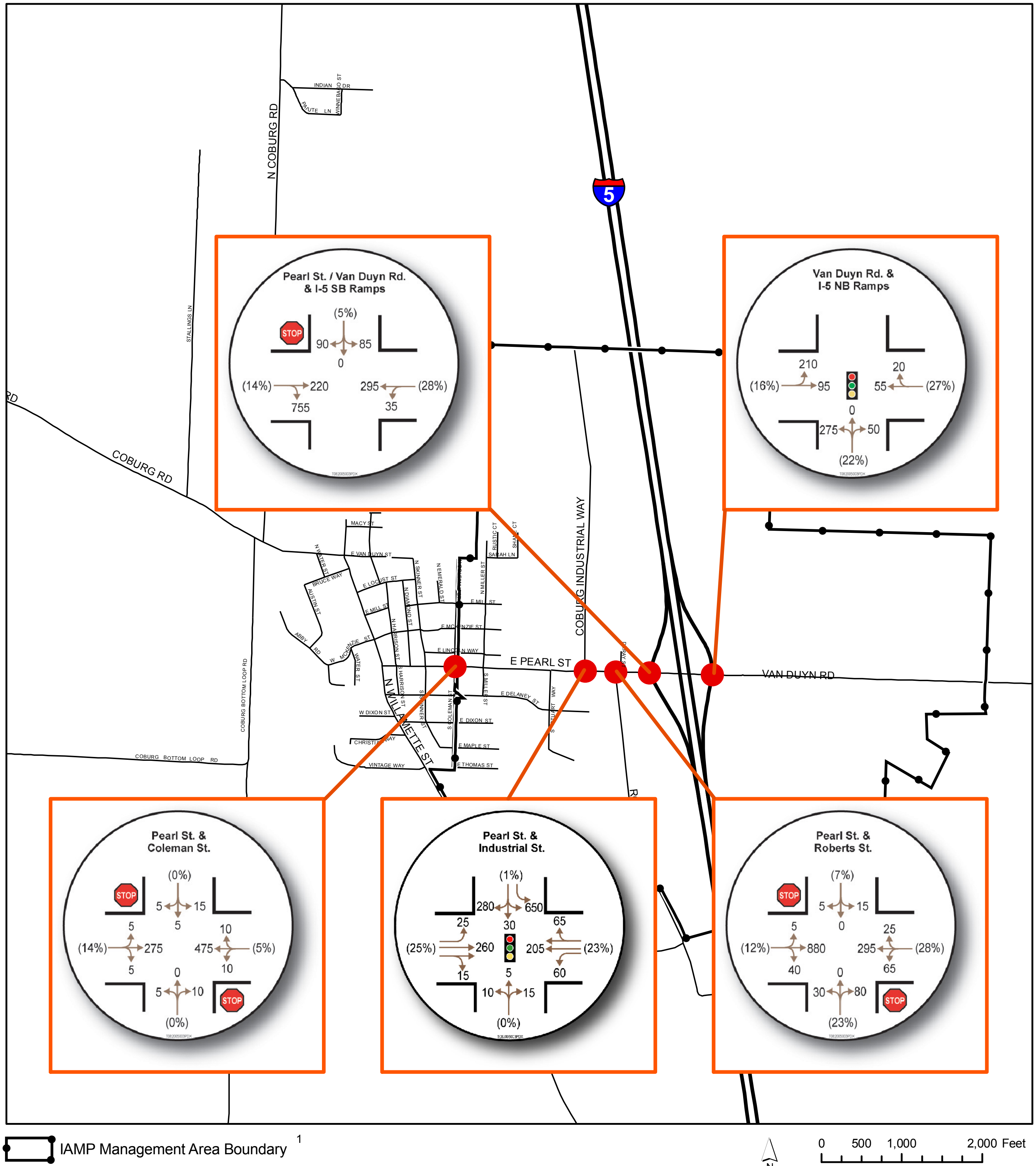

Figure 2-6
Existing Conditions (2005)
30th Highest Hour Traffic Volumes
Coburg/I-5 Interchange Area Management Plan

Map produced by:
LCOG

Sources: 1. CH2M Hill

Map Document: (G:\projects\coburg\IAMP_05\Fig6_ExCondTrafficVolume.mxd)
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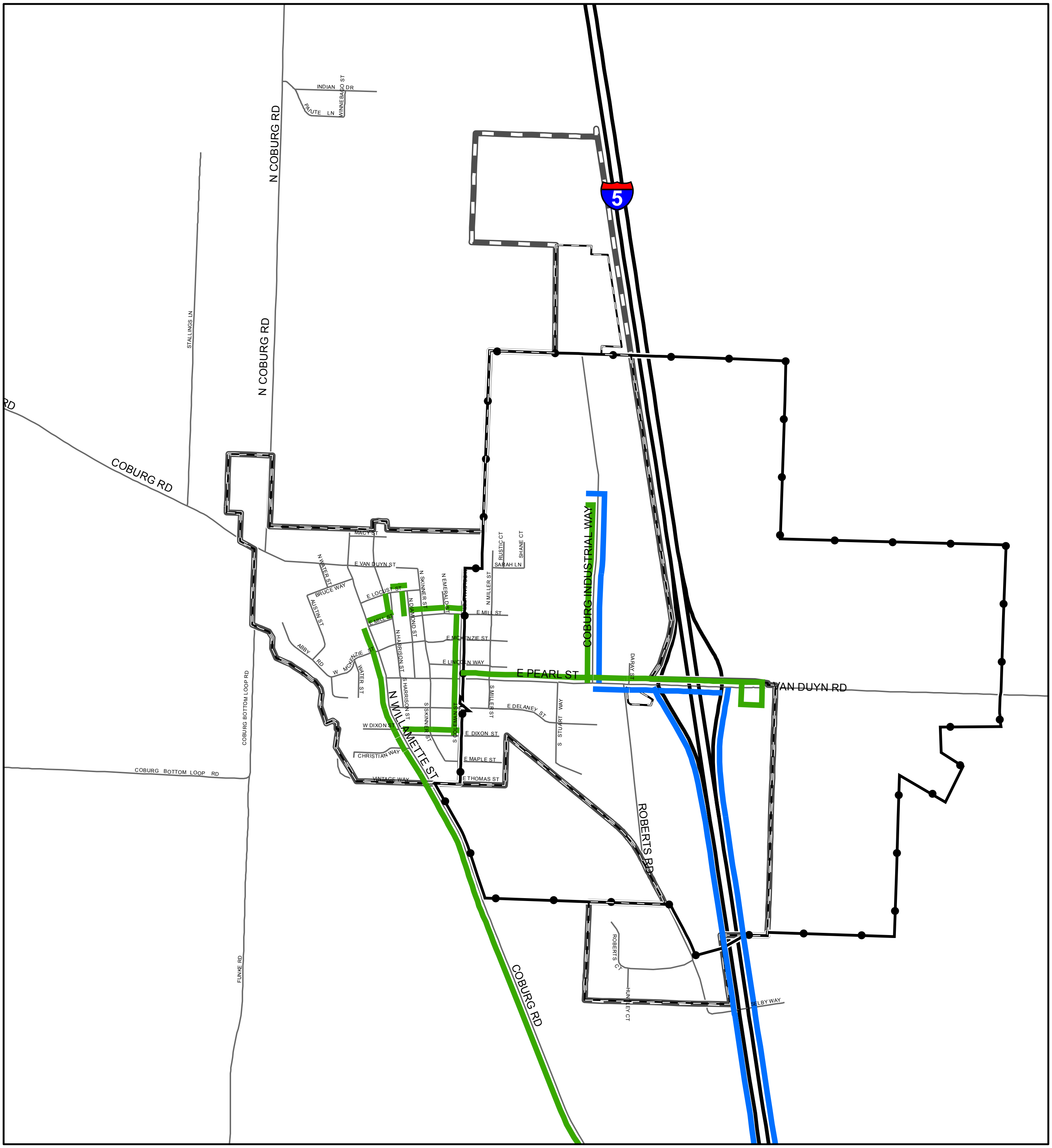

IAMP Management Area Boundary [1]

Coburg City Limits [2]

Urban Growth Boundary [2]

LTD Bus Routes (2008) [3]

96

96x

N

0 500 1,000 2,000 Feet

Figure 2-7
Lane Transit District Bus Routes
Coburg/I-5 Interchange Area
Management Plan

Map produced by:
LCOG

Sources: 1. CH2M Hill; 2. LCOG; 3. USGS

Map Document: (G:\projects\coburg\IAMP_05\Fig7_LTDBusRoutes.mxd)
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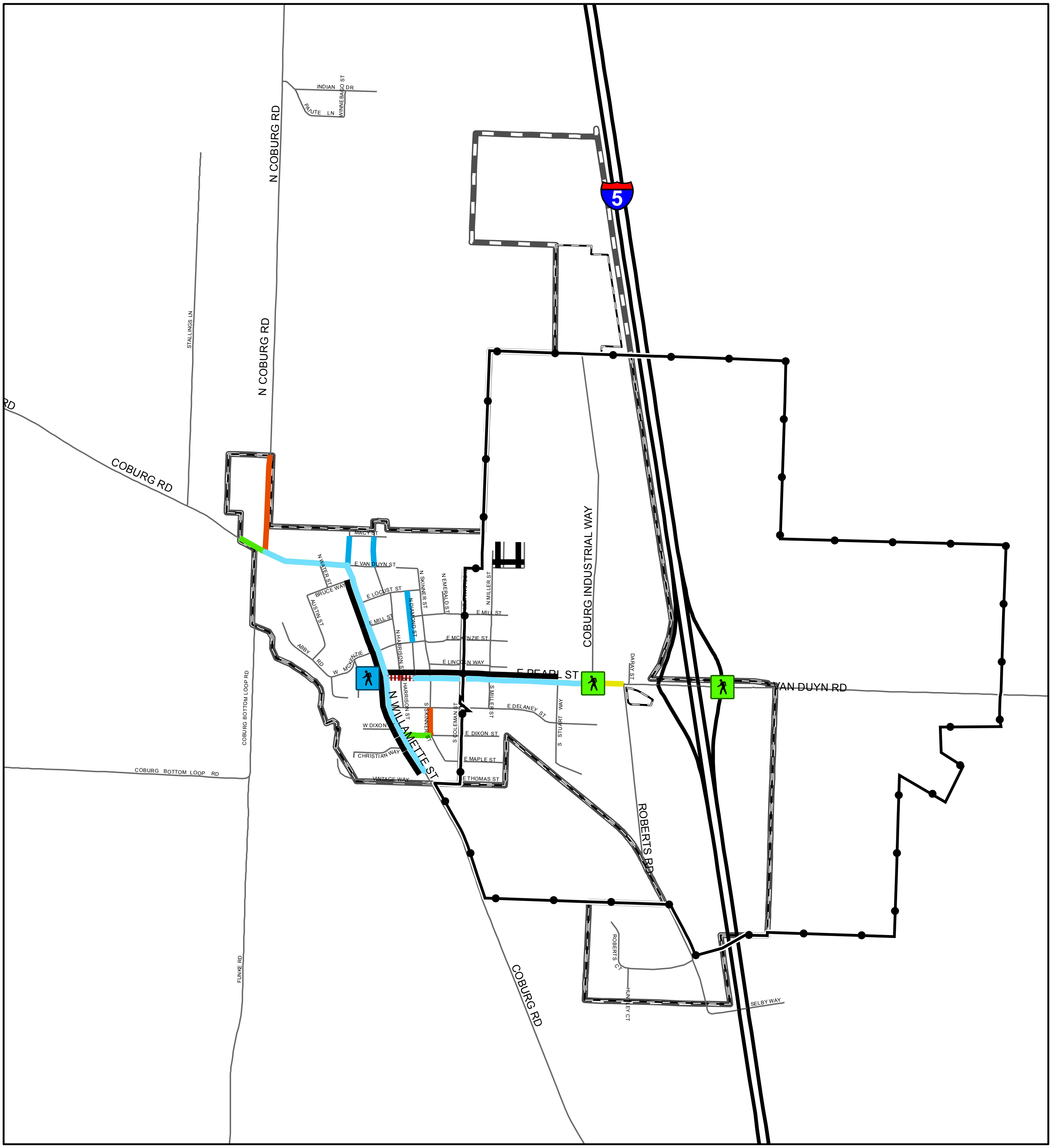

IAMP Management Area Boundary [1]

Coburg City Limits [2]

Urban Growth Boundary [2]

Pedestrian Signal [1]

Signal with four crosswalks

Signal with south and east crosswalks

Bike Lanes [1]

Both Sides

South Side

Sidewalks [1]

BOTH SIDES

EAST SIDE

SOUTH SIDE

WEST SIDE

NORTH SIDE

N

0 500 1,000 2,000 Feet

Map produced by:

LCOG

Figure 2-8
Pedestrian & Bicycle Facilities
Coburg/I-5 Interchange Area Management Plan

Sources: 1. CH2M Hill; 2. LCOG

Map Document: (G:\projects\coburg\IAMP_05\Fig8_Ped&BikeFacilities.mxd)
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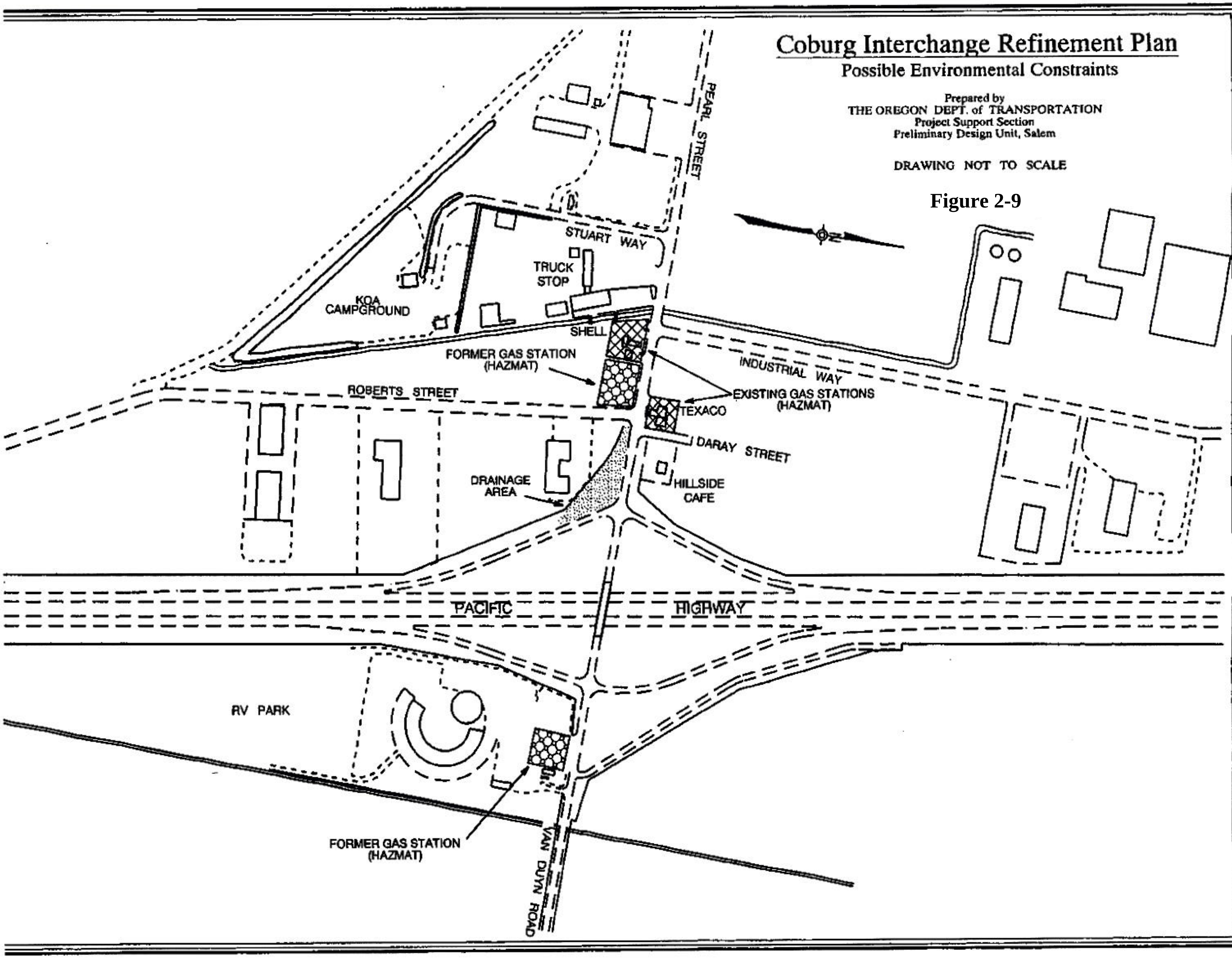

Coburg Interchange Refinement Plan
Possible Environmental Constraints
Prepared by
THE OREGON DEPT. of TRANSPORTATION
Project Support Section
Preliminary Design Unit, Salem
DRAWING NOT TO SCALE
PEARL STREET
STUART WAY
TRUCK STOP
KOA CAMPGROUND
SHELL
FORMER GAS STATION (HAZMAT)
INDUSTRIAL WAY
ROBERTS STREET
EXISTING GAS STATIONS (HAZMAT)
TEXACO
DARAY STREET
DRAINAGE AREA
HILLSIDE CAFE
PACIFIC HIGHWAY
RV PARK
FORMER GAS STATION (HAZMAT)
VAN DUYN ROAD

Figure 2-9

SECTION 3

Future Conditions Analysis

3.1 Purpose

The Coburg IAMP focuses on planning for the Coburg/I-5 interchange and surrounding area. It is important to understand the impact of anticipated future employment and population growth on the transportation system. Transportation analysis was conducted to identify transportation system deficiencies in year 2031 (a 20+ year planning horizon). This provided a basis for developing alternatives for future transportation infrastructure and strategies.

3.2 Land Use Assumptions

3.2.1 Coburg Comprehensive Plan Forecasts

Population and employment allocations are important because they directly relate to how development patterns, which are used to determine transportation system deficiencies, are reflected in the transportation model.

Analysis of the Recommended Alternative for the Coburg IAMP was based on population and employment forecasts derived from the *Coburg Comprehensive Plan*. By year 2025, Comprehensive Plan forecasts anticipate population to be 1,819, the number of new dwelling units to be 322, and employment to be 4,672. All of this growth is anticipated to occur west of I-5. Table 3-1 shows 2025 Comprehensive Plan land use assumptions.

TABLE 3-1
Comprehensive Plan Land Use Assumptions—Year 2025

	Population	New and Total Dwelling Units	Employment
Coburg Comprehensive Plan	1,819	New: 322 Total: 896	4,672

The year 2025 population and employment forecasts from the Comprehensive Plan were used to develop 2025 traffic forecasts, which were in turn grown to year 2031 forecasts based on average annual growth rates.

As described in Section 2, the *Coburg Comprehensive Plan* does not reflect the likelihood that the City of Coburg will expand its UGB. As of this writing, the City had not yet expanded its UGB because of wastewater system constraints (i.e., the lack of a wastewater system).

The RTP predicts 1,131 *more* people (521 more new dwelling units) and 475 *less* jobs in year 2025 than does the current adopted Comprehensive Plan. The Preferred Scenario from the Coburg Urbanization Study predicts 1,508 *more* people (571 more new dwelling units) and

485 *more* jobs in year 2025 than does the current adopted Comprehensive Plan. Both plans assume growth will occur west of I-5. Although the specific population and employment numbers differ for the RTP and *Urbanization Study*, the traffic forecasts are consistent. Alternatives were developed for consistency with the RTP and *Urbanization Study* because it is important that this IAMP provide recommendations that are flexible to accommodate higher levels of growth that would accompany an UGB expansion.

3.2.2 Coburg Comprehensive Plan Growth Allocations

The Coburg buildable lands inventory identifies 59.1 acres of vacant/partially vacant land available for residential purposes under current comprehensive plan designations. The analysis also identifies approximately 23 acres (54 lots) with infill potential. For the purposes of estimating the number of households, five dwelling units per acre was assumed for vacant/partially vacant land and a factor of 0.5 was assumed as the rate for infill development per lot. These assumptions resulted in a total of 322 new households (59 * 5 + 54 * 0.5) anticipated to be constructed in the Coburg UGB by the year 2025.

The buildable lands inventory indicates 51 acres of vacant and 50 acres of underdeveloped land available to support commercial and industrial employment expansion. The analysis for the IAMP assumed a rate of 20 employees per acre for commercial land and 15 employees per acre for industrial land. Underdeveloped land was assigned a rate of 7.5 employees per acre. This assumption was translated to a redevelopment rate of 50 percent at 15 jobs per acre. In addition, a carrying capacity of 500 jobs requiring no additional land (i.e., expansion of current development) was assumed. Therefore, 1,795 new jobs are anticipated to be located in the Coburg UGB in the year 2025. Table 3-2 shows the detailed land use assumptions by Transportation Analysis Zone (TAZ). The TAZs are illustrated in Figure 3-1.

TABLE 3-2
Coburg Comprehensive Plan Land Use Assumptions—2025

TAZ (Figure 3-1)	Dwelling Units		Employment				
	D.U. Total	% of Growth Allocation	RET+SRV+ EDU	% of Growth Allocation	Other	% of Growth Allocation	Total Employment
300	42	5%	2	0%	89	2%	91
301	617	69%	130	13%	189	5%	319
302	118	13%	787	79%	3,351	91%	4,138
303	52	6%	0	0%	9	0%	9
304	64	7%	2	0%	21	1%	23
305	1	0%	0	0%	0	0%	0
306	2	0%	80	8%	12	0%	92
Total	**896**		**1,001**		**3,671**		**4,672**

3.3 Forecasted Traffic Operations

The intent of this section is to present the no-build analysis for year 2031, discuss the results, and identify deficiencies and needs. The no-build alternative represents how the transportation system is anticipated to perform in 2031 if no new transportation infrastructure is constructed.

The no-build analysis for this IAMP is based on Comprehensive Plan growth assumptions because UGB expansion—although desired by Coburg—has not yet been adopted into the *Coburg Comprehensive Plan* due to lack of an adequate wastewater facility to serve the additional population. Previous iterations of this IAMP were based on land use scenarios that assumed expansion of the Coburg UGB to accommodate future population forecasts (consistent with the RTP and *Coburg Urbanization Study*). The preferred scenario from *previous* IAMP iterations assumed all growth would occur west of I-5, and anticipated 485 more jobs and 520 more dwelling units than what can be accommodated with the existing Comprehensive Plan. Future no-build analysis showed that the same intersections that fail under Comprehensive Plan growth assumptions also fail under RTP/*Coburg Urbanization Study* assumptions.

3.3.1 Traffic Forecast Methodology

The forecasted traffic volumes were generated by the Lane Council of Governments (LCOG) regional travel demand model. LCOG provided PM peak-hour turning movement and directional link volumes at each study intersection for existing (2005) volumes and future (2031) no-build alternative volumes.

The forecasted traffic volumes from the model were subsequently post-processed using the iterative directional volume processing method outlined in the *National Cooperative Highway Research Program (NCHRP) Report 255*. An Excel workbook was created to distribute the forecasted entering and exiting link volumes from the model iteratively to arrive at turning movement volumes. The balancing procedure used ten iterations to balance the future entering and exiting trip estimates for each approach leg based on the current turning movement volumes. The balanced 2005 30th highest hour traffic volumes served as the basis for the turning movement distribution. After this process was completed, the future 2031 30th highest hour traffic volumes were analyzed for the no-build future alternative.

3.3.2 Future No-Build (2031) Operations—30th Highest Hour

The No-Build operations scenario assumes that no additional transportation infrastructure would be built during the planning period (through year 2031). The No-Build scenario examines future traffic levels and how well they would be served by the existing road system. Table 3-3 presents the no-build forecasted 2031 intersection V/C ratios for the study area intersections under state jurisdiction and 2031 LOS for the intersections under Lane County jurisdiction.

Three of the five study area intersections (Pearl Street/Coburg Industrial Way, Pearl Street/Roberts Road, Van Duyn Road/I-5 Southbound Ramps) are expected to be congested beyond accepted standards by 2031. At two of the study area intersections (Pearl Street/

Coburg Industrial Way and Pearl Street/Roberts Road), volumes will exceed capacity (V/C > 1.0). The Coleman Street/Pearl Street intersection is expected to meet V/C standards, but not LOS standards.

Table 3-3 shows the mobility standards found in the OHP as well as the Lane County Transportation System Plan/Lane Municipal Code. For V/C for signalized intersections, the overall intersection results are reported. For unsignalized intersections, the movement with the worst operating performance on both the major and minor approaches is reported. Intersection V/C ratios higher than the mobility standards indicate areas of congestion and longer-than-acceptable vehicle delay. Intersection V/C ratios lower than the mobility standards indicate intersections operating at better levels of mobility.

TABLE 3-3
30th Highest Hour Intersection Operational Analysis—2031 No-Build

Intersection	Road Jurisdiction	LOS and V/C Ratio Standard		Forecasted Maximum LOS and V/C Ratio	
Signalized					
Pearl Street and Coburg Industrial Way	Lane County	(D) 0.85		**(F) 1.19**	
Van Duyn Road and I-5 NB Ramps	ODOT	0.80 (OHP) 0.75 (HDM)		0.70	
Unsignalized		**Major**	**Minor**	**Major**	**Minor**
Coleman Street and Pearl Street	Lane County	(D) 0.85	(D) 0.95	(A) 0.01	**(F) 0.64***
Pearl Street and Roberts Road	Lane County	(D) 0.85	(D) 0.95	(A) 0.11	**(F) 8.38**
Van Duyn Road and I-5 SB Ramps	ODOT	0.80 (OHP) 0.75 (HDM)		**0.93**	**0.98**

*Meets V/C standard, but not LOS standard.

OHP = Oregon Highway Plan; HDM = Oregon Highway Design Manual

Source: Synchro HCM Unsignalized and Signalized Reports

Notes: For unsignalized intersections, the V/C ratio is presented for the worst movement for each street.

Numbers in **BOLD** indicate V/C ratios and levels of service not meeting mobility standards.

Table 3-4 shows intersection delay in seconds anticipated at study area intersections under the No-Build scenario. Most of the intersections experience significant delay. The delay at Pearl Street/Roberts Road for the minor movement is expected to be too large for the software to calculate. Appendix H includes the full summary of the Synchro traffic analysis report on the 2031 no-build network.

TABLE 3-4
30th Highest Hour Intersection Delay—2031 No-Build

Study Intersection	Road Jurisdiction	Average Control Delay (seconds)	
Signalized			
Pearl Street and Coburg Industrial Way	Lane County	198.3	
Van Duyn Road and I-5 Northbound Ramps	ODOT	24.4	
Unsignalized		**Major**	**Minor**
Coleman Street and Pearl Street	Lane County	0.5	174.2
Pearl Street and Roberts Road	Lane County	4.4	Err*
Van Duyn Road and I-5 Southbound Ramps	ODOT	8.3	82.2

*The major approach traffic is too large for the stop-controlled minor approach to work effectively. Delay is too large to calculate.

Source: Synchro HCM Unsignalized and Signalized Report.

3.3.3 2031 No-Build Scenario Deficiencies—30th Highest Hour

Intersection operational deficiencies were identified based on the 2031 No-Build scenario traffic analysis.

Without infrastructure improvements by 2031, three of the five study area intersections are expected to fail to meet mobility standards. Another intersection is anticipated to not meet LOS standards, even though it is expected to meet V/C standards.

At the Pearl Street/Coburg Industrial Way intersection, the traffic volume is anticipated to exceed full road capacity with a V/C of 1.19. An average vehicle would need to wait for 198.3 seconds to travel through the intersection.

The high V/C ratios for the minor approaches at the unsignalized Pearl Street/Roberts Road and I-5 Southbound Ramps/Van Duyn Road intersections indicate the inadequacy of the stop-controlled operation for those intersections under the no-build scenario. The minor movement on Roberts Road currently fails (V/C=1.01 for year 2005) and further deteriorates to inoperable conditions in 2031 (V/C=8.38).

At the stop-controlled intersections, the major movements (east-west movements on Pearl Street and Van Duyn Road) are too heavy for drivers making minor movements to find gaps to turn into or cross the major streets, resulting in significant delays for the minor approaches. The minor approaches at the unsignalized intersections essentially would not function.

3.3.4 Future No-Build (2031) Operations—AM Analysis

Per ODOT request, the project team also analyzed intersection operations for the AM peak hour at the I-5 ramp intersections, because the AM peak hour is characterized by heavy traffic movements related to employment trips to the northwest quadrant. Results showed that the system fails during the AM peak hour at the ramp intersections. Table 3-5 shows the analysis results.

TABLE 3-5
AM Operational Analysis at I-5 Ramps—2031 No-Build

Study Intersection	Road Jurisdiction	Average Control Delay (seconds)	
Signalized			
Van Duyn Road and I-5 Northbound Ramps	ODOT	206.5	
Unsignalized		**Major**	**Minor**
Van Duyn Road and I-5 Southbound Ramps	ODOT	0.3	842.5

Source: Synchro HCM Unsignalized and Signalized Report

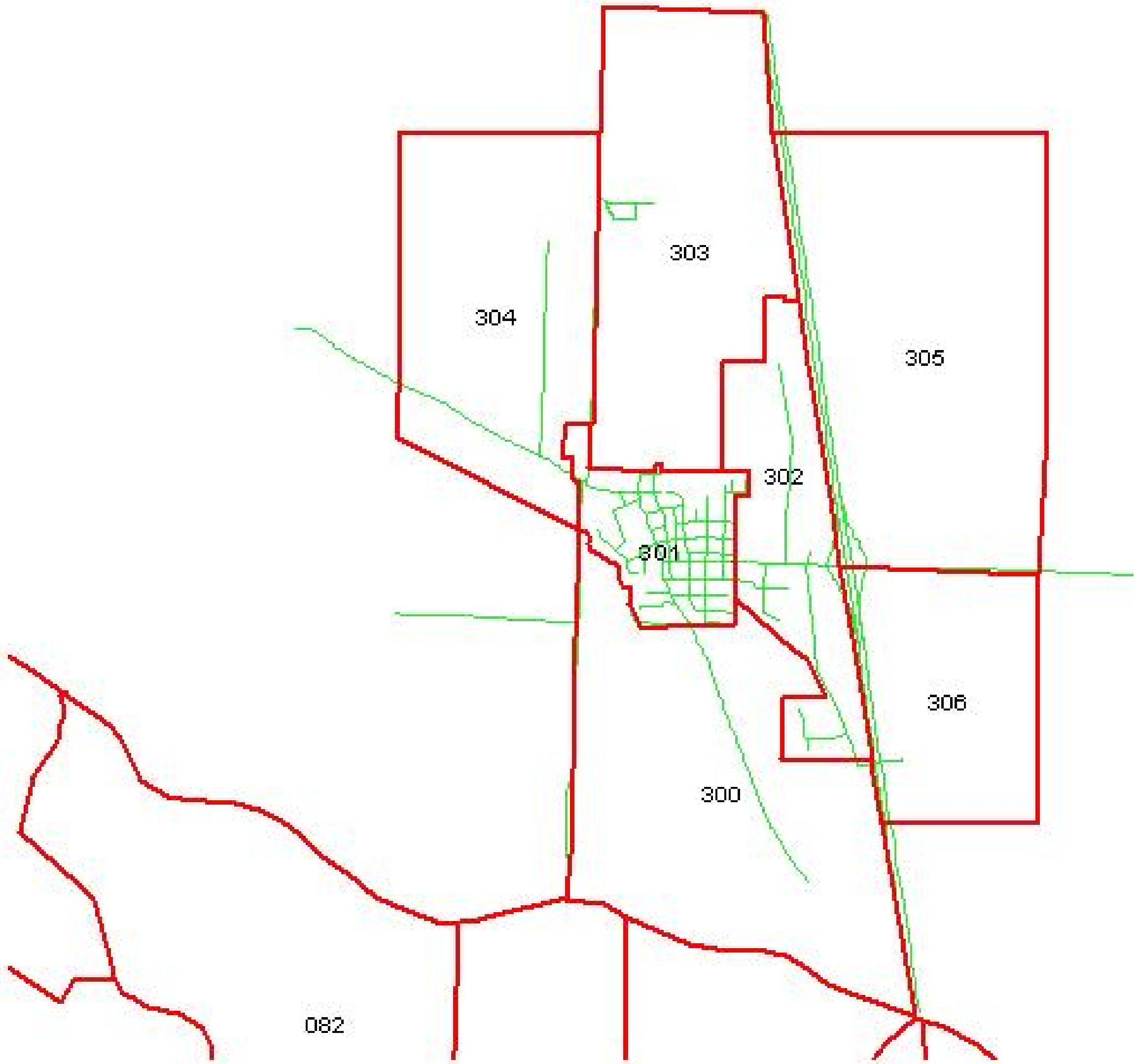
3.3.5 Summary

This analysis shows that the existing transportation network is inadequate to support anticipated 2031 traffic levels, based on Coburg's Comprehensive Plan and the RTP model.

Multiple study intersections are expected to reach or exceed intersection capacity by 2031, causing queuing and delays. Some stop-controlled intersections cannot function with stop-control devices alone, as the conflicts between major and minor movements are too great. The operational analysis assumed interconnection of signals. Future signalization of stop-controlled study intersections would enable them to function properly. Additional improvements such as turn lanes and receiving lanes would increase intersection capacity and further reduce intersection delays. Focus on transportation demand management could also alleviate some of the pressure on the road system.

Figure 3-1

Coburg Area TAZs (from Regional Transportation Plan)



SECTION 4

Alternatives Development and Analysis

4.1 Background and Purpose

Without improvements to the transportation infrastructure in the interchange management area, future traffic in the Coburg/I-5 interchange area is expected to lead to highly congested conditions by 2031. Congestion would be expected to affect intersections along Pearl Street/Van Duyn Road and at the I-5 ramp terminals. This section examines alternatives for improvements or strategies to accommodate anticipated traffic growth in the interchange management area.

4.2 Alternatives Development

After analysis of the no-build traffic operations scenario, it was determined that improvements must be made to accommodate anticipated traffic growth. Infrastructure improvements are needed to meet relevant operational standards (ODOT and Lane County volume-to-capacity ratios). It was determined that transit and transportation demand management strategies alone would not be enough to accommodate anticipated traffic growth.

Alternatives development and analysis for this IAMP was based on traffic forecasts built from population and employment forecasts consistent with Coburg's Comprehensive Plan, and consistent with the RTP and *Coburg Urbanization Study*. These plans assume that all future growth will occur west of I-5. Physical improvements included as part of the alternatives analysis were based on realistic traffic forecasts consistent with land use development west of I-5. Therefore, the physical improvements are designed to be flexible enough to accommodate traffic forecasts based on the Comprehensive Plan land use designations and the adopted regional forecasts in the RTP, consistent with the *Coburg Urbanization Study*. Policy recommendations included in the alternative analysis are intended to protect the capacity of the interchange given the likelihood of UGB expansion.

A set of alternatives were developed to mitigate future operational and safety issues. All alternatives were developed to meet ODOT and Lane County operational standards in 2031. It was assumed that all alternatives would be designed to meet current ODOT HDM and interchange design guide standards. Physical alternatives examined focused on conceptual interchange design:

- Alternative A: Diamond interchange with three-lane bridge
- Alternative B: Diamond interchange with four-lane bridge
- Alternative C: Loop ramp (northbound) interchange with four-lane bridge

Figures 4-1, 4-2, and 4-3 include conceptual drawings of these three alternatives.

All of the physical alternatives included the following consistent components:

- Bicycle and pedestrian facilities on the bridge
- Encouragement of transit and transportation demand management (TDM)
- Access management that supports interchange function and operations on Pearl Street/Van Duyn Road
- Realignment of Roberts Road at a signalized intersection with Coburg Industrial Way
- Closure of the existing Roberts Road at Pearl Street
- A new signal at the I-5 Southbound Ramps/Pearl Street intersection
- The eventual development of a gridded local street system west of I-5 off Coburg Industrial Way

All physical alternatives also were assumed to be paired with policy and development code language intended to protect the function of the interchange (e.g., an alternate mobility standard; traffic impact analysis requirements). Appendix J includes LTD transportation demand management strategies. Table 4-1 compares the assumptions for the three alternatives.

4.3 Alternatives Analysis

Infrastructure alternatives were developed to improve the intersection operation performance for anticipated traffic in 2031 in order to meet the V/C standard set by ODOT (HDM) as well as Lane County LOS standards in the Lane County TSP. The following sections include future traffic operations analysis for the different alternatives. Figures 4-1 to 4-3 illustrate the road configuration for each alternative.

4.3.1 Alternative Comparison—2031 Operations

Several alternatives were developed to evaluate how different interchange configurations would accommodate anticipated future traffic levels. The alternatives are based on the land uses included in the Coburg Comprehensive Plan, but are also intended to accommodate future traffic consistent with the RTP/*Coburg Urbanization Study*.

Alternative A (Diamond Interchange with Three-lane Bridge) was developed to accommodate expected traffic growth by 2031 with the least amount of infrastructure necessary. This alternative is generally consistent with improvement concepts identified in the 1999 Refinement Plan. This alternative is technically able to accommodate anticipated traffic growth by 2031; however, it has some operational limitations.

Alternative B (Diamond Interchange with Four-lane Bridge) was developed to improve upon operational challenges faced with Alternative A. Alternative B includes a four-lane bridge, which allows northbound-westbound traffic an exclusive receiving lane in addition to a westbound through lane. It is anticipated that the four-lane bridge would allow for quicker through-put, and more flexibility than a three-lane bridge. A four-lane bridge structure allows for future capacity and modification for a minimal cost above the cost of a three-lane bridge. It also would allow for addition of a loop ramp if deemed necessary beyond year 2031. Operational results showed that this alternative performed better than Alternative A.

TABLE 4-1
Components of Alternatives

Improvement	Alternatives		
	Alternative A: Diamond Interchange/ Three-lane Bridge	**Alternative B: Diamond Interchange/ Four-lane Bridge**	**Alternative C: Loop Ramp Interchange/ Four-lane Bridge**
Coburg TSP Recommendations: • Realignment of Roberts Road to Coburg Industrial Way (signalized intersection) • Access closure of the original Roberts Road at Pearl Street • New connection between realigned Roberts Road and original Roberts Road • New extension of McKenzie Street east to Coburg Industrial Way (one way heading east) • New extension of Shane Court south to Pearl Street • Northern and southern connection alignments (extensions of Roberts Road and Coburg Industrial Way)	X	X	X
Pedestrian and Bicycle Facilities on Bridge	X	X	X
Three-lane interchange bridge structure	X		
Four-lane interchange bridge structure		X	X
Diamond interchange structure	X	X	
Loop Ramp (northbound)			X
Signalization at I-5 Southbound Ramps/Van Duyn Road intersection	X	X	X
I-5 Southbound ramps: new exclusive eastbound right-turn lane on Pearl Street and southbound on-ramp receiving lane	X	X	X
I-5 Northbound ramps: new exclusive eastbound left-turn lane and northbound on-ramp receiving lane	X	X	X
Coburg Industrial Way: new exclusive southbound left turn lane and northbound left-turn pocket	X	X	X
Coordinate traffic signal operations along Pearl Street	X	X	X
Access management that supports interchange function and operations on Pearl Street/Van Duyn Road	X	X	X
Encouragement of transit/TDM	X	X	X
Eventual development of local gridded street system west of I-5	X	X	X
Design consistent with ODOT HDM and Interchange Design Guide standards, and Lane County or Coburg standards where applicable	X	X	X

X = Improvement needed for mitigation to reach ODOT or Lane County V/C standards

Alternative C (Loop Ramp Interchange with Four-lane Bridge) was developed to examine the effectiveness of isolating the northbound to westbound heavy movement (allowing this movement to bypass the Van Duyn Road/I-5 Northbound ramps intersection). The four-lane bridge is necessary to allow the northbound-to-westbound movement an exclusive receiving lane in addition to a westbound through lane. The operational results for this alternative shows that V/C and LOS results are similar to the results for Alternative B. This alternative would be more costly to implement than Alternative B.

Table 4-2 shows operational analysis results for all of the alternatives. Appendix I includes the full summary of the Synchro traffic analysis report on the 2031 no-build network.

TABLE 4-2
2031 Intersection Operational Analysis—Alternative Comparison

Intersection	Road Jurisdiction	V/C Ratio Standard		Alt A: Diamond With Three-lane Bridge		Alt B: Diamond With Four-lane Bridge		Alt C: Loop Ramp With Four-lane Bridge	
Signalized									
Pearl Street and Coburg Industrial Way	Lane County	0.85		0.77		0.77		0.77	
Van Duyn Road and I-5 Southbound Ramps	ODOT	0.75 (HDM)		0.66		0.64		0.64	
Van Duyn Road and I-5 Northbound Ramps	ODOT	0.75 (HDM)		0.70		0.50		0.40	
Unsignalized		**Major**	**Minor**	**Major**	**Minor**	**Major**	**Minor**	**Major**	**Minor**
Coleman Street and Pearl Street	Lane County	0.85	0.95	0.01	0.25	0.01	0.25	0.01	0.25

Source: Synchro HCM Unsignalized and Signalized Reports.

Table 4-2 shows that all alternatives are able to support the anticipated levels of traffic by year 2031. Alternatives B and C perform generally perform better than Alternative A. Alternatives B and C perform similarly, with small differences at the Van Duyn Road/I-5 Northbound Ramps intersection. The loop ramp is not necessary to meet the mobility standard. A four-lane bridge offers more flexibility for a minimal additional cost, and better accommodates the operational flow and channelization.

Table 4-3 presents average intersection delay for each alternative. The Coleman Street and Pearl Street intersection is expected to perform acceptably based on the County V/C standard however, there will be some delay on the minor street approaches. This may warrant consideration for signalization depending on local circulation needs and objectives.

Table 4-4 contains review of queue length for each alternative.

ODOT developed preliminary cost estimates for the alternatives. Construction cost estimates range from 25 to 35 million for the alternatives.

TABLE 4-3
2031 Intersection Delay—Alternatives Comparison

Intersection	Alt A: Diamond and Three-lane Bridge Average Control Delay		Alt B: Diamond and Four-lane Bridge Average Control Delay		Alt C: Loop Ramp and Four-lane Bridge Average Control Delay	
Signalized						
Pearl Street and Coburg Industrial Way	34.7		34.7		34.7	
Van Duyn Road and I-5 Southbound Ramps	13.3		13.0		13.0	
Van Duyn Road and I-5 Northbound Ramps	30.7		22.2		16.5	
Unsignalized	**Major**	**Minor**	**Minor**	**Minor**	**Major**	**Minor**
Coleman Street and Pearl Street	0.3	45.3	0.3	45.3	0.3	46.5

Source: Synchro HCM Unsignalized and Signalized Reports.

TABLE 4-4
2031 30th Highest Hour Queue Lengths—Alternatives Comparison

Intersection	Approach	Lane Group	Storage (feet) Existing 2005	No Build 2031	Alt A	Alt B	Alt C	Queue Length (feet) Existing 2005	No Build 2031	Alt A	Alt B	Alt C
Pearl Street and Coburg Industrial Way	Eastbound	Left	200	200	200	200	200	40	310	140	140	140
		Thru/Right						200	210	180	180	180
	Westbound	Left	100	100	100	100	100	80	60	120	120	120
		Thru/Right						150	290	220	220	220
	Northbound	Left			150	150	150			70	70	70
		Left/Thru/Right						60	40			
		Thru/Right								70	70	70
	Southbound	Left	300	300	425	425	425	720	1050	360	360	360
		Thru/Right					400	630	1070	70	70	70
Van Duyn Road and I-5 Northbound Ramps	Eastbound	Left			350	350	350			190	190	160
		Left/Thru						80	160			
		Thru								60	60	50
	Westbound	Thru/Right						40	90	40	40	40
	Northbound	Left								140	140	
		Left/Thru/Right						200	300	130	130	
		Thru/Right										--
Pearl Street and Coleman Street	Eastbound	Left/Thru/Right						--	10	10	10	10
	Westbound	Left/Thru/Right						--	10	10	10	10
	Northbound	Left/Thru/Right						20	20	10	10	10
	Southbound	Left/Thru/Right						30	70	30	30	30
Pearl Street and Roberts Road	Eastbound	Left/Thru/Right						--	10			
	Westbound	Left/Thru/Right						--	10			
	Northbound	Left/Thru/Right						190	error			

TABLE 4-4
2031 30th Highest Hour Queue Lengths—Alternatives Comparison

Intersection	Approach	Lane Group	Storage (feet)					Queue Length (feet)				
			Existing 2005	No Build 2031	Alt A	Alt B	Alt C	Existing 2005	No Build 2031	Alt A	Alt B	Alt C
	Southbound	Left/Thru/Right						70	error			
Van Duyn Road and I-5 Southbound Ramps	Eastbound	Thru/Right						--	--	370	370	370
		Right								40	40	40
	Westbound	Left			150	150	150			20	20	20
		Left/Thru						--	--			
		Thru								130	60	60
	Southbound	Left/Thru/Right						90	280	70	70	70

Note:
Numbers in **BOLD** indicate the queue length exceeds the storage length.
Synchro and SimTraffic were used to calculate queue lengths; see Appendix E for more information.
Queue lengths not reported for free-flowing and uncontrolled movements.
Queue lengths rounded up to the nearest 10 feet.
Storage for through-lanes displayed only when queue is expected to surpass distance to next intersection.

4.3.2 Alternatives Development—Previous IAMP Iterations

As discussed earlier, the interchange configuration alternatives discussed above were developed to be consistent with the *Coburg Comprehensive Plan*, RTP, and *Coburg Urbanization Study* in order to ensure the recommended physical infrastructure does not become obsolete once Coburg expands its UGB and amends its Comprehensive Plan.

In previous iterations of this IAMP, instead of interchange configurations, the alternatives were based on differing land use scenarios. One scenario was consistent with the RTP/ *Coburg Urbanization Study* (UGB expansion west of I-5), and two were based on UGB expansions east of I-5. In previous IAMP iterations, the preferred scenario was UGB expansion west of I-5. Through operational analysis related to this preferred scenario, it was determined that a diamond/four-lane bridge or loop ramp/four-lane bridge would be adequate to accommodate anticipated traffic levels.

4.4 Alternatives Evaluation

4.4.1 Evaluation Criteria and Measures of Effectiveness—Background

The purpose of evaluation criteria is to ensure that the future alternatives for the interchange management area are evaluated for consistency with the overall intent of the project and state and local goals. Alternatives were examined against the criteria to ensure consistency with ODOT and local community goals. This will ensure that the Recommended Alternative in the IAMP best addresses future transportation and land use changes in the interchange management area. The evaluation criteria analysis is used as a tool to help inform decision-making.

In the context of the Coburg/I-5 IAMP, *evaluation criteria* are defined as state and local goals that help to determine the adequacy of an alternative to solve the problems the project is intended to solve, in the context of the local community. *Measures of effectiveness* are ways to measure whether or not—or to what extent—an alternative meets a specific criterion.

The basis for the evaluation criteria include issues identified during the existing conditions analysis and future no-build traffic operations analysis, as well as input from the project open house held on September 27, 2005. Criteria and measures of effectiveness are consistent with the goals of the OHP with regard to planning and management of grade-separated interchanges.

4.4.2 Evaluation Criteria

The following evaluation criteria were identified as relevant to planning for the Coburg/I-5 interchange management area. The evaluation criteria are listed in no particular order.

- **Traffic Operations.** *Does the alternative mitigate existing and anticipated (2031) traffic congestion?* This criterion measures the extent to which alternatives alleviate existing and anticipated future traffic congestion.
- **Safety.** *Does the alternative mitigate existing or anticipated safety issues?* This criterion measures the extent to which alternatives ensure safety for all users (drivers, transit, pedestrians, and bicyclists).
- **Mobility.** *Does the alternative enhance mobility for all users?* This criterion measures the extent to which alternatives enhance mobility for transportation users (freight, nonmotorized, transit, transportation disadvantaged, etc.).
- **Land Use.** *Does the alternative minimize land use impacts? Is the alternative consistent with state and local land use planning goals?* This criterion measures the extent to which alternatives minimize property impacts and impacts on existing residential and business access. This criterion relates to economic development because it also evaluates the extent to which alternatives impact future business development through property takes. It also relates to consistency with local, regional, and statewide land use plans.
- **Environmental and Social Impacts.** *Does the alternative minimize environmental and social impacts, including impacts on existing and future development and low-income/minority populations?* Most alternatives will have some built and natural environmental impacts. This criterion measures the extent to which alternatives minimize impacts on the social and environmental considerations for the interchange management area. This criterion includes environmental justice considerations.
- **Support for Implementation.** *Can the alternative be supported by both the state and local community?* This criterion measures the extent to which alternatives can be agreed upon that meet the needs and interests of stakeholders within acceptable timelines.
- **Cost-Effectiveness.** *Is the scale of the alternative consistent with the benefits it provides? Is it a practical, affordable solution?* All alternatives will have costs associated with development and implementation. This criterion evaluates how effective the alternative is at relieving congestion compared to the cost.

4.4.3 Subcriteria and Measures of Effectiveness

Subcriteria and measures of effectiveness were identified for each evaluation criterion listed in the section above. The subcriteria further define the evaluation criteria. The evaluation measures describe the extent to which an alternative concept fulfills a specific subcriterion. The evaluation measures are summarized descriptively (qualitatively and quantitatively) to show how the alternative concepts rate in comparison to each other. Table 4-5 describes the subcriteria and evaluation measures. These are listed in no particular order.

TABLE 4-5
Coburg/I-5 IAMP Evaluation Criteria and Measures of Effectiveness

Subcriteria	Description	Evaluation Measures
Criterion: Traffic Operations		
V/C ratio	Does the alternative bring existing and future congestion to acceptable levels (state and county V/C ratios)?	High—the alternative meets relevant state and local V/C standards for all study area intersections Medium—the alternative meets relevant state and local V/C standards for some study area intersections Low—the alternative does not meet relevant state and local V/C standards for any study area intersections
Delay	Does the alternative decrease delay in comparison to the no-build scenario? To what extent?	High—the alternative decreases delay as compared to the no-build scenario Medium—the alternative maintains delay as compared to the no-build scenario Low—the alternative increases delay as compared to the no-build scenario
Other solutions	Does the alternative offer other solutions to mitigate capacity issues (e.g., policy, TDM, ITS, transit, or multimodal options)?	High—the alternative provides for other solutions to mitigate capacity issues Low—the alternative does not provide for other solutions to mitigate capacity issues
Criterion: Safety		
Safety performance—geometry	Does the alternative mitigate safety issues and concerns related to out-dated geometry at the interchange?	High—the alternative updates interchange geometry Low—the alternative does not update interchange geometry
Access management	Does the alternative decrease the number of conflict points related to public and private accesses? Does the alternative move toward ODOT's preferred spacing (1,320') from interchange ramp terminals on Pearl Street/Van Duyn?	High—the alternative reduces the number of accesses located within 1,320' of the interchange, in comparison to the no-build scenario Medium—the alternative maintains the number of accesses located within 1,320' of the interchange, in comparison to the no-build scenario Low—the alternative increases the number of accesses located within 1,320' of the interchange, in comparison to the no-build scenario
Design Standards	Can the alternative be designed to optimal design standards (design speed, acceleration/deceleration lanes, access spacing, horizontal/ vertical curves, and vertical clearance)?	High—alternative meets design standards as proposed, with minimal or no additional mitigation Medium—alternative requires moderate mitigation to meet design standards; requires a design exception Low—alternative requires significant mitigation;

TABLE 4-5
Coburg/I-5 IAMP Evaluation Criteria and Measures of Effectiveness

Subcriteria	Description	Evaluation Measures
		requires more than one design exception
Criterion: Mobility		
Freight Movement	Does the alternative facilitate freight movement?	High—the alternative enhances freight movement, in comparison to the no-build scenario
		Medium—the alternative provides for maintenance of the same level of freight movement, in comparison to the no-build scenario
		Low—the alternative impedes freight movement, in comparison to the no-build scenario
Mobility for the Transportation Disadvantaged	Does the alternative facilitate mobility for the transportation disadvantaged?	High—the alternative improves mobility for the transportation disadvantaged, in comparison to the no-build scenario
		Medium—the alternative maintains the same level of mobility for the transportation disadvantaged, in comparison to the no-build scenario
		Low—the alternative impedes the level of mobility for the transportation disadvantaged, in comparison to the no-build scenario
Impact on nonmotorized facilities	How well does the alternative advance pedestrian and bicycle system plans?	High—the alternative advances pedestrian and bicycle system plans
		Medium—the alternative does not address pedestrian and bicycle system plans
		Low—the alternative impedes pedestrian and bicycle system plans
Criterion: Land Use Impacts		
Disruptions and Displacements	How many properties will be impacted? To what level does the alternative impact businesses and properties? Is right-of-way available?	High—the alternative does not require takes of commercial or industrial zoned land
		Medium—the alternative requires minimal takes of commercial or industrial zoned land
		Low—the alternative requires significant takes of commercial or industrial zoned land
Business and Residential Accesses	To what extent will private accesses will be impacted?	High—the alternative does not impact private accesses
		Medium—the alternative requires minimal impact to private accesses
		Low—the alternative requires significant impact to private accesses
Compatibility with Local Comprehensive Plans	Is the alternative consistent with the Coburg Comprehensive Plan?	High—the alternative is consistent with the Comprehensive Plan
		Low—the alternative is not consistent with the Comprehensive Plan

TABLE 4-5
Coburg/I-5 IAMP Evaluation Criteria and Measures of Effectiveness

Subcriteria	Description	Evaluation Measures
Impact to resource-zoned land	To what extent does the alternative impact resource-zoned land, including OAR-defined high value agricultural land?	High—the alternative does not require takes of resource-zoned land Medium—the alternative requires minimal takes of resource-zoned land Low—the alternative requires significant takes of resource-zoned land
Criterion: Environmental and Social Impacts		
Impact on sensitive areas and endangered species	How will implementation of an alternative impact known natural and cultural resources or endangered species?	High—the alternative does not impact known natural and cultural resources or endangered species Low—the alternative impacts known natural and cultural resources or endangered species
Impact to critical community resources	Would the alternative require any direct impacts to parks, schools, historic buildings, or other similar resources?	High—the alternative does not require removal of critical community resources Low—the alternative requires removal of critical community resources
Noise	What noise impacts to residential development will result from implementation of the alternative?	High—the alternative is located more than 400' from residential development Medium—the alternative is located 200'-400' from residential development Low—the alternative is located less than 200' from residential development
Required permits and approvals	Is the alternative likely to meet requirements for permits and approvals?	High—the alternative is likely to meet permit and approval requirements Low—the alternative is not likely to meet permit and approval requirements
Impact to low-income and minority populations (related to environmental justice)	Does the alternative negatively impact minority or low-income populations?	High—the alternative does not displace or negatively impact minority or low-income populations Low—the alternative displaces or negatively impacts minority or low-income populations
Economic Development	To what extent does the alternative advance City economic development plans? Does it restrict future development opportunities?	High—the alternative advances economic development plans and requires no takes of undeveloped land Medium—the alternative does nothing to advance economic development or requires minimal takes of undeveloped land Low—the alternative impedes economic development or requires significant takes of undeveloped land
Criterion: Support for Implementation		
Political Feasibility	How easy would it be to implement the alternative?	High—the alternative has political support Medium—the alternative has some political support Low—the alternative has little or no political support
Multijurisdictional Coordination	Can all affected agencies (ODOT, City of Coburg, Lane County) support the alternative?	High—all affected agencies can support the alternative Low—one or more of the affected agencies do not support the alternative

TABLE 4-5
Coburg/I-5 IAMP Evaluation Criteria and Measures of Effectiveness

Subcriteria	Description	Evaluation Measures
Constructability	How disruptive will the alternative be to construct?	High—the alternative will require little disruption Medium—the alternative will require some disruption Low—the alternative will require significant disruption
Criterion: Cost		
Regional Coordination	Does the alternative involve more than one jurisdiction? Can interjurisdictional cooperation be leveraged for funding opportunities (match, etc.)?	High—the alternative allows for interjurisdictional cooperation Low—the alternative does not allow for interjurisdictional cooperation
Cost Effectiveness	Does the alternative provide benefit consistent with the level of investment?	High—the alternative requires a relatively low level of investment Medium—the alternative requires a moderate level of investment Low—the alternative requires a relatively high level of investment

Criteria Application

The following review of evaluation criteria displays the advantages and disadvantages of the project alternatives. This allows decision-makers to compare alternatives to ensure that those forwarded for consideration meet the goals of the community.

Because future congestion in the interchange management area is the motivation behind the IAMP, the traffic operations criteria weighs heavily in any decision.

Application of the criteria to the three alternatives shows that for most of the criteria categories, the alternatives have similar ratings. This is because the alternatives have similar characteristics.

Primary differences among the mitigation strategies include traffic operations, land use impacts, cost, and support for implementation.

Alternatives B and C provide for greater capacity than Alternative A. The four-lane bridge (part of Alternatives B and C) offers more flexibility for growth than the three-lane bridge (part of Alternative A), and maximizes value to the state by investing in infrastructure that will last more than 20 years. These options also provide better accommodation for operations and channelization, which will do a better job of allowing additional growth if Coburg expands its UGB and amends its Comprehensive Plan. Alternative A would not adequately accommodate future traffic conditions if a UGB expansion were to occur consistent with the RTP. For these reasons, ODOT, LCOG, and other entities may not support this option.

Alternatives B and C are expected to have more property and access impacts than Alternative A, due to the need for more land to accommodate the northbound off-ramp configuration (either two lanes or a loop ramp) and to ensure the approaching channelization lines up with the bridge travel lanes. Alternative C is anticipated to cost more than Alternative A or B.

All things considered, Alternative B provides the most benefit. Table 4-6 shows the ratings for each of the alternatives according to the criteria.

TABLE 4-6
Coburg/I-5 IAMP Alternatives and Evaluation Criteria Application

	Mitigation Alternatives		
Criteria	**Alternative A: Diamond and Three-lane Bridge**	**Alternative B: Diamond and Four-lane Bridge**	**Alternative C: Loop Ramp and Four-lane Bridge**
Traffic Operations: Alternatives B and C provide for slightly greater capacity than Alternative A. All alternatives are anticipated to result in improved traffic operations as compared to the future no-build scenario. All alternatives are able to accommodate anticipated 2031 traffic levels consistent with the Comprehensive Plan. Alternative A, however, would not accommodate traffic based on the RTP.			
V/C ratio	Medium	High	High
Delay	Medium	High	High
Other solutions	High	High	High
Safety: All alternatives are expected to update interchange geometry and be designed to optimal design standards where possible. All alternatives include similar access management strategies, including the realignment of Roberts Road/Coburg Industrial Way and the implementation of access management spacing along Pearl/Van Duyn consistent with the interchange area and appropriate road functional classification.			
Safety performance—geometry	High	High	High
Access management	High[a]	High[a]	High[a]
Design Standards	Medium	Medium	Medium
Mobility: Alternatives B and C are anticipated to best improve freight movement through enhancing operations on the I-5 mainline and at the interchange. All alternatives are anticipated to incorporate pedestrian and bicycle facilities into the final design. Improved traffic operation and nonmotorized facilities enhance mobility for transit vehicles and the transportation disadvantaged population.			
Freight Movement	Medium	High	High
Mobility for the Transportation Disadvantaged	Medium	High	High
Impact on nonmotorized facilities	High	High	High
Land Use Impacts: Alternative C is expected to have slightly more impact on existing business and residential land and accesses than Alternatives A or B, due to the need for more interchange footprint. Alternative B has slightly more impact on existing business and residential land and accesses than Alternative A. All alternatives are consistent with the Coburg Comprehensive Plan.			
Disruptions and Displacements	Medium	Medium	Low
Business and Residential Accesses	Medium	Medium	Low
Compatibility with Local Comprehensive Plans	High	High	High
Impact to resource-zoned land	High	High	High
Environmental and Social Impacts: All alternatives are expected to have similar environmental and social impacts.			
Impact on sensitive areas and endangered species	High	High	High
Impact to critical community resources	High	High	High
Noise	High	High	High
Required permits and approvals	High	High	High
Impact to low-income and minority populations	High	High	High
Economic Development	Medium	Medium	Low

TABLE 4-6
Coburg/I-5 IAMP Alternatives and Evaluation Criteria Application

	Mitigation Alternatives		
Criteria	**Alternative A: Diamond and Three-lane Bridge**	**Alternative B: Diamond and Four-lane Bridge**	**Alternative C: Loop Ramp and Four-lane Bridge**
Support for Implementation: Alternatives A or B are the lowest cost and lowest impact options. However, Alternative A would not adequately accommodate future traffic conditions if a UGB expansion were to occur consistent with the RTP. For these reasons, ODOT, LCOG, and other entities may not support this option.			
Political Feasibility	Low	High	Medium
Multijurisdictional Coordination	Low	High	High
Constructability	High	High	High
Cost-Effectiveness: All alternatives would require the reconstruction of the Pearl Street/Van Duyn bridge over I-5. Alternative C would be slightly more costly because of the need for the loop ramp. Alternative B is more cost-effective than Alternative A, because it provides more flexibility and better operational performance for minimal additional cost.			
Regional Coordination	High	High	High
Cost-Effectiveness	Medium	High	Medium
Summary: Alternative B scores better than Alternatives A and C, with 20 Highs and 4 Mediums. Alternative A received 13 Highs, 9 Mediums and 2 Lows. Alternative C received 18 Highs, 3 Mediums, and 3 Lows. Alternative B has the optimal operational performance for the cost required for construction, and the greatest level of support for implementation.			

[a]Through policy strategies.

4.5 Recommendation

Based on analysis of alternatives, the Recommended Alternative is Alternative B: Diamond Interchange with Four-lane Bridge. Alternative B meets operational standards by year 2031, and includes access management measures and policy and implementation measures that will be adopted into local plans and codes.

Alternative B is preferable to Alternative A because it provides better operational performance and better operational channelization for the heavy northbound to westbound movement, for minimal additional cost. It also is more likely to have more multi-jurisdictional support for implementation, since it would offer the ability to accommodate growth related to future UGB expansion. It also offers flexibility to convert the interchange to a loop ramp design if deemed appropriate beyond year 2031. Alternative B is preferable to Alternative C because it provides a very similar level of operational performance for less cost than a loop ramp. This basic design concept will still be subject to operational and geometric modifications during the preliminary and final design process.

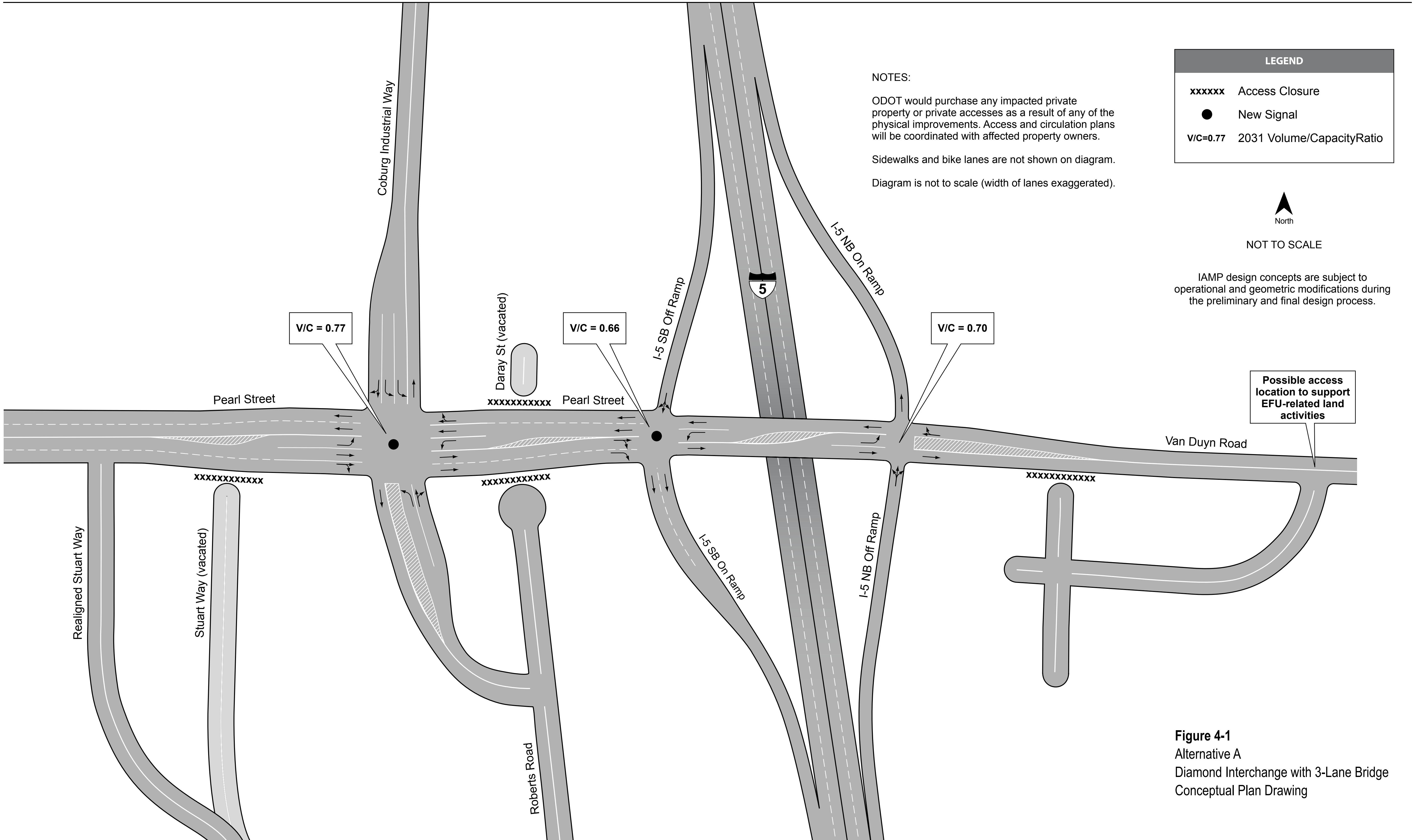


Figure 4-1
Alternative A
Diamond Interchange with 3-Lane Bridge
Conceptual Plan Drawing

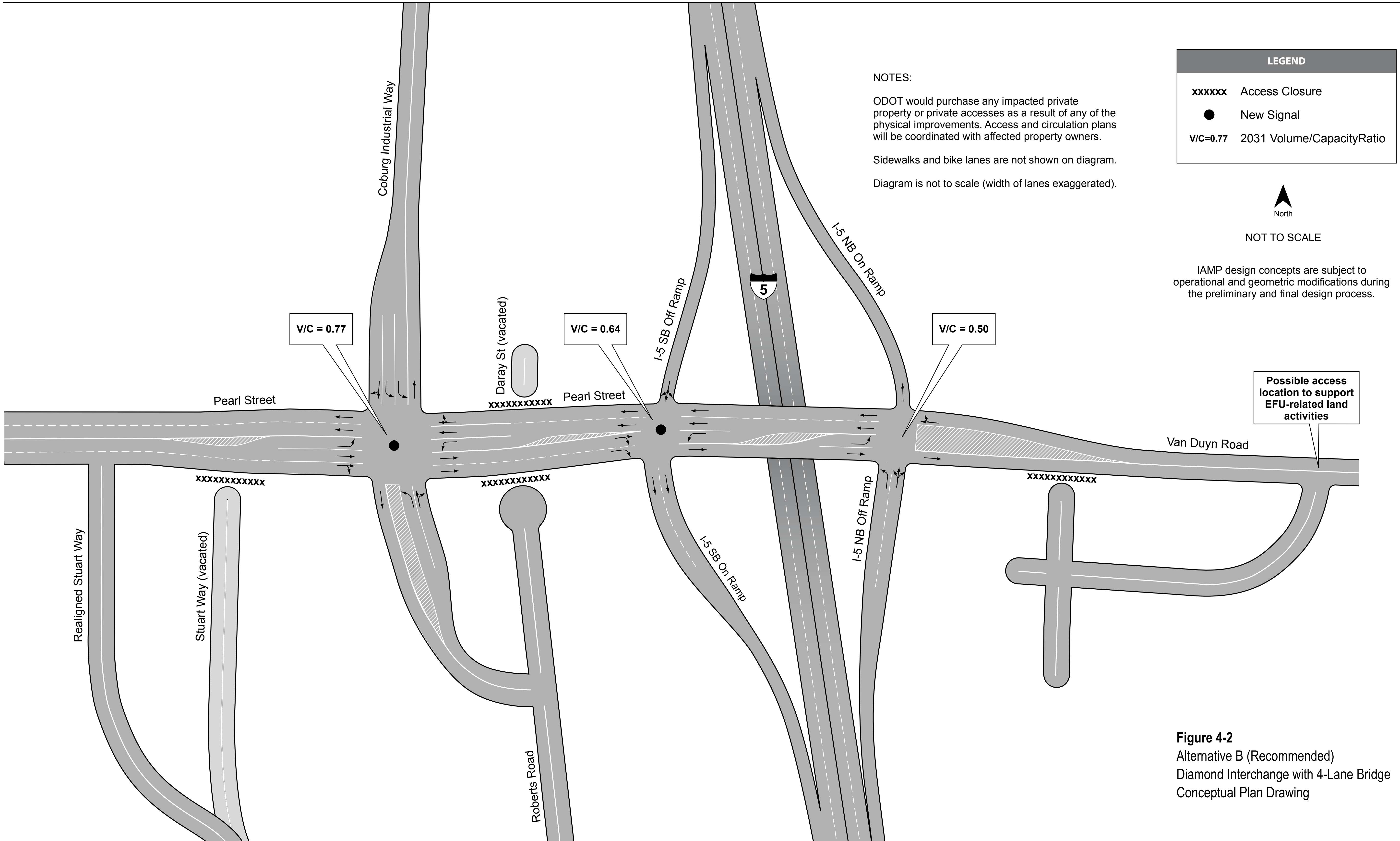


Figure 4-2
Alternative B (Recommended)
Diamond Interchange with 4-Lane Bridge
Conceptual Plan Drawing

317614.16.13_TB092008011SEA . Fig4-2_AltB_DiamondX_4-Lane_Bridge_v4.ai 4-1-09 gr/lw

CH2MHILL

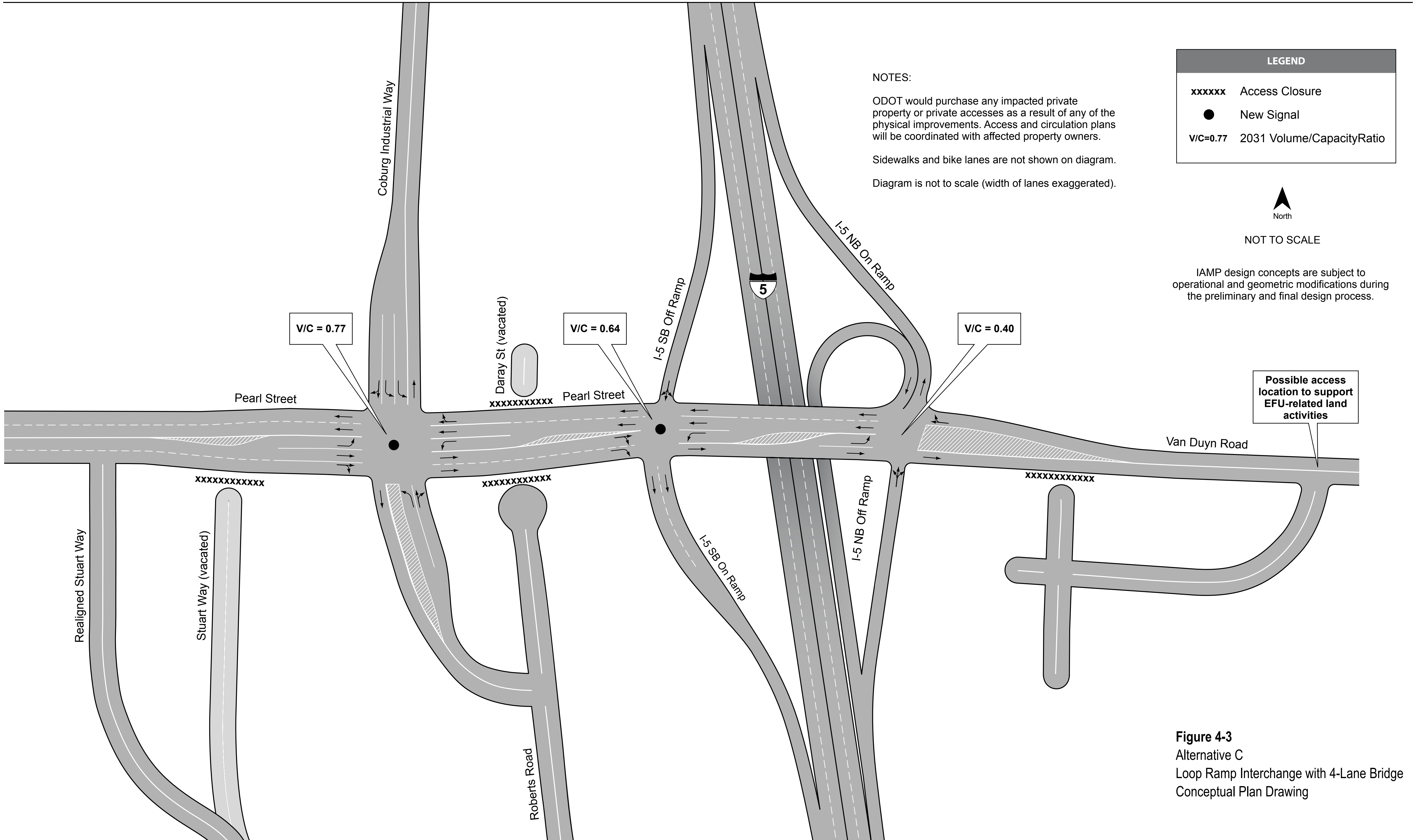


Figure 4-3
Alternative C
Loop Ramp Interchange with 4-Lane Bridge
Conceptual Plan Drawing

SECTION 5

Recommended Alternative—Operational, Physical and Access Improvements

This section of the IAMP outlines the operational, physical, and access management recommendations included as part of the Recommended Alternative. Based on an analysis of alternatives, the Recommended Alternative includes a diamond interchange with a four-lane bridge. The Recommended Alternative includes operational and physical improvements, access management plans, and policy and code implementation recommendations.

5.1 Recommended Alternative and Findings

5.1.1 Recommended Alternative Overview

The recommended alternative package consists of:

- Operational and physical improvements
- Access management plans
- Policy and code implementation recommendations

Section 5 of this IAMP focuses on the operational, physical, and access recommendations. The Recommended Alternative includes reconstruction of a diamond interchange with a four-lane bridge. Figure 5-1 depicts the Recommended Alternative physical and access improvements.[12]

A four-lane bridge is preferred because it will better accommodate the heavy north to west movement from the I-5 Northbound off-ramp, in addition to extending the life of the bridge structure past 2031 for minimal additional cost. A four-lane bridge would also provide future flexibility for the addition of a loop ramp if determined necessary at some point after the 2031 planning horizon.

The Recommended Alternative package is generally consistent with the Preferred Concept outlined in the Refinement Plan, except for increases in bridge and ramp capacity to address growth assumptions in the *Coburg Comprehensive Plan*, increases in capacity at the new Coburg Industrial Way/Roberts Road/Pearl Street intersection, and the inclusion of comprehensive access and policy measures. The access and policy and implementation measures are intended to meet or exceed the OHP access spacing standards for interchanges (or, at a minimum move closer to meeting these standards if existing constraints prevent fully achieving them) and outline requirements for mitigation when developments are projected to create more traffic than is planned for in the *Coburg Comprehensive Plan*.

[12] The design team refined the southbound approach of Coburg Industrial Way at Pearl Street (three lanes under Alternative B and two lanes under the Recommended Alternative) to maximize the trade-off between project cost and operational performance. This revision is not expected to significantly change future operational performance of Pearl Street.

The Recommended Alternative will be designed consistent with applicable ODOT HDM and interchange design guide standards, as well as applicable Lane County or City of Coburg geometric design standards.

The Recommended Alternative is based on the employment and population assumptions included in the *Coburg Comprehensive Plan*. Table 5-1 outlines the employment and population assumptions used to create 2031 traffic forecasts.

TABLE 5-1
Comprehensive Plan Land Use Assumptions—Year 2025

	Population	New and Total Dwelling Units	Employment
Coburg Comprehensive Plan	1,819	New: 322 Total: 896	4,672

5.1.2 Goal and Objectives Findings

This subsection describes how the Recommended Alternative is consistent with the goal and objectives set forth in this IAMP (see Section 1.5).

Goal

Reflect collaborative work with ODOT, Lane County, and the City of Coburg and outline recommendations for transportation improvements and policy and implementation measures that will maximize the operation of the interchange and accommodate future planned growth in the interchange management area.

Response: This IAMP was a collaborative effort, including ODOT, Lane County, and the City of Coburg. The Project Management Team (PMT) included members from all three jurisdictions/agencies. The Recommended Alternative includes recommendations for both transportation improvements and policy measures intended to accommodate growth as provided for in the *Coburg Comprehensive Plan*.

Objectives

- *Protect long-term safety and operations of the interstate and local road network*

  Response: Recommendations included as part of the Recommended Alternative are intended to protect long-term safety and operations. Recommendations include interchange and local intersection modifications, which will increase available capacity. Pedestrian, bicycle, transit, and TDM components of the Recommended Alternative also address improvement of operations. Operational analysis shows that the Recommended Alternative will meet ODOT and Lane County operational standards in year 2031. Recommendations also include access management actions and policies, which work to improve operations and safety due to a reduction in potential conflict points.

- *Build on the work in the Refinement Plan as adopted in the Coburg TSP*

  Response: This IAMP looked to the Preferred Concept outlined in the Refinement Plan as a starting point for interchange area improvement alternatives. The Recommended Alternative is generally consistent with the Preferred Concept outlined in the

Refinement Plan (a diamond interchange), but also includes increases in interchange and local intersection capacity and the inclusion of comprehensive access and policy measures.

- *Accommodate 2031 planned growth for the Coburg/I-5 interchange management area as outlined in the Coburg Comprehensive Plan*

  Response: The Recommended Alternative accommodates 2031 planned growth through interchange modifications, modifications to the local street system, enhanced pedestrian and bicycle facilities, access management plans, and policy and implementation measures. Operational analysis shows that the Recommended Alternative will accommodate traffic levels at appropriate ODOT and Lane County standards by year 2031.

- *Preserve public investments in the Coburg/I-5 interchange and adjacent transportation network*

  Response: The Recommended Alternative will meet ODOT design standards, will achieve appropriate ODOT and Lane County operational standards for year 2031 traffic levels, and will move toward compliance with ODOT access management standards. The alternative includes policy and implementation measures that consider future land development to protect the operations of a newly reconstructed interchange. It also includes a four-lane bridge, which will offer better management/channelization of anticipated traffic, as well as allowing for future interchange modifications (e.g., addition of a loop ramp) if deemed necessary beyond year 2031.

- *Plan for future management of the interchange and adjacent land uses*

  Response: The Recommended Alternative includes recommendations that relate to future development of adjacent land uses. When land develops or redevelops within the interchange management area, development applications will trigger access and traffic analysis requirements.

- *Work with Coburg and Lane County to develop a plan for road network, right-of-way, access, and land within the interchange management area*

  Response: The Recommended Alternative represents a collaborative effort among ODOT, Lane County, and the City of Coburg to provide road, access, and land plans within the interchange management area. The Recommended Alternative includes an access management plan, and also includes policies related to the development of a local grid street system west of I-5 as land develops.

- *Provide recommendations for enhancement of the pedestrian and bicycle system*

  Response: The Recommended Alternative includes an interchange bridge with pedestrian and bicycle facilities that extend multimodal system connectivity.

- *Provide recommendations that do not preclude expanded use of transit and other transportation measures such as transportation demand management (TDM)*

  Response: The Recommended Alternative does not preclude transit or TDM, in that it provides improved nonmotorized access to transit stops and includes recommendations for enhanced TDM and signal optimization.

- *Provide for OTC adoption of a plan so existing funds can be accessed for interchange reconstruction*

  Response: The Recommended Alternative is the culmination of the IAMP and project planning process, and sets the stage for next steps for interchange design and reconstruction. Adoption of the IAMP by the OTC, City, and County fulfills this requirement.

- *Ensure integration of land use and transportation planning*

  Response: The Recommended Alternative includes both operational and physical transportation improvements and recommendations related to policies and code affecting land uses. The Recommended Alternative requires managed population and employment growth within the study area, and requires mitigation for trip generation higher than planned growth.

- *Provide certainty for property and business owners and local governments*

  Response: The Recommended Alternative defines physical improvements over the short-, medium-, and long-term planning horizons. The Recommended Alternative also identifies conditions and/or associated actions/opportunities that cause such improvements to occur. Adoption of the IAMP will provide a foundation for public and private interests and certainty for the development application process in the IAMP management area.

5.2 Recommended Alternative—Operational and Physical Improvements

In its current configuration, the Coburg/I-5 interchange would not support traffic anticipated by 2031 due to growth in employment and population. Without improvement, intersections would be congested, and vehicles would be anticipated to back up onto the I-5 mainline.

The implementation of the Recommended Alternative would result in acceptable operations, safety conditions, and design conditions by year 2031 within the Coburg /I-5 interchange management area.

The Recommended Alternative infrastructure improvement includes the following operational and physical improvements and associated actions to be managed by ODOT, the City of Coburg, and Lane County.[13] Jurisdictions in parentheses indicate the lead responsibility for each action.

5.2.1 Short-Term Operational/Physical Improvements (0 to 7 years)

- I-5 Southbound ramps: Install a new exclusive eastbound right-turn lane on Pearl Street and southbound on-ramp receiving lane (ODOT).

[13] ODOT would purchase any impacted private property or private accesses as a result of any of the physical improvements. Access and circulation plans will be coordinated with affected property owners.

- Realign Roberts Road to meet the existing signalized Coburg Industrial Way intersection. The newly realigned Roberts Road would be constructed to road standards that accommodate freight vehicles (ODOT).
- Add a new connection between the aligned Roberts Road and original Roberts Road (ODOT).
- Purchase access control and do not allow any new private accesses west of I-5 along Pearl Street from the interchange ramp to a point 1,000 feet west of Coburg Industrial Way. In the interim, allow the Stuart Way driveway access at Pearl Street. Upon redevelopment of the Truck and Travel site (located east and west of Stuart Way), realign Stuart Way west of its current location to improve spacing with Coburg Industrial Way.
- Close access to the original Roberts Road at Pearl Street. This closure would only occur after or at the same time as the opening of the new Roberts Road/Coburg Industrial Way intersection to ensure continuous business access. A cul-de-sac will be constructed at the north termination of the original Roberts road that is navigable for WB-67 trucks (ODOT).
- Install a northbound left-turn pocket on Coburg Industrial Way at Pearl Street (ODOT).
- Coordinate traffic signal operations along Pearl Street; ensure signal optimization (ODOT/Lane County).
- Purchase access control and do not allow any new private access east of I-5 along Van Duyn Road from the interchange ramp terminal to Hereford Road and do not allow any full accesses within 1,320 feet of the interchange ramp terminal (ODOT). In the interim, allow the properties within the Urban Growth Boundary (UGB) to continue to access Van Duyn directly from within the UGB. Upon redevelopment of one or more of these properties within the current UGB, implement changes to this access as needed to address safety issues or seek development and use of the access road right-of-way purchased by ODOT during the initial phase of the interchange project if it has not already been developed as part of a subsequent phase of the interchange project (ODOT).
- Purchase right-of-way needed to construct an access road from the areas with the Coburg UGB east of I-5 to a point approximately 1320′ east of the northbound ramp terminals (eventual construction of this access road will require an exception to Goal 3 of the statewide planning goals—if an exception is not granted by Lane County, ODOT will need to develop an alternative access approach to address this issue) (ODOT). See Appendix L for the justification for a goal exception.
- Work with Lane Transit District to expand Bus Rapid Transit to Coburg (City of Coburg).
- Market Lane Transit District's Group Pass Program to employers, and promote carpool and vanpool services (City of Coburg).
- As Coburg develops, monitor the need for a park-and-ride (City of Coburg).

5.2.2 Long-Term Operational/Physical Improvements (8+ years)

- Signalize the I-5 southbound ramp terminals by 2031 or sooner if signal warrants are met and the signal is approved by the State Traffic Engineer (ODOT).
- Reconstruct the Coburg/I-5 interchange bridge structure to four lanes, with full standard pedestrian and bicycle facilities and adequate height to meet the appropriate standard. The bridge is to include two westbound lanes with a turn pocket leading to the I-5 southbound on-ramp, one eastbound through lane, and one eastbound left-turn lane leading to the I-5 northbound on-ramp. ODOT will work with property owners to purchase property impacted due to the interchange reconstruction. The bridge structure will need to be lengthened to reduce the approach slope to meet current design standards. The bridge length will also need to factor in future potential widening of I-5. This improvement could take place earlier if adequate funding is secured for construction (ODOT).
- Consolidate all accesses on the southern side of Van Duyn Road to a point at least 1,320 feet from the north-bound ramp terminal intersection. Close accesses less than 1,320 feet from this location and construct an alternate access road. This road may be constructed by ODOT and maintained as a public road by Lane County or the City of Coburg, or it may be constructed privately in conjunction with redevelopment of properties within the Coburg UGB east of I-5, depending on the timing and availability of funds to construct future phases of the interchange project (eventual construction of this access road will require an exception to Goal 3 of the statewide planning goals—if an exception is not granted by Lane County, ODOT will need to develop an alternative access approach to provide access to the urban properties east of I-5) (ODOT, other responsible parties). See Appendix L for the justification for a goal exception.
- Implement local circulation improvements consistent with the Coburg TSP that provide alternative circulation and access for the land north of Pearl Street and west of I-5 within the IAMP study area (City of Coburg).
- Design and construct the northern and southern connection alignments (extending Coburg Industrial Way north and Roberts Road south) as depicted in Map 16 of the Coburg TSP (City of Coburg).[14]

5.3 Recommended Alternative—Access Management Plan

Access management and access spacing are important for traffic operations and safety. Access management is intended to reduce conflict points in order to improve mobility and minimize potential for collisions. As part of the Coburg/I-5 IAMP, access locations and public street connections were examined in order to meet the goals and objectives of the IAMP.

The Access Management Plan identifies access management actions that move access spacing along Pearl Street and Van Duyn Road toward access management standards as

[14] This improvement is conceptually identified in the City of Coburg TSP. Because it would be located within the Coburg/I-5 interchange management area, it is included as a physical/operational improvement.

defined in the OHP. For the Coburg/I-5 IAMP, the minimum spacing standard is 1,320 feet from the I-5 ramp terminal intersection for placement of the next full access road or driveway.[15] This standard is based on research regarding optimal safety and operations near interchanges. As discussed in Section 2, several public and private accesses are currently located within 1,320 feet of the ramp intersections on both sides of the interchange.

The Access Management Plan identifies driveways that will ultimately need to be relocated, consolidated, or closed to achieve the safety and mobility objectives of the state's access management standards. Relocation, consolidation, or closure of driveways will be paired with enhancement of the local street circulation system (e.g., frontage roads).

Figure 5-1 depicts access recommendations in the interchange management area. Descriptions of the recommendations follow.

5.3.1 Van Duyn Road (East of I-5)

- Purchase access control and do not allow any new private access east of I-5 along Van Duyn Road from the interchange ramp terminal to Hereford Road and do not allow any full accesses within 1,320 feet of the interchange ramp terminal. In the interim, allow the properties within the Urban Growth Boundary (UGB) to continue to access Van Duyn directly from within the UGB. Upon redevelopment of one or more of these properties within the current UGB, implement changes to this access as needed to address safety issues or seek development and use of the access road right-of-way purchased by ODOT during the initial phase of the interchange project if it has not already been developed as part of a subsequent phase of the interchange project.
- Consolidate all accesses on the southern side of Van Duyn Road to a point at least 1,320 feet from the north-bound ramp terminal intersection. Close accesses less than 1,320 feet from this location and construct an alternate access road. This road may be constructed by ODOT and maintained as a public road by Lane County or the City of Coburg, or it may constructed privately in conjunction with redevelopment of properties within the Coburg UGB east of I-5, depending on the timing and availability of funds to construct future phases of the interchange project. (eventual construction of this access road will require an exception to Goal 3 of the statewide planning goals—if an exception is not granted by Lane County, ODOT will need to develop an alternative access approach to provide access to the urban properties east of I-5).
- If land uses change in the northeast quadrant of the interchange management area, consolidate all accesses on the northern side of the road to a public road approach that aligns opposite the consolidated approach south of Van Duyn Road.

[15] Per the Oregon Highway Plan, right-in/right-out accesses are permissible 750 feet from an interchange ramp terminal.

5.3.2 Pearl Street (West of I-5)

- Purchase access control and do not allow any new private accesses west of I-5 along Pearl Street from the interchange ramp to a point 1000 feet west of Coburg Industrial Way. In the interim, allow the Stuart Way driveway access at Pearl Street. Upon redevelopment of the Truck and Travel site (located east and west of Stuart Way), realign Stuart Way west of its current location to improve spacing with Coburg Industrial Way.
- Realign Roberts Road with the signalized Coburg Industrial Way.
- Construct an east-west connection between the realigned Roberts Road and original Roberts Road.
- Close access to Pearl Street from the original Roberts Road.
- Develop local circulation options that provide private properties north and south of Pearl Street the opportunity to access the signalized intersection of Pearl Street and the realigned Roberts Road/Coburg Industrial Way. Specific internal access circulation will be developed by the City of Coburg and individual property owners.
- Close access to Pearl Street from Daray Street. Properties will be accessed via frontage or backage roads (from Coburg Industrial Way/realigned Roberts Road).
- Develop a local road system consistent with the current Coburg TSP. The local grid system developed will connect directly onto Pearl Street within the study area.

5.3.3 Access Management Deviations

When implemented, the IAMP Access Management Plan reduces the number of approaches to Pearl Street/Van Duyn Road by a total of 11 (including private drives; four of the accesses are public streets that are either realigned or redirected).

Under OAR 734-051-0135(5) the ODOT Region Access Management Engineer "*shall require any deviation for an approach located in an interchange access management area as defined in the Oregon Highway Plan, to be evaluated over a 20-year horizon from the date of application and may approve a deviation for an approach located in an interchange access management area if:… (b) The approach is consistent with an access management plan for an interchange that includes plans to combine or remove approaches resulting in a net reduction of approaches to the highway.*" Deviations identified in this IAMP are consistent with this statute.

Table 5-2 addresses all approach locations where access deviations will be required and provides a rationale for why the deviations should be granted. Figure 5-2 shows the locations of these accesses and the approach number that corresponds to Table 5-2.

TABLE 5-2
IAMP Access Deviations

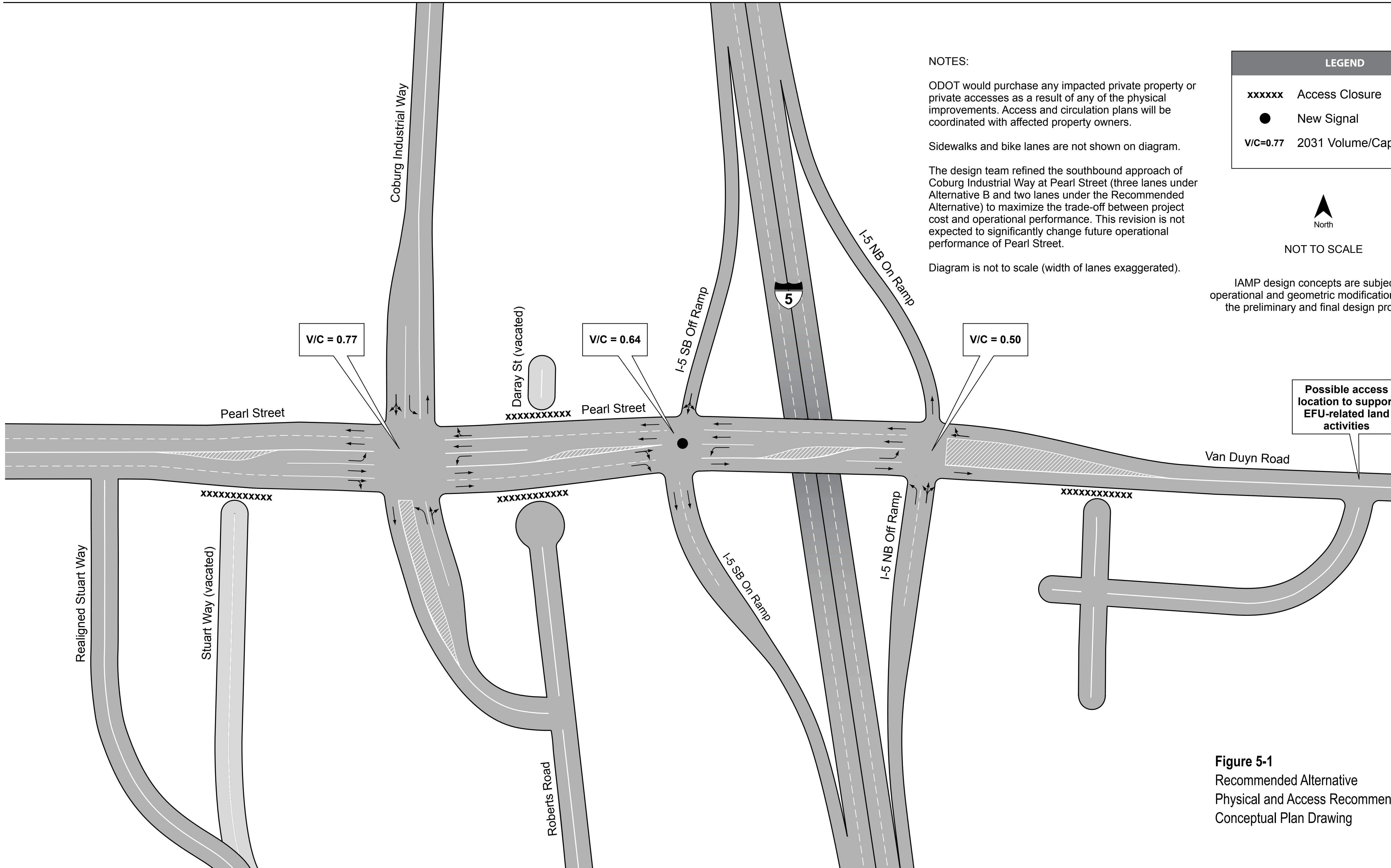
Approach #	Tax Lots Served or Road Name	Deviation Request Rationale
1	Stuart Way/Pearl Street	The intersection of Stuart Way and Pearl Street lies within 1,320 feet from the interchange ramp. The City of Coburg has permitted Stuart Way to be vacated. In the interim, this access shall be allowed to stay open for access to the Truck 'n Travel site (the portion of the Anderson property east of Stuart Way). Upon redevelopment of the portion of the Anderson property west of Stuart Way (tax lot 2800), the Stuart Way access reservation shall be required by ODOT permit to be relocated to a point somewhere between the existing Stuart Way intersection and the far west side of tax lot 2800. The purpose of this relocation is to provide improved access spacing between the relocated (formally Stuart Way) access point and the intersection of Pearl Street and Coburg Industrial Way/Roberts Road. The precise location of the relocated access point will be determined through the City's site plan review process and the traffic analysis required by ODOT's permit process. Upon redevelopment of tax lot 2800 or the Truck 'n Travel Site, the present location of Stuart Way will be closed and Truck 'n Travel will begin using the relocated Stuart Way across tax lot 2800.
2	160332402900	As part of the Recommended Alternative recommended in this IAMP, Roberts Road will be closed at Pearl Street and realigned with Coburg Industrial Way. Once the Roberts Road realignment is complete, this private access will be closed, and access to this property will occur via the realigned Roberts Road. In the interim, this access should be allowed to stay open for property access. Internal local circulation will be discussed directly between ODOT and property owners.
3	Coburg Industrial Way/ Realigned Roberts Road at Pearl Street	The intersection of Coburg Industrial Way and Pearl Street lies within 1,320 feet from the interchange ramp. This location will be where the realignment of Roberts Road ties in to Pearl Street, in order to be able to close Roberts Road and private driveways to the south of Pearl Street. This location was identified in the Refinement Plan after a review of alternatives and extensive public process. As part of this IAMP, Roberts Road will be closed at Pearl Street and realigned to this location south of Coburg Industrial Way, thereby moving toward ODOT access management standards. Coburg Industrial Way is identified in the Coburg TSP and Lane County TSP as an integral piece of Coburg's circulation system.
4	1603330000501	As part of the Recommended Alternative recommended in this IAMP, Roberts Road will be closed at Pearl Street and realigned with Coburg Industrial Way. Once the Roberts Road realignment is complete, this private access will be closed, and access to this property will occur via the realigned Roberts Road. In the interim, this access should be allowed to stay open for property access. Internal local circulation will be discussed directly between ODOT and property owners.
5	1603330000501	As part of the Recommended Alternative recommended in this IAMP, Roberts Road will be closed at Pearl Street and realigned with Coburg Industrial Way. Once the Roberts Road realignment is complete, this private access will be closed, and access to this property will occur via the realigned Roberts Road. In the interim, this access should be allowed to stay open for property access. Internal local circulation will be discussed directly between ODOT and property owners.

TABLE 5-2
IAMP Access Deviations

Approach #	Tax Lots Served or Road Name	Deviation Request Rationale
6	1603330000502 1603330000500	As part of the Recommended Alternative recommended in this IAMP, Roberts Road will be closed at Pearl Street and realigned with Coburg Industrial Way. Once the Roberts Road realignment is complete, this private access will be closed, and access to this property will occur via the realigned Roberts Road. In the interim, this access should be allowed to stay open for property access. Internal local circulation will be discussed directly between ODOT and property owners.
7	1603330000102	As part of this IAMP, once land in the northwest quadrant of the IAMP study area develops or redevelops, the land use application will trigger the development and implementation of a local circulation plan that connects to Pearl Street via Coburg Industrial Way. Direct access to Pearl Street will not be permitted within the IAMP interchange management area. Because this access serves an existing business, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access only until development or redevelopment occurs on adjacent property. Internal local circulation will be discussed directly between ODOT and property owners.
8	1603330000102	As part of this IAMP, once land in the northwest quadrant of the IAMP study area develops or redevelops, the land use application will trigger the development and implementation of a local circulation plan that connects to Pearl Street via Coburg Industrial Way. Direct access to Pearl Street will not be permitted within the IAMP interchange management area. Because this access serves an existing business, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access only until development or redevelopment occurs on adjacent property. Internal local circulation will be discussed directly between ODOT and property owners.
9	Daray Street	As part of this IAMP, once land in the northwest quadrant of the IAMP study area develops or redevelops, the land use application will trigger the development and implementation of a local circulation plan that connects to Pearl Street via Coburg Industrial Way. Direct access to Pearl Street will not be permitted within the IAMP interchange management area. Because this access serves an existing business, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access only until development or redevelopment occurs on adjacent property. Internal local circulation will be discussed directly between ODOT and property owners.
10	1603330000200	All accesses east of I-5 along Van Duyn Road will be rerouted to a new intersection 1,320’ east of the interchange ramp terminal that will connect with a frontage road. Because this access serves an existing purpose, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access in the meantime.
11	1603330000207	All accesses east of I-5 along Van Duyn Road will be rerouted to a new intersection 1,320’ east of the interchange ramp terminal that will connect with a frontage road. Because this access serves an existing purpose, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access in the meantime.
12	1603330000206	All accesses east of I-5 along Van Duyn Road will be rerouted to a new intersection 1,320’ east of the interchange ramp terminal that will connect with a frontage road. Because this access serves an existing purpose, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access in the meantime.

TABLE 5-2
IAMP Access Deviations

Approach #	Tax Lots Served or Road Name	Deviation Request Rationale
13	1603330000101	All accesses east of I-5 along Van Duyn Road will be rerouted to a new intersection 1,320' east of the interchange ramp terminal that will connect with a frontage road. Because this access serves an existing purpose, and because currently there are no reasonable alternative accesses to this property, a deviation should be allowed to allow access in the meantime.



NOTES:

ODOT would purchase any impacted private property or private accesses as a result of any of the physical improvements. Access and circulation plans will be coordinated with affected property owners.

Sidewalks and bike lanes are not shown on diagram.

The design team refined the southbound approach of Coburg Industrial Way at Pearl Street (three lanes under Alternative B and two lanes under the Recommended Alternative) to maximize the trade-off between project cost and operational performance. This revision is not expected to significantly change future operational performance of Pearl Street.

Diagram is not to scale (width of lanes exaggerated).

LEGEND	
xxxxxx	Access Closure
●	New Signal
V/C=0.77	2031 Volume/CapacityRatio

North

NOT TO SCALE

IAMP design concepts are subject to operational and geometric modifications during the preliminary and final design process.

Figure 5-1
Recommended Alternative
Physical and Access Recommendations
Conceptual Plan Drawing

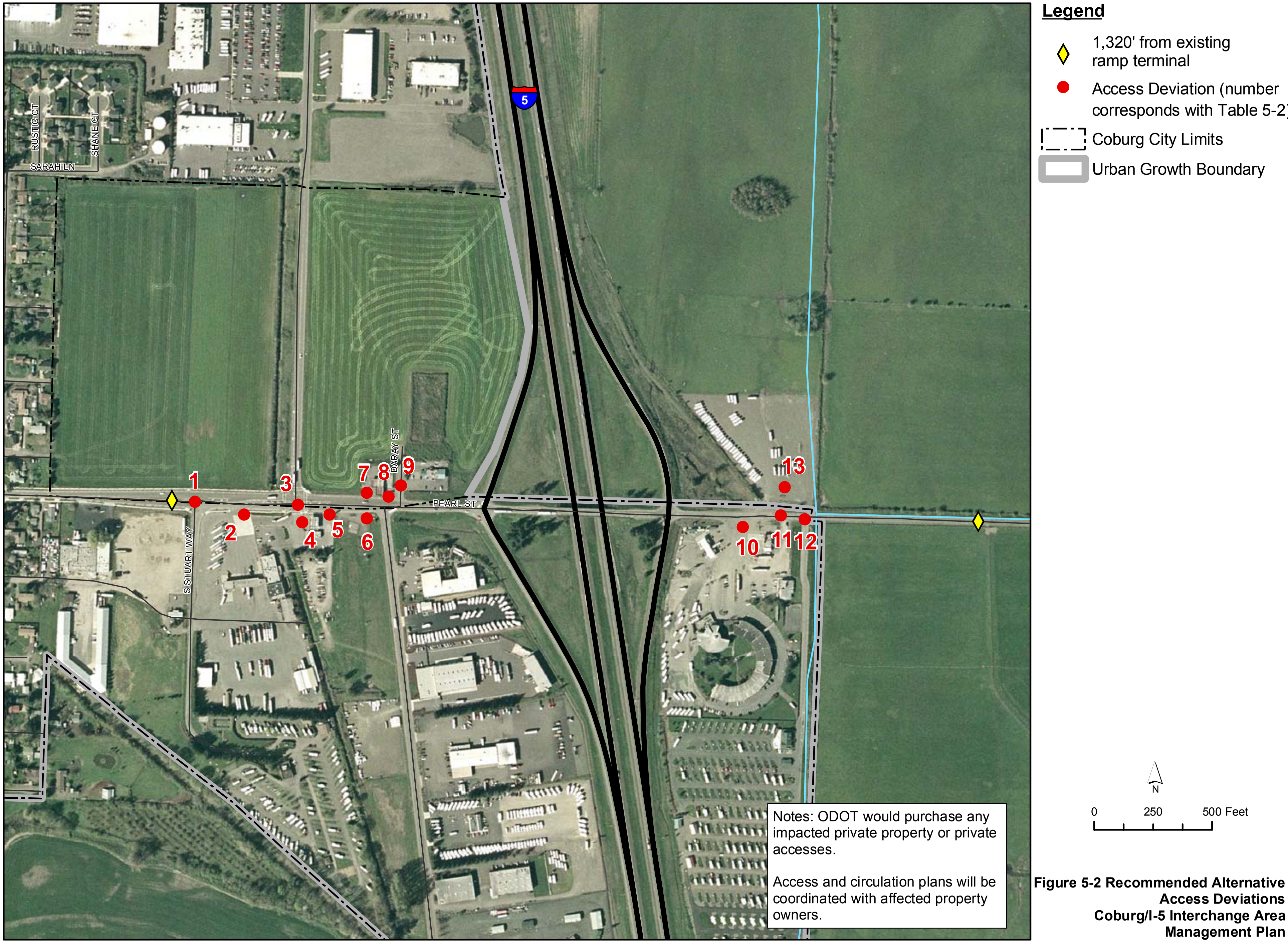


Figure 5-2 Recommended Alternative Access Deviations Coburg/I-5 Interchange Area Management Plan

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SECTION 6

IAMP Recommended Alternative—Policies and Implementation Measures

Adopting policies and other implementation measures are critical to protecting the Recommended Alternative infrastructure investments. IAMP Section 6 summarizes policies to be adopted by the City of Coburg, Lane County, and the OTC. IAMP Section 7 summarizes development code language to be adopted by the City of Coburg, Lane County, and the OTC. Section 8 summarizes the adoption process and the processes for monitoring and updating the IAMP.

6.1 Policy Framework

The following policy framework is to be adopted by the City of Coburg, Lane County, and the OTC.

6.1.1 IAMP Definition and Purpose

The City of Coburg (City), Lane County (County), and Oregon Department of Transportation (ODOT) recognize the importance of Interstate 5 in the movement of people and goods, and are committed to protecting the function of the Coburg/I-5 interchange (Milepost 199.15). The Coburg/I-5 Interchange Area Management Plan and Boundary is defined as the following:

> *A City of Coburg Special District in the City of Coburg Comprehensive Plan map and a Lane County Combining (Overlay) zone in the Lane County Comprehensive Plan map within which ODOT will monitor and review development proposals and proposed land use changes and coordinate with the City and County to meet ODOT access safety spacing standards, mobility standards, and address other possible traffic impacts on the subject interchange, as appropriate.*

The Coburg/I-5 Interchange Area Management Plan (IAMP) is intended to (1) describe plans for operational, physical, and access improvements; and (2) anticipate and provide direction for the development of land inside the interchange management area in a manner that does not compromise the function or operation of the interchange.

6.1.2 IAMP Policies and Actions

The following policies and actions shall be adopted and implemented by ODOT (through this IAMP and development of the interchange improvement project), and Lane County and the City of Coburg (through amendments to their respective Transportation System Plans and Comprehensive Plans).

1. ODOT and the City of Coburg and Lane County establish the Coburg/I-5 Interchange Management Area overlay as depicted in Figure 6-1.

2. If full construction of the improvements described herein as the Recommended Alternative (Alternative B), and depicted in Figures 4-2 and 5-1, occur in advance of the City of Coburg expanding its urban growth boundary and updating its comprehensive plan and zoning to fully accommodate its regional population and employment forecasts[16], in order to preserve capacity for future City of Coburg comprehensive plan updates, ODOT shall establish alternative mobility standards to protect any excess capacity provided by an improvement at the Coburg/I-5 interchange ramps as follows.

Intersection	Van Duyn Road/I-5 Northbound Ramps	Pearl Street/I-5 Southbound Ramps
Alternative Mobility Standard	0.55 V/C Ratio	0.65 V/C Ratio

3. If full construction of the improvements described herein as the Recommended Alternative (Alternative B) occur in advance of the City of Coburg expanding its urban growth boundary and updating its comprehensive plan and zoning to fully accommodate its adopted population and employment forecasts, in order to preserve capacity for future City of Coburg comprehensive plan updates, the City of Coburg shall establish an alternative mobility standard to protect any excess capacity provided by an improvement at the Pearl Street/Coburg Industrial Way intersection as follows.

Intersection	Pearl Street/Coburg Industrial Way
Alternative Mobility Standard	0.80 V/C Ratio

4. The City and County will coordinate with ODOT prior to amending their transportation system plans, proposing transportation improvements that could affect the function of the Coburg/I-5 Interchange Area, or proposing changes that are inconsistent with the IAMP.

5. If the City expands its urban growth boundary and updates its comprehensive plan and zoning to fully accommodate its adopted population and employment forecasts after construction of the interchange and local access and circulation improvements described herein as the Recommended Alternative (Alternative B), ODOT will work with the City and Lane County to amend the IAMP, as necessary, to recognize and support those updates. This amendment shall include adjustment of the Alternative Mobility Standards at the interchange ramps to accommodate the additional growth, but not to exceed the mobility standards in the OHP that apply to the Coburg/I-5 interchange (ramp terminal $V/C \leq 0.8$). ODOT will also work with the County to modify the alternative mobility standards set for the Pearl Street/Coburg Industrial Way intersection.

6. If the City expands its urban growth boundary to fully accommodate the population and employment forecasts in the Regional Transportation Plan (RTP) before construction of the interchange and local access and circulation improvements described herein as the Recommended Alternative (Alternative B), the mobility standards in the OHP that apply to the Coburg/I-5 interchange (ramp terminal $V/C \leq 0.8$) shall be applied to any

[16] As adopted for the federally designated Metropolitan Planning Organization planning area, by the Metropolitan Policy Committee (MPC).

subsequent comprehensive plan and zoning updates initiated by the City for the purposes of complying with Oregon Administrative Rule 660-012-0060.

7. The City and County shall coordinate with ODOT in the review of land use applications for areas within the interchange area management boundary. Land use actions within the interchange management area that may affect the performance of an interchange, such as zone changes, land development applications, and requests for new local access, will be consistent with the adopted IAMP. The City Planner shall include ODOT as an agency referral partner. Actions not consistent with the IAMP may only be approved by also amending the IAMP and related transportation system plans consistent with OAR 660-012-0050 and 0055.

8. The City of Coburg shall adopt traffic impact analysis (TIA) requirements as outlined in Section 7 for the interchange management area. Lane County developments are subject to Lane County TIA requirements, specified in Lane County's TSP, adopted in 2004.

9. In the event that Coburg seeks to expand its urban growth boundary east of I-5, the City of Coburg, Lane County, and ODOT shall reassess the viability of the IAMP local circulation recommendations and shall identify and ensure any new facilities needed to serve the resulting growth pattern are properly planned for, including an implementation strategy—this reassessment may include consideration of a new or enhanced I-5 bridge crossing to reduce potential travel demand on Pearl Street at the interchange ramp intersections.

10. Access spacing requirements shall be implemented consistent with and to meet or exceed the minimum standards in the 1999 Oregon Highway Plan, Policy 3C, as follows:

    (a) When new approach roads are planned or constructed near the interchange, unless no alternative access exists, the nearest intersection on a crossroad shall be no closer than 1,320 feet from the interchange. Measurement is taken from the ramp intersection or the end of a free flow ramp terminal merge lane taper;

    (b) Existing private accesses shall be closed along Pearl Street and Van Duyn Road where access control has been purchased by ODOT and when alternative access to public roads is provided.

    (c) Deviations

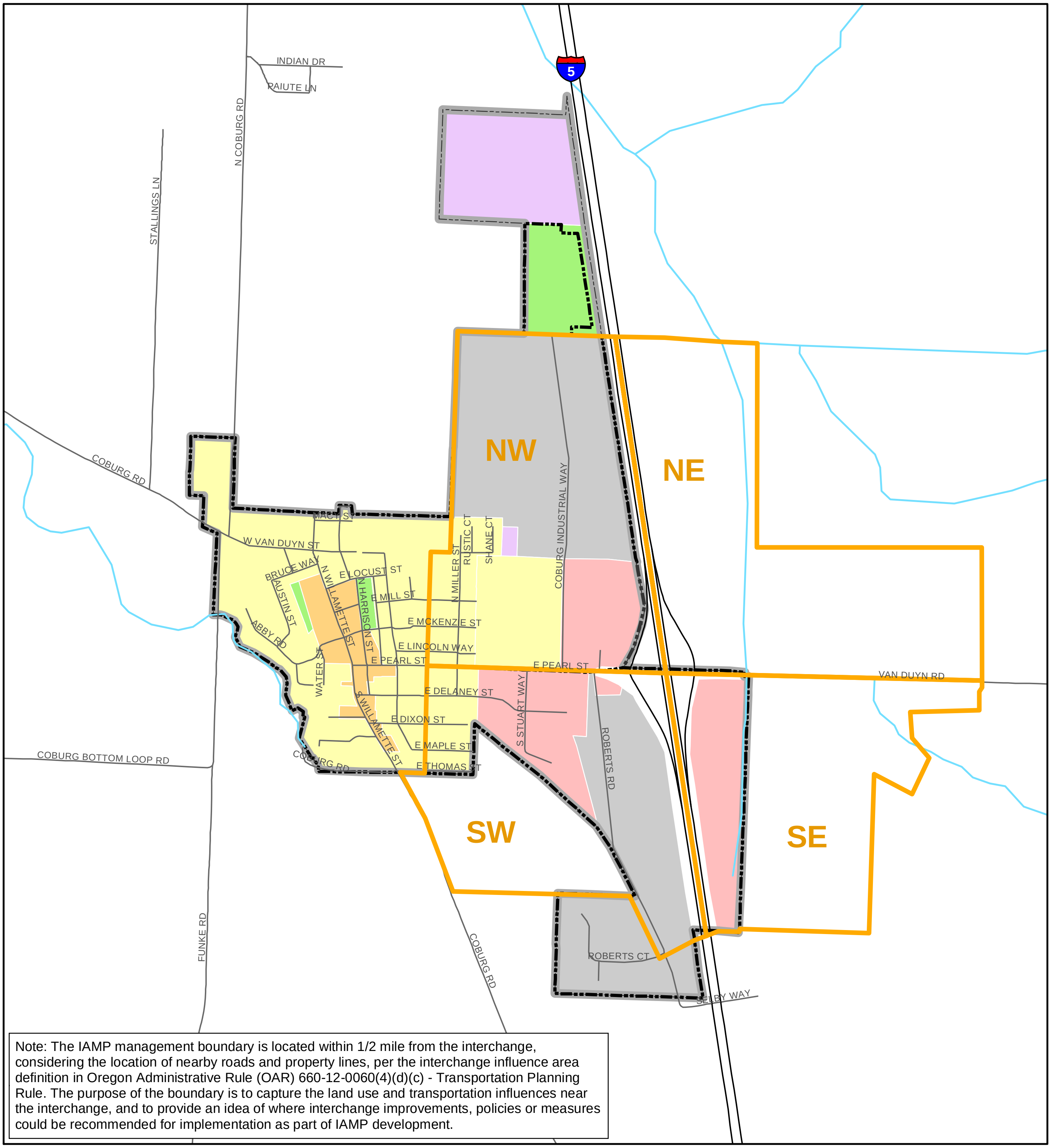
        i. Deviations shall be permitted as identified in Section 5.3.3 of this IAMP.

        ii. Deviations not identified in Section 5.3.3 may be permitted for new access for farm and forestry equipment and associated farm uses, as defined in ORS 215.203, on lands zoned for exclusive farm use, and accepted forest practices on those lands that are within the interchange management area, but only when access meeting the standards in 10(a) above is unfeasible.

    (d) Until such time as ODOT purchases access rights on any County Road or City Street that is designated for restricted access by this IAMP, any redevelopment of property within the IAMP area that would result in a greater number of average daily trips or an increase in large truck trips will require written approval from the Oregon Department of Transportation pursuant to an Intergovernmental Agreement to be established between the City of Coburg, Lane County, and ODOT, and subject to the limits of applicable county or city codes. When ODOT has purchased access rights, any redevelopment of property within the IAMP area that would result in a greater number of average daily trips or an increase in large truck trips will be subject to the provision of ODOT's Access Management Administrative Rule (OAR 734-051).

(e) ODOT shall purchase access control east of I-5 along both sides of Van Duyn Road from the interchange ramp terminal to Hereford Road and west of I-5 along both sides of Pearl Street from the interchange ramp terminal to a point 1,000 feet west of Coburg Industrial Way. New approaches shall be deed restricted to specific uses.

11. The City and County shall work with ODOT to implement the operational, physical, and access recommendations included in Section 5 of this IAMP.
12. Work with Lane Transit District to expand bus rapid transit to Coburg (City of Coburg, Lane County).
13. Market Lane Transit District's Group Pass Program to employers, and promote carpool and vanpool services (City of Coburg).
14. As Coburg develops, monitor the need for a park-and-ride (City of Coburg, ODOT).



Note: The IAMP management boundary is located within 1/2 mile from the interchange, considering the location of nearby roads and property lines, per the interchange influence area definition in Oregon Administrative Rule (OAR) 660-12-0060(4)(d)(c) - Transportation Planning Rule. The purpose of the boundary is to capture the land use and transportation influences near the interchange, and to provide an idea of where interchange improvements, policies or measures could be recommended for implementation as part of IAMP development.

TB012009001PDX 317614.16.14 1-2-09 lh

City of Coburg Comprehensive Plan Designations

- Traditional Residential
- Park/Recreation
- Central Business District
- Highway Commercial
- Public Facility
- Light Industrial

- Coburg City Limits
- Urban Growth Boundary
- IAMP Management Area Boundary

N

0 500 1,000 Feet

Figure 6-1 IAMP Management Area Quadrants
Coburg/I-5 Interchange Area Management Plan

SECTION 7

IAMP Recommended Alternative—Development Code

Implementation measures are critical to protecting Recommended Alternative infrastructure investments. IAMP Section 7 summarizes development code language to be adopted by the City of Coburg and Lane County. Section 8 discusses the adoption process and the processes for monitoring and updating the IAMP.

7.1 Development Code Language

The following development code language applies to any land use proposal for lands within the Coburg/I-5 Interchange Management Area. Any development on unincorporated Lane County land within the interchange management area is subject to Lane County traffic impact analysis standards.

7.1.1 Traffic Impact Analysis

Traffic Impact Analysis Requirements for Land within the Interchange Management Area:

1. For purposes of this section, the IAMP Special District (City of Coburg) or Combining Zone (Lane County) area shall be as defined in Figure 6-1 of this IAMP and represented in the map and legal description of the Coburg Special District area and County Combining Zone area that are shown in Appendix M and included in each jurisdiction's development code.

2. Within the IAMP Special District for lands within the City of Coburg, for city streets, a traffic impact analysis (TIA) shall be required for all proposed development that will generate more than 100 AM or PM peak hour trips per day or 600 Average Daily Trips. Trip calculation shall be based upon *Trip Generation, 8th Edition (2008)* published by the Institute of Transportation Engineers.

3. For County Roads within the IAMP Combining Zone area, a TIA shall be required in accordance with Lane Code Chapter 15.697.

4. Within the IAMP Special District or Combining Zone Area, TIAs shall be prepared in accordance with ODOT's 2005 Development Review Guidelines. TIA adequacy shall be determined jointly by ODOT, the City of Coburg, and Lane County. If a conflict exists between ODOT Development Review Guidelines and applicable County or City requirements, ODOT Development Review Guidelines shall be applied by ODOT. Any required mitigation associated with the ODOT permitting process shall be determined by ODOT with participation by the City of Coburg and Lane County with regard to their respective requirements, and shall be consistent with the requirements in OAR 734-051 and OAR 660-012-0050. Any required mitigation associated with the local land use authority shall be by the City of Coburg and/or Lane County, as appropriate, with

regard to their respective requirements and with participation of ODOT, and shall be consistent with the requirements in OAR 734-051 and OAR 660-012-0050.

5. ODOT shall be responsible for any enforcement necessary to implement ODOT requirements through the ODOT permitting process that are not specified in Lane County or City of Coburg respective requirements.

7.2 Plan and Zone Map Changes

Coburg and Lane County shall amend their development codes as follows:

1. Coburg shall create a Plan Designation and corresponding new “special district” called the IAMP Overlay District to implement the provisions of this IAMP.
2. Lane County shall create a Plan Designation and corresponding “Combining Zone” called the Interchange Area Combining Zone to implement the provisions of this IAMP.
3. The Coburg and Lane County Plan Designation and Zoning Maps shall be amended to show the respective IAMP plan and zoning areas.

SECTION 8

IAMP Implementation, Monitoring, and Updates

Section 8 discusses implementation authority and the processes for monitoring and updating the IAMP.

8.1 Implementation Authority

Development, adoption, and implementation of this IAMP are determined by regulatory authority. Local agency authority comes through state statutes, and city and county comprehensive plans and development codes. State of Oregon authority comes in the form of policy and administrative rules governing authority over federal and state systems, as granted through the following:

- State Agency Coordination Rule and Agreement (SAC 1990—OAR 731-015): The purpose of this rule is to define what ODOT actions are land use actions and how ODOT will meet its responsibilities for coordinating these activities with the statewide land use planning program, other state agencies, and local government.
- Transportation Planning Rule (OAR 660-012): The TPR implements statewide planning goal 12 and is one of several statewide planning rules that promotes protection of the long-term livability of Oregon's communities for future generations. The rule requires multi-modal transportation plans to be coordinated with land use plans. In satisfying the goal, state and local governments must satisfy requirements that are intended to promote development of a transportation system that is consistent with and supportive of planned land uses (and vice versa).
- Access Management Rule (OAR 734-051): The Access Management Rule, commonly referred to as Division 51, regulates the location, construction, maintenance, and use of approaches to state highway rights-of-way and properties under the jurisdiction of ODOT. These rules also govern the closure of existing approaches, spacing standards for approaches and driveways, medians, deviations from standards, appeal process, grants of access, and indentures of access.

8.2 Monitoring and Updates

It is the responsibility of ODOT to monitor this IAMP. An update to this IAMP should be completed within the next 5 to 10 years, given the amount of vacant land in the Coburg/I-5 interchange area.

This IAMP should be updated if/when any of the following occur:

- It is 5 to 10 years after the adoption of this IAMP.
- The *Coburg Comprehensive Plan* is amended, and such update affects the interchange.

- The *Lane County Comprehensive Plan* is amended, and such update affects the interchange.
- Development occurs in Coburg that is significantly different from the development assumptions in the *Coburg or Lane County Comprehensive Plans*.

APPENDIX A
Public Involvement

Coburg/I-5 IAMP Citizen Involvement Plan

TO: Terri Harding, ODOT
Petra Schuetz, Coburg Planning

COPIES: Coburg IAMP Project Management Team

FROM: Steve Perone, CH2M HILL
Kirsten Pennington, CH2M HILL

DATE: March 10, 2006; Revised April 1, 2009

Purpose of Citizen Involvement Plan

The Citizen Involvement Plan addressed Task 2.2 of the Coburg Interchange Area Management Plan (IAMP) Work Order Contract. The purpose of the Citizen Involvement Plan for the Coburg/I-5 IAMP was to ensure comprehensive stakeholder and community involvement throughout the planning process.

The Citizen Involvement Plan (CIP) was intended to support open communication among diverse stakeholders throughout the project. The CIP was designed both to offer information and education to the public regarding the project, and to gain input and perspectives from the community about the Coburg/I-5 IAMP.

This memorandum describes key public meetings and other public involvement techniques used for the Coburg/I-5 IAMP.

Key Public Meetings

Several meetings were held throughout the planning process to ensure full communication among all interested parties and review of project process:

- **Coburg City Council Meetings.** The Coburg City Council was involved in the project, including updates by staff and joint City Council/Planning Commission meetings. Joint City Council/Planning Commission meetings were held at 5:30 on 9/20/05 and 1/10/06 at the Coburg Municipal Courthouse. All meetings were open to the public.

- **Coburg Planning Commission Meetings.** The Coburg Planning Commission reviewed drafts of the planning materials throughout the project. The Planning Commission was updated by staff and via joint City Council/Planning Commission meetings. Joint City Council/Planning Commission meetings were held at 5:30 on 9/20/05 and 1/10/06 at the Coburg Municipal Courthouse. All meetings were open to the public.

- **Periodic Review Core Team (PRCT) Meetings.** The PRCT is comprised of the Coburg City Mayor, Planning Commission Chair, City Administrator, Planning Director, and Department of Land Conservation and Development (DLCD) Field Representative. The PRCT was updated throughout the project to ensure consistency among other periodic review/functional planning efforts and goals for the city, and to provide comment on project deliverables prior to release to the public-at-large. PRCT meetings were held at 5:30 on 8/23/05 and 1/3/06 at the Coburg Municipal Courthouse. Both meetings were open to the public.

- **Open House Meetings.** Open House meetings were held at three critical points during the project process. The first Open House was held at 5:30 on 9/27/05 at the Coburg Municipal Courthouse, and was intended to educate the public about the project, present existing conditions information, and gain input on the project findings. Sixteen people signed in at this Open House. Public comment forms were available in addition to the opportunity for oral comment. One comment form and one letter were received by the project team. (See attached for sign-in sheet, comment form, and letter). Primary comments included concerns regarding growth in employment and population to the east of I-5, access to local businesses in the IAMP area, and property impacts to business located in the IAMP area.

  The second Open House was held at 5:30 on 1/19/06 at the Coburg Municipal Courthouse, and was intended to present future transportation conditions analysis, examined alternatives and the selected alternative, and gain public input. Twelve people signed in at this Open House. Public comment forms were available in addition to the opportunity for oral comment. One letter was received by the project team. No comment forms were received. (See attached for sign-in sheet, comment form, and letter). Primary comments related to property impacts, phasing of elements of the plan, and access and circulation.

  The third Open House was held from 5:00-7:00 on 1/20/09 at Coburg City Hall. This meeting shared the recommended IAMP alternative with the public and property owners. Public comment forms were available in addition to the opportunity for oral comment. One comment form was received. 31 people attended. (See attached for sign-in sheet and comment form). Primary comments related to property impacts, phasing of elements of the plan, and access and circulation.

- **Lane County Board of Commissioners.** The Lane County Board of Commissioners was briefed by Lane County and ODOT staff on 6/8/05. This meeting was open to the public. A series of Council meetings, including worksessions, a hearing, and scheduled adoption will occur toward the conclusion of the project.

- **Lane County Planning Commission.** A working session will be held with the Planning Commission prior to presentation of a recommendation to the Board of Commissioners.

Project Participants

In addition to the public, multiple agencies were involved with the development of the Coburg/I-5 IAMP. These included the following:

- **Technical Advisory Committee (TAC).** The TAC consists of representatives from ODOT, City of Coburg, Lane County, Lane Council of Governments (LCOG), DLCD, Lane Transit District (LTD), CH2M HILL and Angelo Planning Group. The TAC held regularly scheduled monthly conference calls every third Wednesday to coordinate execution of project tasks and discuss project issues. The TAC chartering meeting was held on 9/15/04.

- **Oregon Department of Transportation (ODOT).** This project is funded through ODOT Region 2. The ODOT project manager was involved with the planning process throughout the project. ODOT staff members were also involved with review of project products.

- **City of Coburg.** The City was responsible for all coordination and logistics related to public meetings and meeting promotion in relation to the IAMP. The City also provided review and feedback on project products.

- **Project Consultants.** The project consultants, CH2M HILL and Angelo Planning Group, worked with all of the project participants to ensure open dialogue and delivery of the tasks identified in the project schedule.

Other Public Involvement Techniques

- **Newspaper Article.** An article was published in the Eugene Register-Guard regarding the project. (See attached for a copy of the article).

- **Stakeholder Contact List.** The City of Coburg maintained a contact list for the project, which included over 100 names. These citizens were notified prior to each public open house. The stakeholder list included Coburg residents and business owners with property in the Coburg IAMP study area.

- **Informational Materials regarding Public Involvement Plan and Project Process.** The City of Coburg maintained and distributed materials related to the project process, public involvement process, and project deliverables to interested parties.

- **Property Owner Meetings.** ODOT met with property owners and their representatives to discuss access and circulation issues at their request.

Attachments

JRH

December 13, 2005

COPY

Oregon Transportation Commission
Attn: Chairman Stuart Foster and Fellow Commissioners
355 Capitol Street NE, Room 135
Salem, OR 97301

RE: Coburg/ I-5 Interchange Improvements

Dear Chairman Foster and Fellow Commissioners:

I am here today representing GRC Tire Company (Firestone Tires) located in Coburg, Oregon. GRC Tires is supportive of ODOT's planned Coburg/ I-5 interchange improvements, subject to ODOT constructing adequate alternative access to GRC Tire's business site. ODOT is currently working on The Interchange Area Management Plan. GRC services large trucks (tractor trailers) that come to the site and has a fleet of service trucks that goes out to its customers. The current situation with the unsignalized intersection with Roberts Road and Pearl Street is becoming dangerous. Trucks must turn left across Pearl Street's on-coming traffic onto Roberts Road to access GRC's facilities.

GRC Tires understands ODOT's desire to eliminate this intersection with Pearl Street, located near the on-ramp of I-5 South. GRC's primary concerns for this future interchange improvement project are as follows:

1. That the new connection is fully built and in place prior to disconnecting or limiting access to Roberts Road from Pearl Street, so as to avoid disrupting their business operations.

2. Construct a cul-de-sac at the north termination of Roberts Street that is large enough in diameter to allow large tractor trailers to easily turn around without backing up.

3. The new access located further west should be at a signalized intersection.

4. The new access route lane width, street radii, dedicated turn lanes, etc. are adequate for large trucks that use the GRC facility.

5. Roberts Road is currently dead-ends at its southern end. ODOT should encourage the City of Coburg to plan for another access to south or west connecting to Lane County's highway system (i.e., Coburg Road).

Thanks for providing me this opportunity to speak to you about this future issue.

Yours truly,

Larry E. Reed

Larry E. Reed
Principal, Land Use Planner

Cc: Terri Harding – ODOT Region 2

Coburg/I-5 Interchange Area Management Plan (IAMP)
Open House Sign-in Sheet

Coburg IAMP Open House January 19th, 2006 5:30-7:00				
Name	**Address**	**Telephone**	**Email**	**Signature**
✓Cathy Engebretson	32703 E Locust Coburg	344-6150		[illegible]
✓Bill Stevenson	33401 Van Duyn Rd	343-6108		
✓Bob Reinen	32959 E Pearl	345-3205	bob@cyclebuy.com	[illegible]
✓Terry McMullen	33022 Van Duyn Rd	954-5729	terrypremiereugene@msn.com	Terry McMullen
✓Larry Reed	4765 Village Plaza Loop / Representing GRC Tires	867-1081	LARRYREED@JRHWEB.COM	Larry E Reed
✓John Thiel	32747 Lincoln	484-2887	jthiel@pscnet.com	John Thiel
✓Carolyn Kinman	91717 N. Coburg Rd, Eug	683-4579	SAVEOURVALLEY.COM	[illegible]
✓Ruth Linoz	3500 E. 17th Ave, Eug 97401	682-6112	ruth.linoz@ltd.org	Ruth E Linoz
✓Jeff Morton	2121 Franklin Blvd Eugene 97403	686-6658	jmorton@innclinic.com	[illegible]
✓Jim Anderson	P.O. Box 7608 Eug 97401	868-2880	[illegible]@[illegible]travel.com	[illegible]
✓Jim Lockard	32811 E Maple PO 8443 Coburg	484-6488	jimlockard@msn.com	[illegible]
✓John B Hoffmann	91239 N. Harrison P.O.Box 8498 Coburg	485-0017	JohnbHoffmann@msn.com	[illegible]

Coburg/I-5 Interchange Area Management Plan (IAMP)
Open House Sign-in Sheet

Coburg IAMP Open House
September 17, 2005 [illegible]

Name	Address	Telephone	Email	Signature
Patrick Carroll	91033 Roberts Rd.	345-4120		Patrick Carroll
MARK G. INGRAM	43100 Van Duyn	686-6141		Mark Ingram
Caroline Hubbard	34030 Van Duyn	342-4309		Caroline Hubbard

Design concept emerges from Coburg I-5 interchange

By CHRIS HAGAN
Of the News

COBURG — With rapid growth projected for this little city, planning has begun to replace the outdated Coburg Interstate 5 interchange.

Coburg held a community meeting Jan. 19 to discuss the Interstate Area Management Plan, the city's outline for changes to the interchange. At the meeting Steve Perone, Client Service Manager with the engineering firm CH2M Hill, laid out the plan and took questions from the nearly dozen attendees.

Though Perone emphasized that the plans are still very much conceptual, the design goal is to replace and expand the existing I-5 bridge to add pedestrian and bike space, install more turn lanes around the interchange and to connect Roberts Road at the intersection of Industrial Way and Pearl Street.

"There are still details to work out," Perone said, "but we know how we want the end result."

The plan is designed to accommodate traffic in the area as the city grows over the next 20 years. According to the 2004 Coburg Urbanization Study, the population of the city is expected to rise 300 percent by 2025, to 3,327. This is expected to strain the intersections around I-5, Perone said.

Because Coburg has a large number of daily incoming commuters for jobs at local motor home plants and other businesses just off I-5, the interchange experiences heavy traffic twice each day.

Two nearby intersections, Industrial Way and Pearl Street and the I-5 South ramps at Van Dyun Street, are projected to exceed Oregon Department of Transportation and Lane County standards for congestion if nothing is done to improve the interchange.

The city already has federal funding for the improvements. Its next step is to send a design to the planning commission and then to the city council for approval. But the city is being careful to solicit public comment on the plan.

In addition to the Jan. 19 meeting, a previous community meeting was held in September, and a joint session of the planning commission and city council to discuss the issue was held Jan. 11.

Though few citizens attended this most recent meeting, some had questions about the plan. Jim Lockard, who was a planning commission member in the late 1980s, questioned whether the reconfigured Roberts Road should cut through the Truck 'N' Travel property.

Terri Harding, the project coordinator for ODOT, restated that the plans still needed to be fleshed out and that feedback would still be sought out.

"We're just starting to get to that point," Harding said, "and those conversations will happen directly with the property owners."

Lockard said he thinks the plan also underestimates potential growth east of the freeway, and the improved interchange might soon have to be rebuilt to accommodate the growth.

"There's not enough lanes to cover the amount of traffic on the east and west side of that freeway," Lockard said after the meeting, maintaining that an inadequate design would be a waste of money.

Lockard said that his experiences with ODOT as a planning commission member were not pleasant. But despite his concerns over the plan, he is optimistic about the people involved.

"I have a good feeling that this time we'll get some cooperation and get some things worked out," Lockard said, "that they will get down to our level to help us make decisions."

Perone said that though there have been questions about the plan, there hasn't been much negative feedback.

"By and large, people aren't surprised," Perone said. "Everybody wants to see the improvements. We're going to get feedback throughout to make sure we're not sideways on anything."

Councilor and transportation liaison John Thiel attended the meeting and offered to pass any citizen comments on the plan to the city council.

"I don't own a business," Thiel said, "Only as citizens come to me can I provide direction. Otherwise, I just make sure it doesn't veer off course."

Thiel said he had been hoping for a better turnout, but that citizens often don't turn up at meetings until the last moment, especially for an issue with "such a long planning horizon."

Perone said he hopes to forward a plan to the planning commission sometime this summer. The plan would then have to pass through the city, county and state. Then an environmental review would be done, with final designs coming soon afterward. Perone said a best-case estimate would have construction starting in about six years.

Citizens still have time to comment. Harding said that there will probably be another joint planning commission, a city council meeting and then a final public hearing on the issue before the city council votes.

"The city will have to adopt a plan before the state can adopt a plan," Harding said.

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September 29, 2005

Ms. Kirsten Pennington
CH2M Hill
1100 112th Ave NE, Suite 400
Bellevue, WA 98004

Re: Coburg Interchange

Dear Kirsten,

We offer the following response to your request for comments from Tuesday's open house:

As you are aware, a primary purpose of commercial-highway zoning is to allow for the development of interchanges to service the users of the interstate highway system. Experience has shown that the highway traveler seeks interchanges and associated services that allow for expedient and safe ingress and egress.

In light of the above …

Major Issues (related to the Highway-Commercial District):

Of primary concern is maintaining access and traffic flow to and from existing businesses located along Pearl Street and Van Duyn. In addition, a new interchange should allow future development in the Coburg commercial-highway district to occur in a manner that optimizes the intended land use.

Also of concern is the future of the Coburg Shell. It is well known, by all involved, that relocating Roberts Road, as shown in the current Coburg TSP, will effectively close the Coburg Shell. What are ODOT's thoughts and/or plans for this facility?

Land Use (related to the Highway-Commercial District):

"Best-Use" for the highway commercial district in Coburg is those businesses that serve the interstate traveler. Retail operations that offer fuel, food, restrooms and lodging are the primary industries that interstate highway users look for at interchanges.

Current and future highway-commercial zoning criteria and local road improvements should be designed with the intent of allowing the Coburg Commercial-Highway District to develop such that available land is put to its "best-use".

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Coburg/I-5 Interchange Area Management Plan (IAMP)
Open House Sign-in Sheet

Coburg IAMP Open House
September 27, 2005 5:30-7:30

Name	Address	Telephone	Email	Signature
Jack-Joan Gelineau	90989 RidgeviewRd	541 6877760	Jackgelineau@aol.com	Joan Gelineau
Kathryn Olsen	90948 S. Willamette	344-0510	Kayolsen@worldnet.att.net	Kathryn Olsen
Bart Postor	34160 VanDuyn Rd	912-6947	abporegon@earthlink.net	[illegible]
Jim Anderson	32910 E Pearl St	868 2880	USAJ@TRUCKNTRAVEL.COM	[illegible]
Faith Nowatzke	91033 Roberts Rd	345-4120	fnowatzke@gcrtires.com	Faith Nowatzke
Bill Judd	32763 E. Dixon	345-6791	billjanjudd@Hotmail.com	B Judd
Celia Barry	LCPW 3040 N. Delta Hwy Eugene 97408	682 6935	you have	[illegible]
Don Harkins	91000 Ridgeview Rd	687-7581	DHARKINS@PCINW.com	[illegible]
Bill Stevenson	33401 Van Duyn	343-6108		[illegible]
Jeff & Rena Segebartt	91228 Coburg Rd / PO Box 8258 Coburg 97408	686-0301		R Segebartt
Mike Warner	Marathon Coach	On File	mwarner@marathoncoach.com	[illegible]
Faye Stewart	125 E 8th Ave. Eugene 97401	682-4203	Faye.Stewart@co.lane.or.us	Faye Stewart
Christian Watchie	1035 Monroe Eugene OR 97402	541-334-1784	Christian Watchie	transwatch@mindspring.com

97408

Other (related to the Highway-Commercial District):

The City of Coburg has much to gain from a well developed Highway-Commercial District:

Separation between residential and "freeway" services
Added tax base (urban renewal district)
Additional customer base for downtown business district
Food and fuel services for the community and the industrial park

Although it is logical to develop a new interchange structure and the associated local road system in a manner that "protects" the tax payer's investment, thought must also be given to the development of the surrounding property.

Zoning criteria and local road improvements need to allow for economical development of businesses and services that cater to the user of the "investment". If they don't, there is no need to make the investment in the first place.

Thank you for allowing us this opportunity to comment. We wish you the best in your effort to please all concerned.

Sincerely,

James S. Anderson, Jr.
Truck 'N Travel

cc j volta

Coburg/I-5 Interchange Area Management Plan
Open House – 09/27/05, 5:30-7:30
COMMENT FORM

Please fill out this comment form and return to the comment form envelope, or by mail or fax to:

c/o Kirsten Pennington
CH2M HILL
1100 112th Ave NE Suite 400
Bellevue, WA 98004
Fax: (425) 453-5005
Phone: (425) 468-3100

Feel free to draw on the map on the back side of this comment form.

Thank you!

(1) What do you think are the major issues related to the Coburg/I-5 interchange?

- We don't want to split our city, thus with any improved interchange, we do not want to see further development East of I-5 without first filling in and keeping retail to the heart (Willamette & Pearl)
- Preserve the bucolic atmosphere of Coburg. We are a "bedroom" community, not a "stand-alone" community.
- Keep the "viewscape" of the Coburg Hills

(2) Do you have any concerns regarding land use issues? If so, what are they?

- Do not want "Big Box" on Retail East of I-5
- Do not be confused with the Coburg Crossroads results that put the land east of I-5 into the 50 year UGB. This was done so that Coburg could have a "say" on the use of this land, NOT LANE CO. PLANNING COMMISSION. We want local control.
- The land owners (Stevenson) has been very vocal bringing consultants to these meetings for promoting I-5 east land - he does not speak for residents of Coburg, but seeks his best interest in changing his farmland to retail space.

(3) What do you feel is the best way to keep the community informed and involved?

City meetings are informative, but use care when taking "votes" at these meetings. Developers bring "their people" and often outnumber city or nearby county residents.

(4) Do you have any other questions? / comments

- Please consider Coburg Rd south as an access south from Roberts Rd industrial area, as a wholistic view, not just I-5 interchange
- I am concerned that the city's financial difficulties will "sell out" the area east of I-5 so that the city will see additional tax revenue. Please don't sell out our view of Coburg hills. Don't split our city for the lure of additional tax revenue.

Coburg/I-5 Interchange Area Management Plan (IAMP)
Open House Sign-in Sheet

Coburg IAMP Open House January 20, 2009 5:00-7:00				
Name	**Address**	**Telephone**	**Email**	**Signature**
Mike Stevenson	33401 Van Duyn Rd Eugene 97408	729-9306		
Scott Nunn	91193 N. Miller	321-0188		Scott Nunn
Ed Fish	37803 Upper Camp Cr Rd Spfd	321-5917		[illegible]
Pat Eagan	90855 Marguise	954.0239		
Jim Lockard	32811 E Maple Coburg	484-6488		[illegible]
PETER ASMUTH	2133 CENTENNIAL PLAZA, EUG. 97401	284-8611		[illegible]
Jim HANKS	3672 RiverPointe Dr Eugene 97408	687-1081	Jimhanks@Jrhweb.Com	[illegible]
John Stevenson	33401 Van Duyn Rd. Eugene 97408	343-6108		[illegible]
JIM ANDERSON	P.O. Box 7608 EUG OR 97401	868 2880	JSAJ@TRUCKNTRAVEL.COM	[illegible]
Ramon Fisher	37801 Upper Camp Cr Rd Spfd	914-8866		[illegible]
Katie Thiel	32747 E. Lincoln Way 97408	484-2887		K. Thiel
John Thiel	"	"		J. Thiel
Cathy Engebretson	32703 E Locust Coburg 97408	541-344-6150		C. Engebretson
Morris Gant	91295 Coburg Rd. 97408	503 686 2584		Morris C. Gant

Coburg/I-5 Interchange Area Management Plan (IAMP)
Open House Sign-in Sheet

Coburg IAMP Open House January 20, 2009 5:00-7:00				
Name	**Address**	**Telephone**	**Email**	**Signature**
BRAD CARLSEN	90531 DIAMOND RIDGE LP, EUGENE 97408	541-968-8458	BRAD@PACIFICEXC.COM	[illegible]
* BRIAN PECK	91223 RUSTIC CT. COBURG, 97408	541-465-1522	june9408@msn.com	[illegible]
DON WESTPHALL	32755 N LINCOLN, Coburg	541 485-7856		[illegible]
* Jack Harris	City of Coburg	541-682-7857		[illegible]
* Jerry Behney	City of Coburg - City Council	541-683-6544		Jerry Behney
LARRY REED	JRH 4765 VILLAGE PLAZA LOOP SUITE 201 EUGENE 97401	541-687-1081	LARRYREED@JRHWEB.COM	[illegible]
MARK BERNARD	3040 N. DELTA HWY	541-682-6930	MARK.BERNARD@CO.LANE.OR.US	[illegible]
Shelly Ashbeck	33282 Coleman Gateway Rd Harrisburg 97446	541-561-4499		[illegible]
* Judy Volta	32746 E Maple St Coburg 97408	541-684-8866	mayor.ci.coburg.or.us	[illegible]
BILL KLOOS	375 W. 4TH #204 EUGENE OR 97401	343-8596	BILLKLOOS@LANDUSEOREGON.COM	[illegible]
John Anderson	32910 E Pearl	868-2880		[illegible]
Charles Kreaik	1475 Green Acres Rd Spc 83	520-5593		[illegible]
* John Fox	32764 E. Dixon Coburg	343-0497	jFox@alvordtaylor.org	[illegible]
* Don Schnoele	City of Coburg	682-7871		[illegible]
* Mike Watson	91080 Abby Rd Coburg, OR	344-2411		[illegible]
Linda Egbert	32790 E McKenzie Coburg, OR	684-6953	legbert1@msn.com	[illegible]
Ed Wojakowski	32756 E. mill St coburg, OR			[illegible]

Coburg/I-5 Interchange Area Management Plan
Open House – 1/20/09, 5:00-7:00
COMMENT FORM

Please fill out this comment form and return to the comment form box, or by mail or fax to:

c/o Kirsten Pennington
CH2M HILL
2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Fax: (503) 736-2000
Phone: (503) 235-5000

Thank you!

(1) What do you think about the IAMP strategies? Do you have any concerns regarding any of the strategies? If so, what?

Lovely to meet you, although I missed the meeting, I can guess that the locals are not being honestly prepared for the future plans for the area.

WHERE IS THE WHOLE STORY?

THE MAPS SENT IN THE MAIL WERE ILLEGIBLE + poorly executed

(2) If you do have concerns with the IAMP, what would you propose to alleviate traffic congestion and address safety concerns in the future?

IMPROVE PUBLIC TRANSPORTATION

faster, cheaper, more efficient, daily routes
mini buses, trams subway, ...

(3) Do you have any other questions or comments? TOXIC AIR

WILL THERE BE NO LIMIT TO THE EXPANSION OF THE TRUCK STOP? ... NUMBER OF TRUCKS?
DO THEY HAVE POLLUTION TRAPPING DEVISES?

I AM VERY CONCERNED WITH
LIGHT POLLUTION,

WILL WE BE LOSING OUR BEUTIFUL VIEW OF THE STARS at night?
WILL we lose our view from Coburg of the Coburg HILLS?

NOISE pollution?

higher crime rates

LOSS of prime WILLAMETTE VALLEY FARMLAND

→ URBAN SPRAWL SHOULD BE COMBATED NOT ENCOURAGED
If disaster strikes + America needs to develop its own food resources, how will food be grown with no acreage?

APPENDIX B

Plan and Policy Review

APPENDIX B
Technical Memorandum # 2 – *Updated August 2005 & September 2007*

To: Terri Harding, ODOT
Petra Schuetz, Coburg Planning

From: Anita Yap, Coburg Planning Director – *Updated by Angelo Eaton & Associates*

Date: September 6, 2004 - *Updated August 12, 2005 & September 2007*

Subject: Coburg Transportation System Plan Update, Work Task # 3 & 3.1

ATTACHMENT A: Table 1. Coburg TSP and Local Ordinance Consistency with the State Transportation Planning Rule (OAR 660, Division 12).

Table 2. Coburg TSP and Local Ordinance Consistency with the Regional Transportation Plan for the Central Lane MPO

Angelo Planning Group revisions to this memorandum are denoted by underlined text.

This memo was updated in September 2007 by Angelo Planning Group, to include the tables in Attachment A, with the purpose of assessing the consistency of Coburg's Transportation System Plan (TSP) and implementing ordinances, such as Zoning Code and Subdivision Regulations with applicable requirements of the Transportation Planning Rule (TPR) (OAR 660, Division 12) and the Regional Transportation Plan (RTP) for the Central Lane MPO. Table 1 provides an analysis of the 1999 Coburg TSP, Zoning Code and Subdivision Regulations in the context of State Transportation Planning Rule. Table 2 compares the 1999 Coburg TSP with the 2004 RTP for the Central Lane MPO.

At the time that the 1999 TSP was adopted, Coburg was not part of the Central Lane MPO and was not required to implement regional transportation planning policy. Coburg became part of the MPO in 2003 but has not updated its TSP or implementing ordinances for consistency with the RTP. This analysis will help the City prepare for a future TSP update because it will identify inconsistencies between Coburg's adopted ordinances and State and regional planning efforts.

Introduction

The Coburg Transportation System Plan (TSP) was developed under the requirements of Statewide Planning Goal 12, Transportation Planning Rule, OAR 660-012. Coburg's TSP was adopted by the City and co-adopted by Lane County in 1999. The TSP was amended in 2001 to include the Coburg Downtown Plan: Improving Transportation Choices for Coburg. This was funded under a Transportation and Growth Management Grant (TGM) by the State of Oregon.

Coburg's current Comprehensive Plan was adopted in 1980. Most of the comprehensive plan elements, with the exception of the TSP, remain the same. Many things have changed since 1980 and Coburg is reviewing growth strategies and planning the construction of a new wastewater facility.

The public facilities element of Coburg's work program requires an update of the TSP. In addition to the TSP update, the parks and open space, water, wastewater, stormwater and community facilities sections of the comprehensive plan will be updated or added as new sections. The buildable land inventory, urban growth boundary (UGB) expansions and new plan and zoning designations will be considered in this process. The City will be updating the land development codes as well.

Technical Memo

Coburg received a grant award from TGM to update the TSP. This technical memo is listed as Work Task # 2 in the grant work program as Technical Memo #2. Technical Memo #2 will provide the following information:

A narrative that provides the following information from the review of plans, policies, regulations and standards:

1. Identifies relationships, conflicts and discrepancies within and between local, regional and state plans, policies and standards
2. Identifies inconsistencies between the TPR and existing City Plans and Policies
3. Reviews existing cross-section standards for private and public streets
4. Reviews proposed improvements to state, county, or local facilities
5. Reviews relevant traffic and modal studies
6. Reviews relevant environmental studies
7. Reviews land use policies and regulations
8. Reviews demographic and economic data, forecasts and plan as they relate to transportation/land development
9. Identifies how these local, regional and state plans, policies, regulations and standards impact the transportation system
10. Identifies local policies that may need amending
11. Reviews RTP to determine what policies apply and which do not apply to City

12. Interchange Refinement and Management: consistency with 1999 Oregon Highway Plan (OHP) and the access management spacing standards

City shall review the existing TSP and ensure that all other recently completed or on-going projects and plans including the Coburg-Interstate 5 Ramp project are included in the review. City shall list only projects that are funded and will be complete or in progress by the completion of the City TSP Update.

City shall complete a list of planned, funded projects from state and regional agencies, including recently completed projects not included in the current TSP, and completed and funded projects that are not contained within the current TSP. City shall integrate local proposed projects from periodic review and proposed projects from state and regional agencies including TGM projects (Smart Development and Downtown Planning). City shall provide update information to the Contractor.

1. Relationships with local, regional and state plans, policies and standards

Local, regional and state transportation plans include: Coburg Comprehensive Plan, Lane County TSP, Oregon Highway Plan. This section will review consistency, relationship and conflicts with these plans.

The following documents with their adoption dates are referenced in this technical memo:

- Coburg TSP, 1999
- Coburg Downtown Plan, 2001
- Coburg Community Vision, 2003
- Coburg Urbanization Study, 2004
- Coburg Parks and Open Space Master Plan (not adopted)
- Coburg Land Division Ordinance, No. 132-A, 19
- City of Coburg Bicycle and Pedestrian School Route Project 1995 (not adopted)
- Coburg Wetland Inventory, approved by Oregon Division of State Lands, 2000
- Coburg Smart Development Code Assistance (not adopted)
- Coburg Business Partnership, Lane Transit District
- Lane County TSP, 2004
- Lane County CIP, 2004
- Central Lane Metropolitan Planning Organization Unified Planning Work Program, 2004
- Central Lane Metropolitan Planning Organization Metropolitan Transportation Improvement Program, 2003

- Lane Economic Council: Needs and Issues List, 2004
- Oregon Highway Plan, 1999
- Statewide Transportation Improvement Plan

Coburg
The Coburg TSP is consistent with the Coburg Comprehensive Plan. The 1999 TSP (Ordinance No. A-131J) amended the transportation section in the Comprehensive plan by adding new policies and identifying transportation projects for Coburg. This plan was adopted in compliance with the Transportation Planning Rule. In addition, the existing TSP recommends a set of local zoning and subdivision codes which were adopted in 1999, Ordinance No. A-132A.

The Coburg Downtown Plan, adopted in 2001, Ordinance No. A-131-L, August 21, 2001. This document, developed by Lane Council of Governments (LCOG) for the City, provided a plan that listed issues, visions, strategies and priorities for downtown issues relating to transportation. The plan recommends design standards for downtown. However, these standards were not adopted in the zoning ordinance.

Coburg Community Vision, adopted May 20, 2003, Resolution # 2003-6, provides identification of issues, goals, policies and actions relating to transportation from a community-wide public participation process. This document is part of Coburg's Periodic Review public involvement element. The transportation element of the Coburg Community Vision project will be incorporated into Coburg's updated Comprehensive Plan and will be included in the TSP.

Lane County
Lane County has jurisdiction over Pearl Street and Willamette Street, which are the city's two main arterials through the city. These two streets were recently upgraded as part of Lane County's transportation capital improvement project list. The streets were widened, and sidewalks, streetlights, bike lanes and storm drainage facilities were constructed as part of Lane County's Capital Improvement Program.

Lane County's Transportation System Plan, adopted March 2004, provides references to Coburg. Lane County's TSP policies provide direction for the county to coordinate with small cities for applying city standards to local county roads (policy 1-h), access management, and Goal 3.

The County's TSP also promotes coordination with bicycle and pedestrian connections and coordination with other affected jurisdictions (Goal 7).

The Transportation and Land use section of the county's TSP, Goals 20 and 21 provide a framework for coordination with state, local and federal requirements. These goals and related policies under each goal provide the county direction for coordination, how to deal with inconsistencies between the County's TSP and other TSPs, criteria for review, and the review and adoption process.

Lane County's TSP, page 66, provides a table of Needs Assessment and Capital Expenditures as identified in each local city's TSP. Coburg is listed as having 3 completed projects with a total project cost of $1,450,000. This project cost included improvements to Pearl Street and Willamette Street, as mentioned above. These projects are also listed in Table 13: Road Fund Capital Expenditures for FY 84/85-FY 01/02 and Page 89, Projects on Lane County Roads: 20-year Project List.

Central Lane Metropolitan Planning

The City of Coburg was recently included in the Central Lane Transportation Management Area. The MPO is in the process of developing a Regional Transportation Plan (RTP) to meet federal requirements. Associated documents, including the Metropolitan Transportation Improvement Program includes Coburg projects under Programmed Projects for the planning area. The projects listed under STP-U funding include:

- Coburg TSP update: $60,000 with $10,000 local match
- Coburg Diamond Street overlay: $24,000 with $6,000 local match
- Coburg Locust Street improvements: $30,000 with $10,000 match

These projects are also listed on the statewide 2004-2007 Final Statewide Transportation Improvement Program (STIP).

Coburg is a member of the Metropolitan Policy Committee that makes policy decisions for the TMA on transportation issues. In addition, Coburg is staff to the Transportation Planning Committee.

Oregon Highway Plan

The 1999 Oregon Highway Plan has policies and actions under Policy 1B-land Use and Transportation that recognizes the role of both the State and local governments relating to the state highway system. The policy encourages state and local governments to work together and provides guidelines for land use and transportation goals. The actions provide direction to coordination with local jurisdictions on land use issues with the State of Oregon.

2. Inconsistencies between the TPR and existing City Plans and Policies

A preliminary review of the TPR and existing city plans indicate that there are several city policies that are inconsistent with the TPR. *In order to provide additional detail about TPR consistency and implementation, AEA created Table 1, located in Attachment A.*

3. Review of existing cross-section standards for private and public streets

The City of Coburg's land division ordinance, No. 132-A, provides the following standards for Minimum Right-of-way and Roadway Width, Section VI.B.2. for public streets:

Table 2. City of Coburg Street Standards, Ordinance No. 132-A

Type of Road	Minimum right-of-way	Minimum paving width
Minor arterial	60 feet	40 feet
Collector	60 feet	36 feet
Local	50 feet	28 feet
Cul-de-sac	50 feet	28 feet, 50 foot radius
Industrial/commercial	60 feet	44 feet
Alley (Ind/Comm only)	60 feet	20 feet

The City does not have standards for private streets. Coburg's land division ordinance, No. 132-A, Section VII.C.5, requires construction of sidewalks on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of the primary or secondary arterials, or special type industrial districts, the Planning Commission may approve a subdivision without sidewalks. The Coburg TSP, pages 52-54, provides proposed street standards. This section of the TSP recommends standards for new construction for residential, central business, highway commercial and industrial land uses. These proposed standards were not adopted within the land division ordinance. Nevertheless, these standards do provide guidance for the consideration for sidewalks construction.

Development of the Coburg TSP, which included numerous meetings with citizens, indicated a community preference for no sidewalks on residential streets. This information is illustrated in Figure 3, page 53 of the Coburg TSP. Coburg staff recommends that these street cross section standards be re-evaluated during development of the local street network plan portion of the TSP update.

4. Review of proposed improvements to state, county, or local facilities

Coburg
The Coburg TSP Chapter 5 identifies Plan Implementation and Capital Improvement Projects. This chapter lists short, medium and long range projects for the City of Coburg.

The capital project list, however, does not identify funding sources and priorities. This needs to be further refined in the TSP update.

Lane County
The I-5/Coburg Interchange improvement is listed as 17th by the Lane Economic Committee in the 2004 Needs and Issues Inventory: County Priority List for Infrastructure Projects.

The Lane County Capital Improvement Program, 05-09, adopted May 12, 2004 includes Coburg area improvement projects. The I-5/Coburg Interchange is listed in the Lane County CIP under the Payments of Other Government Agencies section for $2,500,000 (FY 06-07). The plan notes that this is a local match for federal earmark funding of $10 million for construction improvements to the interchange at Interstate 5 and Pearl Street in Coburg.

Central Lane Transportation Management Area
The City of Coburg was recently included in the Central Lane Transportation Management Area. The MPO recently developed a Regional Transportation Plan (RTP) to meet federal requirements. Associated documents, including the Metropolitan Transportation Improvement Program includes Coburg projects under the Programmed Projects section for the planning area. The projects listed under STP-U funding include:

- Coburg TSP update: $60,000 with $10,000 local match
- Coburg Diamond Street overlay: $24,000 with $6,000 local match
- Coburg Locust Street improvements: $30,000 with $10,000 match

State of Oregon
The projects listed by the Central Lane Transportation Management Area are also listed on the statewide 2004-2007 Final Statewide Transportation Improvement Program.

5. Review of relevant traffic and modal studies

- City of Coburg Bicycle and Pedestrian School Route Project 1995 (not adopted)
- Coburg Business Partnership, Lane Transit District

The City of Coburg commissioned a Bicycle and Pedestrian School Route Project through the Oregon Traffic Safety Division Technical Assistance Program in 1995. The study identifies “safe” bicycle and pedestrian routes to and from school, and makes recommendations for long and short term solutions. This plan was not officially adopted by the City of Coburg. In 2000, the Lane Council of Governments received a DLCD Technical Assistance Grant to coordinate a Transportation Demand Management (TDM) project with Lane Transit District (LTD), the City of Coburg and Coburg industrial businesses. The goal of this project was “to develop and implement, with the participation of the industrial area businesses, an effective transportation demand management program in the industrial sector of Coburg." LTD lists the “Coburg Business Partnership” project as an ongoing project as part of the Commuter Solutions program.

6. Review of relevant environmental studies

- Coburg Wetland Inventory, 2001.

The Coburg Wetland Inventory that was developed by Satre and Associates, was adopted by the Oregon Division of State Lands in 2000. The wetland inventory identifies riparian and wetland areas within the City of Coburg. Many of these areas are part of an open irrigation system, owned and maintained by the Muddy Creek Irrigation District. There are other wetland areas near the Interstate 5 right-of-way, which is part of an open drainage system near the freeway. New street development, as well as new land development, will need to comply with state requirements for fill and removal in these areas. The City currently does not have a local wetland ordinance.

7. Review of land use policies and regulations

The City adopted several plan policies and associated land development ordinance amendments with the development of the TSP. These policies, as well as several existing and proposed policies, will influence the final TSP. The proposed policies in the Coburg Crossroads Community Vision and the periodic review comprehensive plan map, draft 7-04, will also need to be evaluated to determine impact of future land development on the transportation system. The following plan policies from the Coburg Comprehensive Plan need to be reviewed in context within the new planning effort and changed circumstances:

Table 3. Review of Coburg Comprehensive Plan policies

Coburg Comprehensive Plan Policy	New planning effort Changed circumstances	Discussion
Goal 5: Open spaces, scenic and historic areas and natural resources Policy 1: Natural drainage way, open space preservation	Stormwater plan (underway) Parks and Open Space master plan (recently completed)	Plan policies should be included that preserve stormwater areas and coordinate with new street network drainage systems
Goal 5: Policy 13: urban appurtenances, including roadways should have uncluttered appearances	New local street network plan (underway)	Need to have policies that provide guidance on transitions from existing to new streets
Goal 5: Policy 21: wetlands	New wetland inventory (1999)	The wetland inventory needs to coordinate with the street network system
Goal 7: Natural Hazards and Disasters: Policy 2: grading	Stormwater plan, new UGB expansion areas (underway)	Should have implementing ordinances or standards that address grading and excavation
Goal 7: Policy 5: elimination of hazards relating to runoff from paving	Stormwater plan	Should have implementing ordinances or standards that address stormwater management
Goal 8 Recreational Needs: Policy 3: bikeways	Parks and Open Space Master Plan, new UGB expansion areas	Need to coordinate with other plans and provide implementation policies, plan map designations, etc
Goal 8: Policy 7: funding	Parks and Open Space Master Plan	Need to identify funding sources for bikeway/pedestrian projects identified in plan and reference in TSP
Goal 9: Economy of the City: Policy 5: off-street parking	New design standards for commercial/industrial (underway)	Need to provide policies relating to off-street parking that reflect design standards
Goal 10 Housing: Policy 9: off-street parking	New design standards for residential (underway)	Need policies that reflect design standards
Goal 11: Public Facilities: Policy 1: general	New UGB expansion areas	Need policies for new development
Goal 11:Policy 15: public facility adequacy	New UGB expansion areas, existing transportation conflicts, new population	Need policies and discussion on system needs, this existing policy should be deleted
Goal 13: Energy conservation: Policy 1: energy use implications	New energy technology	Need discussion and policies about energy conservation relating to fossil fuels and transportation systems and land use (smart development concepts)
Goals 2 & 14: Land Use and Urbanization: Policy 12: County	New County TSP adopted 2004	Need policies reflecting coordination with county TSP

The following plan polices in the Coburg TSP need to be reviewed and evaluated within the context of the new planning effort and changed circumstances:

Table 4. Review of Coburg TSP policies

Coburg TSP Policy	New planning effort Changed circumstances	Discussion
No policy in TSP regarding regional TSP	Coburg included within Central Lane TMA	LCOG completed RTP in late 2004. Coburg TSP needs to coordinate elements of RTP, plan policies, coordination, project lists
Policy 1.1 arterials	New County TSP (2004)	Need to coordinate policies with county TSP, all arterials are county
Policy 1.2 collector	Existing collector system redesignated as part of TMA process for STP-U funding	Need to make sure City has an adequate collector system and street standards respect neighborhood character
Policy 2.2 Protection of function of planned system	No street standards, implementing ordinances for protection	Need policies that provide direction for development of standards
Policy 2.4 Require dedication at time of land development	New case law regarding dedication requirements (Dolan)	Need to provide policy and guidelines to justify dedication at time of development
Policies 3.1 and 3.2 Aesthetics	Most street improvements at major thoroughfares have been improved (Pearl & Willamette)	Update policies
Policies 4.1, 4.2. 4.3 Transit	Increase employment in industrial sector, LTD Coburg Business Partnership project	Update policies to reflect current work, recommend implementing actions
Policies 5.2 & 5.3 Bikeways and pedestrian accessways	Parks and Open Space Plan, new UGB expansion areas	Need to coordinate with other plans, add policies as needed
Policies 6.1 & 6.2 Stormwater	Stormwater Master Plan (underway)	Need to coordinate with other plan, add policies for implementation and standards
Policy 9.2 Traffic calming	New urban growth boundary areas	Need implementing policy language, standards, ordinances
Policy 9.5 Residential sidewalks	New urban growth boundary areas	Need to further refine when and where sidewalks are needed, policy unclear and implementing ordinance reflects this
Policy 11.1 Drainage systems	Stormwater Master Plan	Need to coordinate new plan and policies
Policy 12.1 Traffic calming (see above, policy 9.2)	See above	See above
Policy 13.1 I-5 Interchange	IAMP	Need to incorporate references, polices,

The following land development ordinances need to be reviewed and evaluated within the context of the new planning effort and changed circumstances:

Table 5. Review of Coburg Land Development Ordinances

Coburg Land Development Ordinances	New planning effort Changed circumstances	Discussion
Subdivision ordinance	Lane County TSP	Street standards, access management
Subdivision ordinance	Smart Development code work	Access way standards, street standards, sidewalk provisions
Subdivision ordinance	Coburg Downtown Plan	Need implementing ordinances
Subdivision ordinance	Coburg wetland inventory	Need to provide design standards, criteria for streets/wetland interface
Subdivision ordinance	IAMP (underway)	Incorporate any ordinance standards relating to access management, interchange impact, may need requirements for TIA for new development, criteria, etc
Subdivision ordinance	Parks and Open space master plan	Need to coordinate pedestrian way connection requirements, provide criteria for review and impact analysis requirements
Subdivision ordinance	Stormwater master plan (underway)	Incorporate standards, grading requirements, preservation of drainageway requirements for stormwater management
Subdivision ordinance	Periodic review/design standards/smart development	Street design standards need revision to reflect design standards/smart development work
Zoning Ordinance	Coburg Downtown Plan	Need implementing ordinances
Zoning Ordinance	Stormwater master plan (underway)	Incorporate standards, grading requirements, preservation of drainageway requirements for stormwater management
Zoning Ordinance	IAMP (underway)	Incorporate any ordinance standards relating to access management, interchange impact, may need requirements for TIA for new development, criteria, etc
Zoning Ordinance	TSP update	May need to have zoning requirements for special setbacks along specific streets, etc

8. Review of demographic and economic data, forecasts and plans as they relate to transportation/land development

The 2000 census provides demographic data on the community (see attachment A). Coburg's Urbanization Study, adopted by Resolution 2004-1, provides an Economic opportunities analysis in Chapter 5 (Attachment B). The economic forecast for Lane County shows that this area is expected to grow more slowly than population for Oregon as a whole. The long tem population forecast by Oregon's Office of Economic Analysis predicts Lane County's population will grow at an annual average rate of 0.9% between 2000 and 2040, compared to a rate of 1.1% for Oregon over the same period (Coburg Urbanization Study, page 5-13). Coburg's coordinated population projection for 2025 is 2,950, however, the community has selected a target population of 3,327 in 2025. This population number was selected as a preferred growth alternative in the Coburg Crossroads Community Vision, 2003.

The population growth in Coburg is anticipated based on the construction of a wastewater facility in the near future. The city's population has been artificially low, due to the amount of land needed to accommodate individual on-site subsurface waste disposal (septic) systems. Once the wastewater system is constructed, and due to the proximity of Coburg to the Eugene/Springfield metropolitan area and interstate access, Coburg is expected to grow at a faster rate than historic population growth. Citizens determined that an employment and housing balance is important to the continued sustainability of the community.

Employment growth is expected to grow in the Lane County and Coburg area for the RV industry. RV shipments between 1980 and 2002 show an average rate of 5 percent per year increase. Coburg has several distinct advantages for continued growth in the economic sector, due to the proximity of the Eugene/Springfield metropolitan area and interstate access, as well as the established RV industry manufacturers.

The employment sector in Coburg has a significant impact on land use and transportation systems, both locally and regionally. Currently, the employment in the industrial area of Coburg outnumbers permanent residents 3:1. The current population estimate for 2003 is 1,050, while the employment number in the industrial sector is estimated at 3,500. The employment numbers vary, based on the time of year and operational requirements of the industry. These types of manufacturing industries attract associated businesses, such as RV sales and service.

The major land use and transportation issue facing economic growth in Coburg is related to planning for the Coburg/Interstate 5 Interchange. Based on evaluations by the ODOT, this interchange needs reconstruction to accommodate increased traffic and safety issues in the interchange area. The TSP identified a refinement plan of the interchange in Appendix A, Coburg/Interstate 5 Refinement Plan. Since the development of this plan, several factors have changed that require re-evaluation of this facility. ODOT, in cooperation with the City of Coburg and Lane County is developing an Interchange Area Management Plan (IAMP) that will evaluate this state facility. It is likely that this plan will be incorporated by reference into the Coburg TSP update.

9. Identification of how local, regional and state plans, policies, regulations and standards impact the transportation system

This review is addressed in #1 **Relationships with local, regional and state plans, policies and standards** above (page 2).

10. Identification of local policies that may need amending

The Coburg TSP identifies two areas for further studies in Chapter 5, Plan Implementation (page 67). Street extensions and layout are shown on Map 14 of the TSP. This plan is out-of-date and will be re-evaluated with the TSP update and the local street network plan that will be developed by the consultant. Driveway spacing near the I-5 interchange to the east and west along Van Duyn and Pearl Street do not meet spacing standards included in the Oregon Highway Plan. In addition, several parcels to the east of Interstate 5 and south of Van Duyn Road have been annexed and are not part of the TSP or local street network and will need to be included in the update.

The TSP also identifies two areas, “Southern and Northern Connectors” for further study. These alternative routes will need to be evaluated in the TSP update and recommendations if these are viable options will need to be presented to the city for decision makers.

The Coburg Periodic Review process will also need to be incorporated into the TSP update. The City is anticipating additional population, housing and employment in the area and is expecting additional Urban Growth Boundary (UGB) expansions to accommodate this growth. The new UGB expansion areas will need to be included in the TSP update for local street network planning, traffic analysis and findings of consistency with the Transportation Planning Rule.

New land development ordinances, such as street cross-sections, will need evaluation (see above). Additionally, new ordinance and plan policy text will need to be developed to incorporate findings and policies for the TSP.

All city policies will need to be evaluated to determine their relevancy to the changed circumstances of the potential for population and employment increase, the annexation of property on the east side of the interstate, construction of a wastewater facility, periodic review process, and new state and local street projects not anticipated by the TSP.

11. Review of RTP to determine what policies apply and which do not apply to City

The MPO for this area, Lane Council of Governments, recently developed a Regional Transportation Plan to meet federal regulations relating to the establishment of the Transportation Management Area (December 2004). *In order to provide additional detail about RTP consistency, AEA created Table 2, located in Attachment A.*

12. Interchange Refinement and Management: consistency with OHP and the access management spacing standards

The Interchange Area Management Plan (IAMP), under development at this time, will provide the information to determine consistency with OHP and access management spacing standards. It is already acknowledged that access points east and west of the interchange do not meet spacing standards for the current interchange ramp terminals. The interchange plan should address how to accommodate existing uses, redevelopment, and new development in these areas. The TSP update should coordinate the local street network plan to assure that state and county standards are met. Recommendations for transportation policies and coordination should be provided with the interchange plan.

Conclusions

Based on the evaluation within this technical memo, Coburg's TSP and associated land use documents (land development codes, comprehensive plan policies) will need updating and refinement to reflect changed circumstances. The changed circumstances include annexation of property to the east of the interchange, Coburg's periodic review process for expansion of the urban growth boundary, construction of a wastewater treatment facility, and several new studies that have been completed since the adoption of the TSP. The IAMP will need to be closely coordinated with the City and Lane County to assure that access management, local street network plans and associated TSP polices reflect supporting the future reconstruction of the interchange and state highway policies.

CONSISTENCY CODE

● = Consistent with TPR
◑ = Partially Consistent with TPR
○ = Not Consistent with TPR

ATTACHMENT A

Table 1. 1999 Coburg TSP and Local Ordinance Consistency with Applicable Requirements of the State Transportation Planning Rule (OAR 660, Division 12)

TPR Requirements	Code	Ordinance Consistency Finding
OAR 660-012-0015: Preparation and Coordination of the TSPs		
(3) Cities and Counties shall prepare, adopt, and amend local TSPs for lands within their planning jurisdiction in compliance with this division.		
(a) Establish a system of transportation facilities and services to meet identified local needs and that are consistent with adopted elements of regional and state TSPs.	◑	**Chapters 2 and 3** of the TSP document Coburg's existing transportation conditions and future conditions and needs. **Chapter 5** contains the TSP, which provides a system of transportation facilities and services to meet these needs. The Coburg TSP is not consistent with the RTP as Coburg only recently became part of the MPO. See Table 2 for a discussion of consistency with the RTP.
(b) Coordinate the preparation of the local TSP to assure regional and state transportation needs are met.	○	The 1999 Coburg TSP was adopted prior to the 2004 RTP. Coburg became part of the MPO in 2002, and so the TSP needs to be updated to be consistent with the RTP. When the regional TSP is updated, regional and state transportation needs need to be considered
(4) Cities shall adopt regional and local TSPs as part of their comprehensive plan.	●	The 1999 TSP is adopted as part of the Comprehensive Plan.
(5) TSPs preparation shall be coordinated with affected state, federal, and regional agencies; local governments; special districts; and private providers of transportation services.	●	The 1999 Coburg TSP was coordinated to be consistent with the policies, goals, and needs of affected agencies, including ODOT, LCOG, and Lane County through the establishment of a Transportation Advisory Committee (TAC).

TPR Requirements	Code	Ordinance Consistency Finding
OAR 660-012-0020: Elements of Transportation System Plans		
(1) Establish a coordinated network of facilities to serve state, regional, and local transportation needs.	◑	The planned transportation facilities in the 1999 TSP were coordinated with the needs of state, regional, and local agencies identified. Coburg was not part of the Central Lane MPO at the time of TSP adoption and the TSP is not consistent with the RTP.
(2) The TSP shall include the following elements:		
(a) Determination of transportation needs per OAR 660-012-0030.	●	Coburg's 20-year transportation needs are documented in **Chapter 3** of the 1999 TSP.
(b) A road plan for a system of arterials and collectors and standards for the layout of local streets and connections.	●	The Coburg street plan is documented in **Chapter 4**, of the 1999 TSP.
(c) A public transportation plan.	○	There is no proposed public transportation plan in Coburg's the 1999 TSP. Coburg is served by Lane Transit District, which is limited to commuter service.
(d) A bicycle and pedestrian plan consistent with ORS 365.514.	●	Coburg's bicycle and pedestrian plans are documented in **Chapter 4** and illustrated in Map 15 of the 1999 TSP.
(e) An air, rail, water, and pipeline plan that identifies public use airports, mainline and branchline railroads, port facilities, and major regional pipelines and terminals.	●	The air, rail, water, and pipeline system plans are documented in **Chapter 4** of the 1999 TSP.
(g) A parking plan in MPO areas per OAR 660-012-0045 (5)(C)	○	At the time of the 1999 TSP adoption, Coburg was not part of the Central Lane MPO and therefore does not include a parking plan. **Recommendation:** This should be addressed in a future TSP update
(h) Policies and land use regulation for TSP	◑	The 1999 TSP and Coburg Development Code contain policies

TPR Requirements	Code	Ordinance Consistency Finding
implementation per OAR 660-012-0045.		and land use regulations for TSP implementation per OAR 660-012-0045, though they may need some updating. See below.
(3) Each element identified in (2)(b)-(d) shall contain:		
(a) An inventory and assessment of existing and committed facilities and services by function, type, capacity, and condition.	●	An inventory of Coburg's existing and committed transportation facilities is documented in **Chapter 2** the 1999 TSP.
(b) A system of planned facilities, services, and major improvements.	●	A system of planned facilities, services, and major improvements is documented in **Chapter 4** of the 1999 TSP.
(c) A description of planned facilities, services, and major improvements including a map showing general location of proposed improvements, minimum and maximum right-or-way widths, and a description of facility or service.	●	**Chapter 4** of the 1999 TSP contains a description of Coburg's planned facilities, services, and major improvements, as well as minimum and maximum right-of-way widths.
(d) Identification of the provider of each facility or service.	●	The responsible agency/provider of each facility in the 1999 TSP is documented in **Chapter 5**.
OAR 660-012-0025: Complying with the Goals in TSP Preparation		
(1) Adoption of a TSP shall constitute the land use decision regarding the need for transportation facilities services, and major improvements and their function, mode, and general location.	●	The 1999 TSP was adopted through the legislative process.
(2) Findings of compliance with applicable statewide planning goals and comprehensive plan policies shall be developed in conjunction with adoption of the TSP.	●	The 1999 TSP was adopted through the legislative process with required findings of compliance with the statewide planning goals and local comprehensive plan policies.
OAR 660-012-0030: Determination of Transportation Needs		
(1) The TSP shall identify transportation needs including:		

TPR Requirements	Code	Ordinance Consistency Finding
(a) State, regional, and local transportation needs;	◑	The State and local transportation needs were documented in **Chapter 3** of the 1999 TSP. Regional transportation needs were not accounted for, as Coburg was not part of the Central Lane MPO at the time of TSP adoption. Regional needs will need to be accounted for in a future TSP update.
(b) Needs of the transportation disadvantaged;	○	The needs of the transportation disadvantaged are not addressed in the 1999 TSP.
(c) Needs for the movement of goods and services.	○	The needs for the movement of goods are not addressed in the 1999 TSP.
(3) Within UGBs the determination of transportation needs shall be based upon:		
(a) Population and employment forecasts and distributions consistent with the acknowledged comprehensive plan. Forecasts shall be for 20 years and, if desired, longer periods;	●	20-year population, household and employment forecasts were developed by the City of Coburg, consistent with the comprehensive plan. This information is documented and summarized in **Chapter 3** of the 1999 TSP.
(b) Measures adopted pursuant to OAR 660-012-0045 to encourage reduced reliance on the automobile.	●	See findings for OAR 660-012-0045, below.
(4) In MPO areas determination of transportation needs shall be based upon accomplishment of the requirement in OAR 660-012-0035(4) to reduce reliance on the automobile.	○	Coburg was not part of the Central Lane MPO when the 1999 TSP was adopted. A future update of the TSP needs to ensure that transportation needs are based upon the requirements for reducing reliance on the automobile in OAR 660-012-0035(4).
OAR 660-012-0035: Evaluation and Selection of Transportation System Alternatives		
(1) The TSP shall be based upon evaluation of potential impacts of system alternatives that can reasonable be expected to meet the identified needs at reasonable cost. The following shall be evaluated as components of the	○	The 1999 TSP does not contain documentation regarding system alternatives.

TPR Requirements	Code	Ordinance Consistency Finding
system alternatives:		
(a) Improvements to existing facilities or services;	●	Reasonable and cost effective solutions to existing facilities were evaluated before new facilities were considered for the 1999 TSP.
(b) New facilities and services including different modes of travel;	●	Pedestrian, bicycle, carpool and vanpool modes were considered as part of the new facilities and services proposed in the system alternative.
(c) Transportation system management measures;	○	The 1999 TSP does not mention transportation system management measures as being anticipated in the development of the TSP. **Recommendation:** A future update of the TSP needs to include TSM measures in the development of the TSP.
(d) Demand management measures;	○	The 1999 TSP does not mention transportation demand management measures as being considered in the development of the future travel demand forecasts. **Recommendation:** A future update of the TSP needs to include TDM measures in the development of the travel demand forecasts.
(e) A no-build system alternative required by the national EPA.	○	A "no-build" system alternative and its inadequacies to meet the future transportation needs of Coburg is not included as an alternative in the 1999 TSP. **Recommendation:** A future update of the TSP needs to include analysis of a "no-build" alternative.
(3) The following standards shall be used to evaluate and select alternatives:		

TPR Requirements	Code	Ordinance Consistency Finding
(a) The transportation system shall support urban and rural development by providing types and levels of facilities and services appropriate to serve the land uses identified in the acknowledged comprehensive plan;	●	The 1999 TSP is based on the current, acknowledged comprehensive plan and provides enhancement to the integration of transportation and land use systems.
(b) The transportation system shall be consistent with state and federal standards for the protection of air, land and water quality;	●	The goals and objectives in **Chapter 4** were used to evaluate and select transportation projects and the preferred alternative. The goals ensure that the TSP is consistent with state and federal standards for the protection of air, land and water quality.
(c) The transportation system plan shall minimize adverse economic, social, environmental, and energy consequences;	●	The standards used to evaluate and select transportation alternatives ensure that the TSP minimizes adverse economic, social, environmental, and energy consequences.
(d) The transportation system shall minimize conflicts and facilitate connections between modes of transportation.	●	The standards used to evaluate and select transportation alternatives ensure that the TSP minimizes conflicts and facilitates connections between modes of transportation.
(e) The transportation system plan shall avoid principal reliance of any one mode of transportation and reduce principal reliance on the automobile.	●	The standards used to evaluate and select transportation alternatives ensure that the TSP avoids principal reliance of any one mode of transportation and reduces principal reliance on the automobile.
(4) In MPO areas TSPs shall be designed to achieve the objectives listed below for reducing automobile vehicle miles traveled per capita:		
(a) In MPO areas of less than 1 million population, 5% reduction within 20 years of adoption of a plan;	●	Coburg was not part of the Central Lane_MPO when the 1999 TSP was adopted. **Recommendation:** A future update of the TSP needs to address these requirements for reducing VMT per capita.

TPR Requirements	Code	Ordinance Consistency Finding
(c) Through subsequent planning efforts, an additional 5% reduction within 30 years of adoption of a plan.	●	Coburg was not part of the Central Lane_MPO when the 1999 TSP was adopted. **Recommendation:** A future update of the TSP needs to address these requirements for reducing VMT per capita
(7) Local TSPs shall include interim benchmarks to assure satisfactory progress towards meeting the requirements of this Chapter at five-year intervals. Local governments shall evaluate progress in meeting interim benchmarks at five year intervals from adoption of the TSP.	●	The City of Coburg needs to continue to coordinate closely with Lane County, LCOG, ODOT and other planning partners to evaluate progress toward established regional benchmarks.
OAR 660-012-0040: Transportation Financing Program		
(1) For areas within an urban growth boundary containing a population greater than 2,500 persons, the TSP shall include a transportation-financing program.	●	As the population of Coburg is less than 2,500 persons, the requirement for a transportation financing program and subsequent requirements in sections (2), (3), (4) and (5) do not apply. However, **Chapter 6** of the 1999 TSP includes a transportation financing program identifying short-, medium- and long-range projects.
OAR 660-012-0045: Implementation of Transportation System Plan and City of Coburg Zoning Code Compliance		
(1) Each local government shall amend its land use regulations to implement the TSP.		
(b) To the extent, if any, that a transportation facility, service or improvement concerns the application of a comprehensive plan provision or land use regulation, it **may** be allowed without further land use review **if** it is permitted outright **or** if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment.	○	Transportation facilities, services and improvements are addressed as permitted, conditional or other uses as follows in Article VII (District Regulations) of the CZC: **Parks, Recreation and Open Space (PRO):** This district allows "bike paths and pedestrian walkways" as a permitted principal use. The following transportation-related definitions are contained in the Coburg Subdivision Regulations (CSRs): *Alley, Arterial Street, Block length, Chicane, Collector Street, Cul-de-sac, Curb*

TPR Requirements	Code	Ordinance Consistency Finding
		Extensions, Lane, mid-block, Local Street, Multi-use Path, Road or Street, Right-of-way, Special Paving, Traffic Circle. In addition, the TSP contains transportation-related definitions. **Recommendation:** For clarity, the definitions section of the CZC should be modified to include these terms and for transportation facilities **and** uses called out in the TPR including pedestrian, bicycle and transit amenities. As defined, transportation-related uses should be included as an outright use in each of the City's zones where appropriate or as conditional uses.
(c) Local governments shall provide a review and approval process that is consistent with **660-012-0050** (Transportation Project Development). Local governments shall amend regulations to provide for consolidated review of land use decisions required to permit a transportation project.	○	The CZC does not contain a process for review and approval of transportation projects that is consistent with 660-012-0050 or regulations to provide notice to ODOT or LCOG for review of any land use decisions. **Recommendation:** The City should amend Article IX, Section A (3) to include notice to ODOT and LCOG. The City should develop/document a clear and objective review process for the approval of land use decisions required to permit a transportation project.
(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities for their identified functions.		
(a) Access control measures.	◑	Article VIII (Supplementary District Regulations) Section 1 (A),"Visibility at Intersections and Access from Driveways" requires residential driveways to be located to optimize intersection operation and provide access from the street with the lowest functional classification. Section 2 "Structures and Properties to Have Access" states that all buildings shall be on a lot adjacent to a public street or with access to an approved private street, and all structures shall be so located on lots as to provide safe and convenient access for servicing, fire protection and required off-street parking. Properties abutting only collector or arterial streets should share access with neighboring

TPR Requirements	Code	Ordinance Consistency Finding
		properties where feasible. **Recommendation:** At a minimum, the CZC should include driveway and public road spacing, median control and signal spacing standards. These standards should also be included in public works engineering standards and be consistent with the functional classification of roads.
(b) Standards to protect the future operations of roadways and transit corridors.	●	Section VII of the Coburg Subdivision Regulations (CSRs), "Design Standards" contains provisions to protect the future operation of roadways. Section (B) (5), Future Extensions of Streets, requires streets to be extended to the boundary of a subdivision or partition. **Recommendation:** Amend the CSZ to include additional standards to protect future operation of roads, as well as major transit corridors, such as those provided in the ODOT TGM program's "Model Code for Small Cities."
(c) Control of land use around airports.	●	No airports are located within or affect the airspace inside the Coburg UGB
(d) Coordinated review of future land use decisions affecting transportation facilities, corridors or sites.	○	The CZC should provide a process for coordinated review of future land use decisions that affect transportation facilities. **Recommendation:** The City should consider adding language to Article X, Administration and Enforcement, Section G. Comprehensive Plan Amendments, to specifically include land use reviews for transportation-related facilities. Notification to ODOT, for land use amendments that affect state facilities, to affected local jurisdictions, and to relevant transit providers/departments should be included in this section to ensure a "coordinated review."
(e) Process to apply conditions to development proposals in order to minimize impacts and protect transportation	◑	The conditional use process in Article X, Section C (4) of the CZC allows the Planning Commission to apply conditions to a Conditional Use decision, including *(g) modify access provisions*

TPR Requirements	Code	Ordinance Consistency Finding
facilities.		*for safety reasons.* In addition, section (p) allows for *"additional conditions which may be necessary to implement policies of the Coburg Comprehensive Plan and the City of Coburg Transportation System Plan."* **Recommendation:** The City should reassess standards for each of the residential and commercial zoning categories to indicate that future road usage is based on the maximum density allowed by zone. See the TPR requirements in Section 660-012-0060 below.
(f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of: land use applications that require public hearings, subdivision and partition applications, applications which affect private access to roads, applications within airport noise corridor and imaginary surfaces which affect airport operations.	◑	CZC Article XI Section A (3) details notification procedures for public hearings; only 45-day notice to DLCD is specified, while no specific notification to ODOT or other agencies is required. **Recommendation:** The City should amend the CZC to include a requirement that ODOT and other affected public agencies (DEQ, Oregon Aviation Administration, etc.) receive notification of land use applications that meet the descriptions in this TPR requirement. Similarly, notification should be provided to other jurisdictions if an action by the City potentially affects another jurisdiction's road or facility.
(g) Regulations assuring amendments to land use designations, densities, design standards are consistent with the function, capacities, and levels of service of facilities designated in the TSP.	●	The CZC does not contain provisions ensuring that amendments be consistent with the designated facilities in the TSP. **Recommendation:** The City should amend the CZC to clarify that approval of amendments to land use designations, densities and design standards must be consistent with the planned transportation system, as adopted in the Coburg TSP. Sections that may be appropriate for this revision include Article X, Administration and Enforcement and the CSRs. Language that governs zone changes and plan amendments should be revised to include reference to TPR Section –0060 (see Section 660-12-0060 below), or should include language from this section that states under what circumstances a plan or land use regulation amendment *"significantly affects a transportation*

TPR Requirements	Code	Ordinance Consistency Finding
		facility" and the mitigation that is required. The options for ensuring that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP should be included in the CZC, or the CZC should reference the relevant TPR section.
(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth in 660-012-0040(3)(a-d):		
(a) Provide bike parking in multifamily developments of 4 units or more, new retail, office and institutional developments, transit transfer stations and park-and-ride lots.	◑	Bicycle Parking requirements are outlined in Article VIII, Supplementary District Regulations, Section B (5). Bicycle parking is required for all developments that require a Site Plan, including multi-family residential development and non-residential. Site Plan review applies in the C-1, C-2 and LI Districts and to proposed demolition of historic structures. The CZC does not address transit stations or park and ride lots. **Recommendation:** The City may want to consider defining the uses that trigger the bicycle parking requirement, rather than depending on Site Plan review, which defines applicability by the District in which development occurs. If transit transfer stations or park and ride lots are planned for Coburg as part of a future TSP update, corresponding changes should be made to the bicycle parking requirements in the CZC.
(b) Provide "safe and convenient" (per subsection 660-012-0045.3(d)) pedestrian and bicycle connections from new subdivisions/multifamily development to neighborhood activity centers[1]; bikeways are required along arterials and major collectors; sidewalks are required along arterials, collectors, and most local streets in urban areas except controlled access roadways	◑	**Pedestrian Connections:** CZC Article VIII, Section D, "Pedestrian Access and Circulation" requires pedestrian access to *transit facilities* from new commercial, employment and multifamily residential development. Redeveloped sites must also provide "safe and accessible" pedestrian access to *transit facilities*. Internal pedestrian and bicycle circulation systems must connect with external existing and planned systems. Section VII (B) (2) - Sidewalks are required on all Arterial streets but are not shown as a requirement for Collector or Local

[1] "Neighborhood activity centers" is defined in the TPR as including, but not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers.

TPR Requirements	Code	Ordinance Consistency Finding
		streets. Section VII (C) (5) "Sidewalks" requires that sidewalks be installed on both sides of a public street and in any special pedestrian way within a subdivision, except that in the case of the primary or secondary arterials, or special type industrial districts, the Planning Commission may approve a subdivision without sidewalks if alternative pedestrian routes are available **Recommendation:** Expand CZC Article VIII, Section D to include requirements for pedestrian and bicycle connections from multifamily residential to *all neighborhood activity centers* – not just transit facilities. In addition, the City should include a bikeway and sidewalk requirement for Collector streets.
(c) Off-site road improvements required as a condition of development approval must accommodate bicycle and pedestrian travel, including facilities on arterials and major collectors	◑	As noted above, the conditional use process in CZC Article X, Section C (4) allows the Planning Commission to apply conditions to a Conditional Use decision, including *(g) modify access provisions for safety reasons and (p) additional conditions which may be necessary to implement policies of the Coburg Comprehensive Plan and the City of Coburg Transportation System Plan."* The CZC does not have a specific process for applying development conditions in order to require off-site road improvements to accommodate bicycle and pedestrian travel. **Recommendation:** The CSRs should be amended to ensure that when conditions of approval require off-site improvements they accommodate bicycle and pedestrian travel.
(e) Provide internal pedestrian circulation within new office parks and commercial developments	○	**Design standards should** include provisions for "Pedestrian and Multi-Use Pathways" that apply to **all** new development except single family residential and particular topographical situations.
(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been made that a public transit system is feasible, local governments shall adopt land use and	●	The TPR defines "Urban Area" as lands within an urban growth boundary, two or more contiguous urban growth boundaries, and urban unincorporated communities as defined by OAR 660-022-0010(9). As the population of Coburg is less than 25,000 this provision does not apply.

TPR Requirements	Code	Ordinance Consistency Finding
subdivision regulations as provided in (a)-(g) below:		
(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:		
(a) Allow transit-oriented developments (TODs) on lands along transit routes;	●	According to the TPR, a "transit-oriented development" means 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) A mixed-use center at the transit stop, oriented principally to transit riders and pedestrian and bicycle travel from the surrounding area; (b) High density of residential development proximate to the transit stop sufficient to support transit operation and neighborhood commercial uses within the TOD; (c) 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. Currently, the amount of public transit service provided to Coburg by Lane Transit District is limited. The zoning along transit routes includes Traditional Residential, CBD, Highway Commercial and Light Industrial. The HC and LI districts are fairly limited in terms of uses and are not likely to change. The currently adopted "Central Business District" permits "Mixed Use Development" outright (defined as residential combined with another use) and is subject to provisions of CZC Section 12. Finally, Goal 13, Policy 2 in the Comprehensive Plan encourages "the location if future subdivisions along high capacity transportation corridors." The CZC is consistent with these requirements.

TPR Requirements	Code	Ordinance Consistency Finding
(b) Implements a demand management program to meet the measurable standards set in the TSP in response to 660-012-0035(4);	●	Comprehensive Plan Goal 12 Policy 4.3 states that the City will "pursue and develop a transportation demand management (TDM) program and policies and strategies." However, there are no implementation measures for such a program in the CZC. **Recommendation:** Develop implementation measures for a TDM program.
(c) Implements a parking plan which: (A) Achieves a 10% reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses; (B) Aids in achieving the measurable standards set in the TSP in response to OAR 660-012-0035(4); (C) Includes land use and subdivision regulations setting minimum and maximum parking requirements in appropriate locations, such as downtowns, designated regional or community centers, and transit oriented-developments; and (D) Is consistent with demand management programs, transit-oriented development requirements and planned transit service.	○	Current parking standards are located in Article VIII of the CZC. The parking plan adopted by the Central Lane_MPO is located in Chapter 3 Section 6 of the RTP. As Coburg was not part of the MPO until 2002, the current CZC has not been updated to be consistent with RTP parking management plan requirements. For example, the RTP includes the development of parking maximums for land uses, while the CZC only lists minimum requirements. There are no references to Transportation Demand Management programs in the CZC or the Coburg TSP. The RTP includes a number of TDM strategies, though few of them apply to Coburg. The area around the Coburg/I-5 Interchange, however, is designated as a Special Project Area for "Commuter Solutions Regional Programs." Transit service is currently provided by Lane Transit District. **Recommendation:** Review RTP parking management plan requirements and update CZC Article VIII to implement it.

TPR Requirements	Code	Ordinance Consistency Finding
(d) As an alternative to (c) above, local governments in an MPO may instead revise ordinance requirements for parking as follows: (A) Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels; (B) Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements; (C) Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments; (D) Exempt structured parking and on-street parking from parking maximums; (E) Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and (F) Provide for designation of residential parking districts.	○	See above. The City has not amended land use regulations to be consistent with the Central Lane MPO RTP. As part of a future TSP update, the City should update the CZC and CSRs to comply with RTP Parking Management Plan.
(e) Require all major industrial, institutional, retail and office developments to provide either a transit stop on site or connection to a transit stop along a transit trunk route when the transit operator requires such an improvement.	○	The CZC does not contain provisions that major industrial, institutional, retail and office developments to provide a transit stop on site **or** connection to a transit stop along a transit trunk route when the transit operator requires such an improvement. The Comprehensive Plan Goal 12 Policy 8.3 states that the City will make new industrial and commercial development "transit friendly" but there are no implementation measures for the policy.

TPR Requirements	Code	Ordinance Consistency Finding
		Recommendation: As part of a future TSP update, the City should amend the CZC to include a provision stating that when required by the Lane Transit District (or other transit provider) certain developments provide a transit stop on site or a connection to one along a transit truck route.
(6) As part of the pedestrian and bicycle circulation plans, local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas.	●	The 1999 TSP Chapter 4 Section E, "Proposed Bicycle and Pedestrian System" includes a bike and pedestrian circulation plan and shows a map with proposed sidewalks, bike lanes, and bike paths. In addition, Chapter 5, Plan Implementation identifies specific improvements to facilitate bicycle and pedestrian trips to meet local travel needs.
(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility.	◑	**Proposed** CSDs Section VI, Design Standards, contains "Right-of-Way and Roadway Width" standards. The required pavement widths are as follows: **Minor Arterials** (3,000 to 10,000 ADT) - 32'-33' **Minor Arterials** (3,000 to 10,000 ADT) - 43.5'-44.5' **Collector (Residential)** No parking: 22' Parking 1-side: 25'-27' Parking both sides: 32'-34' **Collector (Industrial)** Parking 1-side: 28' Parking both sides: 36' **Local (7' parking lanes)** 21'-25' (two lanes) 14' (one lane) **Recommendation:** To be consistent with the TPR requirement to "establish standards for local streets and accessways that minimize pavement width and total right-of-way," the City needs to provide at least one narrower local street option.

TPR Requirements	Code	Ordinance Consistency Finding
OAR Section 660-12-0060 – Plan and Land Use Regulation Amendments		
Amendments to functional plans, acknowledged comprehensive plans, and land use regulations that significantly affect an existing or planned transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility.	○	Neither the CZC nor the 1999 TSP includes language consistent with this section of the TPR. Amendments to this section of the TPR were finalized and filed with the state in April 2005. These changes clarify how local governments should assess whether or not a proposed plan or land use regulation amendment causes a significant effect and what corrective actions may be taken to put land uses and the transportation system in balance. Revisions to the CZC should be consistent with the revised 660-12-0060. **Recommendation:** Revise the CZC to include language that is consistent with the language of the TPR.

CONSISTENCY CODE
● = Consistent with RTP
◑ = Partially Consistent with RTP
○ = Not Consistent with RTP
✕ = RTP policy does not apply

Table 2. 1999 Coburg TSP and Local Ordinance Consistency with Applicable Policies of the Regional Transportation Plan for the Central Lane MPO

RTP Policies	Code	Coburg TSP Compliance
Chapter 2: Policy Element		
Land Use Policies		
Land Use Policy #1: Nodal Development Apply the nodal development strategy in areas selected by each jurisdiction that have identified potential for this type of transportation-efficient land use patter	✕	The "Proposed Nodal Development Areas" map in Appendix A of the RTP shows the areas within the MPO that are being targeted for the region-wide nodal development strategy. No part of Coburg is identified having potential for nodal development. **Recommendation:** This policy does not apply.
Land Use Policy #2: Support for Nodal Development Support application of the nodal development strategy in designated areas through information, technical assistance, or incentives.	✕	The "Proposed Nodal Development Areas" map in Appendix A of the RTP shows the areas within the MPO that are being targeted for the region-wide nodal development strategy. No part of Coburg is identified as having potential for nodal development. Therefore, this policy does not apply. **Recommendation:** This policy does not apply.
Land Use Policy #3: Transit-Supportive Land Use Patterns Provide for transit-supportive land use patterns and development, including higher intensity, transit oriented development along major transit corridors and near transit stations; medium- and high-density residential development within ¼ mile of transit stations, major transit corridors, employment centers, and downtown areas; and development and redevelopment in designated areas that are or could be well served by existing or planned transit.	○	The existing Lane Transit District routes are illustrated in Appendix A of the RTP ("Existing LTD System" Map). Coburg has fairly limited transit service. **Recommendation:** Inconsistent with the RTP. While Comprehensive Plan Goal 12 Policy 4 addresses public transportation, neither the policy nor the sub policies encourage additional housing density along transit routes. The proposed MTR district would allow multiple family dwellings, but the district is not yet mapped.

RTP Policies	Code	Coburg TSP Compliance
Land Use Policy #4: Multi-Modal Improvements in New Development Require improvements that encourage transit, bicycles, and pedestrians in new commercial, public, mixed-use, and multi-unit residential development.	◑	Comprehensive Plan Goal 12 Policies 5, 8.1 and 8.3 address the development of and improvements to the bicycle and pedestrian system. **Recommendation:** Partially consistent with the RTP. While the CZC and Comprehensive Plan policies require improvements that encourage bicycles and pedestrians in new development, they do not encourage transit.
Land Use Policy #5: Implementation of Nodal Development Within three years of TransPlan adoption, apply the ND, Nodal Development designation to areas selected by each jurisdiction, adopt and apply measures to protect designated nodes from incompatible development and adopt a schedule for completion of nodal plans and implementing ordinances.	×	**Recommendation:** This policy does not apply (see response to Land Use - Policy 1).
Transportation Demand Policies		
TDM Policy #1: TDM Program Development Expand existing TDM programs and develop new TDM programs. Establish TDM bench marks and if the benchmarks are not achieved, mandatory programs may be established.	◑	The RTP "Commuter Solutions Regional Programs" Map shows the van pool routes, special project areas, future special project areas, and participating businesses. Coburg is targeted as a special project area. The designation is not reflected in the Comprehensive Plan. Comprehensive Plan Policy 4.3 states that the City will "pursue and develop transportation demand management (TDM) program policies and strategies." Policy 13 references the Interchange Refinement Plan, which includes a TDM program. **Recommendation:** Partially consistent. The City should update the Comprehensive Plan to address the RTP Special Project Area.
TDM Policy #2: Parking Management Increase the use of motor vehicle parking management strategies in selected areas throughout the Central Lane MPO area.	○	The City's parking standards are not consistent with the RTPs Parking Management Plan (see responses to the TPR requirements). **Recommendation:** Not consistent. The City should revise its parking standards to be consistent with the RTP Parking Management Plan and update the Comprehensive Plan policies accordingly.

RTP Policies	Code	Coburg TSP Compliance
Transportation System Improvement "System-Wide" Policies		
TSI System-Wide Policy #1: Transportation Infrastructure Protection and Management Protect and manage existing and future transportation infrastructure.	◑	Comprehensive Plan Policy 2 refers to protecting "the function, of existing and planned transportation systems identified in the TSP through application of appropriate land use regulations. When making a land use decision, the City shall consider the impact on the existing and planned transportation facilities." **Recommendation:** This policy addresses the protection of future transportation infrastructure, but the update to the TSP should amend the CZC to include some implementing standards, such as access management.
TSI System-Wide Policy #2: Intermodal Connectivity Develop or promote intermodal linkages to connectivity and ease of transfer among all transportation modes.	●	The purpose of this policy is to promote the development of intermodal linkages (e.g., between transit and autos at park and ride lots, and for freight between truck and rail). The RTP highlights intermodal facilities in the Central Lane MPO, none of which are located in Coburg. However, park and ride lots are encouraged in Policy 4 of the Comprehensive Plan (Goal 12). **Recommendation:** This policy is consistent with the RTP.
TSI System-Wide Policy #3: Corridor Preservation Preserve corridors, such as rail rights-of-way, private roads, and easements of regional significance, that are identified for future transportation-related uses.	○	There is no mention of corridor preservation in the Goal 12 Comprehensive Plan policies or 1999 TSP. It is not clear if Coburg contains any rail rights-of-way, private roads, or easements of regional significance that are identified for future transportation-related uses. **Recommendation:** Determine whether there are any rail rights-of-way, private roads, or easements of regional significance that are identified for future transportation-related uses in Coburg and

RTP Policies	Code	Coburg TSP Compliance
		amend Goal 12 policies as needed.
TSI System-Wide Policy #4: Neighborhood Livability Support transportation strategies that enhance neighborhood livability.	◑	The intent of the Neighborhood Livability Policy is to reduce neighborhood traffic impacts through the implementation of access management programs, traffic calming, alternative modes and combining trips. Goal #1 of the 1999 TSP and Goal 12 Policy 1 in the Comprehensive Plan is to develop a street network system that evenly distributes traffic throughout the community, lessening traffic impacts on residential streets, and identifying a system of arterials for moving people, goods, and services safely and efficiently. Additionally, policies under Goal 12 indirectly address reducing impacts to residential neighborhoods. Policy 11.2 notes that traffic-calming should be considered as a buffer between land uses. Walking and bicycling are widely encouraged and in some places, required (policy 8). Walking is particularly encouraged in Policy #8. Access management is addressed in Article VIII. Section A of the CZC but it does not contain any access spacing or signal spacing standards. Traffic calming is addressed in policies 9.1 and 12.1. **Recommendation:** Partially consistent, though access management may need to be further addressed through access spacing standards.
Transportation System Infrastructure “Roadway” Policies		
TSI Roadway Policy #1: Mobility and Safety for all Modes Address the mobility and safety needs of motorists, transit users, bicyclists, pedestrians, and the needs of emergency vehicles when planning and constructing roadway system improvements.	◑	Goal 1.4 of the 1999 TSP and Goal 12 Policy 1.4 of the Comprehensive Plan is to design streets to efficiently and safely accommodate emergency service vehicles. **Recommendation:** Partially consistent. Bike lanes and sidewalks may be required on collectors and local streets as well as on

RTP Policies	Code	Coburg TSP Compliance
		arterials.
TSI Roadway Policy #2: Motor Vehicle Level of Service 1. Use motor vehicle level of service standards to maintain acceptable and reliable performance on the roadway system. These standards shall be used for: a. Identifying capacity deficiencies on the roadway system. b. Evaluating the impacts on roadways of amendments to transportation plans, acknowledged comprehensive plans and land-use regulations, pursuant to the TPR (OAR 660-12-0060). c. Evaluating development applications for consistency with the land-use regulations of the applicable local government jurisdiction. 2. Acceptable and reliable performance is defined by the following levels of service under peak hour traffic conditions: Level of Service E within Eugene's Central Area Transportation Study (CATS) area, and Level of Service D elsewhere. 3. Performance standards from the Oregon Highway Plan shall be applied on state facilities in the Eugene-Springfield metropolitan area. In some cases, the level of service on a facility may be substandard. The local government jurisdiction may find that transportation system improvements to bring performance up to standard within the planning horizon may not be feasible, and safety will not be compromised, and broader community goals would be better served by allowing a substandard level of service. The limitation on the feasibility of a transportation system improvement may arise from severe constraints including but not limited to environmental conditions, lack of public agency financial resources, or land use constraint factors. It is not the intent of TSI Roadway **TSI Roadway Policy #2:** Motor Vehicle Level of Service to require deferral of development in such cases. The intent is to defer motor vehicle capacity increasing transportation system improvements until existing	○	The 1999 TSP contains the following definition for Level of Service (LOS). • **Level of Service -** A measure of how well the transportation facility (street, intersection, sidewalk, bikeway, etc.) provides service. More congestion means a lower level of service. Congestion is measured as the percent of capacity that is being used. **A -** Free flow conditions: 32% of capacity **B** - Reasonably free flow conditions: 51% of capacity **C** - Operation stable: 71 % of capacity **D** - Lower speed range of stable flow : 86% of capacity **E** - Unstable flow: 100% of capacity **F** - Forced flow, stop and go operation: +100% of capacity A level of service inventory is not included as part of the existing conditions inventory for the 1999 TSP. The TSP does include an inventory of existing roadway conditions, however, it is very limited. **Recommendation:** Level of Service "D" is considered acceptable in Coburg. It is not clear from the 1999 TSP which facilities have substandard levels of service. This analysis should be redone, and used to inform the future TSP update.

RTP Policies	Code	Coburg TSP Compliance
constraints can be overcome or develop an alternative mix of strategies (such as: land use measures, TDM, short-term safety improvements) to address the problem.		
TSI Roadway Policy #3: Coordinated Roadway Network In conjunction with the overall transportation system, recognizing the needs of other transportation modes, promote or develop a regional roadway system that meets combined needs for travel through, within, and outside the region Central Lane MPO Regional Transportation Plan	○	Coburg is part of the regional roadway network, but the City's TSP is not consistent with the regional system as designated in the RTP though the functional classification is consistent across the documents. **Recommendation:** TSP not consistent with RTP. Updated local TSP needs to be to be consistent with regional designations.
TSI Roadway Policy #4: Access Management Manage the roadway system to preserve safety and operational efficiency by adopting regulations to manage access to roadways and applying these regulations to decisions related to approving new or modified access to the roadway system.	○	CZC Article VIII (Supplementary District Regulations) Section 1 (A),"Visibility at Intersections and Access from Driveways" requires residential driveways to be located to optimize intersection operation and provide access from the street with the lowest functional classification. CSR Section 2 "Structures and Properties to Have Access" states that all buildings shall be on a lot adjacent to a public street or with access to an approved private street, and all structures shall be so located on lots as to provide safe and convenient access for servicing, fire protection and required off-street parking. Properties abutting only collector or arterial streets should share access with neighboring properties where feasible. **Recommendation:** Not consistent with the TPR or RTP. At a minimum, the CZC should include driveway and public road spacing, median control and signal spacing standards. These standards should also be included in public works engineering standards and be consistent with the functional classification of roads.
Transportation System Improvement "Transit" Policies		
TSI Transit Policy #1: Transit Improvements Improve transit service and facilities to increase the system's accessibility, attractiveness, and convenience for all users, including the transportation disadvantaged population.	◑	The 1999 TSP notes that public transit service for Coburg through LTD is usually designed as commuter-only due to the low volume of riders. Currently, LTD Route #96 services Coburg (refer to TSP Map 9). There is no Saturday service.

RTP Policies	Code	Coburg TSP Compliance
		For all of their rural routes, LTD has requests for later service. LTD has also had requests for Saturday service for Coburg. Two policies under Goal 12 in the in the Comprehensive Plan address improvements to and maintenance of the public transit system (Lane Transit District). No policies at this time address the "transportation disadvantaged" population. • Policy 4 – *Continue to pursue improvements to the public transportation system (LTD) from Eugene to Coburg, to the industrial area and throughout the City (e.g. park and ride facilities, covered shelters).* • Policy 8.3 – *Make provisions for new industrial and commercial developments to be transit-friendly.* **Recommendation:** Policies should be amended to address the transportation disadvantaged population.
TSI Transit Policy #2: Bus Rapid Transit Establish a Bus Rapid Transit (BRT) system composed of frequent, fast transit service along major corridors and neighborhood feeder service that connects with the corridor service and with activity centers, if the system is shown to increase transit mode split along BRT corridors, if local governments demonstrate support, and if financing for the system is feasible.	×	No bus rapid transit is proposed for Coburg. **Recommendation:** This policy does not apply.
TSI Transit Policy #3: Transit/High-Occupancy Vehicle (HOV) Priority Implement traffic management strategies and other actions, where appropriate and practical, that give priority to transit and other HOVs.	●	The intent of this policy is to make public transit more attractive and efficient. Lane Transit District provides fairly limited bus routes to Coburg. Comprehensive Plan Goal 12 Policy 4 provides general guidance about improvements to the public transportation system. Sub-policy 4.1 could improve efficiency by allowing changes to the frequency of transit services that are consistent with the TSP without land use review. Policy 4.2 also encourages transit choices

RTP Policies	Code	Coburg TSP Compliance
		by requiring streets identified as future transit routes to be designed to safely and efficiently accommodate transit vehicles. **Recommendation:** Consistent, but should be updated to include additional traffic management strategies as part of the TSP update.
TSI Transit Policy #4: Park-and-Ride Facilities Expand the Park-and-Ride system within the metropolitan area and nearby communities.	●	The 1999 Coburg TSP observes that the city has no park and ride facility location but that "at present there is free parking with good capacity" - referring to parking along the streets. There is one covered bus shelter located south of Mill, east of Willamette Street. Coburg Comprehensive Plan Goal 12 Policy 4 provides policy guidance regarding the public transportation system, which includes park and ride facilities, stating that the city will continue to pursue improvements from Eugene to Coburg, to the industrial area and throughout the city (e.g. park & ride facilities, covered shelters). One park and ride is included as a future project in the 1999 TSP. **Recommendation:** The Comprehensive Plan is consistent with the RTP policy.
Transportation System Improvement "Bicycle" Policies		
TSI Bicycle Policy #1: Bikeway System and Support Facilities Construct and improve the region's bikeway system and provide bicycle system support facilities for both new development and redevelopment/expansion.	×	No regional bicycle projects as associated with Coburg in the RTP. **Recommendation:** This policy does not apply.
TSI Bicycle Policy #2: Bikeways on Arterials and Collectors Require bikeways along new and reconstructed arterial and major collector streets.	○	**Proposed** CSR Section VI (B) (2) includes a table outlining street improvement standards for arterial and collector streets. Bike lanes are required for Major and Minor Arterial streets but are not shown as a requirement for Collector streets. **Recommendation:** Not consistent. Require bikeway on collector streets.

RTP Policies	Code	Coburg TSP Compliance
TSI Bicycle Policy #3: Bikeway Connections to New Development Require bikeways to connect new development with nearby neighborhood activity centers and major destinations.	◑	Comprehensive Plan Goal 12, Policy 5 addresses bikeway connections to neighborhood activity centers (though they're not defined as such). Bike lanes are required for Major and Minor Arterial streets but are not shown as a requirement for Collector and Local streets. **Recommendation:** Partially consistent. Expand CZC Article VIII, Section D to include requirements for pedestrian and bicycle connections from multifamily residential to *all neighborhood activity centers* – not just transit facilities. In addition, the City should include a bikeway and sidewalk requirement for Collector streets.
TSI Bicycle Policy #4: Implementation of Priority Bikeway Miles Give funding priority (ideally within the first 3 to 5 years after adoption of TransPlan, subject to available funding) to stand-alone bikeway projects that are included in the definition of "Priority Bikeway Miles" and that increase the use of alternative modes.	×	No streets in Coburg are identified as priority bikeways on the "Priority Bikeway System Projects" map in Appendix A of the RTP. **Recommendation:** This policy does not apply.
Transportation System Infrastructure "Pedestrian" Policies		
TSI Pedestrian Policy #1: Pedestrian Environment Provide for a pedestrian environment that is well integrated with adjacent land uses and is designed to enhance the safety, comfort, and convenience of walking.	●	Comprehensive Plan Goal 12, Policy 5 (and subsequent sub-policies) address pedestrian access and connectivity, stating that the City shall "establish a safe bicycle and pedestrian system that provides for connections and minimizes conflict to an from local school and other significant activity areas, provides for connections between pocket parks, and provides a sidewalk plan in selected areas such as on Willamette and Pearl Streets." See response to Land Use Policy #4: Multi-Modal Improvements in New Development. **Recommendation:** Consistent. If adopted, **proposed** amendments will meet this requirement.
TSI Pedestrian Policy #2: Continuous and Direct Routes Provide for a continuous pedestrian network with reasonably direct travel routes between destination points.	●	Comprehensive Plan Goal 12, Policy 5 (and subsequent sub-policies) address pedestrian access and connectivity, stating that the City shall "establish a safe bicycle and pedestrian system that provides for connections and minimizes conflict to an from local school and other significant activity areas, provides for connections between pocket parks, and provides a sidewalk plan in selected areas such as on Willamette and Pearl Streets." See response to Land Use Policy #4: Multi-Modal Improvements in

RTP Policies	Code	Coburg TSP Compliance
		New Development **Recommendation:** Consistent. If adopted, proposed amendments will meet this requirement.
TSI Pedestrian Policy #3: Sidewalks Construct sidewalks along urban area arterial and collector roadways, except freeways	◑	Improvements in subdivisions require sidewalks along both sides of a public street. **Recommendation:** Partially consistent. Proposed amendments do not require sidewalks along urban collectors and to meet this requirement, they must.
Transportation System Infrastructure "Goods Movement" Policies		
TSI Goods Movement Policy #1: Freight Efficiency Support reasonable and reliable travel times for freight/goods movement in the Central Lane MPO region.	◑	The 1999 TSP notes that there is no freight rail in Coburg at this time, and that the proposed TSP will provide for adequate freight movement by highway. While the location just off of I-5 facilitates freight movement. Goal 12 Policy 13, addresses the I-5 Interchange Refinement Plan, which has been adopted. Improvements to the interchange will facilitate freight movement into Coburg. **Recommendation:** The Comprehensive Plan should be updated to include additional policy language supporting freight movement in Coburg after an analysis of freight needs has been completed as part of the TSP update.
Transportation System Improvements "Other Modes" Policies		
TSI Other Modes Policy #2: High Speed Rail Corridor Support provision of rail-related infrastructure improvements as part of the Cascadia High Speed Rail Corridor project.	×	High-speed rail is not planned for Coburg. **Recommendation:** This policy does not apply.
TSI Other Modes Policy #3: Passenger Rail and Bus Facilities Support improvements to the passenger rail station and inter-city bus terminals that enhance usability and convenience.	×	No passenger rail is planned for Coburg. **Recommendation:** This policy does not apply.

APPENDIX C

Findings of Compliance with State and Local Plans, Policies, and Regulations

APPENDIX C: Findings of Compliance with Applicable State and Local Plans, Policies and Regulations

Oregon Statewide Planning Goals and Guidelines

GOAL 1: CITIZEN INVOLVEMENT

Requirement: Goal 1 requires the development of a citizen involvement program that is widespread, allows two-way communication, provides for citizen involvement through all planning phases, and is understandable, responsive, and funded.

Findings

Task 2 of the IAMP included the development of a citizen involvement plan that allowed for involvement of citizens, stakeholders and public agencies throughout the duration of the project. The plan was a coordinated effort between the Contractor, ODOT, and the City of Coburg and included the Technical Advisory Committee, the general public, the Coburg Crossroads Stakeholder group, the Periodic Review Core Team, affected public agencies, transportation providers, and transportation interest groups.

Two meetings were held with the Periodic Review Core Team, both of which were open to the public. Two joint meetings were held with the City Council and the Planning Commission, which were also open to the public. Two open houses were held to inform the public and gather their input; written notices were sent out prior to the meetings to invite participation. Written public comment was accepted throughout the project. Several individual meetings were conducted with property owners in the project vicinity.

In addition, public notice for the hearings on this application will be provided through the City of Coburg and Lane County notification procedures. The public will have opportunity to review the application and staff report in advance of the public hearings, and to provide testimony at the hearings.

A copy of the citizen involvement plan and actions taken to engage citizens in the planning process are included in IAMP Appendix A.

Conclusions

Based on the above findings, the requirements set forth in Goal 1 have been met.

GOAL 2: LAND USE PLANNING

Requirement: This goal requires that a land use planning process and policy framework be established as a basis for all decisions and actions relating to the use of land. All local governments and state agencies involved in the land use action must coordinate with each other. With regard to this IAMP, ODOT is required coordinate with Lane County and the City of Coburg, both of which have planning authority over the impacted area.

Findings

Task 3 of this project involved a thorough review and analysis of all relevant state, regional and local planning documents in order to establish a planning process and policy framework for the IAMP. This information can be found in Memo #1, Plans and Policy Review (Appendix B)

Throughout the project, the Contractor met with ODOT, Lane County and City of Coburg to discuss objectives, issues and concerns regarding the IAMP. In addition, a Technical Advisory Committee (TAC) was established to guide the IAMP process. The TAC consisted of representatives from the City, County, DLCD, ODOT, and other local and regional agencies.

The alternatives analysis was based on land use assumptions included in the Coburg Comprehensive Plan, and was consistent with forecasts included in the Regional Transportation Plan.

Requirement: Land use decisions and actions must be supported by an "adequate factual base." It is required that there is evidence that a reasonable person would find to be adequate to support findings of fact that a land use action complies with the applicable review standards.

Findings
The IAMP adoption application has prepared a thorough factual base that demonstrates that this proposed action is consistent with the applicable adopted local plans, including the Coburg Comprehensive Plan and the Regional Transportation Plan.

Requirement: City, county, state and federal agency and special district plans and actions related to land use must be consistent with the comprehensive plans of cities and counties and regional plans adopted under Oregon Revised Statues (ORS) Chapter 268.

Findings
Task 3 of this project included a thorough review and analysis of all relevant state, regional and local planning documents, including the Lane County and Coburg comprehensive plans. The IAMP is consistent with the Coburg Comprehensive Plan, as it is based on land use assumptions included in that Plan. The recommended alternative is consistent with the Coburg Comprehensive Plan and traffic forecasts included in the Regional Transportation Plan.

Conclusions
Based on the above findings, the requirements set forth in Goal 2 have been met.

GOAL 11: PUBLIC FACILITIES AND SERVICES

Requirement: Cities and counties shall plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. The goal requires that urban and rural development be "guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served."

Findings
The IAMP will amend the City of Coburg Transportation System Plan and adds a number of planned improvements at the interchange to the list of TSP projects needed to meet planned urban growth (IAMP, Section 5.2). The IAMP establishes special access management requirements for the interchange area to improve safety and help ensure traffic mobility is maintained (IAMP, Section 5.3). The IAMP also establishes a mobility standard for the interchange that limits growth in traffic to a level commensurate with the adopted population and employment for the city (IAMP, Section 6). These measures provide a basis for ensuring investment in public facility infrastructure is made in a manner that will accommodate the city's planned population and employment.

Requirement: Goal 11 prohibits the establishment of sewer systems outside urban growth boundaries and the extension of sewer lines from within UGBs to serve lands outside UGBs, except where a new or extended system is the only practicable alternative to mitigate a public health hazard and will not adversely affect farm or forest land.

Findings
This IAMP does not propose the establishment of new sewer systems outside the urban growth boundary.

Conclusions
The IAMP complies with Goal 11.

GOAL 12: TRANSPORTATION
Requirement: This goal requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a "safe, convenient and economic transportation system." This is accomplished through development of Transportation System Plans based on inventories of local, regional and state transportation needs.

Goal 12 is implemented through OAR 660, Division 12, also known as the Transportation Planning Rule (TPR). The TPR contains numerous requirements governing transportation planning and project development. (See the "OAR 660, Division 12" section of this document for findings of compliance with the TPR.)

Findings
The adoption of the Coburg IAMP will ensure that the interchange operates safely and efficiently. Task 7.1 of the IAMP involved a transportation analysis that was conducted in order to determine safety issues, future demand, capacity, deficiencies, and needs for this interchange area. The analysis demonstrates that the recommended alternative in the IAMP will be adequate to serve trips generated by future land uses. An alternative mobility standard is included in the IAMP to protect the interchange capacity in the case that interchange development occurs prior to the anticipated expansion of the Coburg UGB and simultaneous amendment of the Comprehensive Plan.

As noted above, the IAMP's adoption by the city will amend the City of Coburg Transportation System Plan as required by city policy and the TPR for plans that implement local transportation system plans. Coburg development regulations recommended in the

IAMP impose new limitations on access to major roads in the IAMP boundary and also require traffic impact studies for development projects that cause a significant impact to the function of the interchange (IAMP, Sections 7.1 and 7.2). Lane County will also adopt the IAMP as part of its Transportation System Plan through policy that recognizes the special regulatory and access limitations on land within the IAMP boundary (IAMP, Section 6). This alters the underlying regulatory framework that applies to new development in the interchange area regarding access and mobility standards that apply to new development proposals.

Conclusions
The IAMP complies with Goal 12.

GOAL 14: URBANIZATION, AND OAR 660, DIVISIONS 14 AND 22
Requirement: Goal 14 regulates urban growth boundaries. The goal provides that establishment and change of a UGB shall be based upon considerations of the following seven factors:

- Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals;
- Need for housing, economic opportunities, and livability;
- Orderly and economic provision for public facilities and services;
- Maximum efficiency of land uses within and on the fringe of the existing urban area;
- Environmental, energy, economic and social consequences;
- Retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority; and
- Compatibility of the proposed urban uses with nearby agricultural activities.

Additionally, **ORS 197.298** establishes priorities for including land inside urban growth boundaries. The first (highest) priority for inclusion is land that is designated "urban reserve" land. The second priority is land adjacent to a UGB that is identified as "an exception area or nonresource land." The third priority is land that is designated as "marginal land" pursuant to ORS 197.247. The final (lowest) priority is land that is designated for agriculture, forestry, or both.

Findings
This IAMP does not involve any amendments to the Coburg UGB boundary.

The EFU land in Lane County, within the Coburg Interchange management area, is lowest priority for inclusion into the UGB. While the proximity of this land to the interchange makes it susceptible over time to inclusion inside a UGB, such an action would need to be based on a demonstration of need and the application of the standards in ORS 197.298.

The IAMP does include measures (alternate mobility standards) designed to protect the function of the interchange if it is constructed prior to a Coburg UGB expansion and Comprehensive Plan amendment.

Conclusions
The IAMP complies with Goal 14.

Oregon Transportation Plan (1992)

An IAMP must be consistent with the goals and policies of the OTP. OTP policies that are applicable to an IAMP are:

- Policy 1B (Efficiency)
- Policy 1C (Accessibility)
- Policy 1G (Safety)
- Policy 2B (Urban Accessibility)
- Policy 4G (Management Practices)

An IAMP must include an access management component that identifies approaches on the state highways within the management area and recommends any necessary access changes in order to protect the function of the interchange.

Findings
A plan and policy review was conducted as part of the IAMP planning process that identified relevant OTP policies (Appendix B). The IAMP addresses relevant OTP policies.

Conclusions
The IAMP complies with the OTP.

Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) establishes policies and investment strategies for Oregon's state highway system over a 20-year period and refines the goals and policies found in the OTP. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The policies applicable to planning for the Coburg interchange improvements are described below, with impacts to interchange planning shown in italic.

Under Goal 1: System Definition, the following policies are applicable:

- Policy 1A (Highway Classification) defines the function of state highways to serve different types of traffic that should be incorporated into and specified through IAMPs.

- Policy 1B (Land Use and Transportation) recognizes the need for coordination between state and local jurisdictions;
  Coordination with local jurisdictions occurred throughout the preparation of the IAMP. A Technical Advisory Committee (TAC) was formed to inform the IAMP. Members included representatives from the City of Coburg, LCOG, ODOT and Lane County.

- Policy 1C (State Highway Freight System) states the need to balance the movement of goods and services with other uses;
  I-5 is a designated freight route.

- Policy 1F (Highway Mobility Standards) sets mobility standards for ensuring a reliable and acceptable level of mobility on the highway system by identifying necessary improvements that would allow the interchange to function in a manner consistent with OHP mobility standards; and
  The purpose of the IAMP is to evaluate the operation of the Coburg Interchange, assess needs and problems, identify future long-range needs, and identify recommended improvements in order to ensure consistency with mobility standards.

- Policy 1G (Major Improvements) requires maintaining performance and improving safety by improving efficiency and management before adding capacity. ODOT works with regional and local governments to address highway performance and safety.
  The current Coburg I-5 Interchange Refinement Plan is adopted into the City TSP, and addresses the major investment criteria. The IAMP will continue to implement Policy 1G.

- Policy 1H (Bypasses) establishes criteria for determining the need and impact considerations for a new bypass; directs the preparation of plans, management of access, and provision of local facilities for existing bypasses; and provides a checklist of considerations.

Findings

Under Goal 2: System Management, the following policies are applicable:

- Policy 2B (Off–System Improvements**)** helps local jurisdictions adopt land use and access management policies; and
  The IAMP includes sections describing existing and future land use patterns, an access management plan, and implementation measures.

- Policy 2F (Traffic Safety) improves the safety of the highway system.
  One component of the IAMP is identification of existing crash patterns and rates and to develop strategies to address safety issues, including access management and improvement of operational conditions to avoid backup onto the I-5 mainline.

Findings

Under Goal 3: Access Management, the following policies are applicable:

- Policy 3A: (Classification and Spacing Standards) sets access spacing standards for driveways and approaches to the state highway system;

- Policy 3C (Interchange Access Management Areas) sets policy for managing interchange areas by developing an IAMP that identifies and addresses current interchange deficiencies and short, medium and long term solutions; *The access spacing standard designated in the OHP for state highways within a UGB is 1,320 feet from the ramp terminal.*

- Policy 3D (Deviations) establishes general policies and procedures for deviations from adopted access management standards and policies.
  The Access Management Plan component of the IAMP is consistent with adopted access standards. Intersections that do not meet access spacing standards – either in the interim before the interchange improvements are constructed or after construction of interchange improvements – are included in Section 5 of the IAMP.

Findings
The IAMP includes policies that establish desired access conditions consistent with the OHP and regulations that require new development to alter existing access that is not in compliance with the desired condition (1,320'). A frontage road improvement east of the freeway interchange is planned to enable private development to comply with this requirement (IAMP, Section 5.3). Deviations – for intersections not meeting the standard in the interim before interchange improvement construction, and for some not meeting the standard after construction – are included in Section 6 of the IAMP.

Conclusion
The Coburg IAMP complies with the OHP.

OAR 660 Division 12 Transportation Planning Rule (TPR)

The TPR requires local governments to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors and sites for their identified functions OAR 660-012-0045(2)." This policy is achieved through a variety of measures, including:

- Access control measures which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;
- Standards to protect future operations of roads;
- A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;
- A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;
- Regulations to provide notice to ODOT of land use applications that require public hearings, involve land divisions, or affect private access to roads; and
- Regulations assuring that amendments to land use designations, densities and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP. See also OAR 660-012-0060.

In addition to the requirements noted above, the TPR defines the interstate interchange area as containing property within one-half mile of an existing or planned interchange on an Interstate Highway as measured from the center point of the interchange; or as defined an Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

This is the area in which planning and analysis for the IAMP takes place locally and in which local governments must comply with interchange-related state access management rules.

Findings
The IAMP planning process included a review of all relevant sections of the TPR (Appendix B, Table 1). Applicable sections of the TPR are addressed throughout the IAMP, including identifying the purpose and function of the interchange (Section 1), an assessment of existing and future conditions (Sections 2 and 3), an analysis of alternative solutions for meeting functional objectives (Section 4), and measures to ensure the plan addresses planned conditions including physical improvements, policies, and development regulations (Sections 5, 6, and 7).

Conclusion
The IAMP complies with the Oregon TPR.

OAR 734, Division 51. Highway Approaches, Access Control, Spacing Standards and Medians

OAR 734-051 governs the permitting, management, and standards of approaches to state highways to ensure safe and efficient operation of the state highways. OAR 734-051 policies address the following:

- How to bring existing and future approaches into compliance with access spacing standards, and ensure the safe and efficient operation of the highway;
- The purpose and components of an access management plan; and
- Requirements regarding mitigation, modification and closure of existing approaches as part of project development.

Section 734-051-0125, Access Management Spacing Standards for Approaches in an Interchange Area, establishes interchange management area access spacing standards. It also specifies elements that are to be included in IAMPs, such as short- and long-range actions to improve and maintain safe and efficient roadway operations within the interchange area. The Access Management Plan component of the IAMP (Section 5.3) includes plans for access closures and a frontage road to be constructed east of I-5. This section also includes deviations for intersections on Pearl Street and Van Duyn Road that will not meet adopted state access standards in the interim (before construction) as well as those that will not meet standards after construction, per OAR 734-051-0135.

Findings
Section 5.3 of the IAMP outlines a detailed access management plan of the interchange area. Access spacing standards are designed around OPH and Division 51 spacing standards and are intended over time to shift access spacing in the direction of the applicable state standards. The plan also includes policies specifically aimed at improving access spacing and citing conditions in which access alterations must be made to bring conditions in line with state standards (IAMP, Section 6.1.2, Policy #10).

Conclusion
The IAMP complies with OAR 734, Division 51.

Regional Transportation Plan

The *Central Lane Metropolitan Planning Organization Regional Transportation Plan (RTP)* guides regional transportation system planning and development in the Central Lane MPO metropolitan area. Coburg was recently added to the MPO. The RTP includes provisions for meeting the transportation demand of residents over 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. The City of Coburg and Lane County are two of the six jurisdictions participating in regional transportation planning related to the RTP. The following project related to the Coburg/I-5 Interchange is on the RTP Capital Improvements List: The following project is on the "illustrative" list in the RTP, that is, it is considered a "needed" project but it does not fit with anticipated revenue over the life of the plan. The City is working at the MPO level to get the project on the Financial Constraint list in the near term.

RTP Project # and Category	Name	Location	Description	Responsible Agency	Anticipated Cost
1003 – New Arterial Link or Interchange	Interstate 5 at Coburg	Interchange	Interchange Improvements	ODOT	$12,500,000

According to the RTP, new arterial links or interchanges add new links or interchanges to the arterial or freeway systems in the region. Projects typically consist of any required right-of-way acquisition, general roadway construction, and addition of pedestrian and bicycle facilities either adjacent or parallel to the roadway.

Findings

The IAMP included an evaluation of RTP policies and planned improvements (IAMP, Appendix B). The IAMP provides Coburg the means necessary for elevating the interchange project on the RTP list of needed projects, especially the list of financially constrained projects, by addressing necessary planning requirements associated with securing state and federal funding for the improvements that implement the IAMP. In addition, the development of IAMP alternatives and selection of the recommended alternative were consistent with RTP traffic forecasts and policies.

Conclusion

The IAMP complies with the RTP; the Coburg TSP will need to be revised for RTP consistency.

Lane County Transportation System Plan

Lane County's TSP was adopted in 2004. The Plan contains an introduction to the concept of access management in the section of Chapter 4 entitled *Access Management: Spacing of Intersections and Driveways on County Roads*, stating that "Implementation of access management techniques produces a more consistent traffic flow, helping to improve safety, while reducing congestion, fuel consumption and air pollution." (p. 27).

In addition, the Goals and Policies section contains access management policies under Goal 3: *Promote a safe and efficient road network through access management.* Policy 3b specifically addresses state facilities, noting that "for state facilities, the Oregon Department of Transportation controls access pursuant to Oregon Administrative Rules 734, Division 51."

The TSP references Lane Code 15.130 as containing the access management guidelines and spacing standards. The table below outlines the access spacing requirements for County Roads. The spacing standard for local roads outside of urban growth boundaries is 100 feet. The Lane County section of the IAMP study area only contains one road, Van Duyn Road, which is classified by the County as an urban local road inside the UGB and a rural local road once it leaves the UGB. The City of Coburg classifies it as a County Arterial.

Road and Driveway Spacing Standards for Lane County Collector and Arterial Roadways (Feet) in the Lane County TSP (LC 15.138)

Posted Speed or Travel Speed*	Principal Arterial	Minor Arterial	Major Collector	Minor Collector
≥ 55	700	475	475	325
50	550	475	475	325
40 & 45	500	400	400	325
30 & 35	400	275	275	220
< 25	400	200	200	150

Chapter 6 of the TSP, entitled *Recommended Improvements* lists the improvements on Lane County Roads. The following table shows the project within the Coburg IAMP boundary:

Table 2: Projects on Lane County Roads within the Coburg IAMP management area in the Lane County Transportation System Plan

Project #	Road Name	Limits	Begin MP	End MP	Length	Source	Description	Cost	Status
#28	Pearl Street**	Miller Street to I-5	0.244	0.64	.396	Coburg	Urban Standards – Four lane facility with median treatments, curb, gutter, sidewalks, bike lanes, #B1	$750,000	Complete

Findings
The IAMP includes requirements for traffic impact studies that are consistent with those required by Lane County (IAMP, Section 7).

Conclusion
The IAMP complies with the Lane County TSP.

Lane County Code

Much of the land adjacent to and east of the Coburg/I-5 interchange is currently under the jurisdiction of Lane County. Land directly southeast of the interchange was recently annexed into the Coburg city limits, and is now designated as Highway Commercial.

The land in Lane County jurisdiction is zoned Exclusive Farm Use – Rural Comprehensive Plan (E-RCP) zone, which allows corresponding appropriate farm-related uses. The Lane

County Code implements OAR 660-033. It allows four levels of minimum parcel size, E-60, E-40, E-30, and E-25. Land within the Coburg/I-5 IAMP boundary is zoned E-40, with a minimum lot size of 40 acres. [1] The full text of the E-RCP zone is included as Appendix A of this document.

Findings
The IAMP includes a review of relevant sections of the Lane County Code and TSP (IAMP, Appendix B). The IAMP includes requirements for traffic impact studies that are consistent with those required by Lane County (IAMP, Section 7). The IAMP does not alter planned land uses or zoning for any properties within the IAMP management boundary.

Conclusion
The IAMP is consistent with the Lane County Code.

Coburg Comprehensive Plan

Coburg's Comprehensive Plan was originally adopted in 1978 and is currently undergoing periodic review, which is anticipated to result in Draft plan amendments. *Per agreement with LCOG and ODOT, this review includes Draft amendments as of 2005.* Therefore, the 2005 PROPOSED policy amendments to the Coburg Comprehensive Plan are incorporated into the following review.

Goal 9, Economy of the City includes the following policy relevant to the Coburg/I-5 IAMP.

- ***Policy 4:*** *A "Highway Commercial" district will be located adjacent to the I-5 interchange. The purpose of the Highway Commercial Plan designation is to provide goods and services that primarily serve the traveling public. Uses in this area will preserve the small town and historic character of Coburg, by having compatibility in architectural design and scale with the Central Business District and/or Residential designations. Development of the Highway Commercial District shall be considered secondary to the development of the downtown area, however.*

Findings
The policy advances a city preference that the Highway Commercial district applies to land the general vicinity of the interchange. The policy is not specific with regard to access distances or uses that would compromise interchange operation.

Goal 12, Transportation includes the following policies relevant to the Coburg/I-5 IAMP:

- ***Policy 3:*** *Improve the aesthetics of streets and streetscapes, especially at City entrance ways such as Interstate5 interchange area. Aesthetic improvements may address: street design, trees, lighting, utility lines, sidewalks, park strips, noise abatement, etc.*

  3.1 *Improve major through-fares with beautification and scenic amenities, coordinating with other agencies and jurisdictions as necessary.*

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[1] *Lane County implements Goal 3 through its E-40 District. The minimum lot size is 40 acres. See Lane Code, 16.212(9).*

3.2 *Identify and improve city gateways and entranceways with beautification and scenic amenities, coordinating with other agencies and jurisdictions as necessary.*

This policy identifies the importance of the I-5 interchange as a gateway to Coburg that needs aesthetic improvements. No specific location has been identified to date as the "gateway". No projects are designated on the CIP related to this policy.

Findings
The policies do not conflict with the proposed access limitations or design features planning in the IAMP.

- ***Policy 13:*** *Improve the Coburg-Interstate 5 Interchange safety and transportation operations.*

  13.1 *The City shall adopt and coordinate with ODOT and Lane County to implement the ODOT Coburg-Interstate 5 Interchange Refinement Plan, which includes but is not limited to:*

  - *A preferred interchange alternative,*
  - *An interchange access management plan,*
  - *A recommended TDM program that shall be fully implemented before interchange reconstruction, and*
  - *An assumption that current City and County comprehensive land use designations at and near the interchange are constant for the next 20 years.*

This policy supports coordination with Lane County and ODOT to adopt the Coburg/I-5 Interchange Refinement Plan, which is discussed in more detail below.

Findings
The policy is supportive of IAMP objectives and operational objectives.

- ***Policy 36:*** *The City shall not expand the UGB east of Interstate 5 until the City has sufficient clarity on the configuration, timing, and cost of the interchange upgrade to conclude that adequate transportation facilities will be in place to serve future development.*

An area immediately southeast of the Coburg/I-5 interchange has recently been annexed into the UGB and designated as Highway Commercial, but also still carries the County's zoning designations.

Findings
The policy is consistent with the IAMP. Traffic analysis did not assume UGB expansion to the east. The policy also is consistent with IAMP policies that enact an alternative mobility standard for the interchange that would support levels of traffic consistent with the city's adopted land use plan, and protect the capacity of the interchange in case the interchange is constructed prior to any UGB expansion and Comprehensive Plan amendment by Coburg.

- ***Policy 41:*** *The exception area immediately east of the Interstate 5 interchange shall have an established trip generation baseline upon annexation of the property. The trip generation baseline shall be for average daily trips (ADT), weekday AM peak and weekday PM peak trips, based on ITE Trip Generation Manual and inventory of uses is as shown in Exhibit 2 and is incorporated as policy by reference .*

- ***Policy 42:*** *All new development proposals and/or redevelopment proposals in the exception area immediately east of Interstate 5 that exceed the baseline trip generation established upon annexation shall be required to apply for a city plan amendment application and meet Statewide Goal 12, Transportation Planning Rule, in particular Section 0060, and develop a transportation analysis to determine the impact on the interchange and on County Roads. The County may require a traffic impact analysis and road improvements consistent with the Lane County Transportation System Plan goals and policies and with County requirements for roads in Lane Code 15. The new site development or redevelopment shall be required to measure the following trip impacts for all three of the following:*

    - *Weekday PM peak hour trips between 4:00 pm and 6:00 pm*
    - *Weekday AM peak hour trips between 6:00 am and 9:00 am*
    - *Average Daily grips for the entire area in question.*

- ***Policy 43:*** *In the event that Interchange Refinement Plan is completed and adopted in the Coburg TSP or Interchange Area Management Plan is developed and adopted, the exception areas immediately east of Interstate 5 shall be included in the plans and shall be governed by the results of that plan. Notwithstanding this provision, a traffic impact analysis, road dedications and road improvements may be required for new development affecting County roads in this area.*

Related to Policy 43, above, the Interchange Refinement Plan was completed and adopted in 1999 as part of the planning and adoption process for the 1999 Coburg TSP. The IAMP management area include the areas of Lane County directly east of the interchange, which has been designated by the County for exclusive farm use (E-40). For a specific description of the uses within the IAMP boundary, see Section III, Existing Land Use.

Findings

IAMP alternatives were based on land use assumptions contained in the current adopted Coburg Comprehensive Plan.

The policies listed above are generally consistent with the alternative mobility standard and other policies that are enacted through the IAMP, and with land use assumptions used in the IAMP traffic analysis. Future land use applications in the IAMP management area would trigger policies in the IAMP that require the development either to mitigate traffic impacts to perform within the adopted mobility standard/alternative mobility standard for the interchange or proceed with local amendments to the city and county land use plans and the IAMP. The IAMP will be adopted by Coburg – establishing an IAMP Overlay area – which will address concerns expressed in the policies above regarding traffic impact analysis, access and other requirements for development.

Conclusion
The IAMP is consistent with the Coburg Comprehensive Plan.

City of Coburg Transportation System Plan
The City adopted a Transportation System Plan (TSP) in 1999. In order to implement the TSP, the City made amendments to the Comprehensive Plan and Development Code. Chapter 4, Recommended Transportation System Plan, includes Goal 13, which reiterates the intention to adopt the Coburg/I-5 Interchange Refinement Plan.

In addition, Chapter 5, *Plan Implementation* outlines a Capital Improvement Project List for Coburg Transportation Improvements. Under "Medium Range Projects," the Coburg/Interstate 5 Interchange is listed as a project. According to the TSP, the three-phase project includes rebuilding the interchange to modern standards. These include widening the structure to three lanes of traffic with shoulders for bicycles and sidewalks for pedestrians, and the profile grade will also be improved. Related access improvements and improvements to Pearl Street are also included. The total estimated project cost is $7,773,500. According to the project schedule, all improvements will be completed by 2015.

Findings
The recommended alternative that is advanced by the IAMP is generally consistent with the project description outlined in the Coburg TSP, with additional interchange bridge lanes and accompanying policy and code measures. Cost estimates for the preferred alternative differs from the cost in the TSP; that difference, however, relates to time-sensitive estimates that were prepared when the TSP was adopted and which are no longer relevant.

Conclusion
The IAMP is consistent with the Coburg Transportation System Plan Capital Project List.

Coburg/Interstate 5 Interchange Refinement Plan
As noted above, this Refinement Plan was adopted in order to provide a deeper analysis of the Coburg/Interstate 5 Interchange than was possible during the general TSP process. The Refinement Plan was adopted in 1999 as part of the Coburg TSP.

According to the executive summary, the intent of the Refinement Plan is to create a long range plan for the interchange and surrounding transportation system and land uses with public participation and to improve the function and safety of the interchange. The plan did not anticipate expansion of the Coburg UGB east of the interchange. The plan guides investment and program decisions for the City of Coburg, Lane County, and ODOT. The Plan includes multiple design concepts showing detailed preliminary analyses of traffic patterns, land use projections, and geometric designs. Major issues that were raised during the Refinement Plan process were:

- The interchange is an obsolete structure, built in 1959;
- The percentage of land uses in the surrounding area dominated by heavy vehicles (trucks);

- The undeveloped nature of the surrounding area, including large tracts of industrial and commercial land, that, if developed would severely degrade the operations, safety, mobility and access of the interchange;
- A desire to improve safety and operations; and
- A desire to lessen impacts of transportation improvements to local residents.

The adopted preferred concept, an enhanced diamond interchange, includes the following improvements:

- The interchange structure is rebuilt and local street improvements enhance the safety and operations of the interchange terminals;
- The bridge is rebuilt to modern standards that include a wider structure with shoulders, bike lanes, sidewalks, and traffic signals;
- The ramp terminals are significantly improved;
- Exit lanes from I-5 to and from the interchange are longer, wider, and will increase capacity for vehicles.

Policy implementation includes Transportation Demand Management (TDM) and access management policies and guidelines.

Findings
The recommended alternative chosen in the IAMP is generally consistent with the Refinement Plan recommendations for the interchange. However, IAMP recommendations are based on updated population and employment forecasts and changes in state requirements, so the new interchange is recommended to be a 4-lane bridge diamond structure accompanied by an access management plan and policy and development code provisions to be adopted by the City of Coburg, Lane County, and the OTC.

Conclusion
The IAMP complies with the Refinement Plan.

Coburg Zoning Code and Land Division Regulations

Land in Coburg immediately adjacent to the Coburg/I-5 interchange is zoned Light Industrial and Highway Commercial. Further west within the IAMP area boundary and closer to downtown Coburg, land is zoned Mixed Use Master Plan, Public Facilities, and Traditional Residential. The list below briefly describes each of these land use designations. Specific information about the uses allowed in each land use district within the IAMP boundary is located in Appendix B of this document (Page 45).

- **Light Industrial –** The Light Industrial designation is intended to provide areas for manufacturing, assembly, packaging, wholesaling, related activities, and limited commercial uses that support local industry and are compatible with the surrounding commercial and residential districts. The LI designation is intended to promote a high quality of life through a diverse economy and strong tax base, transition between higher and lower intensity uses, and appropriately scaled non-polluting industrial uses that fit the small town, historic character of the community.

- **Highway Commercial –** The Highway Commercial designation is intended to provide goods and services that primarily serve the traveling public. The C-2 designation is intended to promote a high quality of life through a diverse economy and strong tax base, transition between higher and lower intensity uses, and appropriately scaled commercial uses that fit the small town, historic character of the community.

- **Public Facility –** This designation is intended to provide lands for public facilities and uses such as water reservoirs, sewage treatment plants, pump stations, major electric utilities and similar uses.

- **Traditional Residential –** The Traditional Residential designation is intended to guide development within historic and traditional neighborhoods of the community. The Traditional Residential designation is intended to provide a livable neighborhood environment, preserve the small town and historic character of Coburg, ensure architectural compatibility, and provide for a variety of residential housing choices (including medium density housing in designated areas).

Findings

The IAMP does not modify the purpose or uses allowed by the zoning districts that are found within the IAMP management boundary. Special policies and the alternative mobility standard may result in limiting development in the IAMP management boundary differently from areas outside the management boundary. This is an intended outcome of the IAMP to ensure the interchange functions over time.

Conclusion

The IAMP is consistent with the City of Coburg's development code and zoning districts.

APPENDIX D
Permitted Land Uses

Appendix D: Permitted Land Uses within Coburg/I-5 IAMP Boundary

Zoning District	Permitted Uses (general categories, not a complete list)	Minimum lot size, coverage	Total Acres (Developed/Undeveloped)
City of Coburg Zoning Code – Ordinance No. A-199			
Traditional Residential (TR) – Article VII, A			
Permitted	Single family, duplexes, group homes	7,500 – 10,000 sf	
	Churches, schools, child care center	Maximum lot coverage: 30-35%	
	Bed and breakfast		
	Accessory structures		
Conditional use	Boarding, rooming houses, nursing homes		
	Child care (over 13 children)		
	Parks, community centers		
	Public buildings		
	Agricultural uses		
Highway Commercial (C-2) – Article VII, D			
Permitted	Retail, auto-related uses, outdoor storage	10,000 sf if no public sewer	
	Institutional, religious, educational uses	No minimum if public sewer	
	Offices, administrative	Maximum lot coverage: 60%	
	Gas and service stations		
	Eating establishments		
	Existing agricultural, residential, warehouse uses (no new)		
	Mixed use		
Conditional use	Commercial recreation facilities		
	New warehouse uses		
	Truck stops		
Light Industrial (LI) – Article VII, E		10,000 sq. ft. if no public sewer, No minimum if public sewer	
Permitted	Commercial service, office, retail	Maximum lot coverage: 60%	
	Manufacturing, assembly		
	Processing		
	Utilities		
	Wholesaling, warehousing		
	Existing agriculture and livestock		
	Accessory buildings, parking		

Zoning District	Permitted Uses (general categories, not a complete list)	Minimum lot size, coverage	Total Acres (Developed/Undeveloped)
Conditional use	Public buildings		
	Service stations		
	Wireless communication facilities		
	Stone yards, resource extraction		
Lane County Code, Chapter 10			
Neighborhood Commercial (C2) - Section 10.160		No minimum; full lot coverage allowed	
Permitted	Bakeries, banks, small retail stores, laundries, restaurants, etc.		
Conditional use	Churches, kennels, transportation facilities per LC 10.500		
Lane County Code, Chapter 16			
Exclusive Farm Use (EFU-40) – Section 10.100, Section 16.212		40 acre minimum	
Permitted (some require review)	Farm uses, accessory buildings		
	Limited single family residential		
	Limited public buildings		
	Resource harvesting		
	Churches, schools		
	Limited commercial		
	Public and private parks, recreation		
	Forest related uses		
Rural Residential (RR) – Section 10.130, Section 16.290		Minimum lot size 1 to 5 acres depending on use	
Permitted	Single family dwelling		
	General farming, animal husbandry		
	Public buildings		
	Dog kennel		
Conditional use	Churches, schools, parks, golf courses		
	Cemeteries		
	Transmission towers		
	Sewage treatment facilities		
	Transportation facilities		

APPENDIX E

Traffic Methodology

I-5 Coburg Interchange Area Management Plan Traffic Methodology

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DATE: June 20, 2005; Revised October 2, 2007

This memorandum includes an outline of the process to estimate 30th highest hour volumes (30 HV) and Average Daily Traffic (ADT) volumes, forecast future traffic volumes and perform the traffic analysis for the I-5 Coburg Interchange Area Management Plan. In addition, these methods will be used to update the existing conditions section of the City of Coburg Transportation System Plan. We would like to receive comments by June 30, 2005 so that any revisions can be incorporated prior to finalizing the existing conditions analysis with the Technical Advisory Committee in mid-July.

30th Highest Hour and Average Daily Traffic Volume Methodology

There are 10 intersections identified for analysis and they are listed below in Table 1 with the date and duration of the count. Table 1 is organized by the jurisdiction the intersection falls under, ODOT or Lane County/the City of Coburg.

TABLE 1
Study Intersections

Intersection	Date	Duration
ODOT		
Pearl St/Van Duyn Rd & I-5 Southbound Ramps	November 6/7, 2002	14-hour
Van Duyn Rd & I-5 Northbound Ramps	January 31, 2005	6-hour (3 in AM and 3 in PM)
Pearl St/Van Duyn Rd & I-5 Southbound Ramps	February 2007	14-hour
Van Duyn Rd & I-5 Northbound Ramps	February 2007	14-hour
Lane County/City of Coburg		
Coburg Rd & Coburg Bottom Loop	May 10/11, 2004	14-hour
Van Duyn St & Willamette St	May 5/6, 2004	14-hour
Willamette St & Pearl St	July 13/14, 2004	14-hour
Willamette St & Dixon St	May 5/6, 2004	14-hour
Pearl St & Diamond St	May 10/11, 2004	14-hour
Pearl St & Coleman St	May 5/6, 2004	14-hour
Pearl St & Industrial Way	May 4/5, 2004	14-hour
Pearl St & Roberts Rd	May 4,5 2004	14-hour

Note: The City of Coburg uses the Lane County TSP and Lane Code for volume to capacity (V/C) and Level of Service (LOS) standards.

Traffic counts for the eight City of Coburg intersections were collected by ODOT in May and July of 2004 to support the project. Traffic counts for the two ODOT intersections were collected in different years, but the older data was replaced by new counts taken in 2007.

No automated traffic recorder (ATR) site exists within the project area, so ATR site 24-016 (Wilsonville-Hubbarb Highway, No. 51) was chosen using the 2004 ATR Characteristic Table. This site was chosen because it most closely represents the project area when considering the following characteristics: seasonal traffic trend, area type, number of lanes, weekly traffic trend and 2003 ADT. This site will be used to seasonally adjust the counts to normalize the count data and factor the 14-hour data to ADT volumes. The ATR trend summaries on the ODOT website[1], which includes this ATR location, will be used to arrive at 30th highest hour volumes.

The procedure used to create 30th highest hour volumes from the ATR Trend Summary tables is outlined in section two (ATR Characteristic Table Method) of TPAU's document *ATR Characteristic Table Instructions memorandum*. As directed by the memorandum, the Average Weekday Traffic to Percent of ADT percentages were taken from the ATR trend summaries for the past five years (see Table 2). The high and low percentages were removed and averages of the remaining percentages were used to calculate a seasonal factor for that month.

TABLE 2

Seasonal Adjustment using ATR # 24-016

	2004	2003	2002	2001	2000	Factor
Peak Month	118% (June)	117% (June)	116% (August)	117% (August)	117% (August)	N/A
January	86%	100%	99%	49%	102%	1.23
February	108%	107%	106%	52%	107%	1.10
April	115%	110%	111%	64%	114%	1.05
May	114%	111%	110%	86%	110%	1.06
July	111%	111%	113%	112%	115%	1.04
October	111%	113%	112%	76%	112%	1.05
November	105%	108%	107%	66%	106%	1.10

Note: Gray cells indicate highs and lows that will be omitted from the calculations.

The percentages shown in Table 2 represent the 15th day of the month, so the counts that were not taken during the middle of the month require interpolation. Table 3 shows the seasonal factors for all the counts taken.

TABLE 3

Seasonal Adjustment Factors

Intersection	Date	Seasonal Factor
ODOT		
Pearl St/Van Duyn Rd & I-5 Southbound Ramps	November 6/7, 2002	1.09
Van Duyn Rd & I-5 Northbound Ramps	January 31, 2005	1.16
City of Coburg		
Coburg Rd & Coburg Bottom Loop	May 10/11, 2004	1.06

[1] The website can be found at: http://www.oregon.gov/ODOT/TD/TDATA/tsm/Traffic_Volume_Tables.

Van Duyn St & Willamette St	May 5/6, 2004	1.05
Willamette St & Pearl St	July 13/14, 2004	1.04
Willamette St & Dixon St	May 5/6, 2004	1.05
Pearl St & Diamond St	May 10/11, 2004	1.06
Pearl St & Coleman St	May 5/6, 2004	1.05
Pearl St & Industrial Way	May 4/5, 2004	1.05
Pearl St & Roberts Rd	May 4,5 2004	1.05

One peak hour will be selected for all study intersections based on the summation of hourly volumes for the entire traffic count data set. Once the peak hour volumes are determined, the 30 HV seasonal factors found in Table 3 will be applied to get 30th highest hour volumes. See equations #1 and #2 below for the equations used in this process.

30 HV Seasonal Factor Equation (from TPAU's document, *30th Hour Volumes*):

> #1) 30 HV Seasonal Factor = Count period seasonal factor / Peak period seasonal factor

Equation to convert 14-hour traffic count to 30 HV volumes:

> #2) 30 HV = Peak Hour from traffic count * 30 HV Seasonal Factor

Once the 30th highest hour volume is calculated for each intersection, the traffic counts collected in 2002 and 2004 will be adjusted to reflect 2005 year volumes. Using ODOT's Future Volume Table an annual growth rate of 2.40% was calculated using a location 0.30 miles south of the Van Duyn Road Interchange on I-5.

TABLE 4

Annual Growth Rate Calculation along I-5 (Pacific Highway No. 1)

MP	2002 ADT	2023 ADT	R-Squared	Overall Factor	1-Year Growth
198.85	43500	65400	Model	1.50	2.40%

Note: One year growth calculated linearly
Source: http://www.oregon.gov/ODOT/TD/TP/TADR.shtml

Traffic Forecast Methodology

The forecasted traffic volumes will be generated by the Lane Council of Governments (LCOG) regional travel demand model. LCOG will provide PM peak-hour turning movement and directional link volumes at each study intersection for Existing (2005) and the future (2031) No-Build and Build scenarios.

The forecasted traffic volumes from the model will be subsequently post-processed using the iterative directional volume processing method outlined in the *National Cooperative Highway Research Program (NCHRP) Report 255*. An Excel workbook will be created to distribute the forecasted entering and exiting link volumes from the model iteratively to arrive at turning movement volumes. The balancing procedure will use ten iterations to balance the future entering and exiting trip estimates for each approach leg based on the current turning movement volumes. The balanced 2005 30th highest hour traffic volumes will serve as the basis for the turning movement distribution. After this process is completed, the future 2031 30th highest hour traffic volumes will be analyzed for each future scenario.

Traffic Analysis Software and Input Assumptions

Synchro software will be used for the intersection analysis. The reported results will be the V/C ratios from the HCM report. Assumptions are listed in Table 4.

TABLE 4
Synchro Operations Parameters/Assumptions

	Condition	
Arterial Intersection Parameters	**Existing (2005)**	**Design Year (2031)**
Peak Hour Factor	From traffic count, if not provided: - 0.85 for side street approaches and collector streets - 0.95 for the I-5 Ramps	- 0.85 for side street approaches and collector streets - 0.95 for the I-5 Ramps If traffic count has higher PHFs than default PHFs, then continue using the existing PHFs.[1]
Conflicting Bikes and Pedestrian per Hour	From traffic count, if not provided, assume 10 peds/bikes per approach	Same as Existing
Area Type	“Other” Area	Same as Existing
Ideal Saturation Flow Rate (for all movements)	1800	Same as Existing
Lane Width	From as-builts, field visit or ODOT website, otherwise 12 feet	Same as Existing
Percent Heavy Vehicles	From traffic count, otherwise 5%	Same as Existing
Percent Grade	From as-builts, otherwise 0%	Same as Existing
Parking Maneuvers per Hour	From field visit, otherwise assume 0	Same as Existing
Bus Blockages	From field visit, otherwise assume 0	Same as Existing
Intersection signal phasing and coordination	From current timing plan	Optimize phase and cycle length, phase sequence and offset (if signals are coordinated)
Intersection signal timing optimization limits	N/A, only performed in future year analysis	60 to 120 seconds depending on the number of phases[1]
Minimum Green time	From current timing plan	Current timing plan, otherwise 10 sec. if no pedestrian time required.
Yellow and all-red time	From current timing plan	For existing signals, same as existing. If additional signal warranted, (Y) = 4 seconds and (R) = 0 second
Right Turn on Red	From field visit	From existing conditions, if additional signal warranted, then “allow”.
Vehicle Queues	95th Percentile, calculated based on an average of 25 feet per vehicle and: For V/C < 0.70, use 95th Percentile results from Synchro reports For V/C > 0.70, use SimTraffic report (the average of at least 5 runs of 1 hour length with 15-min peak divided out)[2]	Same as Existing
Level of service goals for ODOT facilities[3]	- The I-5 Ramps V/C threshold is 0.80 – OHP	**No-Build:** - The I-5 Ramp V/C threshold is 0.80 **Build:** - The I-5 Ramp V/C threshold is 0.75

TABLE 4

Synchro Operations Parameters/Assumptions

	Condition	
Arterial Intersection Parameters	**Existing (2005)**	**Design Year (2031)**
Level of service goals for City facilities[4]	- The side-street and collector-street V/C threshold is 0.85 and the LOS threshold is D - For a 2-way stop controlled intersection, the approaches that are required to stop have a V/C threshold of 0.95. The approaches that are not required to stop have a V/C threshold of 0.85.	**No-Build:** - Apply existing conditions V/C thresholds **Build:** - Apply existing conditions V/C thresholds

1 – Assumptions consistent with White Paper on Application of Oregon Highway Plan Mobility Standards.

2 – The simulation will be for one hour with the peak 15-minutes in the first 15 minutes. The results from this simulation will be applied to signalized and unsignalized intersections. Instructions provided by TPAU.

3 – Existing and No-Build V/C thresholds for ODOT facilities from the Oregon Highway Plan (OHP), Build V/C thresholds from the Highway Design Manual, Table 10-1.

4 – Existing and No-Build V/C thresholds for City facilities from the Lane County TSP, Goal A, Policy 4-a and 4-b.

APPENDIX F

Raw Existing Traffic Data

COBURG I-5 AT EXIT 199 NORTHBOUND

2/8/2007

0600-0700			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	11	18	4	31	0	10	1	807	0	0	0	882
		Commercial Vehicles	0	1	2	0	1	0	0	0	3	0	0	0	7
		Buses	0	1	0	0	0	0	0	0	3	0	0	0	4
		Motorcycles	0	0	0	0	0	0	0	0	1	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	0	3	12	3	3	0	2	0	6	0	0	0	29
		3 Axle	0	0	0	0	0	0	0	0	2	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	12	1	3	0	3	1	7	0	0	0	28
		6 Axle +	0	0	0	0	1	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	3	0	1	0	0	0	4	0	0	0	8
		Totals	0	17	47	8	40	0	15	2	834	0	0	0	963

0700-0715			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	0	11	2	12	0	3	0	154	0	0	0	182
		Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
		Buses	0	0	0	0	0	0	0	0	2	0	0	0	2
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	3	0	1	0	0	0	1	0	0	0	5
		3 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	3	3	1	0	1	0	2	0	0	0	10
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	0	17	5	14	0	4	0	160	0	0	0	200

TrafStats

0715-0730			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	3	6	1	9	0	6	1	113	0	0	0	139
Commercial Vehicles			0	0	0	0	0	0	0	0	0	0	0	0	0
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	1	4	0	1	0	1	0	2	0	0	0	9
		3 Axle	0	0	0	0	0	0	1	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	5	0	1	0	0	0	2	0	0	0	8
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
		Totals	0	4	16	1	11	0	8	1	117	0	0	0	158

0730-0745			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	0	2	0	16	0	1	0	77	0	0	0	96
Commercial Vehicles			0	0	1	0	0	0	0	0	0	0	0	0	1
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	1	0	6	0	0	0	0	0	7
		3 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	1	0	0	0	0	1
		5 Axle	0	1	5	0	2	0	3	1	0	0	0	0	12
		6 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	1	0	0	0	0	0	1
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	1	9	0	19	0	11	2	77	0	0	0	119

TrafStats

0745-0800			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	3	9	2	9	0	3	0	91	0	0	0	117
Commercial Vehicles			0	0	0	0	0	0	0	0	2	0	0	0	2
Buses			0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	4	0	0	0	2	0	0	0	0	0	6
		3 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	2	0	0	0	3	1	0	0	0	0	6
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	4	15	2	10	0	8	1	93	0	0	0	133

0800-0815			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	5	3	0	22	0	5	0	56	0	0	0	91
Commercial Vehicles			0	0	1	0	0	0	0	0	1	0	0	0	2
Buses			0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	1	2	0	1	0	0	0	6	0	0	0	10
		3 Axle	0	0	1	0	0	0	0	0	1	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	2	0	0	0	0	0	1	0	0	0	3
		6 Axle +	0	0	0	0	0	0	1	0	1	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	1	0	0	0	0	0	2
		Totals	0	7	10	0	24	0	7	0	66	0	0	0	114

TRAFSTATS

0815-0830			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	4	4	0	21	0	5	0	47	0	0	0	81
Commercial Vehicles			0	0	0	0	0	0	0	0	2	0	0	0	2
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	1	1	0	1	0	1	0	2	0	0	0	6
		3 Axle	0	0	0	0	0	0	0	0	2	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	1	0	0	0	0	0	1	0	0	0	2
		6 Axle +	0	0	0	1	0	0	0	0	1	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	5	6	1	22	0	6	0	56	0	0	0	96

0830-0845			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	2	1	0	15	0	1	0	39	0	0	0	58
Commercial Vehicles			0	0	3	0	0	0	2	0	5	0	0	0	10
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	1	1	0	0	1	0	0	0	0	0	3
		3 Axle	0	0	0	0	0	0	1	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	2	0	1	0	0	0	0	0	0	0	4
		6 Axle +	0	0	2	0	0	0	5	0	0	0	0	0	7
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	1	0	0	0	0	0	2
		Totals	0	3	10	1	16	0	11	0	44	0	0	0	85

TrafStats

0845-0900			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	0	7	0	9	0	3	0	44	0	0	0	63
Commercial Vehicles			0	2	0	1	1	0	0	0	1	0	0	0	5
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	1	0	0	1	0	0	0	0	0	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	0	1	2	1	0	0	2	0	2	0	0	0	8
		3 Axle	0	0	0	0	0	0	1	0	1	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	1	0	0	0	0	0	4	0	0	0	5
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	4	10	2	11	0	6	0	52	0	0	0	85

0900-1000			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	21	26	4	60	0	17	1	106	0	0	0	235
Commercial Vehicles			0	0	1	0	0	0	0	0	2	0	0	0	3
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	7	3	0	9	0	4	0	14	0	0	0	37
		3 Axle	0	0	1	0	2	0	0	0	2	0	0	0	5
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	3	0	0	0	3
		5 Axle	0	1	12	1	1	0	2	1	16	0	0	0	34
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	1	0	0	0	1	0	1	0	0	0	3
		6 Axle	0	0	0	0	0	0	0	0	3	0	0	0	3
		7 Axle +	0	0	0	1	1	0	1	0	4	0	0	0	7
		Totals	0	29	44	6	73	0	25	2	152	0	0	0	331

TrafStats

1000-1100			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	12	26	4	30	0	11	0	100	0	0	0	183
		Commercial Vehicles	0	0	0	0	0	0	0	0	5	0	0	0	5
		Buses	0	0	2	0	0	0	0	0	0	0	0	0	2
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	2	11	1	4	0	2	0	13	0	0	0	33
		3 Axle	0	0	1	0	1	0	0	0	2	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	1	0	0	0	1	0	2	0	0	0	4
		5 Axle	0	0	17	1	1	0	4	0	15	0	0	0	38
		6 Axle +	0	0	1	0	0	0	0	1	1	0	0	0	3
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		6 Axle	0	0	1	0	0	0	0	1	1	0	0	0	3
		7 Axle +	0	0	1	0	0	0	0	0	3	0	0	0	4
		Totals	0	14	61	6	36	0	18	2	143	0	0	0	280

1100-1200			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	25	39	0	46	0	14	3	126	0	0	0	253
		Commercial Vehicles	0	0	0	0	2	0	1	0	6	0	0	0	9
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	1	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	0	2	3	1	3	0	4	0	6	0	0	0	19
		3 Axle	0	0	1	0	0	0	0	0	4	0	0	0	5
		4 Axle +	0	0	0	0	2	0	0	0	0	0	0	0	2
	Single Trailer	4 Axle -	0	1	1	0	1	0	0	0	0	0	0	0	3
		5 Axle	0	1	10	0	1	0	1	0	18	0	0	0	31
		6 Axle +	0	1	1	0	1	0	0	0	3	0	0	0	6
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	1	0	0	0	0	0	0	2	0	0	0	3
		7 Axle +	0	0	2	0	0	0	0	0	1	0	0	0	3
		Totals	0	31	57	1	56	0	20	3	167	0	0	0	335

TrafStats

1200-1300			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	35	19	2	48	0	24	1	144	0	0	0	273
Commercial Vehicles			0	2	1	0	1	0	0	0	8	0	0	0	12
Buses			0	0	1	0	0	0	0	0	2	0	0	0	3
Motorcycles			0	0	0	0	0	0	0	0	2	0	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	0	7	7	1	4	0	0	0	18	1	0	0	38
		3 Axle	0	0	3	0	1	0	0	0	0	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	1	0	0	0	0	0	0	1	0	1	0	3
		5 Axle	0	2	13	0	2	0	0	0	17	1	1	0	36
		6 Axle +	0	0	2	0	0	0	0	0	4	0	0	0	6
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	2	0	1	0	0	0	4	0	0	0	7
		Totals	0	47	48	3	57	0	24	1	200	2	2	0	384

1300-1400			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	22	18	9	36	0	19	3	137	0	0	0	244
Commercial Vehicles			0	1	1	0	1	0	1	0	6	0	0	0	10
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	4	5	4	2	0	3	0	11	0	0	0	29
		3 Axle	0	0	3	2	0	0	2	0	5	0	0	0	12
		4 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	1	10	4	0	0	3	0	13	0	0	0	31
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	0	0	1	0	0	0	2
		Totals	0	28	38	19	39	0	28	3	176	0	0	0	331

TrafStats

1400-1500			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	27	39	4	53	0	26	0	135	0	0	0	284
		Commercial Vehicles	0	2	1	0	2	0	0	0	5	0	0	0	10
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	7	3	3	9	0	3	1	9	0	0	0	35
		3 Axle	0	0	1	1	0	0	1	0	0	0	0	0	3
		4 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	0	12	1	1	0	2	0	22	0	0	0	38
		6 Axle +	0	0	1	0	0	0	0	0	2	0	0	0	3
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		6 Axle	0	0	0	0	0	0	0	0	1	0	0	0	1
		7 Axle +	0	0	1	0	0	0	0	0	2	0	0	0	3
		Totals	0	36	58	9	65	0	32	1	179	0	0	0	380

1500-1600			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	44	55	10	51	0	39	0	177	0	0	0	376
		Commercial Vehicles	0	2	3	0	1	0	1	0	2	0	0	0	9
		Buses	0	1	0	0	1	0	0	0	0	0	0	0	2
		Motorcycles	0	1	0	0	2	0	1	0	1	0	0	0	5
Trucks	Single Unit	2 Axle 6 Tire	0	6	3	2	6	0	2	0	11	0	0	0	30
		3 Axle	0	1	2	2	0	0	2	0	3	0	0	0	10
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	2	0	0	0	0	0	1	0	0	0	3
		5 Axle	0	0	12	1	0	0	0	0	21	0	0	0	34
		6 Axle +	0	0	1	1	0	0	1	0	4	0	0	0	7
	Multi Trailer	5 Axle -	0	0	1	0	0	0	0	0	0	0	0	0	1
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	2	0	0	0	0	0	2	0	0	0	4
		Totals	0	55	81	16	61	0	46	0	222	0	0	0	481

TrafStats

1600-1615			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	13	28	3	14	0	6	1	45	0	0	0	110
Commercial Vehicles			0	0	0	0	0	0	1	0	3	0	0	0	4
Buses			0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	0	0	0	0	3	0	0	0	3
		3 Axle	0	0	1	0	0	0	0	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	1	0	1	0	0	0	2	0	0	0	5
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	15	30	3	16	0	7	1	55	0	0	0	127

1615-1630			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	13	16	5	8	0	14	0	43	0	0	0	99
Commercial Vehicles			0	0	0	0	0	0	0	0	1	0	0	0	1
Buses			0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles			0	0	0	0	0	0	0	0	1	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	0	0	1	0	0	0	1	0	3	0	0	0	5
		3 Axle	0	0	1	0	0	0	0	0	3	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	0	0	0	0	1	0	6	0	0	0	7
		6 Axle +	0	0	0	0	0	0	0	0	2	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	14	18	5	9	0	16	0	59	0	0	0	121

TRAFSTATS

1630-1645			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	10	17	3	12	0	8	1	42	0	0	0	93
Commercial Vehicles			0	2	1	0	2	0	1	0	6	0	0	0	12
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	1	0	0	1	0	0	0	3	0	0	0	5
		3 Axle	0	1	2	0	1	0	0	0	0	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	2	1	0	0	0	0	4	0	0	0	7
		6 Axle +	0	0	1	0	0	0	0	0	1	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	14	23	4	16	0	9	1	57	0	0	0	124

1645-1700			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	18	17	2	15	0	6	0	53	0	0	0	111
Commercial Vehicles			0	0	1	0	3	0	0	0	3	0	0	0	7
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	1	0	0	1	0	3	0	0	0	5
		3 Axle	0	0	1	0	0	0	0	0	3	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	4	0	0	0	0	0	4	0	0	0	9
		6 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	2	0	0	0	2
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
		Totals	0	19	25	3	18	0	7	0	68	0	0	0	140

TrafStats

1700-1715			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	8	13	0	14	0	12	2	46	0	0	0	95
		Commercial Vehicles	0	1	1	0	0	0	0	0	3	0	0	0	5
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	3	0	0	0	3
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	0	0	1	0	3	0	0	0	4
		3 Axle	0	0	1	0	0	0	0	0	3	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	4	0	0	0	0	0	4	0	0	0	9
		6 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	2	0	0	0	2
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	0	0	0	0	0	0	1
		Totals	0	10	21	0	14	0	13	2	64	0	0	0	124

1715-1730			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	6	11	1	13	0	12	2	54	0	0	0	99
		Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
		Buses	0	0	0	0	0	0	0	0	1	0	0	0	1
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	2	0	1	0	0	0	0	0	0	0	3
		3 Axle	0	0	3	0	0	0	1	0	2	0	0	0	6
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	4	0	1	0	1	0	3	0	0	0	9
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	6	20	1	15	0	14	2	61	0	0	0	119

TrafStats

1730-1745			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	7	14	1	11	0	8	1	55	0	0	0	97
Commercial Vehicles			0	0	0	0	0	0	1	0	2	0	0	0	3
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	2	0	0	0	0	0	0	3	0	0	0	5
		3 Axle	0	0	0	0	0	0	0	0	1	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	0	0	1	2	0	1	0	3	0	0	0	7
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	9	14	2	13	0	10	1	67	0	0	0	116

1745-1800			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	6	13	1	8	0	6	0	47	0	0	0	81
Commercial Vehicles			0	0	0	0	0	0	0	0	1	0	0	0	1
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	1	0	0	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	0	0	0	0	1	0	0	0	1
		3 Axle	0	0	1	0	0	0	0	0	1	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	0	1	0	0	2	0	6	0	0	0	9
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
		Totals	0	6	14	2	8	0	9	0	57	0	0	0	96

TrafStats

1800-1900			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	22	17	7	36	0	36	0	104	0	0	0	222
		Commercial Vehicles	0	1	0	0	1	0	0	0	2	0	0	0	4
		Buses	0	1	0	0	1	0	0	0	0	0	0	0	2
		Motorcycles	0	0	1	1	0	0	0	0	0	0	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	0	1	1	0	2	0	1	0	5	0	0	0	10
		3 Axle	0	0	1	0	0	0	1	0	2	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	1	9	0	0	0	0	0	20	0	0	0	30
		6 Axle +	0	0	0	0	0	0	0	0	2	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	2	0	0	0	0	0	2	0	0	0	4
		Totals	0	26	31	8	40	0	38	0	138	0	0	0	281

1900-2000			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	0	6	17	0	16	0	17	3	74	0	0	0	133
		Commercial Vehicles	0	0	0	0	0	0	0	0	1	0	0	0	1
		Buses	0	0	0	0	0	0	0	0	2	0	0	0	2
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	0	0	0	0	0	0	0	0	0
		3 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	0	6	17	0	16	0	17	3	77	0	0	0	136

TrafStats

2000-2100			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	7	9	3	13	0	21	0	66	0	0	0	119
Commercial Vehicles			0	0	0	0	1	0	0	0	0	0	0	0	1
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	1	0	2	1	0	0	0	2	0	0	0	6
		3 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	0	10	0	0	0	2	0	5	0	0	0	17
		6 Axle +	0	0	2	0	0	0	0	0	0	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	0	0	0	0	0	1	0	0	0	2
		Totals	0	8	22	5	15	0	23	0	75	0	0	0	148

2100-2200			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			0	12	9	1	18	0	16	2	44	0	0	0	102
Commercial Vehicles			0	0	0	1	0	0	0	0	0	0	0	0	1
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	0	0	0	0	0	0	0	0	0	0	0	0	0
		3 Axle	0	0	0	0	0	0	0	0	1	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	1	0	0	0	1
		5 Axle	0	1	2	1	1	0	1	0	6	0	0	0	12
		6 Axle +	0	0	0	0	0	0	0	0	1	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	1	1	0	0	1	0	0	0	0	0	3
		Totals	0	13	12	4	19	0	18	2	53	0	0	0	121

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0600-0700			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	143	22	0	0	775	26	0	0	0	85	0	5	1056
		Commercial Vehicles	0	1	0	0	3	0	0	0	0	0	0	0	4
		Buses	0	1	0	0	3	0	0	0	0	0	0	0	4
		Motorcycles	0	0	0	0	1	0	0	0	0	1	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	13	6	0	0	10	1	0	0	0	5	0	1	36
		3 Axle	3	1	0	0	1	2	0	0	0	0	0	0	7
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	19	18	0	0	9	1	0	0	0	8	0	1	56
		6 Axle +	2	1	0	0	0	1	0	0	0	0	0	0	4
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	4	2	0	0	2	1	0	0	0	2	0	0	11
		Totals	184	52	0	0	804	32	0	0	0	101	0	7	1180

0700-0715			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	48	11	0	0	150	10	0	0	0	13	0	0	232
		Commercial Vehicles	0	0	0	0	2	0	0	0	0	0	0	0	2
		Buses	0	0	0	0	2	0	0	0	0	0	0	0	2
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	3	3	0	0	2	0	0	0	0	1	0	0	9
		3 Axle	1	0	0	0	0	0	0	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	1	0	0	0	0	0	0	0	0	0	0	0	1
		5 Axle	5	3	0	0	2	1	0	0	0	1	0	0	12
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	1	0	0	0	0	1	0	0	2
		Totals	58	17	0	0	159	11	0	0	0	16	0	0	261

TrafStats

0715-0730			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	62	9	0	0	114	8	0	0	0	9	0	0	202
		Commercial Vehicles	1	2	0	0	1	1	0	0	0	0	0	0	5
		Buses	1	0	0	0	0	0	0	0	0	0	0	0	1
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	4	3	0	0	2	0	0	0	0	0	0	0	9
		3 Axle	1	1	0	0	0	0	0	0	0	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	5	5	0	0	3	0	0	0	0	6	0	0	19
		6 Axle +	2	0	0	0	0	0	0	0	0	0	0	0	2
	Multi Trailer	5 Axle -	1	0	0	0	0	0	0	0	0	1	0	0	2
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	1	0	0	0	0	0	0	0	0	0	0	2
		Totals	78	21	0	0	120	9	0	0	0	16	0	0	244

0730-0745			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	59	2	0	0	81	15	0	0	0	9	0	0	166
		Commercial Vehicles	2	1	0	0	0	0	0	0	0	0	0	0	3
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	2	0	0	0	4	0	0	0	0	1	0	0	7
		3 Axle	3	1	0	0	0	0	0	0	0	0	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	1	0	0	0	1	0	0	0	0	0	0	0	2
		5 Axle	3	3	0	0	1	3	0	0	0	2	0	1	13
		6 Axle +	1	1	0	0	0	0	0	0	0	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	0	0	0	0	0	0	0	0	0	1	0	2
		Totals	72	8	0	0	87	18	0	0	0	12	1	1	199

0745-0800			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			53	12	0	0	92	9	0	0	0	15	0	1	182
Commercial Vehicles			1	1	0	0	0	0	0	0	0	0	0	0	2
Buses			0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	5	5	0	0	2	0	0	0	0	1	0	0	13
		3 Axle	1	0	0	0	0	0	0	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	4	4	0	0	4	0	0	0	0	2	0	0	14
		6 Axle +	1	0	0	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	1	0	0	0	0	0	0	0	1
		Totals	65	23	0	0	100	9	0	0	0	18	0	1	216

0800-0815			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			36	9	0	0	59	15	0	0	0	2	0	2	123
Commercial Vehicles			1	0	0	0	3	0	0	0	0	0	0	0	4
Buses			1	1	0	0	1	0	0	0	0	0	0	0	3
Motorcycles			1	0	0	0	0	0	0	0	0	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	6	2	0	0	6	1	0	0	0	2	0	1	18
		3 Axle	4	1	0	0	1	0	0	0	0	1	0	0	7
		4 Axle +	1	0	0	0	0	0	0	0	0	0	0	0	1
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	5	1	0	0	1	0	0	0	0	1	0	0	8
		6 Axle +	0	1	0	0	1	0	0	0	0	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	1	0	0	0	0	0	0	0	1	0	0	3
		Totals	56	16	0	0	72	16	0	0	0	7	0	3	170

TrafStats

0815-0830			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			45	9	0	0	59	14	0	0	0	1	0	1	129
Commercial Vehicles			4	0	0	0	1	0	0	0	0	2	0	0	7
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	6	1	0	0	2	1	0	0	0	0	0	0	10
		3 Axle	0	0	0	0	2	0	0	0	0	2	0	0	4
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	6	2	0	0	2	0	0	0	0	0	0	0	10
		6 Axle +	3	0	0	0	0	0	0	0	0	0	0	0	3
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	1	0	0	0	0	0	0	0	1
		Totals	64	12	0	0	67	15	0	0	0	5	0	1	164

0830-0845			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			45	4	0	0	41	10	0	0	0	3	0	0	103
Commercial Vehicles			3	2	0	0	7	0	0	0	0	1	0	0	13
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	2	1	0	0	3	0	0	0	0	3	0	0	9
		3 Axle	1	0	0	0	1	0	0	0	0	1	0	0	3
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	7	3	0	0	3	0	0	0	0	1	0	1	15
		6 Axle +	1	1	0	0	0	0	0	0	0	1	0	0	3
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	1	0	0	2	0	0	0	0	2	0	0	6
		Totals	60	12	0	0	57	10	0	0	0	12	0	1	152

TrafStats

0845-0900			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			49	10	0	0	46	7	0	0	0	5	0	0	117
Commercial Vehicles			1	1	0	0	2	1	0	0	0	0	0	1	6
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	1	0	0	0	0	0	0	1	2
Trucks	Single Unit	2 Axle 6 Tire	3	1	0	0	3	1	0	0	0	1	0	1	10
		3 Axle	1	0	0	0	1	0	0	0	0	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	0	1	0	0	5	1	0	0	0	2	0	0	9
		6 Axle +	1	0	0	0	0	0	0	0	0	1	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	55	13	0	0	58	10	0	0	0	9	0	3	148

0900-1000			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			140	42	0	0	119	39	0	0	0	27	0	1	368
Commercial Vehicles			4	2	0	0	5	2	0	0	0	3	0	0	16
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			1	0	0	0	0	0	0	0	0	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	14	10	0	0	25	4	0	0	0	9	0	2	64
		3 Axle	7	1	0	0	5	3	0	0	0	2	0	0	18
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	4	0	0	0	0	1	0	0	5
		5 Axle	21	13	0	0	16	0	0	0	0	18	0	2	70
		6 Axle +	4	0	0	0	5	1	0	0	0	2	0	0	12
	Multi Trailer	5 Axle -	0	1	0	0	1	0	0	0	0	0	0	0	2
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	0	0	0	2	0	0	0	0	0	0	0	3
		Totals	192	69	0	0	182	49	0	0	0	62	0	5	559

1000-1100			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	115	32	0	0	116	21	0	0	0	32	2	4	322
		Commercial Vehicles	5	1	0	0	3	3	0	0	0	2	0	0	14
		Buses	0	0	0	0	1	0	0	0	0	0	0	0	1
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	16	18	0	0	21	2	0	0	0	7	0	1	65
Trucks	Single Unit	3 Axle	9	2	0	0	7	0	0	0	0	1	0	0	19
Trucks	Single Unit	4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Trailer	4 Axle -	4	2	0	0	4	0	0	0	0	0	0	0	10
Trucks	Single Trailer	5 Axle	26	18	0	0	19	2	0	0	0	25	0	0	90
Trucks	Single Trailer	6 Axle +	6	0	0	0	1	0	0	0	0	2	0	0	9
Trucks	Multi Trailer	5 Axle -	0	1	0	0	0	0	0	0	0	1	0	0	2
Trucks	Multi Trailer	6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Multi Trailer	7 Axle +	1	1	0	0	2	0	0	0	0	0	0	0	4
		Totals	182	75	0	0	174	28	0	0	0	70	2	5	536

1100-1200			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	199	57	0	0	157	34	0	0	0	21	0	2	470
		Commercial Vehicles	8	1	0	0	6	2	0	0	0	1	0	0	18
		Buses	0	1	0	0	2	0	0	0	0	0	0	0	3
		Motorcycles	1	0	0	0	1	0	0	0	0	0	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	17	7	0	0	12	2	0	0	0	6	0	1	45
Trucks	Single Unit	3 Axle	9	2	0	0	6	0	0	0	0	2	0	1	20
Trucks	Single Unit	4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Trailer	4 Axle -	5	2	0	0	1	1	0	0	0	1	0	0	10
Trucks	Single Trailer	5 Axle	21	9	0	0	22	0	0	0	0	22	1	1	76
Trucks	Single Trailer	6 Axle +	1	1	0	0	5	0	0	0	0	1	0	1	9
Trucks	Multi Trailer	5 Axle -	1	0	0	0	0	1	0	0	0	0	0	0	2
Trucks	Multi Trailer	6 Axle	0	1	0	0	0	0	0	0	0	0	0	1	2
Trucks	Multi Trailer	7 Axle +	0	1	0	0	0	0	0	0	0	1	0	0	2
		Totals	262	82	0	0	212	40	0	0	0	55	1	7	659

TrafStats

1200-1300			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	184	54	0	0	172	26	0	0	0	25	1	4	466
		Commercial Vehicles	1	4	0	0	8	2	0	0	0	1	0	0	16
		Buses	0	1	0	0	0	0	0	0	0	0	0	0	1
		Motorcycles	1	0	0	0	1	0	0	0	0	1	0	0	3
Trucks	Single Unit	2 Axle 6 Tire	10	9	0	0	13	2	0	0	0	5	0	0	39
		3 Axle	9	2	0	0	2	1	0	0	0	1	0	0	15
		4 Axle +	1	0	0	0	0	0	0	0	0	0	0	0	1
	Single Trailer	4 Axle -	0	2	0	0	2	0	0	0	0	0	0	0	4
		5 Axle	36	14	0	0	20	1	0	0	0	19	0	1	91
		6 Axle +	0	2	0	0	1	0	0	0	0	1	0	0	4
	Multi Trailer	5 Axle -	0	0	0	0	0	1	0	0	0	0	0	0	1
		6 Axle	1	0	0	0	2	0	0	0	0	0	0	0	3
		7 Axle +	6	3	0	0	7	0	0	0	0	4	0	0	20
		Totals	249	91	0	0	228	33	0	0	0	57	1	5	664

1300-1400			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	132	43	0	0	162	16	0	0	0	24	1	0	378
		Commercial Vehicles	2	1	0	0	3	0	0	0	0	1	0	1	8
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	2	0	0	0	0	0	0	0	0	0	0	0	2
Trucks	Single Unit	2 Axle 6 Tire	4	7	0	0	7	1	0	0	0	5	0	0	24
		3 Axle	7	2	0	0	2	0	0	0	0	0	0	0	11
		4 Axle +	0	0	0	0	1	0	0	0	0	0	0	0	1
	Single Trailer	4 Axle -	2	0	0	0	2	0	0	0	0	0	0	0	4
		5 Axle	22	9	0	0	10	1	0	0	0	12	0	2	56
		6 Axle +	1	0	0	0	1	0	0	0	0	1	0	0	3
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	5	0	0	0	1	0	0	0	0	2	0	0	8
		Totals	177	62	0	0	189	18	0	0	0	45	1	3	495

TrafStats

1400-1500			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	141	55	0	0	170	33	0	0	0	21	4	9	433
		Commercial Vehicles	1	0	0	0	2	0	0	0	0	0	0	0	3
		Buses	1	0	0	0	0	0	0	0	0	0	0	0	1
		Motorcycles	0	0	0	0	0	0	0	0	0	1	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	9	3	0	0	11	4	0	0	0	8	0	3	38
		3 Axle	4	0	0	0	0	0	0	0	0	2	0	0	6
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	2	0	0	0	0	1	0	0	3
		5 Axle	19	12	0	0	17	2	0	0	0	15	0	1	66
		6 Axle +	1	1	0	0	1	0	0	0	0	1	0	0	4
	Multi Trailer	5 Axle -	1	0	0	0	0	0	0	0	0	0	0	0	1
		6 Axle	0	0	0	0	2	0	0	0	0	0	0	0	2
		7 Axle +	4	0	0	0	4	0	0	0	0	1	0	0	9
		Totals	181	71	0	0	209	39	0	0	0	50	4	13	567

1500-1600			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	668	103	0	0	181	37	0	0	0	49	1	3	1042
		Commercial Vehicles	6	2	0	0	4	0	0	0	0	3	0	0	15
		Buses	3	1	0	0	2	0	0	0	0	0	0	0	6
		Motorcycles	2	0	0	0	3	0	0	0	0	0	0	1	6
Trucks	Single Unit	2 Axle 6 Tire	10	7	0	0	12	0	0	0	0	5	0	4	38
		3 Axle	11	2	0	0	3	0	0	0	0	5	0	0	21
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	1	2	0	0	1	0	0	0	0	1	0	0	5
		5 Axle	11	11	0	0	23	0	0	0	0	15	0	0	60
		6 Axle +	2	1	0	0	4	0	0	0	0	2	0	0	9
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	1	0	0	1	0	0	0	0	0	0	0	2
		7 Axle +	1	2	0	0	1	0	0	0	0	0	0	0	4
		Totals	715	132	0	0	235	37	0	0	0	80	1	8	1208

TrafStats

1600-1615			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			269	36	0	0	50	11	0	0	0	8	0	1	375
Commercial Vehicles			6	0	0	0	5	0	0	0	0	0	0	0	11
Buses			1	1	0	0	1	0	0	0	0	0	0	0	3
Motorcycles			0	0	0	0	0	0	0	0	0	1	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	4	0	0	0	3	0	0	0	0	3	0	0	10
		3 Axle	0	1	0	0	0	0	0	0	0	1	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	1	0	0	0	0	0	0	0	0	0	0	0	1
		5 Axle	6	1	0	0	2	1	0	0	0	3	0	1	14
		6 Axle +	1	0	0	0	1	0	0	0	0	0	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	0	0	0	1	0	0	0	0	0	0	0	2
		Totals	289	39	0	0	63	12	0	0	0	16	0	2	421

1615-1630			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			129	29	0	0	39	7	0	0	0	12	0	2	218
Commercial Vehicles			1	0	0	0	1	0	0	0	0	0	0	0	2
Buses			2	1	0	0	0	1	0	0	0	0	0	0	4
Motorcycles			0	0	0	0	1	0	0	0	0	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	1	1	0	0	2	0	0	0	0	1	0	0	5
		3 Axle	1	1	0	0	3	0	0	0	0	1	0	0	6
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	3	1	0	0	6	0	0	0	0	3	0	0	13
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	0	0	0	0	0	0	0	0	1	0	0	2
		Totals	138	33	0	0	52	8	0	0	0	18	0	2	251

TRAFSTATS

1630-1645			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			150	29	0	0	51	5	0	0	0	11	1	1	248
Commercial Vehicles			2	2	0	0	5	1	0	0	0	0	0	0	10
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	1	1	0	0	3	0	0	0	0	3	0	0	8
		3 Axle	2	2	0	0	0	0	0	0	0	3	0	0	7
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	5	2	0	0	6	0	0	0	0	3	0	0	16
		6 Axle +	0	1	0	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	1	0	0	0	1	0	0	0	0	0	0	0	2
		Totals	161	37	0	0	66	6	0	0	0	20	1	1	292

1645-1700			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			121	29	0	0	59	14	0	0	0	8	1	3	235
Commercial Vehicles			3	0	0	0	2	0	0	0	0	3	0	0	8
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	8	0	0	1	3	0	0	0	0	3	0	0	15
		3 Axle	2	1	0	0	4	0	0	0	0	1	0	0	8
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	4	4	0	0	4	0	0	0	0	4	0	1	17
		6 Axle +	0	1	0	0	0	0	0	0	0	1	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	2	0	0	0	0	0	0	0	2
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	2	1	0	0	0	0	0	0	0	0	0	0	3
		Totals	140	36	0	1	74	14	0	0	0	20	1	4	290

TrafStats

1700-1715			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			166	22	0	0	52	12	0	0	0	11	0	3	266
Commercial Vehicles			1	1	0	0	1	0	0	0	0	1	0	0	4
Buses			0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles			0	0	0	0	3	0	0	0	0	0	0	0	3
Trucks	Single Unit	2 Axle 6 Tire	1	2	0	0	1	0	0	0	0	1	0	0	5
		3 Axle	3	1	0	0	2	0	0	0	0	1	0	0	7
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	4	4	0	0	3	1	0	0	0	2	0	0	14
		6 Axle +	0	0	0	0	1	0	0	0	0	1	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	1	0	0	1
		7 Axle +	0	0	0	0	0	0	0	0	0	1	0	0	1
		Totals	175	30	0	0	63	13	0	0	0	19	0	3	303

1715-1730			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles			134	18	0	0	60	9	0	0	0	11	0	1	233
Commercial Vehicles			1	0	0	0	1	0	0	0	0	0	0	0	2
Buses			0	0	0	0	0	1	0	0	0	0	0	0	1
Motorcycles			1	0	0	0	0	0	0	0	0	0	0	0	1
Trucks	Single Unit	2 Axle 6 Tire	4	0	0	0	1	0	0	0	0	2	0	0	7
		3 Axle	0	0	0	0	1	0	0	0	0	0	0	0	1
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		5 Axle	2	3	0	0	0	0	0	0	0	3	0	1	9
		6 Axle +	1	0	0	0	0	0	0	0	0	0	0	0	1
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	143	21	0	0	63	10	0	0	0	16	0	2	255

TRAFSTATS

1730-1745			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	112	21	0	0	58	6	0	0	0	7	0	0	204
		Commercial Vehicles	1	0	0	0	1	1	0	0	0	1	0	0	4
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	5	2	0	0	2	0	0	0	0	3	0	0	12
		3 Axle	0	0	0	0	2	0	0	0	0	0	0	0	2
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	1	0	0	0	0	0	0	0	1
		5 Axle	4	0	0	0	4	1	0	0	0	2	1	0	12
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals	122	23	0	0	68	8	0	0	0	13	1	0	235

1745-1800			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	102	19	0	0	49	7	0	0	0	11	0	0	188
		Commercial Vehicles	0	0	0	0	1	0	0	0	0	0	0	0	1
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	2	1	0	0	0	0	0	0	0	1	0	0	4
		3 Axle	1	0	0	0	1	0	0	0	0	1	0	0	3
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	1	0	0	1
		5 Axle	4	2	0	0	6	0	0	0	0	6	0	0	18
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	0	0	0	2	0	0	0	0	1	0	0	3
		Totals	109	22	0	0	59	7	0	0	0	21	0	0	218

TRAFSTATS

1800-1900	Eastbound			Westbound			Northbound			Southbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles	129	42	0	0	126	20	0	0	0	27	0	1	345
Commercial Vehicles	1	0	0	0	1	1	0	0	0	0	0	1	4
Buses	0	1	0	0	1	0	0	0	0	0	0	0	2
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	1	1
Trucks, Single Unit, 2 Axle 6 Tire	1	1	0	0	6	1	0	0	0	1	0	1	11
Trucks, Single Unit, 3 Axle	1	1	0	0	1	0	0	0	0	1	0	0	4
Trucks, Single Unit, 4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks, Single Trailer, 4 Axle -	0	0	0	0	2	0	0	0	0	0	0	0	2
Trucks, Single Trailer, 5 Axle	8	11	0	0	23	0	0	0	0	11	0	0	53
Trucks, Single Trailer, 6 Axle +	0	0	0	0	0	0	0	0	0	1	0	0	1
Trucks, Multi Trailer, 5 Axle -	1	0	0	0	2	0	0	0	0	0	0	0	3
Trucks, Multi Trailer, 6 Axle	2	1	0	0	0	0	0	0	0	1	0	0	4
Trucks, Multi Trailer, 7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	143	57	0	0	162	22	0	0	0	42	0	4	430

1900-2000	Eastbound			Westbound			Northbound			Southbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
Automobiles	77	24	0	0	76	12	0	0	0	20	1	2	212
Commercial Vehicles	1	0	0	0	1	0	0	0	0	0	0	0	2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks, Single Unit, 2 Axle 6 Tire	5	2	0	0	2	0	0	0	0	1	0	0	10
Trucks, Single Unit, 3 Axle	0	0	0	0	1	0	0	0	0	0	0	0	1
Trucks, Single Unit, 4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks, Single Trailer, 4 Axle -	0	0	0	0	0	0	0	0	0	2	0	0	2
Trucks, Single Trailer, 5 Axle	12	6	0	0	16	0	0	0	0	12	0	0	46
Trucks, Single Trailer, 6 Axle +	0	0	0	0	0	0	0	0	0	1	0	0	1
Trucks, Multi Trailer, 5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks, Multi Trailer, 6 Axle	1	1	0	0	0	0	0	0	0	0	0	0	2
Trucks, Multi Trailer, 7 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	96	33	0	0	96	12	0	0	0	36	1	2	276

2000-2100			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	36	14	0	0	68	10	0	0	0	10	2	1	141
		Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	2	2	0	0	5	1	0	0	0	1	0	0	11
		3 Axle	1	0	0	0	0	0	0	0	0	2	0	0	3
		4 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Single Trailer	4 Axle -	0	0	0	0	0	0	0	0	0	1	0	0	1
		5 Axle	8	13	0	0	6	0	0	0	0	2	0	1	30
		6 Axle +	0	0	0	0	0	0	0	0	0	0	0	0	0
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	0	1	0	0	0	0	0	0	0	1	0	0	2
		Totals	47	30	0	0	79	11	0	0	0	17	2	2	188

2100-2200			Eastbound			Westbound			Northbound			Southbound			
			Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals
		Automobiles	45	21	0	0	54	10	0	0	0	16	1	0	147
		Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
		Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
		Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	Single Unit	2 Axle 6 Tire	2	0	0	0	0	0	0	0	0	1	0	0	3
		3 Axle	0	0	0	0	1	0	0	0	0	0	0	0	1
		4 Axle +	0	0	0	0	1	0	0	0	0	0	0	0	1
	Single Trailer	4 Axle -	0	0	0	0	1	0	0	0	0	0	0	0	1
		5 Axle	6	2	0	0	7	1	0	0	0	7	0	0	23
		6 Axle +	1	0	0	0	0	0	0	0	0	1	0	0	2
	Multi Trailer	5 Axle -	0	0	0	0	0	0	0	0	0	0	0	0	0
		6 Axle	0	0	0	0	0	0	0	0	0	0	0	0	0
		7 Axle +	3	2	0	0	0	0	0	0	0	1	0	0	6
		Totals	57	25	0	0	64	11	0	0	0	26	1	0	184

PEARL STREET/COBURG INDUSTRIAL WAY

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2008	12	14	06:00-07:00A	28	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2	2008	12	14	07:00-08:00A	9	0	13	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	12	14	08:00-09:00A	12	0	20	0	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	12	14	09:00-10:00A	22	0	10	2	1	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	12	14	10:00-11:00A	20	0	18	3	3	5	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	12	14	11:00-12:00P	54	0	65	5	1	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	12	14	12:00-01:00P	43	0	46	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
8	2008	12	14	01:00-02:00P	14	0	12	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	12	14	02:00-03:00P	56	0	38	1	0	6	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	12	14	03:00-04:00P	366	0	230	0	0	1	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0
11	2008	12	14	04:00-05:00P	256	0	185	0	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
12	2008	12	14	05:00-06:00P	115	0	74	2	0	1	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0
13	2008	12	14	06:00-07:00P	18	1	9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
14	2008	12	14	07:00-08:00P	8	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	13	14	06:00-07:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	2008	13	14	07:00-08:00A	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	13	14	08:00-09:00A	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	13	14	09:00-10:00A	2	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
5	2008	13	14	10:00-11:00A	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	13	14	11:00-12:00P	12	0	13	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	13	14	12:00-01:00P	5	0	7	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	13	14	01:00-02:00P	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	13	14	02:00-03:00P	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	13	14	03:00-04:00P	14	0	13	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	13	14	04:00-05:00P	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	13	14	05:00-06:00P	7	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2008	13	14	06:00-07:00P	6	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	13	14	07:00-08:00P	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1	2008	14	14	06:00-07:00A	16	0	7	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2008	14	14	07:00-08:00A	18	0	6	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	14	14	08:00-09:00A	8	0	4	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	14	14	09:00-10:00A	12	0	3	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	14	14	10:00-11:00A	12	0	4	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	14	14	11:00-12:00P	49	2	44	5	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	14	14	12:00-01:00P	29	0	21	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8	2008	14	14	01:00-02:00P	23	0	37	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	14	14	02:00-03:00P	25	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
10	2008	14	14	03:00-04:00P	154	2	96	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
11	2008	14	14	04:00-05:00P	111	0	87	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
12	2008	14	14	05:00-06:00P	58	1	7	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
13	2008	14	14	06:00-07:00P	7	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	14	14	07:00-08:00P	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	21	14	06:00-07:00A	423	0	307	0	3	1	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0
2	2008	21	14	07:00-08:00A	233	0	139	4	8	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0
3	2008	21	14	08:00-09:00A	52	0	29	2	2	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	21	14	09:00-10:00A	23	0	28	0	4	3	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	21	14	10:00-11:00A	24	0	28	2	2	6	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	21	14	11:00-12:00P	34	0	42	0	0	5	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	21	14	12:00-01:00P	35	0	46	2	0	4	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	21	14	01:00-02:00P	37	0	47	2	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	21	14	02:00-03:00P	54	0	54	2	0	2	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0
10	2008	21	14	03:00-04:00P	27	0	25	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11	2008	21	14	04:00-05:00P	18	0	23	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12	2008	21	14	05:00-06:00P	10	0	7	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
13	2008	21	14	06:00-07:00P	7	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
14	2008	21	14	07:00-08:00P	14	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	23	14	06:00-07:00A	13	0	4	0	1	0	0	0	11	1	0	1	0	0	0	0	0	0	0	0	0	0
2	2008	23	14	07:00-08:00A	11	0	9	2	2	0	0	0	14	4	0	0	3	0	0	0	0	0	0	0	0	0
3	2008	23	14	08:00-09:00A	10	0	4	0	1	1	0	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	23	14	09:00-10:00A	7	0	6	2	0	1	0	0	21	4	0	1	3	0	0	0	0	0	0	0	0	0
5	2008	23	14	10:00-11:00A	9	0	5	3	0	1	0	0	14	4	1	1	0	0	0	0	0	0	0	0	0	0
6	2008	23	14	11:00-12:00P	10	0	6	2	0	2	0	1	27	3	1	0	0	0	0	0	0	0	0	0	0	0
7	2008	23	14	12:00-01:00P	6	0	7	1	0	1	0	0	20	2	0	0	2	0	0	0	0	0	0	0	0	0
8	2008	23	14	01:00-02:00P	8	0	2	1	0	1	0	0	20	2	0	0	3	0	0	0	0	0	0	0	0	0
9	2008	23	14	02:00-03:00P	10	1	4	0	0	1	0	1	22	2	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	23	14	03:00-04:00P	7	0	9	3	1	0	0	0	26	3	0	0	1	0	0	0	0	0	0	0	0	0
11	2008	23	14	04:00-05:00P	18	0	7	3	2	6	0	0	23	4	0	0	3	0	0	0	0	0	0	0	0	0
12	2008	23	14	05:00-06:00P	5	0	4	2	3	1	0	2	25	4	0	0	2	0	0	0	0	0	0	0	0	0
13	2008	23	14	06:00-07:00P	6	0	2	1	2	2	0	0	19	0	0	2	0	0	0	0	0	0	0	0	0	0
14	2008	23	14	07:00-08:00P	6	0	3	1	1	0	0	0	19	1	0	0	1	0	0	0	0	0	0	0	0	0
1	2008	24	14	06:00-07:00A	55	0	50	0	4	1	0	0	12	1	0	1	5	0	0	0	2	0	0	0	0	1
2	2008	24	14	07:00-08:00A	49	0	17	3	4	1	0	0	8	3	0	1	1	0	0	0	1	1	0	0	0	0
3	2008	24	14	08:00-09:00A	59	0	29	4	3	3	0	2	15	6	0	0	4	0	0	0	2	0	0	0	0	0
4	2008	24	14	09:00-10:00A	67	0	28	1	4	0	0	1	11	2	0	0	2	0	0	0	0	0	0	0	0	0
5	2008	24	14	10:00-11:00A	74	0	52	7	2	2	0	1	13	4	0	0	6	0	0	0	0	0	0	0	0	0
6	2008	24	14	11:00-12:00P	54	0	45	5	1	8	1	1	17	2	0	0	3	0	0	0	1	0	0	0	0	0
7	2008	24	14	12:00-01:00P	68	0	47	2	3	2	3	0	7	3	0	1	7	0	0	0	0	1	0	0	0	1
8	2008	24	14	01:00-02:00P	75	0	52	4	0	2	9	2	11	2	0	0	1	0	0	0	2	1	0	0	0	1
9	2008	24	14	02:00-03:00P	60	3	58	4	0	2	15	0	10	5	0	0	1	0	0	0	0	0	0	0	0	0
10	2008	24	14	03:00-04:00P	84	0	64	7	1	2	12	1	14	4	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	24	14	04:00-05:00P	94	0	93	5	0	2	14	0	8	3	0	1	1	0	0	0	0	0	1	0	0	0
12	2008	24	14	05:00-06:00P	104	1	88	8	4	2	1	1	11	2	0	0	0	0	0	0	0	0	0	0	0	1
13	2008	24	14	06:00-07:00P	82	0	46	4	3	0	0	0	13	0	0	0	1	0	0	0	1	0	1	0	0	0
14	2008	24	14	07:00-08:00P	48	0	40	6	6	1	0	0	7	2	0	0	2	0	0	0	0	0	0	0	0	1

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2008	31	14	06:00-07:00A	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2	2008	31	14	07:00-08:00A	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	31	14	08:00-09:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	31	14	09:00-10:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	31	14	10:00-11:00A	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	31	14	11:00-12:00P	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	31	14	12:00-01:00P	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	2008	31	14	01:00-02:00P	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	31	14	02:00-03:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10	2008	31	14	03:00-04:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	31	14	04:00-05:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	31	14	05:00-06:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2008	31	14	06:00-07:00P	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	31	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	32	14	06:00-07:00A	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2008	32	14	07:00-08:00A	10	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	32	14	08:00-09:00A	8	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	32	14	09:00-10:00A	9	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	32	14	10:00-11:00A	14	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	32	14	11:00-12:00P	12	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	32	14	12:00-01:00P	8	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	32	14	01:00-02:00P	16	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	32	14	02:00-03:00P	12	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	32	14	03:00-04:00P	6	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	32	14	04:00-05:00P	18	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	32	14	05:00-06:00P	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2008	32	14	06:00-07:00P	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	32	14	07:00-08:00P	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	34	14	06:00-07:00A	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2008	34	14	07:00-08:00A	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	34	14	08:00-09:00A	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	34	14	09:00-10:00A	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	34	14	10:00-11:00A	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	34	14	11:00-12:00P	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	34	14	12:00-01:00P	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	34	14	01:00-02:00P	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	34	14	02:00-03:00P	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	34	14	03:00-04:00P	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	34	14	04:00-05:00P	7	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	34	14	05:00-06:00P	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2008	34	14	06:00-07:00P	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	34	14	07:00-08:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	41	14	06:00-07:00A	176	0	100	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	2	0	0	0
2	2008	41	14	07:00-08:00A	90	0	35	0	1	1	0	0	0	1	0	0	0	0	0	0	0	3	1	0	0	0
3	2008	41	14	08:00-09:00A	16	0	10	1	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4	2008	41	14	09:00-10:00A	11	0	6	0	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	41	14	10:00-11:00A	10	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	41	14	11:00-12:00P	25	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	41	14	12:00-01:00P	34	0	28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	41	14	01:00-02:00P	19	0	23	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	41	14	02:00-03:00P	20	0	17	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	41	14	03:00-04:00P	15	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	41	14	04:00-05:00P	9	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	41	14	05:00-06:00P	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
13	2008	41	14	06:00-07:00P	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	41	14	07:00-08:00P	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2008	42	14	06:00-07:00A	69	0	57	0	8	1	1	0	36	8	0	2	3	0	0	0	1	0	0	0	0	2
2	2008	42	14	07:00-08:00A	161	1	67	5	8	4	1	0	39	7	0	1	7	0	0	0	1	0	0	0	0	0
3	2008	42	14	08:00-09:00A	90	0	57	10	8	7	0	1	35	8	0	0	4	0	0	0	1	0	0	0	0	0
4	2008	42	14	09:00-10:00A	83	0	36	7	7	6	0	0	39	5	0	0	12	0	0	0	0	0	1	0	0	1
5	2008	42	14	10:00-11:00A	59	0	27	9	5	5	1	0	29	7	0	0	6	0	0	0	0	0	0	0	0	0
6	2008	42	14	11:00-12:00P	69	0	51	5	6	8	7	3	35	9	0	0	5	0	0	0	1	0	0	0	0	1
7	2008	42	14	12:00-01:00P	62	1	55	1	2	10	4	0	35	5	1	1	6	0	0	0	0	1	0	0	0	0
8	2008	42	14	01:00-02:00P	67	0	71	4	3	9	8	0	29	8	0	0	8	0	0	0	1	0	0	0	0	0
9	2008	42	14	02:00-03:00P	80	2	54	5	3	4	11	1	26	5	0	0	2	0	0	0	0	0	0	0	0	0
10	2008	42	14	03:00-04:00P	100	0	66	6	6	17	10	0	24	8	0	0	1	0	0	0	1	0	0	0	0	1
11	2008	42	14	04:00-05:00P	115	0	61	5	13	14	16	3	28	6	0	0	1	0	0	0	2	0	0	0	0	0
12	2008	42	14	05:00-06:00P	91	0	53	6	6	5	1	3	17	3	0	0	1	0	0	0	0	1	1	0	0	0
13	2008	42	14	06:00-07:00P	59	2	23	3	5	4	0	0	20	3	0	0	4	0	0	0	0	0	0	0	0	1
14	2008	42	14	07:00-08:00P	39	0	21	1	2	3	0	0	21	2	1	2	1	0	0	0	0	0	0	0	0	2
1	2008	43	14	06:00-07:00A	7	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2008	43	14	07:00-08:00A	18	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2008	43	14	08:00-09:00A	16	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2008	43	14	09:00-10:00A	11	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2008	43	14	10:00-11:00A	14	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2008	43	14	11:00-12:00P	11	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2008	43	14	12:00-01:00P	11	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2008	43	14	01:00-02:00P	12	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2008	43	14	02:00-03:00P	13	1	5	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
10	2008	43	14	03:00-04:00P	6	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2008	43	14	04:00-05:00P	15	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2008	43	14	05:00-06:00P	9	0	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2008	43	14	06:00-07:00P	5	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2008	43	14	07:00-08:00P	4	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEARL STREET/ROBERTS STREET

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2010	12	14	06:00-07:00A	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	12	14	07:00-08:00A	1	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	12	14	08:00-09:00A	2	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	12	14	09:00-10:00A	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	12	14	10:00-11:00A	2	0	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	12	14	11:00-12:00P	2	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	12	14	12:00-01:00P	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	12	14	01:00-02:00P	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	12	14	02:00-03:00P	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	12	14	03:00-04:00P	5	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	12	14	04:00-05:00P	5	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	12	14	05:00-06:00P	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	12	14	06:00-07:00P	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	12	14	07:00-08:00P	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
1	2010	13	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	13	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	13	14	08:00-09:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	13	14	09:00-10:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	13	14	10:00-11:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	13	14	11:00-12:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	13	14	12:00-01:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	13	14	01:00-02:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	13	14	02:00-03:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	13	14	03:00-04:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	13	14	04:00-05:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	13	14	05:00-06:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	13	14	06:00-07:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	13	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	14	14	06:00-07:00A	3	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	14	14	07:00-08:00A	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	14	14	08:00-09:00A	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	14	14	09:00-10:00A	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	14	14	10:00-11:00A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	14	14	11:00-12:00P	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	14	14	12:00-01:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	14	14	01:00-02:00P	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	14	14	02:00-03:00P	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	14	14	03:00-04:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	14	14	04:00-05:00P	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	14	14	05:00-06:00P	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	14	14	06:00-07:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	14	14	07:00-08:00P	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	21	14	06:00-07:00A	5	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	21	14	07:00-08:00A	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	21	14	08:00-09:00A	1	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	21	14	09:00-10:00A	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	21	14	10:00-11:00A	4	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	21	14	11:00-12:00P	4	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	21	14	12:00-01:00P	7	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	21	14	01:00-02:00P	7	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	21	14	02:00-03:00P	4	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	21	14	03:00-04:00P	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	21	14	04:00-05:00P	7	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	21	14	05:00-06:00P	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	21	14	06:00-07:00P	4	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	21	14	07:00-08:00P	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	23	14	06:00-07:00A	15	0	43	0	5	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	23	14	07:00-08:00A	29	0	50	0	5	0	0	1	2	0	0	1	1	0	0	0	1	1	0	0	0	0
3	2010	23	14	08:00-09:00A	22	0	40	1	8	1	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0
4	2010	23	14	09:00-10:00A	14	0	27	0	10	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0
5	2010	23	14	10:00-11:00A	10	0	23	0	4	2	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	23	14	11:00-12:00P	9	0	17	1	13	2	0	5	4	1	0	0	1	0	0	0	0	0	0	0	0	0
7	2010	23	14	12:00-01:00P	15	0	34	0	2	1	0	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	23	14	01:00-02:00P	9	0	23	1	5	0	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	23	14	02:00-03:00P	5	0	23	2	2	0	0	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0
10	2010	23	14	03:00-04:00P	4	0	23	1	6	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	23	14	04:00-05:00P	6	0	18	0	3	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0
12	2010	23	14	05:00-06:00P	4	0	7	0	3	2	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	23	14	06:00-07:00P	1	0	3	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
14	2010	23	14	07:00-08:00P	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	24	14	06:00-07:00A	373	0	413	0	5	1	0	0	23	4	1	1	5	0	0	0	2	2	0	0	0	0
2	2010	24	14	07:00-08:00A	223	0	250	2	13	2	0	5	23	9	0	0	3	0	0	0	2	1	0	0	0	0
3	2010	24	14	08:00-09:00A	79	0	86	2	16	7	0	5	25	8	0	0	4	0	0	0	2	0	0	0	0	0
4	2010	24	14	09:00-10:00A	43	0	80	2	23	4	0	5	33	4	0	0	3	0	0	0	0	0	0	0	0	0
5	2010	24	14	10:00-11:00A	50	0	75	5	17	8	0	6	26	5	0	1	6	0	0	0	0	0	0	0	0	0
6	2010	24	14	11:00-12:00P	54	0	80	5	15	8	1	4	33	5	1	0	4	0	0	0	1	0	0	0	0	0
7	2010	24	14	12:00-01:00P	62	0	99	1	8	10	0	3	30	4	1	0	10	0	0	0	0	0	0	0	0	0
8	2010	24	14	01:00-02:00P	86	0	112	4	15	9	7	2	31	8	0	0	2	0	0	0	2	1	0	0	0	1
9	2010	24	14	02:00-03:00P	80	1	104	6	14	10	9	5	33	5	0	0	1	0	0	0	0	1	0	0	0	0
10	2010	24	14	03:00-04:00P	79	0	103	7	10	7	6	2	39	5	0	0	1	0	0	0	1	0	0	0	0	0
11	2010	24	14	04:00-05:00P	88	0	114	6	20	15	3	5	27	6	0	0	3	0	0	0	3	0	0	0	0	0
12	2010	24	14	05:00-06:00P	84	0	95	5	16	5	0	7	37	4	0	1	2	0	0	0	1	0	0	0	0	0
13	2010	24	14	06:00-07:00P	66	0	62	3	6	2	0	1	24	0	0	2	1	0	0	1	2	0	1	0	0	0
14	2010	24	14	07:00-08:00P	31	0	46	5	10	0	0	1	25	3	0	0	3	0	0	0	1	0	0	0	0	2

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2010	31	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2	2010	31	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	31	14	08:00-09:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4	2010	31	14	09:00-10:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	2010	31	14	10:00-11:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	2010	31	14	11:00-12:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7	2010	31	14	12:00-01:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	2010	31	14	01:00-02:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9	2010	31	14	02:00-03:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10	2010	31	14	03:00-04:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	31	14	04:00-05:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	31	14	05:00-06:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	31	14	06:00-07:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	31	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	32	14	06:00-07:00A	0	0	3	0	5	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	32	14	07:00-08:00A	5	0	18	0	8	0	0	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	32	14	08:00-09:00A	2	0	24	0	4	1	0	2	0	0	0	1	1	2	0	0	0	0	0	0	0	0
4	2010	32	14	09:00-10:00A	4	0	17	1	8	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	32	14	10:00-11:00A	7	0	18	0	7	1	0	3	4	1	0	0	1	0	0	0	1	0	0	0	0	0
6	2010	32	14	11:00-12:00P	15	0	33	1	10	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	2010	32	14	12:00-01:00P	26	0	36	0	4	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	32	14	01:00-02:00P	17	0	30	0	9	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	32	14	02:00-03:00P	17	0	28	2	9	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	32	14	03:00-04:00P	14	0	41	0	8	2	0	4	0	1	0	0	2	0	0	0	0	0	0	0	0	0
11	2010	32	14	04:00-05:00P	29	0	40	2	4	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
12	2010	32	14	05:00-06:00P	36	0	74	0	6	1	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0
13	2010	32	14	06:00-07:00P	15	0	14	0	0	1	0	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0
14	2010	32	14	07:00-08:00P	2	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1	2010	34	14	06:00-07:00A	1	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	34	14	07:00-08:00A	0	0	3	0	5	1	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	34	14	08:00-09:00A	2	0	11	0	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	34	14	09:00-10:00A	8	0	12	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	34	14	10:00-11:00A	6	0	17	0	6	1	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	34	14	11:00-12:00P	4	0	18	0	8	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	34	14	12:00-01:00P	8	0	23	0	5	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	2010	34	14	01:00-02:00P	6	0	17	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	34	14	02:00-03:00P	8	0	25	1	4	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	34	14	03:00-04:00P	6	0	14	1	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	34	14	04:00-05:00P	5	0	15	0	2	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0
12	2010	34	14	05:00-06:00P	12	0	28	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
13	2010	34	14	06:00-07:00P	4	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	34	14	07:00-08:00P	3	0	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	41	14	06:00-07:00A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	41	14	07:00-08:00A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	41	14	08:00-09:00A	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2010	41	14	09:00-10:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2010	41	14	10:00-11:00A	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	41	14	11:00-12:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	41	14	12:00-01:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2010	41	14	01:00-02:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	41	14	02:00-03:00P	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	41	14	03:00-04:00P	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	41	14	04:00-05:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2010	41	14	05:00-06:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	41	14	06:00-07:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	41	14	07:00-08:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2010	42	14	06:00-07:00A	61	0	61	0	7	1	0	1	34	7	0	2	4	0	0	0	2	0	0	0	0	5
2	2010	42	14	07:00-08:00A	105	0	126	5	14	6	1	5	39	6	1	0	7	0	0	0	2	0	0	0	0	0
3	2010	42	14	08:00-09:00A	69	0	98	3	20	9	0	9	33	7	0	0	3	0	0	0	1	0	0	0	0	0
4	2010	42	14	09:00-10:00A	64	0	76	4	13	8	0	7	33	11	0	0	8	0	0	0	0	0	0	0	0	0
5	2010	42	14	10:00-11:00A	53	0	68	5	13	10	0	7	23	8	0	0	6	0	0	0	0	0	0	0	0	0
6	2010	42	14	11:00-12:00P	74	0	110	4	27	5	3	8	32	7	1	1	6	0	0	0	1	0	0	0	0	2
7	2010	42	14	12:00-01:00P	65	0	118	1	13	10	6	4	36	5	1	0	6	1	0	0	0	0	0	0	0	0
8	2010	42	14	01:00-02:00P	74	0	100	1	18	9	11	5	31	11	0	0	6	0	0	0	1	0	0	0	0	13
9	2010	42	14	02:00-03:00P	87	0	123	3	24	14	10	5	26	6	0	0	2	0	0	0	0	0	0	0	0	0
10	2010	42	14	03:00-04:00P	328	0	385	9	28	15	11	2	27	6	0	0	1	0	0	0	1	2	0	0	0	0
11	2010	42	14	04:00-05:00P	285	0	320	2	19	14	13	2	25	5	1	0	0	0	0	0	3	0	0	0	0	0
12	2010	42	14	05:00-06:00P	169	0	185	4	10	6	0	5	15	2	0	0	3	1	0	0	1	1	2	0	0	0
13	2010	42	14	06:00-07:00P	62	1	57	3	6	3	0	0	20	3	0	0	4	0	0	1	0	0	0	0	0	4
14	2010	42	14	07:00-08:00P	41	0	45	2	4	1	0	1	23	2	0	2	1	0	0	0	1	0	0	0	0	0
1	2010	43	14	06:00-07:00A	10	0	23	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2010	43	14	07:00-08:00A	12	0	25	0	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	2010	43	14	08:00-09:00A	6	0	21	0	9	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4	2010	43	14	09:00-10:00A	8	0	19	1	6	0	0	3	3	0	0	0	0	0	0	0	0	0	2	0	0	0
5	2010	43	14	10:00-11:00A	4	0	14	0	10	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2010	43	14	11:00-12:00P	10	0	23	0	5	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2010	43	14	12:00-01:00P	12	0	24	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	2010	43	14	01:00-02:00P	14	0	24	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2010	43	14	02:00-03:00P	11	0	15	0	5	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2010	43	14	03:00-04:00P	5	0	21	0	8	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2010	43	14	04:00-05:00P	10	0	8	0	6	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0
12	2010	43	14	05:00-06:00P	4	0	4	0	4	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
13	2010	43	14	06:00-07:00P	2	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	43	14	07:00-08:00P	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEARL STREET/COLEMAN STREET

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2006	12	14	06:00-07:00A	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2	2006	12	14	07:00-08:00A	4	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	2006	12	14	08:00-09:00A	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	12	14	09:00-10:00A	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	12	14	10:00-11:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	12	14	11:00-12:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	12	14	12:00-01:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	12	14	01:00-02:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
9	2006	12	14	02:00-03:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	12	14	03:00-04:00P	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11	2006	12	14	04:00-05:00P	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	12	14	05:00-06:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
13	2006	12	14	06:00-07:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	12	14	07:00-08:00P	2	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	13	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2	2006	13	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	2006	13	14	08:00-09:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4	2006	13	14	09:00-10:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5	2006	13	14	10:00-11:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6	2006	13	14	11:00-12:00P	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7	2006	13	14	12:00-01:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8	2006	13	14	01:00-02:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	2006	13	14	02:00-03:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10	2006	13	14	03:00-04:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
11	2006	13	14	04:00-05:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
12	2006	13	14	05:00-06:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
13	2006	13	14	06:00-07:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	13	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1	2006	14	14	06:00-07:00A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	14	14	07:00-08:00A	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	2006	14	14	08:00-09:00A	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	14	14	09:00-10:00A	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	14	14	10:00-11:00A	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	14	14	11:00-12:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	14	14	12:00-01:00P	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	14	14	01:00-02:00P	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	14	14	02:00-03:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	14	14	03:00-04:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	14	14	04:00-05:00P	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	14	14	05:00-06:00P	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	14	14	06:00-07:00P	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	14	14	07:00-08:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	21	14	06:00-07:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	21	14	07:00-08:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2006	21	14	08:00-09:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	21	14	09:00-10:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	21	14	10:00-11:00A	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	21	14	11:00-12:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	21	14	12:00-01:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8	2006	21	14	01:00-02:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	21	14	02:00-03:00P	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	21	14	03:00-04:00P	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	21	14	04:00-05:00P	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	21	14	05:00-06:00P	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	21	14	06:00-07:00P	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	21	14	07:00-08:00P	2	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	23	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	23	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	2006	23	14	08:00-09:00A	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4	2006	23	14	09:00-10:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	23	14	10:00-11:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	23	14	11:00-12:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7	2006	23	14	12:00-01:00P	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	23	14	01:00-02:00P	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
9	2006	23	14	02:00-03:00P	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	23	14	03:00-04:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11	2006	23	14	04:00-05:00P	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	23	14	05:00-06:00P	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	23	14	06:00-07:00P	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
14	2006	23	14	07:00-08:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	24	14	06:00-07:00A	37	0	56	1	5	3	1	0	2	0	0	0	2	0	0	0	3	0	0	0	0	0
2	2006	24	14	07:00-08:00A	42	0	58	1	7	5	0	5	3	3	0	0	2	0	0	0	0	3	0	0	0	0
3	2006	24	14	08:00-09:00A	47	0	60	1	8	6	0	2	1	3	0	0	3	0	0	0	1	1	0	0	0	0
4	2006	24	14	09:00-10:00A	31	0	55	1	8	5	1	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	24	14	10:00-11:00A	40	0	70	2	12	4	0	0	4	4	0	0	3	0	0	0	0	0	0	0	0	0
6	2006	24	14	11:00-12:00P	73	0	114	2	9	3	1	5	4	3	0	0	0	0	0	0	0	1	0	0	0	0
7	2006	24	14	12:00-01:00P	68	0	83	2	8	2	0	1	4	4	0	0	5	0	0	0	0	0	0	1	0	0
8	2006	24	14	01:00-02:00P	43	0	75	5	8	4	0	2	5	5	0	0	2	0	0	0	1	0	0	1	0	0
9	2006	24	14	02:00-03:00P	58	0	93	5	10	6	1	2	5	3	0	0	3	0	0	0	2	0	0	0	0	0
10	2006	24	14	03:00-04:00P	146	0	206	4	9	2	0	1	2	3	0	0	0	0	0	0	3	0	0	3	0	4
11	2006	24	14	04:00-05:00P	143	0	170	3	9	3	0	3	1	0	0	0	0	0	0	0	1	1	0	0	0	0
12	2006	24	14	05:00-06:00P	104	0	147	3	8	2	0	4	1	0	0	0	0	0	0	0	3	1	3	3	0	2
13	2006	24	14	06:00-07:00P	69	0	72	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
14	2006	24	14	07:00-08:00P	41	0	37	1	1	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0

rn	ccnn	dd	hr	time	psg_car	psg_trl	oth_2xl	oth_trl	sut_2xl	sut_3xl	sut_4xl	stt_4xl	stt_5xl	stt_6xl	dtt_5xl	dtt_6xl	dtt_7xl	ttt_7xl	ttt_8xl	ttt_9xl	buses	motocl	mov_bcl	xwk_bcl	ped_stn	ped_oth
1	2006	31	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	31	14	07:00-08:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2006	31	14	08:00-09:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
4	2006	31	14	09:00-10:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5	2006	31	14	10:00-11:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6	2006	31	14	11:00-12:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	2006	31	14	12:00-01:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8	2006	31	14	01:00-02:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	2006	31	14	02:00-03:00P	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10	2006	31	14	03:00-04:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	31	14	04:00-05:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	31	14	05:00-06:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13	2006	31	14	06:00-07:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
14	2006	31	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1	2006	32	14	06:00-07:00A	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	32	14	07:00-08:00A	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2006	32	14	08:00-09:00A	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	32	14	09:00-10:00A	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	32	14	10:00-11:00A	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	32	14	11:00-12:00P	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	32	14	12:00-01:00P	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	32	14	01:00-02:00P	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	32	14	02:00-03:00P	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	32	14	03:00-04:00P	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	32	14	04:00-05:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	32	14	05:00-06:00P	5	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	32	14	06:00-07:00P	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	32	14	07:00-08:00P	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	34	14	06:00-07:00A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	34	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2006	34	14	08:00-09:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	34	14	09:00-10:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	34	14	10:00-11:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	34	14	11:00-12:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	34	14	12:00-01:00P	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	34	14	01:00-02:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	34	14	02:00-03:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	34	14	03:00-04:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	34	14	04:00-05:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	34	14	05:00-06:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	34	14	06:00-07:00P	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	34	14	07:00-08:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	41	14	06:00-07:00A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	41	14	07:00-08:00A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2006	41	14	08:00-09:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4	2006	41	14	09:00-10:00A	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	41	14	10:00-11:00A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	41	14	11:00-12:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	41	14	12:00-01:00P	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	41	14	01:00-02:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	41	14	02:00-03:00P	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	41	14	03:00-04:00P	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	41	14	04:00-05:00P	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	41	14	05:00-06:00P	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	41	14	06:00-07:00P	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	41	14	07:00-08:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	42	14	06:00-07:00A	155	0	236	1	7	1	1	0	0	3	0	0	2	0	0	0	0	7	1	0	0	0
2	2006	42	14	07:00-08:00A	149	0	174	5	9	5	0	1	0	5	0	0	1	0	0	0	0	4	2	0	0	0
3	2006	42	14	08:00-09:00A	63	0	100	1	12	5	1	1	1	3	0	0	4	0	0	0	2	0	0	0	0	2
4	2006	42	14	09:00-10:00A	53	0	65	2	6	4	2	1	2	6	0	0	2	0	0	0	0	0	0	0	0	3
5	2006	42	14	10:00-11:00A	47	0	59	2	10	6	2	1	2	5	0	0	3	0	0	0	0	1	0	0	0	0
6	2006	42	14	11:00-12:00P	63	0	86	2	13	6	2	2	3	4	0	0	2	0	0	0	1	1	0	0	0	0
7	2006	42	14	12:00-01:00P	82	0	98	2	13	5	1	4	4	2	0	0	2	0	0	0	0	0	0	0	0	0
8	2006	42	14	01:00-02:00P	66	0	89	4	14	4	3	2	6	6	0	0	1	0	0	0	1	0	0	0	0	0
9	2006	42	14	02:00-03:00P	57	0	73	3	9	13	2	2	1	6	0	0	1	0	0	0	1	0	0	0	0	0
10	2006	42	14	03:00-04:00P	61	0	100	4	9	4	0	2	2	3	0	0	0	0	0	0	3	0	0	0	0	0
11	2006	42	14	04:00-05:00P	60	1	103	2	9	13	0	4	0	1	0	0	0	0	0	0	1	0	0	0	0	0
12	2006	42	14	05:00-06:00P	76	0	77	0	5	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
13	2006	42	14	06:00-07:00P	54	0	66	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	42	14	07:00-08:00P	32	0	40	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2006	43	14	06:00-07:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2006	43	14	07:00-08:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	2006	43	14	08:00-09:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2006	43	14	09:00-10:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2006	43	14	10:00-11:00A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2006	43	14	11:00-12:00P	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2006	43	14	12:00-01:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2006	43	14	01:00-02:00P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2006	43	14	02:00-03:00P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2006	43	14	03:00-04:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	2006	43	14	04:00-05:00P	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2006	43	14	05:00-06:00P	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2006	43	14	06:00-07:00P	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2006	43	14	07:00-08:00P	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX G

Existing 2005 Traffic Operations Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	270	5	10	460	10	5	0	10	15	5	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	318	6	12	541	12	6	0	12	18	6	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1118										
pX, platoon unblocked												
vC, conflicting volume	553			324			912	909	321	915	906	547
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	553			324			912	909	321	915	906	547
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	100	98	93	98	99
cM capacity (veh/h)	960			1220			247	273	725	248	274	541

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	329	565	18	29
Volume Left	6	12	6	18
Volume Right	6	12	12	6
cSH	960	1220	441	284
Volume to Capacity	0.01	0.01	0.04	0.10
Queue Length 95th (ft)	0	1	3	9
Control Delay (s)	0.2	0.3	13.5	19.1
Lane LOS	A	A	B	C
Approach Delay (s)	0.2	0.3	13.5	19.1
Approach LOS			B	C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frpb, ped/bikes		1.00			0.99			1.00				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.98				
Flt Protected		0.97			1.00			0.96				
Satd. Flow (prot)		1421			1492			1620				
Flt Permitted		0.79			1.00			0.96				
Satd. Flow (perm)		1161			1492			1620				
Volume (vph)	95	65	0	0	70	20	250	0	55	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	112	76	0	0	82	24	263	0	58	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	188	0	0	97	0	0	309	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	22%	22%	22%	16%	16%	16%	18%	18%	18%	0%	0%	0%
Turn Type	Perm						Split					
Protected Phases		2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)		40.9			40.9			17.5				
Effective Green, g (s)		41.9			41.9			18.5				
Actuated g/C Ratio		0.61			0.61			0.27				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		4.2			4.2			3.0				
Lane Grp Cap (vph)		711			914			438				
v/s Ratio Prot					0.06			c0.19				
v/s Ratio Perm		c0.16										
v/c Ratio		0.26			0.11			0.71				
Uniform Delay, d1		6.1			5.5			22.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.9			0.2			5.1				
Delay (s)		7.0			5.7			27.6				
Level of Service		A			A			C				
Approach Delay (s)		7.0			5.7			27.6			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	855	40	60	280	25	30	0	80	15	0	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	1006	47	71	329	29	35	0	94	18	0	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		470										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	359			1053			1532	1541	1029	1621	1550	344
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			1060			1601	1611	1033	1701	1621	344
tC, single (s)	4.2			4.4			7.3	6.7	6.4	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.5			3.7	4.2	3.5	3.6	4.1	3.4
p0 queue free %	99			86			41	100	59	46	100	99
cM capacity (veh/h)	1147			503			59	71	228	33	76	687

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1059	429	129	24
Volume Left	6	71	35	18
Volume Right	47	29	94	6
cSH	1147	503	128	43
Volume to Capacity	0.01	0.14	1.01	0.55
Queue Length 95th (ft)	0	12	176	50
Control Delay (s)	0.2	4.2	147.3	163.9
Lane LOS	A	A	F	F
Approach Delay (s)	0.2	4.2	147.3	163.9
Approach LOS			F	F

Intersection Summary			
Average Delay	15.2		
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	29	318	71	300	36	570	535
v/c Ratio	0.12	0.46	0.16	0.28	0.27	0.89	0.86
Control Delay	29.2	54.0	27.5	33.3	49.9	61.2	54.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	54.0	27.5	33.3	49.9	61.2	54.0
Queue Length 50th (ft)	18	156	45	113	19	592	505
Queue Length 95th (ft)	38	196	75	146	56	717	629
Internal Link Dist (ft)		422		201	108		1000
Turn Bay Length (ft)	200		100			300	
Base Capacity (vph)	362	690	431	1075	321	668	646
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.46	0.16	0.28	0.11	0.85	0.83

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	11	11	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96			0.93		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.98	
Satd. Flow (prot)	1368	2705		1390	2639			1847		1555	1439	
Flt Permitted	0.57	1.00		0.41	1.00			0.98		0.95	0.98	
Satd. Flow (perm)	819	2705		597	2639			1847		1555	1439	
Volume (vph)	25	255	15	60	190	65	10	5	15	630	30	280
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	29	300	18	71	224	76	12	6	18	741	35	329
RTOR Reduction (vph)	0	2	0	0	14	0	0	17	0	0	30	0
Lane Group Flow (vph)	29	316	0	71	286	0	0	19	0	570	505	0
Confl. Peds. (#/hr)			10			10			10			10
Heavy Vehicles (%)	25%	25%	25%	23%	23%	23%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	49.0	41.3		75.6	63.9			7.7		65.2	65.2	
Effective Green, g (s)	49.0	41.3		75.6	63.9			7.7		65.2	65.2	
Actuated g/C Ratio	0.31	0.26		0.47	0.40			0.05		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	276	696		431	1051			89		632	585	
v/s Ratio Prot	0.01	c0.12		c0.03	c0.11			c0.01		c0.37	0.35	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.11	0.45		0.16	0.27			0.21		0.90	0.86	
Uniform Delay, d1	39.6	50.1		24.2	32.6			73.5		44.7	43.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.2	2.1		0.8	0.6			1.2		16.1	12.6	
Delay (s)	39.7	52.2		25.0	33.2			74.7		60.8	56.2	
Level of Service	D	D		C	C			E		E	E	
Approach Delay (s)		51.2			31.7			74.7			58.5	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM Average Control Delay	52.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	160.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
Van Duyn Rd & I-5 SB Ramps

10/4/2007

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	150	800	45	275	0	0	0	0	10	0	90
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Hourly flow rate (vph)	0	176	941	53	324	0	0	0	0	11	0	95
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		991			920							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	324			1118			1171	1076	647	1076	1547	324
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	324			1133			1194	1087	600	1087	1620	324
tC, single (s)	4.2			4.3			7.1	6.5	6.2	7.5	6.9	6.6
tC, 2 stage (s)												
tF (s)	2.3			2.4			3.5	4.0	3.3	3.8	4.3	3.6
p0 queue free %	100			89			100	100	100	92	100	85
cM capacity (veh/h)	1209			498			111	168	437	135	68	645

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1118	376	105
Volume Left	0	53	11
Volume Right	941	0	95
cSH	1700	498	469
Volume to Capacity	0.66	0.11	0.22
Queue Length 95th (ft)	0	9	21
Control Delay (s)	0.0	3.3	14.9
Lane LOS		A	B
Approach Delay (s)	0.0	3.3	14.9
Approach LOS			B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

	→	←	↑
Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	188	106	321
v/c Ratio	0.27	0.11	0.71
Control Delay	8.7	6.0	30.2
Queue Delay	0.0	0.0	0.0
Total Delay	8.7	6.0	30.2
Queue Length 50th (ft)	33	13	113
Queue Length 95th (ft)	76	36	192
Internal Link Dist (ft)	840	592	151
Turn Bay Length (ft)			
Base Capacity (vph)	705	922	568
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.11	0.57

Intersection Summary

APPENDIX H

Future No-Build 2031 Traffic Operations Worksheets

Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	129	94	1632
v/c Ratio	0.42	0.44	1.44
Control Delay	36.7	51.0	229.2
Queue Delay	0.0	0.0	0.0
Total Delay	36.7	51.0	229.2
Queue Length 50th (ft)	75	63	~1733
Queue Length 95th (ft)	121	111	#2002
Internal Link Dist (ft)	840	592	151
Turn Bay Length (ft)			
Base Capacity (vph)	310	215	1130
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.44	1.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frpb, ped/bikes		1.00			0.99			1.00				
Flpb, ped/bikes		0.98			1.00			1.00				
Frt		1.00			0.98			1.00				
Flt Protected		0.96			1.00			0.95				
Satd. Flow (prot)		1149			1403			1883				
Flt Permitted		0.75			1.00			0.95				
Satd. Flow (perm)		897			1403			1883				
Volume (vph)	80	30	0	0	70	10	1520	0	30	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	94	35	0	0	82	12	1600	0	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	129	0	0	90	0	0	1631	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	48%	48%	48%	25%	25%	25%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt						Split					
Protected Phases	7	2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)		34.0			17.0			71.0				
Effective Green, g (s)		36.0			18.0			72.0				
Actuated g/C Ratio		0.30			0.15			0.60				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		4.2			4.2			3.0				
Lane Grp Cap (vph)		307			210			1130				
v/s Ratio Prot		c0.06			c0.06			c0.87				
v/s Ratio Perm		0.06										
v/c Ratio		0.42			0.43			1.44				
Uniform Delay, d1		33.6			46.3			24.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.2			6.2			204.6				
Delay (s)		37.8			52.6			228.6				
Level of Service		D			D			F				
Approach Delay (s)		37.8			52.6			228.6			0.0	
Approach LOS		D			D			F			A	

Intersection Summary			
HCM Average Control Delay	206.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	100	340	60	1530	0	0	0	0	10	0	190
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Hourly flow rate (vph)	0	118	400	71	1800	0	0	0	0	11	0	200
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		991			920							
pX, platoon unblocked												
vC, conflicting volume	1800			518			2459	2259	318	2259	2459	1800
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1800			518			2459	2259	318	2259	2459	1800
tC, single (s)	4.4			4.1			7.1	6.5	6.2	7.3	6.7	6.4
tC, 2 stage (s)												
tF (s)	2.5			2.2			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			93			0	100	100	58	100	0
cM capacity (veh/h)	283			1043			0	39	728	25	26	91

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	518	1871	211
Volume Left	0	71	11
Volume Right	400	0	200
cSH	1700	1043	81
Volume to Capacity	0.30	0.07	2.61
Queue Length 95th (ft)	0	5	504
Control Delay (s)	0.0	0.3	842.5
Lane LOS		A	F
Approach Delay (s)	0.0	0.3	842.5
Approach LOS			F

Intersection Summary			
Average Delay	68.5		
Intersection Capacity Utilization	139.1%	ICU Level of Service	H
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
Van Duyn Rd & I-5 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frpb, ped/bikes		1.00			0.99			1.00				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.96			0.98				
Flt Protected		0.96			1.00			0.96				
Satd. Flow (prot)		1544			1474			1624				
Flt Permitted		0.66			1.00			0.96				
Satd. Flow (perm)		1061			1474			1624				
Volume (vph)	285	80	0	0	90	35	330	0	60	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	335	94	0	0	106	41	347	0	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	10	0	0	0	0
Lane Group Flow (vph)	0	429	0	0	127	0	0	400	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	11%	11%	11%	16%	16%	16%	18%	18%	18%	0%	0%	0%
Turn Type	pm+pt						Split					
Protected Phases	7	2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)		34.0			17.0			19.1				
Effective Green, g (s)		36.0			18.0			20.1				
Actuated g/C Ratio		0.53			0.26			0.30				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		4.2			4.2			3.0				
Lane Grp Cap (vph)		689			390			479				
v/s Ratio Prot		c0.16			0.09			c0.25				
v/s Ratio Perm		c0.16										
v/c Ratio		0.62			0.33			0.84				
Uniform Delay, d1		11.3			20.2			22.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.2			2.2			12.0				
Delay (s)		15.5			22.4			34.4				
Level of Service		B			C			C				
Approach Delay (s)		15.5			22.4			34.4			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	345	995	50	370	0	0	0	0	20	0	270
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Hourly flow rate (vph)	0	406	1171	59	435	0	0	0	0	21	0	284
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		991			920							
pX, platoon unblocked				0.81			0.81	0.81	0.81	0.81	0.81	
vC, conflicting volume	435			1576			1828	1544	991	1544	2129	435
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	435			1713			2024	1673	989	1673	2397	435
tC, single (s)	4.2			4.3			7.1	6.5	6.2	7.4	6.8	6.5
tC, 2 stage (s)												
tF (s)	2.3			2.4			3.5	4.0	3.3	3.8	4.3	3.6
p0 queue free %	100			78			100	100	100	52	100	50
cM capacity (veh/h)	1088			270			15	61	244	44	18	569

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1576	494	305
Volume Left	0	59	21
Volume Right	1171	0	284
cSH	1700	270	313
Volume to Capacity	0.93	0.22	0.98
Queue Length 95th (ft)	0	20	256
Control Delay (s)	0.0	8.3	82.2
Lane LOS		A	F
Approach Delay (s)	0.0	8.3	82.2
Approach LOS			F

Intersection Summary			
Average Delay	12.3		
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	1230	55	25	555	60	70	0	95	15	0	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	1447	65	29	653	71	82	0	112	18	0	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		470										
pX, platoon unblocked				0.81			0.81	0.81	0.81	0.81	0.81	
vC, conflicting volume	724			1512			2244	2274	1479	2350	2271	688
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	724			1632			2535	2572	1592	2666	2568	688
tC, single (s)	4.2			4.4			7.3	6.7	6.4	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.5			3.7	4.2	3.5	3.6	4.1	3.4
p0 queue free %	99			89			0	100	0	0	100	99
cM capacity (veh/h)	835			271			11	16	95	0	18	438

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1518	753	194	24
Volume Left	6	29	82	18
Volume Right	65	71	112	6
cSH	835	271	23	0
Volume to Capacity	0.01	0.11	8.38	Err
Queue Length 95th (ft)	1	9	Err	Err
Control Delay (s)	0.6	4.4	Err	Err
Lane LOS	A	A	F	F
Approach Delay (s)	0.6	4.4	Err	Err
Approach LOS			F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	11	11	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.95			0.93		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.99	
Satd. Flow (prot)	1368	2715		1390	2593			1849		1555	1410	
Flt Permitted	0.25	1.00		0.25	1.00			0.98		0.95	0.99	
Satd. Flow (perm)	361	2715		373	2593			1849		1555	1410	
Volume (vph)	235	370	15	60	370	200	10	5	15	905	30	610
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	276	435	18	71	435	235	12	6	18	1065	35	718
RTOR Reduction (vph)	0	2	0	0	56	0	0	17	0	0	87	0
Lane Group Flow (vph)	276	451	0	71	614	0	0	19	0	873	858	0
Confl. Peds. (#/hr)			10			10			10			10
Heavy Vehicles (%)	25%	25%	25%	23%	23%	23%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	36.2	21.1		46.2	27.1			5.7		36.2	36.2	
Effective Green, g (s)	36.2	21.1		46.2	27.1			5.7		36.2	36.2	
Actuated g/C Ratio	0.36	0.21		0.46	0.27			0.06		0.36	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	282	572		387	702			105		562	510	
v/s Ratio Prot	c0.15	0.17		0.04	c0.24			c0.01		0.56	c0.61	
v/s Ratio Perm	0.21			0.05								
v/c Ratio	0.98	0.79		0.18	0.87			0.18		1.55	1.68	
Uniform Delay, d1	26.8	37.4		16.1	34.9			45.0		32.0	32.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	47.2	10.5		1.0	14.3			0.8		257.7	315.7	
Delay (s)	74.0	47.9		17.1	49.1			45.8		289.7	347.6	
Level of Service	E	D		B	D			D		F	F	
Approach Delay (s)		57.8			46.1			45.8			319.8	
Approach LOS		E			D			D			F	

Intersection Summary			
HCM Average Control Delay	198.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
Pearl St & Coleman St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	595	5	10	965	15	5	0	10	15	5	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	700	6	12	1135	18	6	0	12	18	6	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1118										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	1153			706			1891	1891	703	1894	1885	1144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1153			660			2029	2029	657	2033	2023	1144
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			82	100	97	50	88	98
cM capacity (veh/h)	565			791			32	49	406	35	50	246

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	712	1165	18	29
Volume Left	6	12	6	18
Volume Right	6	18	12	6
cSH	565	791	84	46
Volume to Capacity	0.01	0.01	0.21	0.64
Queue Length 95th (ft)	1	1	18	61
Control Delay (s)	0.3	0.5	59.0	174.2
Lane LOS	A	A	F	F
Approach Delay (s)	0.3	0.5	59.0	174.2
Approach LOS			F	F

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

APPENDIX I

Future Build 2031 Traffic Operations Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0			4.0				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	1.00			0.99			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.96			0.98				
Flt Protected	0.95	1.00			1.00			0.96				
Satd. Flow (prot)	1541	1622			1475			1625				
Flt Permitted	0.95	1.00			1.00			0.96				
Satd. Flow (perm)	1541	1622			1475			1625				
Volume (vph)	290	80	0	0	90	35	350	0	60	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	341	94	0	0	106	41	368	0	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	10	0	0	0	0
Lane Group Flow (vph)	341	94	0	0	126	0	0	421	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	11%	11%	11%	16%	16%	16%	18%	18%	18%	0%	0%	0%
Turn Type	Split						Split					
Protected Phases	2	2			6		8	8				
Permitted Phases												
Actuated Green, G (s)	17.0	17.0			13.0			18.5				
Effective Green, g (s)	18.0	18.0			14.0			19.5				
Actuated g/C Ratio	0.28	0.28			0.22			0.31				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Vehicle Extension (s)	4.2	4.2			4.2			3.0				
Lane Grp Cap (vph)	437	460			325			499				
v/s Ratio Prot	c0.22	0.06			c0.09			c0.26				
v/s Ratio Perm												
v/c Ratio	0.78	0.20			0.39			0.84				
Uniform Delay, d1	20.9	17.3			21.1			20.6				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	12.9	1.0			3.5			12.4				
Delay (s)	33.9	18.3			24.6			32.9				
Level of Service	C	B			C			C				
Approach Delay (s)		30.5			24.6			32.9			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
Van Duyn Rd & I-5 SB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	12	16	12
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	
Lane Util. Factor		0.95	0.95	1.00	1.00						1.00	
Frt		0.95	0.85	1.00	1.00						0.87	
Flt Protected		1.00	1.00	0.95	1.00						1.00	
Satd. Flow (prot)		1484	1333	1462	1538						1388	
Flt Permitted		1.00	1.00	0.20	1.00						1.00	
Satd. Flow (perm)		1484	1333	305	1538						1388	
Volume (vph)	0	350	980	50	390	0	0	0	0	20	0	285
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Adj. Flow (vph)	0	412	1153	59	459	0	0	0	0	21	0	300
RTOR Reduction (vph)	0	29	457	0	0	0	0	0	0	0	233	0
Lane Group Flow (vph)	0	614	465	59	459	0	0	0	0	0	88	0
Heavy Vehicles (%)	9%	9%	9%	17%	17%	17%	0%	0%	0%	28%	28%	28%
Turn Type			Perm	pm+pt						Perm		
Protected Phases		4		3	8						6	
Permitted Phases			4	8						6		
Actuated Green, G (s)		26.0	26.0	32.0	32.0						11.6	
Effective Green, g (s)		26.0	26.0	32.0	32.0						11.6	
Actuated g/C Ratio		0.50	0.50	0.62	0.62						0.22	
Clearance Time (s)		4.0	4.0	4.0	4.0						4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		748	672	234	954						312	
v/s Ratio Prot		c0.41		0.01	c0.30							
v/s Ratio Perm			0.35	0.15							0.06	
v/c Ratio		0.82	0.69	0.25	0.48						0.28	
Uniform Delay, d1		10.8	9.7	6.4	5.3						16.6	
Progression Factor		1.00	1.00	1.00	1.00						1.00	
Incremental Delay, d2		7.2	3.1	0.6	0.4						0.5	
Delay (s)		18.0	12.8	7.0	5.7						17.1	
Level of Service		B	B	A	A						B	
Approach Delay (s)		15.0			5.8			0.0			17.1	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	11	11	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1368	2660		1390	2567		1710	1779		3175	1459	
Flt Permitted	0.20	1.00		0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	291	2660		486	2567		1710	1779		3175	1459	
Volume (vph)	125	350	60	125	325	225	50	35	105	875	35	325
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	147	412	71	147	382	265	59	41	124	1029	41	382
RTOR Reduction (vph)	0	13	0	0	114	0	0	109	0	0	241	0
Lane Group Flow (vph)	147	470	0	147	533	0	59	56	0	1029	182	0
Confl. Peds. (#/hr)			10			10			10			10
Heavy Vehicles (%)	25%	25%	25%	23%	23%	23%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Effective Green, g (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Actuated g/C Ratio	0.33	0.26		0.33	0.26		0.12	0.12		0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	683		233	659		202	210		1169	537	
v/s Ratio Prot	c0.06	0.18		0.05	0.21		c0.03	0.03		c0.32	0.12	
v/s Ratio Perm	c0.21			0.16								
v/c Ratio	0.81	0.69		0.63	0.81		0.29	0.27		0.88	0.34	
Uniform Delay, d1	23.5	30.1		22.5	31.2		36.1	36.0		26.5	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.4	5.6		5.5	10.3		0.8	0.7		8.0	0.4	
Delay (s)	45.9	35.7		28.0	41.6		36.9	36.6		34.4	20.8	
Level of Service	D	D		C	D		D	D		C	C	
Approach Delay (s)		38.1			39.1			36.7			30.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
Pearl St & Coleman St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	510	5	10	680	10	5	0	10	15	5	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	600	6	12	800	12	6	0	12	18	6	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1118										
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	812			606			1453	1450	603	1456	1447	806
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	812			585			1477	1474	582	1480	1471	806
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			94	100	98	82	95	98
cM capacity (veh/h)	765			926			93	119	491	96	119	385

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	612	824	18	29
Volume Left	6	12	6	18
Volume Right	6	12	12	6
cSH	765	926	203	118
Volume to Capacity	0.01	0.01	0.09	0.25
Queue Length 95th (ft)	1	1	7	23
Control Delay (s)	0.2	0.3	24.4	45.3
Lane LOS	A	A	C	E
Approach Delay (s)	0.2	0.3	24.4	45.3
Approach LOS			C	E

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	341	94	147	208	223
v/c Ratio	0.65	0.17	0.22	0.63	0.57
Control Delay	25.4	16.4	16.1	30.2	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	16.4	16.1	30.2	24.1
Queue Length 50th (ft)	108	25	16	73	66
Queue Length 95th (ft)	185	54	37	138	130
Internal Link Dist (ft)		840	592		151
Turn Bay Length (ft)	350				
Base Capacity (vph)	523	551	663	381	442
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.17	0.22	0.55	0.50

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0				
Lane Util. Factor	1.00	1.00			0.95		0.95	0.95				
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00				
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.96		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	0.97				
Satd. Flow (prot)	1541	1622			2791		1377	1518				
Flt Permitted	0.95	1.00			1.00		0.95	0.97				
Satd. Flow (perm)	1541	1622			2791		1377	1518				
Volume (vph)	290	80	0	0	90	35	350	0	60	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	341	94	0	0	106	41	368	0	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	32	0	0	23	0	0	0	0
Lane Group Flow (vph)	341	94	0	0	115	0	208	200	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	11%	11%	11%	16%	16%	16%	18%	18%	18%	0%	0%	0%
Turn Type	Split						Split					
Protected Phases	2	2			6		8	8				
Permitted Phases												
Actuated Green, G (s)	20.0	20.0			13.0		13.9	13.9				
Effective Green, g (s)	21.0	21.0			14.0		14.9	14.9				
Actuated g/C Ratio	0.34	0.34			0.23		0.24	0.24				
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0				
Vehicle Extension (s)	4.2	4.2			4.2		3.0	3.0				
Lane Grp Cap (vph)	523	550			631		331	365				
v/s Ratio Prot	c0.22	0.06			c0.04		c0.15	0.13				
v/s Ratio Perm												
v/c Ratio	0.65	0.17			0.18		0.63	0.55				
Uniform Delay, d1	17.3	14.3			19.3		21.0	20.6				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	6.2	0.7			0.6		3.7	1.7				
Delay (s)	23.6	15.0			20.0		24.7	22.2				
Level of Service	C	B			B		C	C				
Approach Delay (s)		21.7			20.0			23.4			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	61.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	643	922	59	459	321
v/c Ratio	0.81	0.81	0.25	0.26	0.58
Control Delay	20.5	8.6	6.7	4.9	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	8.6	6.7	4.9	8.7
Queue Length 50th (ft)	146	0	5	23	6
Queue Length 95th (ft)	#364	40	18	52	64
Internal Link Dist (ft)	441			840	793
Turn Bay Length (ft)			150		
Base Capacity (vph)	869	1156	239	1959	657
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.80	0.25	0.23	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	12	16	12
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	
Lane Util. Factor		0.95	0.95	1.00	0.95						1.00	
Frt		0.95	0.85	1.00	1.00						0.87	
Flt Protected		1.00	1.00	0.95	1.00						1.00	
Satd. Flow (prot)		1484	1333	1462	2923						1388	
Flt Permitted		1.00	1.00	0.20	1.00						1.00	
Satd. Flow (perm)		1484	1333	305	2923						1388	
Volume (vph)	0	350	980	50	390	0	0	0	0	20	0	285
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Adj. Flow (vph)	0	412	1153	59	459	0	0	0	0	21	0	300
RTOR Reduction (vph)	0	29	457	0	0	0	0	0	0	0	233	0
Lane Group Flow (vph)	0	614	465	59	459	0	0	0	0	0	88	0
Heavy Vehicles (%)	9%	9%	9%	17%	17%	17%	0%	0%	0%	28%	28%	28%
Turn Type			Perm	pm+pt						Perm		
Protected Phases		4		3	8						6	
Permitted Phases			4	8						6		
Actuated Green, G (s)		26.0	26.0	32.0	32.0						11.6	
Effective Green, g (s)		26.0	26.0	32.0	32.0						11.6	
Actuated g/C Ratio		0.50	0.50	0.62	0.62						0.22	
Clearance Time (s)		4.0	4.0	4.0	4.0						4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		748	672	234	1813						312	
v/s Ratio Prot		c0.41		0.01	c0.16							
v/s Ratio Perm			0.35	0.15							0.06	
v/c Ratio		0.82	0.69	0.25	0.25						0.28	
Uniform Delay, d1		10.8	9.7	6.4	4.4						16.6	
Progression Factor		1.00	1.00	1.00	1.00						1.00	
Incremental Delay, d2		7.2	3.1	0.6	0.1						0.5	
Delay (s)		18.0	12.8	7.0	4.5						17.1	
Level of Service		B	B	A	A						B	
Approach Delay (s)		15.0			4.8			0.0			17.1	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	147	483	147	647	59	165	1029	423
v/c Ratio	0.86	0.69	0.69	0.84	0.29	0.52	0.88	0.54
Control Delay	65.2	35.3	39.7	35.5	40.1	17.9	37.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	35.3	39.7	35.5	40.1	17.9	37.1	6.4
Queue Length 50th (ft)	56	124	56	140	31	21	272	15
Queue Length 95th (ft)	#140	174	#117	#216	64	70	#354	67
Internal Link Dist (ft)		422		201		1166		1000
Turn Bay Length (ft)	200		100		150		425	
Base Capacity (vph)	171	695	214	772	423	533	1169	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.69	0.69	0.84	0.14	0.31	0.88	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	11	11	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1368	2660		1390	2567		1710	1779		3175	1459	
Flt Permitted	0.20	1.00		0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	291	2660		486	2567		1710	1779		3175	1459	
Volume (vph)	125	350	60	125	325	225	50	35	105	875	35	325
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	147	412	71	147	382	265	59	41	124	1029	41	382
RTOR Reduction (vph)	0	13	0	0	114	0	0	109	0	0	241	0
Lane Group Flow (vph)	147	470	0	147	533	0	59	56	0	1029	182	0
Confl. Peds. (#/hr)			10			10			10			10
Heavy Vehicles (%)	25%	25%	25%	23%	23%	23%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Effective Green, g (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Actuated g/C Ratio	0.33	0.26		0.33	0.26		0.12	0.12		0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	683		233	659		202	210		1169	537	
v/s Ratio Prot	c0.06	0.18		0.05	0.21		c0.03	0.03		c0.32	0.12	
v/s Ratio Perm	c0.21			0.16								
v/c Ratio	0.81	0.69		0.63	0.81		0.29	0.27		0.88	0.34	
Uniform Delay, d1	23.5	30.1		22.5	31.2		36.1	36.0		26.5	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.4	5.6		5.5	10.3		0.8	0.7		8.0	0.4	
Delay (s)	45.9	35.7		28.0	41.6		36.9	36.6		34.4	20.8	
Level of Service	D	D		C	D		D	D		C	C	
Approach Delay (s)		38.1			39.1			36.7			30.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	510	5	10	680	10	5	0	10	15	5	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	600	6	12	800	12	6	0	12	18	6	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1118										
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	812			606			1453	1450	603	1456	1447	806
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	812			585			1477	1474	582	1480	1471	806
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			94	100	98	82	95	98
cM capacity (veh/h)	765			926			93	119	491	96	119	385

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	612	824	18	29
Volume Left	6	12	6	18
Volume Right	6	12	12	6
cSH	765	926	203	118
Volume to Capacity	0.01	0.01	0.09	0.25
Queue Length 95th (ft)	1	1	7	23
Control Delay (s)	0.2	0.3	24.4	45.3
Lane LOS	A	A	C	E
Approach Delay (s)	0.2	0.3	24.4	45.3
Approach LOS			C	E

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	NBT
Lane Group Flow (vph)	341	94	147	63
v/c Ratio	0.54	0.14	0.35	0.06
Control Delay	17.6	12.7	17.6	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.6	12.7	17.6	0.1
Queue Length 50th (ft)	94	21	34	0
Queue Length 95th (ft)	156	46	73	0
Internal Link Dist (ft)		275	592	195
Turn Bay Length (ft)	350			
Base Capacity (vph)	636	669	425	1055
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.14	0.35	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0			4.0				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	1.00			0.99			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.96			0.86				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1541	1622			1476			1495				
Flt Permitted	0.95	1.00			1.00			1.00				
Satd. Flow (perm)	1541	1622			1476			1495				
Volume (vph)	290	80	0	0	90	35	0	0	60	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95	0.85	0.85	0.85
Adj. Flow (vph)	341	94	0	0	106	41	0	0	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	56	0	0	0	0
Lane Group Flow (vph)	341	94	0	0	127	0	0	7	0	0	0	0
Confl. Peds. (#/hr)	10					10						
Heavy Vehicles (%)	11%	11%	11%	16%	16%	16%	18%	18%	18%	0%	0%	0%
Turn Type	Split											
Protected Phases	2	2			6			8				
Permitted Phases												
Actuated Green, G (s)	20.4	20.4			13.3			5.4				
Effective Green, g (s)	21.4	21.4			14.3			6.4				
Actuated g/C Ratio	0.40	0.40			0.26			0.12				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Vehicle Extension (s)	4.2	4.2			4.2			3.0				
Lane Grp Cap (vph)	610	642			390			177				
v/s Ratio Prot	c0.22	0.06			c0.09			c0.00				
v/s Ratio Perm												
v/c Ratio	0.56	0.15			0.33			0.04				
Uniform Delay, d1	12.7	10.5			16.0			21.1				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	3.7	0.5			2.2			0.1				
Delay (s)	16.4	11.0			18.2			21.2				
Level of Service	B	B			B			C				
Approach Delay (s)		15.2			18.2			21.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	643	922	59	459	321
v/c Ratio	0.81	0.81	0.25	0.26	0.58
Control Delay	20.5	8.6	6.7	4.9	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	8.6	6.7	4.9	8.7
Queue Length 50th (ft)	146	0	5	23	6
Queue Length 95th (ft)	#364	40	18	52	64
Internal Link Dist (ft)	441			651	793
Turn Bay Length (ft)			150		
Base Capacity (vph)	869	1156	239	1959	657
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.80	0.25	0.23	0.49

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	12	16	12
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	
Lane Util. Factor		0.95	0.95	1.00	0.95						1.00	
Frt		0.95	0.85	1.00	1.00						0.87	
Flt Protected		1.00	1.00	0.95	1.00						1.00	
Satd. Flow (prot)		1484	1333	1462	2923						1388	
Flt Permitted		1.00	1.00	0.20	1.00						1.00	
Satd. Flow (perm)		1484	1333	305	2923						1388	
Volume (vph)	0	350	980	50	390	0	0	0	0	20	0	285
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.95
Adj. Flow (vph)	0	412	1153	59	459	0	0	0	0	21	0	300
RTOR Reduction (vph)	0	29	457	0	0	0	0	0	0	0	233	0
Lane Group Flow (vph)	0	614	465	59	459	0	0	0	0	0	88	0
Heavy Vehicles (%)	9%	9%	9%	17%	17%	17%	0%	0%	0%	28%	28%	28%
Turn Type			Perm	pm+pt						Perm		
Protected Phases		4		3	8						6	
Permitted Phases			4	8						6		
Actuated Green, G (s)		26.0	26.0	32.0	32.0						11.6	
Effective Green, g (s)		26.0	26.0	32.0	32.0						11.6	
Actuated g/C Ratio		0.50	0.50	0.62	0.62						0.22	
Clearance Time (s)		4.0	4.0	4.0	4.0						4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		748	672	234	1813						312	
v/s Ratio Prot		c0.41		0.01	c0.16							
v/s Ratio Perm			0.35	0.15							0.06	
v/c Ratio		0.82	0.69	0.25	0.25						0.28	
Uniform Delay, d1		10.8	9.7	6.4	4.4						16.6	
Progression Factor		1.00	1.00	1.00	1.00						1.00	
Incremental Delay, d2		7.2	3.1	0.6	0.1						0.5	
Delay (s)		18.0	12.8	7.0	4.5						17.1	
Level of Service		B	B	A	A						B	
Approach Delay (s)		15.0			4.8			0.0			17.1	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	147	483	147	647	59	165	1029	423
v/c Ratio	0.86	0.69	0.69	0.84	0.29	0.52	0.88	0.54
Control Delay	65.2	35.3	39.7	35.5	40.1	17.9	37.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	35.3	39.7	35.5	40.1	17.9	37.1	6.4
Queue Length 50th (ft)	56	124	56	140	31	21	272	15
Queue Length 95th (ft)	#140	174	#117	#216	64	70	#354	67
Internal Link Dist (ft)		422		201		1166		1000
Turn Bay Length (ft)	200		100		150		425	
Base Capacity (vph)	171	695	214	772	423	533	1169	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.69	0.69	0.84	0.14	0.31	0.88	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	12	11	11	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1368	2660		1390	2567		1710	1779		3175	1459	
Flt Permitted	0.20	1.00		0.33	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	291	2660		486	2567		1710	1779		3175	1459	
Volume (vph)	125	350	60	125	325	225	50	35	105	875	35	325
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	147	412	71	147	382	265	59	41	124	1029	41	382
RTOR Reduction (vph)	0	13	0	0	114	0	0	109	0	0	241	0
Lane Group Flow (vph)	147	470	0	147	533	0	59	56	0	1029	182	0
Confl. Peds. (#/hr)			10			10			10			10
Heavy Vehicles (%)	25%	25%	25%	23%	23%	23%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Effective Green, g (s)	30.0	23.0		30.0	23.0		10.6	10.6		33.0	33.0	
Actuated g/C Ratio	0.33	0.26		0.33	0.26		0.12	0.12		0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	683		233	659		202	210		1169	537	
v/s Ratio Prot	c0.06	0.18		0.05	0.21		c0.03	0.03		c0.32	0.12	
v/s Ratio Perm	c0.21			0.16								
v/c Ratio	0.81	0.69		0.63	0.81		0.29	0.27		0.88	0.34	
Uniform Delay, d1	23.5	30.1		22.5	31.2		36.1	36.0		26.5	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.4	5.6		5.5	10.3		0.8	0.7		8.0	0.4	
Delay (s)	45.9	35.7		28.0	41.6		36.9	36.6		34.4	20.8	
Level of Service	D	D		C	D		D	D		C	C	
Approach Delay (s)		38.1			39.1			36.7			30.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	510	5	10	680	10	5	0	10	15	5	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	600	6	12	800	12	6	0	12	18	6	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1118										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	812			606			1453	1450	603	1456	1447	806
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	812			579			1483	1480	576	1487	1477	806
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			94	100	98	81	95	98
cM capacity (veh/h)	765			918			91	116	488	93	117	385

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	612	824	18	29
Volume Left	6	12	6	18
Volume Right	6	12	12	6
cSH	765	918	199	115
Volume to Capacity	0.01	0.01	0.09	0.25
Queue Length 95th (ft)	1	1	7	24
Control Delay (s)	0.2	0.3	24.9	46.5
Lane LOS	A	A	C	E
Approach Delay (s)	0.2	0.3	24.9	46.5
Approach LOS			C	E

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX J

Transportation Demand Management

Appendix J. Transportation Demand Management

Transportation Demand Management (TDM) [1] addresses traffic congestion by reducing travel demand rather than increasing transportation capacity and focuses on alternatives such as ride sharing, flextime, increased transit usage, walking, and bicycling. The Lane Transit District (LTD) has developed and implemented a wide range of transit demand management strategies listed below.

Bus Rapid Transit

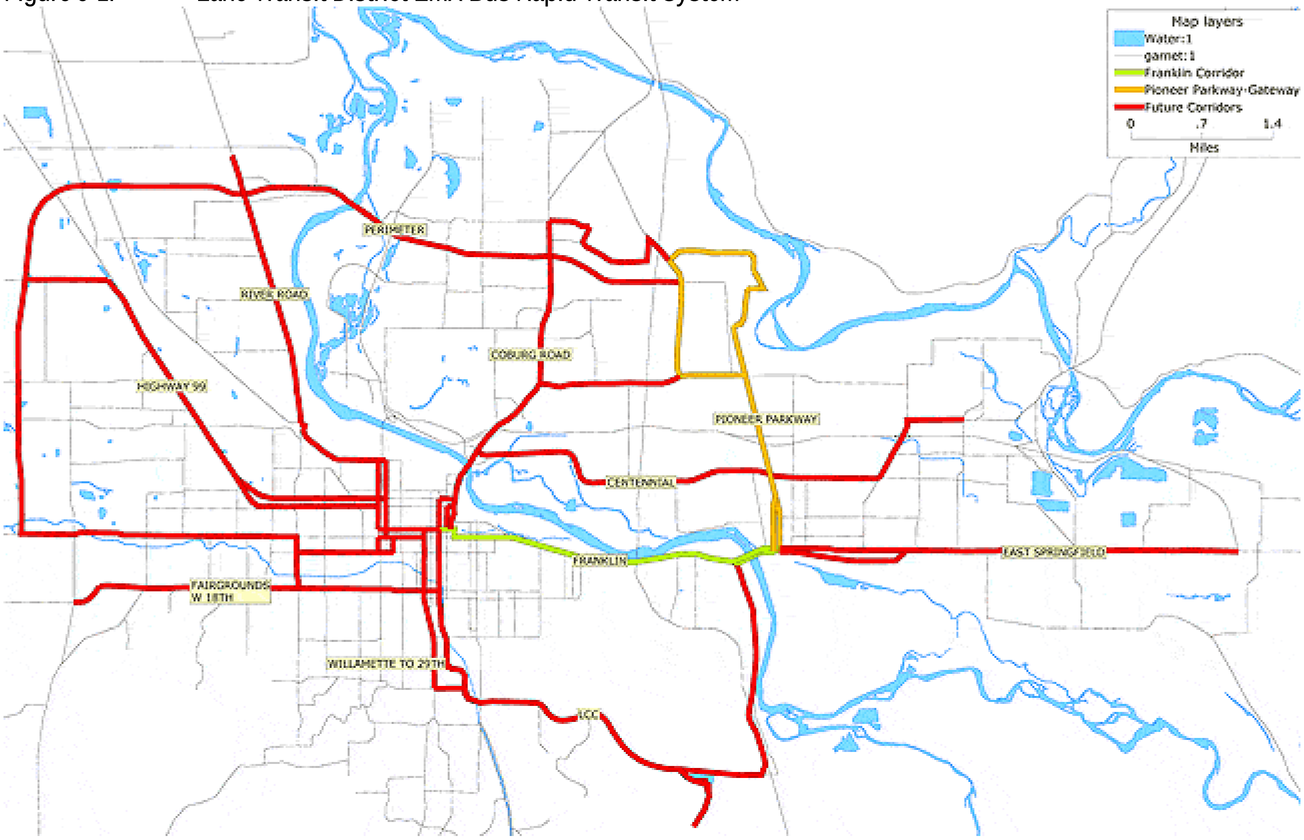
EmX is the Bus Rapid Transit (BRT) System developed by LTD. LTD, Lane County and partner agencies are to determine the sequence of future corridor development. **Figure J-1** illustrates the BRT system. The long term goal is to have EmX operating on all major corridors. LTD is examining the development of transit corridors incrementally with the eventual goal to establish a full EmX treatment on some of those corridors in the metro area. This incremental development approach is being called Progressive Corridor Enhancement.

LTD has identified the following four levels of EmX corridor improvements. The implementation sequence and schedule will be dictated by funding and community support. Level 1 and Level 2 enhancements could be added to any LTD transit corridor. Level 3 and Level 4 enhancements would be for dedicated EmX corridors.

Eventually, Coburg will be served by the EmX BRT system. The city of Coburg should work with LTD to accelerate the BRT expansion into Coburg so that the residents and employees will have a rapid transit option. This could shift some of the vehicle traffic to transit ridership.

[1] Source: Lane Transit District and the Commuter Solutions Program.

Figure J-1. Lane Transit District EmX Bus Rapid Transit System



Park and Ride

Lane Transit District operates more than 23 Park & Ride locations throughout the area. Park & Ride lots are conveniently located along major bus routes, and many locations are served by express or direct bus service. Park & Ride lots also are popular meeting places for carpools and vanpools. Eventually, the increased residential development in Coburg could potentially justify a new park and ride at the Coburg interchange.

Group Pass Program

Lane Transit District's Commuter Solutions Program offers employers a discounted transit pass program called a Group Pass Program. The most updated guidelines for the program requires that participating firms employ a minimum of 10 employees. Most employers are eligible for the program. The Group Pass Program is an annual contract with LTD. Transportation education fairs and employee surveys are conducted annually at each work site to maintain visibility and encourage increased participation in alternative modes programs. Coburg should market aggressively to the employers within the city boundary and educate employees to consider taking advantage of the group pass program.

Carpool Matching

LTD's Commuter Solutions program helps commuters by providing a contact list of other commuters who are interested in carpooling and share the same commute route and times. An organized ridesharing program makes it easier for drivers to carpool. City of Coburg should partner with LTD to educate and encourage residents and employees to carpool.

Vanpool

Cascades West Rideshare, Mid-Valley Rideshare, and Lane Transit District's Commuter Solutions Program collaborated two years ago to streamline service, promotion, and recruitment for commuter vanpools in the Willamette Valley. Valley VanPool, the resulting program, has set up a vanpool hotline number and created a Web site that is a one-stop vanpool information center. Valley Vanpool has now been involved in the creation or oversight of ten vanpools that serve over 100 commuters in the Willamette Valley. These vanpools reduce Vehicle Miles Traveled (VMT) by over 100,000 miles every month. The Valley VanPool has a wide coverage area that includes Eugene, Salem, Corvallis, Albany, and Lebanon. City of Coburg could participate in the Valley Vanpool program in an effort to reduce single occupancy vehicle travel.

Regional Emergency Ride Home Program

The Emergency Ride Home (ERH) program provides a guaranteed taxi ride home for eligible participants in case of an emergency. The regional ERH program provides each of the employees that commute to work other than driving alone up to four taxi rides home each year in case of an eligible emergency.

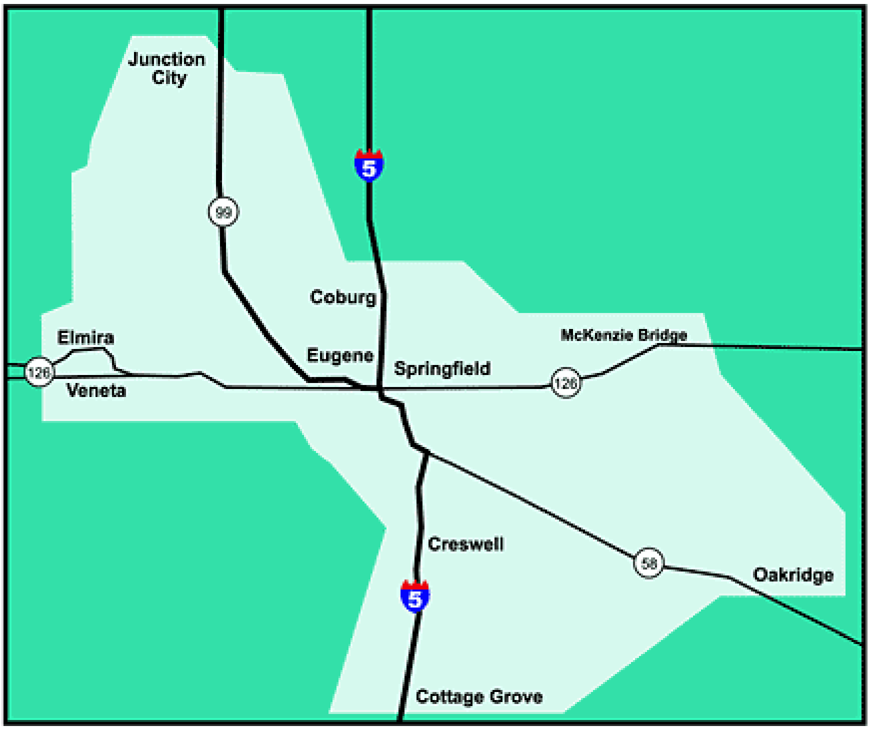
Research indicates that one of the main reasons many people drive alone to work is the security of having a car available to them in case a family member becomes unexpectedly ill or is injured. By providing a free Emergency Ride Home, employers can increase the number of employees in community who will either carpool, vanpool, take a bus, ride a bike, or walk to work. The regional Emergency Ride Home Program is a strategy to help manage the demand placed upon the road system, reduce congestion, and to increase the efficiency of the existing roads. **Figure J-2** shows the area of service provided by the ERH program.

Flexible Work Schedules

Employees who have flexible work schedules either can avoid traveling at peak traffic hours or they can work longer hours each day to eliminate the commute one or more days per week. This can result in reduced peak-hour travel demand, and it is often easier on the commuter. Flexible work schedules are a proven congestion-management strategy. Elements in the program include:

Staggered Work Hours
Employees' starting and ending times are staggered by anywhere from 15 minutes to two hours in order to shift some people away from rush-hour traffic.

Figure J-2. Emergency Ride Home Area of Service



Compressed Work Weeks
The number of hours an employee works each day is increased so that the number of days they have to travel to work is decreased. This can take place over the course of a one- or two-week period. Common examples of this are the 4/10 (employees work four 10-hour days per week) and the 9/80 (during a two-week period, employees work 8 9-hour days, one 8 hour day, and have an extra day off every other week). If all employees are on compressed work weeks, total number of work trips could be reduced by 10% to 20% while number trips will drop dramatically on Mondays and Fridays.

Flex-time employees are offered a window of time during the day within which they may begin and end work. The employer may set a group of core hours, such as 10:00 a.m. to 3:00 p.m., but may allow employees to work flexible shifts between 6:00 a.m. and 7:00 p.m.

Flexible time schedules can help relieve the traffic in peak hours by spreading the work trips to other hours with less traffic.

Telecommuting

Telecommuting allows people to work from home by using home computers or remote network access. Telecommuters usually work at home one to three days a week. Businesses and individuals can earn tax credits by investing in whatever equipment needed to telecommute. Each telecommuting day is equivalent to two fewer work trips a day.

APPENDIX K

Alternate Land Use Scenarios

APPENDIX K

Alternate Land Use Scenarios

This appendix documents the findings of four alternate land use scenarios, which was completed to determine how Coburg might develop in year 2025 under different population and employment growth assumptions.

These data are provided for informational purposes only and were not used in the Coburg/I-5 IAMP because the land uses are inconsistent with the current Coburg Comprehensive Plan. The City of Coburg has expressed interest in potentially amending its Comprehensive Plan at some point in the future. This information could be used during a future comprehensive plan update.

Land Use Scenarios

The Coburg/I-5 IAMP is based on population and employment assumptions derived from the *Coburg Comprehensive Plan*. Land use scenarios were based on the following documents: *Coburg Comprehensive Plan*, *LCOG Regional Transportation Plan*, and *Coburg Urbanization Study*. Table 1 provides a comparison of growth assumptions for year 2025.

TABLE 1
Comprehensive Plan, Coburg Urbanization Study and RTP Land Use Assumptions Comparison—Year 2025

	Population	New Dwelling Units	Employment
Coburg Comprehensive Plan	1,819 (2025)	322 (2025)	4,672 (2025)
LCOG Regional Transportation Plan	2,950 (2025)	843 (2025)	4,197 (2025)
Coburg Urbanization Study	3,327 (2025)	893 (2025)	5,157 (2025)

Four land use scenarios were developed:

- **Land Use Scenario #2 - Urbanization Study:** Based on the 2004 Coburg Urbanization Study preferred alternative. Reflects 960 more jobs than the RTP, with similar residential assumptions. Residential growth concentrated to the north and west, outside the UGB. Employment growth concentrated just west of I-5; industrial with additional 960 jobs over RTP numbers classified as retail/service.
- **Land Use Scenario #3a - Residential Growth East of I-5:** Total growth numbers based on the 2004 Coburg Urbanization Study. All residential growth allocated to the northeast interchange quadrant (TAZ 305) instead of to the north and west. Same employment growth assumptions as Urbanization Study, except for 100 jobs allocated east of I-5.
- **Land Use Scenario #3b – Employment Growth East of I-5:** Same population numbers and growth assumptions as the Coburg Urbanization Study—residential growth to the north and west, outside the UGB. Same employment numbers and growth assumptions

as Coburg Urbanization Study, *plus* the addition of 1,386 jobs allocated east of I-5 (employment growth in both eastern quadrants).

- **Land Use Scenario #4 - Comprehensive Plan:** Based on the 2005 Coburg Comprehensive Plan. Reflects 475 more jobs than the RTP, but 521 fewer new dwelling units. Both residential and employment growth concentrated within the UGB, just west of I-5.

TABLE 2
Summary of Land Use Scenarios – Year 2025

Land Use Scenario	Total Dwelling Units	Total Employment
#2	1,416 growth west of I-5	5,157 growth west of I-5
#3a	1,416 growth east of I-5	5,157 growth west of I-5
#3b	1,416 growth west of I-5	6,543 growth west and east of I-5
#4	896 growth west of I-5	4,672 growth west of I-5

The land use scenarios were developed based on the following assumptions:

- Residential growth numbers were held constant (at 843 new DUs) for land use scenarios other than that based on the *Coburg Comprehensive Plan*.
- Based on Regional Transportation Plan (RTP) residential growth and Transportation Analysis Zone (TAZ) allocation, residential growth patterns were held constant for Land Use Scenarios #2 (Urbanization Study) and #3b (Intensive Interchange Development).
- For Scenarios #2 and #3b, residential growth is expected to occur: (1) to the northwest of Coburg (north of Coburg Road and west of the Monaco development)—outside the existing Coburg Urban Growth Boundary; and (2) to the southwest of Coburg (west of Coburg Road south of city limits and between the Highway Commercial and Traditional Residential land uses immediately east of Maple and Thomas Streets)—outside the existing Coburg Urban Growth Boundary.
- Growth is measured in dwelling units and number of employees.

Summary of Land Use Scenarios

Land Use Scenario #2—Urbanization Study Growth Allocations

Land Use Scenario #2 is based on the growth assumptions included in the preferred growth scenario as presented in the Coburg Urbanization Study. This equates to the addition of 2,337 people (approximately 885 households, based on average household size of 2.64 in the

Coburg Urbanization Study)[1] and 2,169 employees in the Coburg area from year 2002 to year 2025. Therefore, the projections are similar to the RTP[2] for population/dwelling units, but greater for employment. Table 3 shows the land use assumptions for Land Use Scenario #2.

According to the *Coburg Urbanization Study*, Coburg does not have enough land within its UGB to accommodate anticipated growth. The Study states that within the 2002-2025 period, Coburg needs to expand the UGB by 58 acres[3] to accommodate employment, 109 acres to accommodate housing needs, and 53 acres to accommodate parks and other public uses.

TABLE 3
Land Use Scenario #2—Urbanization Study Land Use Assumptions

	Dwelling Units		Employment				
TAZ	D.U. Total	% of Growth Allocation	RET+SRV+ EDU	% of Growth Allocation	Other	% of Growth Allocation	Total Employment
300	135	11%	2	0%	89	0%	91
301	619	25%	107	4%	189	5%	296
302	145	17%	1,225	88%	3,391	95%	4,616
303	202	18%	30	3%	9	0%	39
304	312	29%	2	0%	21	0%	23
305	1	0%	0	0%	0	0%	0
306	2	0%	90	5%	2	0%	92
Total	**1,416**		**1,456**		**3,701**		**5,157**

Land Use Scenario #3a—Residential Growth East of I-5

This scenario includes development east of I-5, currently inconsistent with the Coburg Comprehensive Plan.

Land Use Scenario #3a assumes the same population and employment forecast numbers as the *Coburg Urbanization Study* (1,416 dwelling units and 5,157 employees). However, this scenario assumes all of the additional residential growth is allocated to the northeast interchange quadrant rather than to the west and north of the city. This scenario also assumes that some retail/service employment would be allocated to the northeast and southeast quadrants (TAZs 305 and 306)[4], reflecting mixed-use development.

TABLE 4
Land Use Scenario #3a—Residential Growth East of I-5 Land Use Assumptions

	Dwelling Units		Employment				
TAZ	D.U.	% of Growth	RET+SRV+	% of Growth	Other	% of Growth	Total

[1] Dwelling units = households plus vacant dwelling units, where vacancy rate is 2.5% for single family housing units and 5.0% for multiple family units per the assumptions in the Coburg Urbanization Study.

[2] Given the similarity, RTP dwelling unit assumptions will be assumed for Scenario #2.

[3] This does not include the approximately 35 mostly developed acres east of I-5 recently adopted into the UGB.

[4] Moved from TAZ 302.

	Total	Allocation	EDU	Allocation		Allocation	Employment
300	42	0%	2	0%	89	0%	91
301	411	0%	107	4%	189	5%	296
302	2	0%	1,125	80%	3,391	95%	4,516
303	52	0%	30	3%	9	0%	39
304	64	0%	2	0%	21	0%	23
305	843	100%	25	2%	0	0%	25
306	2	0%	165	11%	2	0%	167
Total	**1,416**		**1,456**		**3,701**		**5,157**

Land Use Scenario #3b—Employment Growth East of I-5

This scenario includes development east of I-5, and is inconsistent with the *Coburg Comprehensive Plan.* Table 5 shows the land use assumptions for Land Use Scenario #3b.

This scenario assumes the same population forecast numbers and patterns as the *Coburg Urbanization Study* preferred growth scenario—1,416 total dwelling units, with residential growth allocated to the north and west.

This scenario assumes the same employment numbers and allocations as the *Coburg Urbanization Study* preferred scenario, **plus** additional service/retail employment allocated to the northeast and southeast interchange quadrants (TAZs 305 and 306).

TABLE 3-5
Land Use Scenario #3b—Service/Retail Growth East of I-5 Land Use Assumptions

	Dwelling Units		Employment				
TAZ	**D.U. Total**	**% of Growth Allocation**	**RET+SRV+ EDU**	**% of Growth Allocation**	**Other**	**% of Growth Allocation**	**Total Employment**
300	135	11%	2	0%	89	0%	91
301	619	25%	107	2%	189	5%	296
302	145	17%	1,225	41%	3,391	95%	4,616
303	202	18%	30	1%	9	0%	39
304	312	29%	2	0%	21	0%	23
305	1	0%	693	27%	0	0%	693
306	2	0%	783	29%	2	0%	785
Total	**1,416**		**2,842**		**3,701**		**6,543**

Land Use Scenario #4—Comprehensive Plan Growth Allocations

Land Use Scenario #4 is based on the build-out of the existing UGB, in accordance with the growth assumptions presented in the 2005 *Coburg Comprehensive Plan*. This equates to the addition of 322 households and 1,795 employees in the Coburg area from year 2002 to year 2025.

The Coburg buildable lands inventory identifies 59.1 acres of vacant/partially vacant land available for residential purposes under current comprehensive plan designations. The analysis also identifies approximately 23 acres (54 lots) with infill potential. For the purposes of estimating number of households in Land Use Scenario #4, five dwelling units per acre is assumed for vacant/partially vacant land and a factor of 0.5 is assumed as the rate for infill development per lot. These assumptions result in a total of 322 new households (59 * 5 + 54 * 0.5) in the Coburg UGB in the year 2025 under Land Use Scenario #4.

The buildable lands inventory indicates 51 acres of vacant and 50 acres of underdeveloped land to support commercial and industrial employment expansion. Land Use Scenario #4 assumes a rate of 20 employees per acre for commercial land and 15 employees per acre for industrial land. Underdeveloped land assumes a rate of 7.5 employees per acre. This assumption could be translated to a redevelopment rate of 50 percent at 15 jobs per acre. In addition, Land Use Scenario #4 assumes a carrying capacity of 500 jobs requiring no additional land (i.e. expansion of current development). Therefore, Land Use Scenario #4 assumes 1,795 new jobs in the Coburg UGB in the year 2025. Table 6 shows the land use assumptions for Land Use Scenario #4.

TABLE 6
Land Use Scenario #4—Comprehensive Plan Land Use Assumptions

	Dwelling Units		Employment				
TAZ	**D.U. Total**	**% of Growth Allocation**	**RET+SRV+ EDU**	**% of Growth Allocation**	**Other**	**% of Growth Allocation**	**Total Employment**
300	42	5%	2	0%	89	2%	91
301	617	69%	130	13%	189	5%	319
302	118	13%	787	79%	3,351	91%	4,138
303	52	6%	0	0%	9	0%	9
304	64	7%	2	0%	21	1%	23
305	1	0%	0	0%	0	0%	0
306	2	0%	80	8%	12	0%	92
Total	**896**		**1,001**		**3,671**		**4,672**

Appendix L

Goal Exception Rationale

Memorandum

Date: November 24, 2008

To: Terry Cole, ODOT Region 2

From: DJ Heffernan
Serah Overbeek

cc: Kirsten Pennington, CH2M HILL
Celia Barry, Lane County
Candice Stich, ODOT Region 2
Bonnie Heitsch, ODOJ

Re: Coburg IAMP Goal Exception

Background

This memorandum outlines the reasons why an exception to Statewide Planning Goal 3 will be needed as part of the Coburg/I-5 Interchange project. Per the Coburg Interchange Area Management Plan (IAMP), the recommended alternative for the interchange includes a new access road connecting Van Duyn Road to properties located southeast of the interchange. The IAMP states that in order to build this access road, ODOT must first apply, and receive approval for, a goal exception. The intent of this memorandum is to provide an overview of the land use regulations that necessitate the exception.

The design for the Coburg interchange calls for an existing access along Van Duyn Road east of the interchange to be closed. The access does not meet the applicable safety spacing standards for a freeway interchange as established in the 1999 Oregon Highway Plan (Policy 3C) and Tables 5 and 6 of OAR 734-051-0125. These safety spacing standards require a minimum distance of 1,320 feet between the end of an interchange ramp taper and the nearest full access point unless a deviation is granted by ODOT. The distance between the end of the ramp taper and the access on Van Duyn Road is currently less than 700 feet and, upon completion of the interchange improvements, the distance will be reduced further due to modernized design requirements. With potential and expected increases in traffic over time, it will not be safe to maintain this sub-standard spacing.

The existing access point on Van Duyn Road currently serves a highway commercial district in the southeast quadrant of the project area that is located inside the Coburg Urban Growth Boundary (UGB). The district currently includes an RV park that serves highway travelers, so convenient access to the highway is important. ODOT is proposing the construction of an alternative access road that will provide the most direct access possible without compromising access spacing safety standards. In order to do so, the new access road that will direct traffic bound for the highway commercial district within the Coburg UGB will intersect Van Duyn Road at a point at least 1,320 feet from the end of the northbound interchange ramp.

While the highway commercial district is in the Coburg's UGB, the land to the east (south of Van Duyn Road) is outside the UGB and zoned by Lane County for exclusive farm use (EFU). The EFU land is protected under Goal 3, Agricultural Lands. In order to achieve the 1,320 foot spacing standard, the new access road will have to travel through the EFU land before it crosses into the UGB and the commercial district.

The Oregon Transportation Planning Rule (OAR 660-012-0065) identifies transportation improvements that may be allowed on rural lands, consistent with Goal 3. Per 660-012-0065(3)(o), a new road may be built on rural lands provided that it is necessary to support rural land uses. The proposed access road is intended to serve urban uses located within the UGB and is therefore not consistent with this definition. OAR 660-012-0070 states that transportation facilities that do not meet the requirements of 660-012-0065 require an exception to be sited on rural lands. As such, in order to construct the proposed access road, ODOT will need to secure approval for an exception to Statewide Land Use Planning Goal 3 – Agriculture.

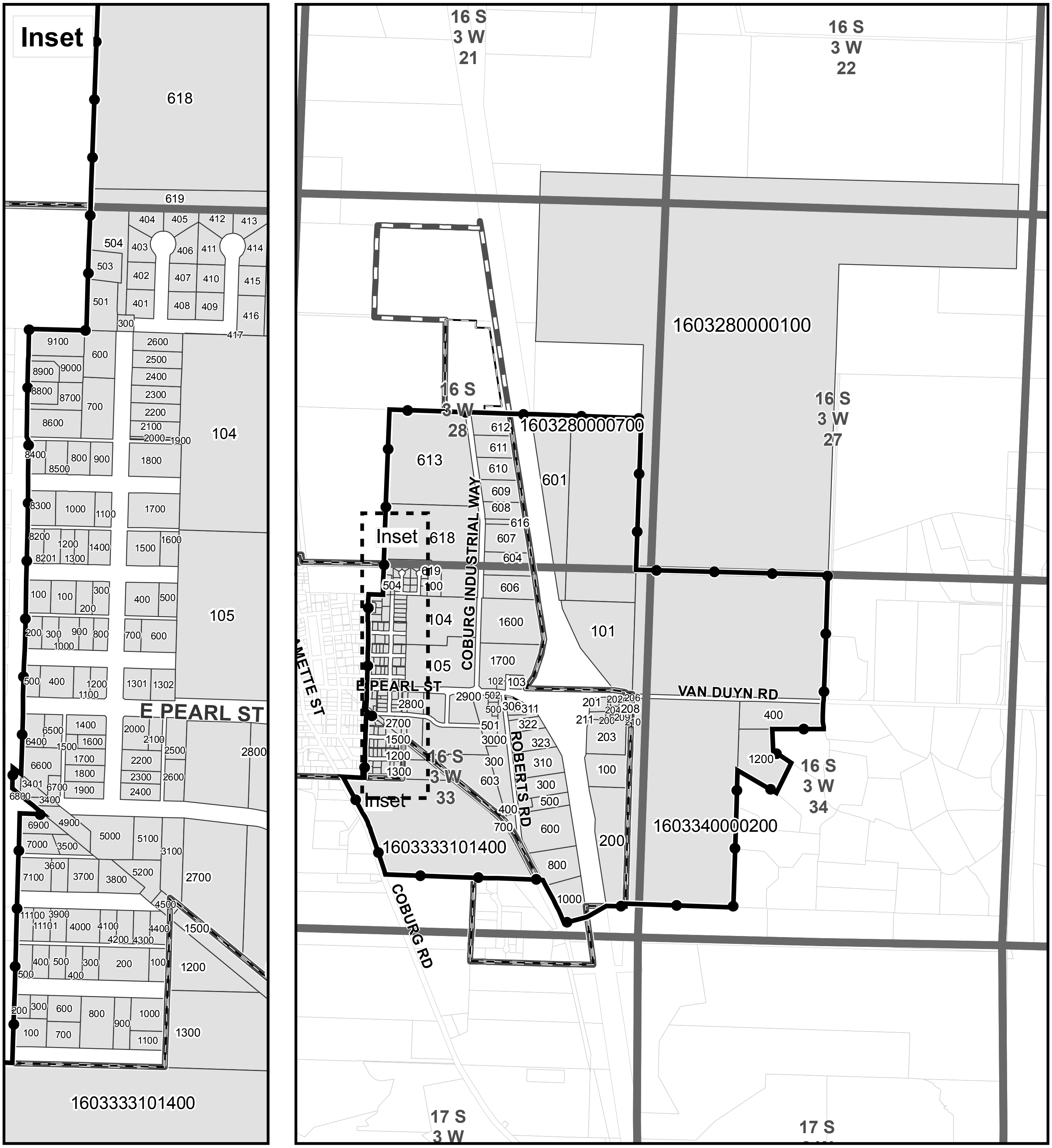
OAR 660-012-0070 outlines the reasons to justify why the state goal should not apply and merit an exception. If an exception is adopted pursuant to this division (Division 12), then the exception is also deemed consistent with the requirements for goal exceptions under ORS 197.732(1)(c) and Goal 2. Exception standards in OAR 660 Divisions 4 and 14 do not apply.

Conclusion

Based on this analysis, it is our opinion that the new access road will require an exception to Goal 3 – Agriculture. The basis for the exception must be justified using the process and criteria set forth in OAR 660-012-0070. It is also our opinion that there are no reasonable alternatives for providing access to these properties that would not also require an exception and that the proposed solution results in the least impact to resource land. That demonstration is not required at this time but will be necessary at the time ODOT requests approval from Lane County for a goal exception, which will take place prior to completing work on the design for this road improvement and securing construction permits.

APPENDIX M

IAMP Map and Legal Description



IAMP Management Area Boundary [1]

Coburg City Limits [2]

Urban Growth Boundary [2]

Tax Lots [2]

N

0 500 1,000 Feet

IAMP Management Area
Coburg/I-5 Interchange Area Management Plan

Map produced by:
LCOG

Sources: 1. CH2M Hill 2. LCOG

Map Document: (\\Clsrv111\gis\projects\coburg\IAMP_05\Fig1_CoburgIAMP_Legal.mxd)
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Map (Township-Range-Section-Quarter)	Tax Lot
16-03-28-00	100*
	601
	604
	606
	607
	608
	609
	610
	611
	612
	613
	616
	618
	619
	701
16-03-33-00	101
	102
	103
	104
	105
	200
	201
	202
	203
	204
	206
	207
	208
	209
	210
	211
	300
	306
	310
	311
	322
	323
	500
	501
	502
	603
	1600
	1700

*Southern portion of tax lot only (portion of tax lot within Section 34).

Map (Township-Range-Section-Quarter)	Tax Lot
16-03-33-21	100
	300
	401
	402
	403
	404
	405
	406
	407
	408
	409
	410
	411
	412
	413
	414
	415
	416
	417
	501
	503
	504
	600
	700
	800
	900
	1000
	1100
	1200
	1300
	1400
	1500
	1600
	1700
	1800
	1900
	2000
	2100
	2200
	2300
	2400
	2500
	2600

Map (Township-Range-Section-Quarter)	**Tax Lot**
16-03-33-22	8200
	8201
	8300
	8400
	8500
	8600
	8700
	8800
	8900
	9000
	9100
16-03-33-23	100
	200
	300
	400
	500
	6400
	6500
	6600
	6700
	6800
	6900
	7000
	7100
	11100
	11101

Map (Township-Range-Section-Quarter)	Tax Lot
16-03-33-24	100
	200
	300
	400
	500
	600
	700
	800
	900
	1000
	1100
	1200
	1301
	1302
	1400
	1500
	1600
	1700
	1800
	1900
	2000
	2100
	2200
	2300
	2400
	2500
	2600
	2700
	2800
	2900
	3000
	3100
	3400
	3401
	3500
	3600
	3700
	3800
	3900
	4000
	4100
	4200
	4300
	4400
	4500
	4900
	5000
	5100
	5200

Map (Township-Range-Section-Quarter)	Tax Lot
16-03-33-31	100
	200
	300
	400
	500
	600
	700
	800
	900
	1000
	1100
	1200
	1300
	1400
	1500
16-03-33-32	100
	200
	300
	400
	500
16-03-33-40	100
	200
	300
	400
	500
	600
	700
	800
	1000
16-03-34-00	202
	400
	1200