



**Oregon**

Theodore R. Kubongski, Governor

**Department of Land Conservation and Development**

635 Capitol Street, Suite 150

Salem, OR 97301-2540

(503) 373-0050

Fax (503) 378-5518

www.lcd.state.or.us



**NOTICE OF ADOPTED AMENDMENT**

12/4/2009

**TO:** Subscribers to Notice of Adopted Plan  
or Land Use Regulation Amendments

**FROM:** Plan Amendment Program Specialist

**SUBJECT:** Wasco County Plan Amendment  
DLCD File Number 003-09

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. Due to the size of amended material submitted, a complete copy has not been attached. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures\*

**DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL:** Wednesday, December 16, 2009

This amendment was submitted to DLCD for review prior to adoption. Pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

**\*NOTE:** THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAT IT WAS MAILED TO DLCD. AS A RESULT, YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.

**Cc:** Tod R. Cornett, Wasco County  
Gloria Gardiner, DLCD Urban Planning Specialist  
Bill Holmstrom, DLCD Transportation Planner  
Jon Jinings, DLCD Regional Representative

<paa> YA

FORM 2

# DLCD

## Notice of Adoption

THIS FORM **MUST BE MAILED** TO DLCD  
**WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION**  
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18

In person  electronic  mailed

**DEPT OF**

**NOV 27 2009**

**LAND CONSERVATION AND DEVELOPMENT**

For DLCD Use Only

Jurisdiction: **Wasco County**

Local file number: **PLALEG-08-12-0003**

Date of Adoption: **25 November 2009**

Date Mailed: **25 November 2009**

Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? **Yes** Date: 13 August 2009

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Comprehensive Plan Text Amendment | <input type="checkbox"/> Comprehensive Plan Map Amendment                    |
| <input checked="" type="checkbox"/> Land Use Regulation Amendment     | <input type="checkbox"/> Zoning Map Amendment                                |
| <input type="checkbox"/> New Land Use Regulation                      | <input checked="" type="checkbox"/> Other: <b>Transportation System Plan</b> |

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

1. Transportation System Plan Adoption.
2. Chenoweth Interchange Area Management Plan Adoption (addendum to TSP)
3. Comprehensive Plan Text Amendment to implement Transportation System Plan and create consistency with ORS, OAR and other parts of Comprehensive Plan.
4. Land Use and Development Ordinance Text Amendment to implement Transportation System Plan and create consistency with ORS, OAR and other parts of Land Use and Development Ordinance.

Does the Adoption differ from proposal? Yes, Please explain below:

Additional changes were made to chapters being amended in the Comprehensive Plan and Land Use and Development Ordinance that were out of compliance or inconsistent with current ORS's, OAR's and other parts of the Comprehensive Plan and Land Use and Development Ordinance.

Plan Map Changed from: **N/A**

to: **N/A**

Zone Map Changed from: **N/A**

to: **N/A**

Location: **Unincorporated Wasco County**

Acres Involved: **N/A**

Specify Density: Previous: **N/A**

New: **N/A**

Applicable statewide planning goals:

- |                                     |                                     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                                     |                          |                          |                          |                          |                          |                          |                          |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>1</b>                            | <b>2</b>                            | <b>3</b>                 | <b>4</b>                 | <b>5</b>                 | <b>6</b>                 | <b>7</b>                 | <b>8</b>                 | <b>9</b>                 | <b>10</b>                | <b>11</b>                | <b>12</b>                           | <b>13</b>                | <b>14</b>                | <b>15</b>                | <b>16</b>                | <b>17</b>                | <b>18</b>                | <b>19</b>                |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Was an Exception Adopted?  YES  NO

Did DLCD receive a Notice of Proposed Amendment...

45-days prior to first evidentiary hearing?

Yes  No

If no, do the statewide planning goals apply?

Yes  No

If no, did Emergency Circumstances require immediate adoption?  Yes  No

**DLCD file No.** \_\_\_\_\_

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

Department of Land Conservation and Development, Oregon Department of Transportation, City of The Dalles, Maupin, Dufur, Mosier, Antelope and Shaniko.

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Local Contact: Todd R. Cornett, Planning Director      Phone: (541) 506-2563      Extension:  
Address: 2705 E. 2<sup>nd</sup> St.      Fax Number: 541-506-2561  
City: The Dalles, OR      Zip: 97058      E-mail Address: toddc@co.wasco.or.us

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### **ADOPTION SUBMITTAL REQUIREMENTS**

This form **must be mailed** to DLCD **within 5 working days after the final decision**  
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and **TWO Complete Copies** (documents and maps) of the Adopted Amendment to:  

**ATTENTION: PLAN AMENDMENT SPECIALIST**  
**DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT**  
**635 CAPITOL STREET NE, SUITE 150**  
**SALEM, OREGON 97301-2540**
2. Electronic Submittals: At least **one** hard copy must be sent by mail or in person, or by emailing **[larry.french@state.or.us](mailto:larry.french@state.or.us)**.
3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.
4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.
5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **twenty-one (21) days** of the date, the Notice of Adoption is sent to DLCD.
6. In addition to sending the Notice of Adoption to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.
7. **Need More Copies?** You can now access these forms online at **<http://www.lcd.state.or.us/>**. Please print on **8-1/2x11 green paper only**. You may also call the DLCD Office at (503) 373-0050; or Fax your request to: (503) 378-5518; or Email your request to **[larry.french@state.or.us](mailto:larry.french@state.or.us)** - **Attention: Plan Amendment Specialist**.

WASCO COUNTY PLANNING  
AND DEVELOPMENT  
Todd R. Cornett, Director  
2705 East Second Street  
The Dalles, Oregon 97058



Phone: (541) 506-2560  
Fax: (541) 506-2561  
Web Address: [co.wasco.or.us](http://co.wasco.or.us)

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**COUNTY COURT  
NOTICE OF LEGISLATIVE DECISION**

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**FILE #:** PLALEG-08-12-0003

**DATES OF HEARING:** 4 & 25 November 2009

**DATE OF DECISION:** 25 November 2009

**EFFECTIVE DATE:** 16 December 2009

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**REQUESTS:**

- (1) Adopt a Transportation System Plan for Wasco County;
- (2) Adopt the Chenowith Interchange Area Management Plan as an addendum to the Transportation System Plan;
- (3) Adopt amendments to Chapters 6, 10, 11 & 15 of the Wasco County Comprehensive Plan to implement the Transportation Planning Rule and create consistency with state regulations and other sections of the Comprehensive Plan; and
- (4) Adopt amendments to Chapters 1, 2, 4, 5, 9, 18, 20 & 21 of the Wasco County Land Use and Development Ordinance to implement the Transportation Planning Rule and create consistency with state regulations and other sections of the Land Use and Development Ordinance.

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**DECISIONS:**

- (1) On a vote of 3 – 0 the Wasco County Court unanimously approved the Transportation System Plan as proposed.
- (2) On a vote of 3 – 0 the Wasco County Court unanimously approved the Chenowith Interchange Area Management Plan as further amended by The Dalles City Council on 9 November 2009.
- (3) On vote of 3 – 0 the Wasco County Court unanimously approved the amendments to the Wasco County Comprehensive Plan with an additional amendment.
- (4) On a vote of 3 – 0 the Wasco County Court unanimously approved the amendments to the Wasco County Land Use and Development Ordinance with additional amendments.

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**AFFECTED PROPERTIES:** All properties within the rural unincorporated portion of Wasco County outside of the National Scenic Area.

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**FINDINGS OF FACT:**

- A. Proper notice was given and the hearing was held in accordance with procedural rules for legislative hearings and in conformity with said requirements as set forth in the Wasco County LUDO and Comprehensive Plan.
- B. Three members of the County Court were present and qualified to sit as decision-makers after full disclosure was made and the matter of qualifications was discussed.
- C. In making the three separate decisions, the County Court recognized the procedural and legal requirements of the Wasco County LUDO and Comprehensive Plan, and weighed fully each requirement in arriving at its decision.

All reports and documents related to this decision may be reviewed at the Wasco County Planning & Development Office, 2705 East Second Street, The Dalles, Oregon, 97058, or are available for purchase at the cost of \$0.25 per page. Most of these documents are also available online at: [www.co.wasco.or.us/planning/planhome.html](http://www.co.wasco.or.us/planning/planhome.html).

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**APPEAL PROCESS:** Appeals of a legislative amendment to the Land Use Board of Appeals are governed by ORS 197.620.

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**SIGNATURE**

DATED this 25th day of November 2009

  
\_\_\_\_\_  
Todd R. Cornett, Planning Director

**COUNTY COURT REPORT  
PLALEG-08-12-0003**

**Amendments to the  
Comprehensive Plan &  
Land Use and Development Ordinance**

**Request:** -Adopt the Wasco County Transportation System Plan  
-Adopt the Chenoweth Interchange Area Management Plan  
-Amend Chapters 6, 10, 11, & 15 of the Wasco County Comprehensive Plan to implement the Transportation System Plan  
-Amend Chapters 1, 2, 4, 5, 9, 18, 20, & 21 of the Wasco County Land Use and Development Ordinance to implement the Transportation System Plan

**Prepared by:** Todd R. Cornett, Planning Director on behalf of the Wasco County Commission

**Prepared for:** Wasco County Court

**Applicant:** Wasco County Planning & Development Department

**Planning Commission**  
**-Hearing Date:** 6 October 2009  
**-Notice Date:** 7 October 2009  
**-Recommendation:** On a 3-0 vote the Planning Commission recommended the County Court approve the request with additional amendments.

**County Court**  
**-Hearing Dates:** 4 & 25 November 2009  
**-Decision Date:** 25 November 2009  
**-Effective Date:** 16 December 2009

**Properties:** All properties within the rural unincorporated portion of Wasco County outside of the National Scenic Area.

**Procedure Type:** Legislative

## **I. BACKGROUND INFORMATION**

- A.** Wasco County is one of only a few counties who have yet to adopt a Transportation System Plan Consistent with Oregon Transportation Planning Rule as codified in OAR 660-012-004. In March of 2007 the Wasco County Planning Department and the Wasco County Road Department applied to the Transportation and Growth Management Program for a \$250,000 grant to fund the creation and adoption of a Transportation System Plan for Wasco County and the cities of Dufur, Maupin, Mosier and Shaniko. On 21 May of 2007 Wasco County received a \$100,000 grant to fund the creation and adoption of a Transportation System Plan for Wasco County only.
- B.** In July of 2008 Wasco County chose Kittleson and Associates, Inc. to lead the public outreach and creation process.
- C.** On 29 October, 2008 the Wasco County Governing Body entered into an Intergovernmental Agreement with the State of Oregon (ODOT) to proceed with this process that included an agreed upon statement of work.
- D.** On 29 January 2009 the Wasco County Governing Body adopted a resolution directing the Wasco County Planning Department, per Section 9.040(A) of the Wasco County Land Use & Development Ordinance, to initiate a Post Acknowledgement Plan Amendment process for a Legislative Text Amendment to the Comprehensive Plan and Land Use & Development Ordinance to amend the transportation element and associated regulations to become consistent with the Transportation Planning Rule, OAR 660, Division 12.
- E.** The following schedule was established and the following meetings were held to review materials and develop the standards now recommended to the County Governing Body:

6 October 2009: Planning Commission Workshop & Hearing

4 November 2009: County Governing Body Hearing

## **II. PUBLIC INVOLVEMENT**

In addition to the hearings indicated above, which allowed public testimony and the ability to provide prior written comments, Wasco County has included the following measures to ensure the process is open to the public.

### **A. Technical Advisory Committee**

Kittleson and Associates established a Technical Advisory Committee made up of a group of people representing diverse agencies and interests groups. This group was made up of the following people:

| <b>Name</b>                                     | <b>Agency/Group Representing</b>           |
|---|--|
| Dan Ericksen                                    | Wasco County Judge                         |
| Todd Cornett                                    | Wasco County Planning Director             |
| Gary Nychyk                                     | Wasco County Senior Planner                |
| Marty Matherly                                  | Wasco County Roadmaster                    |
| Dan Boldt                                       | Wasco County Surveyor                      |
| Dan Hammel                                      | Fire Marshal, Mid-Columbia Fire and Rescue |
| Dennis Ross                                     | Mayor of Maupin                            |
| Dotty DeVaney                                   | Mosier City Planner                        |
| Arthur Smith                                    | City of Dufur Representative               |
| Phil Kaser                                      | Wheat Farmer Representative                |
| Dick Gassman, City of The Dalles Senior Planner | City of The Dalles Senior Planner          |
| Dale McCabe, City of The Dalles Engineer        | City of The Dalles Engineer                |
| Clay Smith                                      | The Dalles Cycling Association             |
| Jon Jinings                                     | DLCD Region 4 Field Representative         |
| David Boyd                                      | ODOT Region 4 Access Management Engineer   |
| Sam Wilkins                                     | ODOT District 9 Manager, or designee       |
| Brad DeHart                                     |  |
| Charles Kettenring                              | ODOT Rail Unit Representative              |
| Myron Arneson                                   |  |
| Robin Marshburn                                 | ODOT Freight Unit Representative           |
| Wade Coatney                                    | ODOT Bike and Pedestrian Representative    |
| Peter Schuytema                                 | ODOT Transportation Planning Analysis Unit |
| Rod Cathcart                                    | ODOT Region 4 Transportation Analyst       |
| Matt Hughart                                    | Kittelson & Associates                     |
| Casey Bergh                                     | Kittelson & Associates                     |
| Matt Hastie                                     | Angelo Planning Group                      |
| Darci Rudzinski                                 | Angelo Planning Group                      |
| Ana Jovanovic                                   | ODOT                                       |

This group met 5 times at the following locations and provided important information and perspectives that lead to the proposed amendments.

| <b>Date</b>      | <b>City</b> | <b>Location</b>                     |
|------------------|-------------|-------------------------------------|
| 17 December 2008 | The Dalles  | Planning Department Conference Room |
| 2 April 2009     | The Dalles  | Civic Auditorium                    |
| 30 April 2009    | The Dalles  | ODOT District Office                |
| 10 June 2009     | Maupin      | American Legion Hall                |
| 22 July 2009     | The Dalles  | The Dalles City Hall                |

**B. Public Workshops:** The following two publicly notified workshops were held:

| <b>Date</b>  | <b>City</b> | <b>Location</b>      |
|--------------|-------------|----------------------|
| 2 April 2009 | The Dalles  | Civic Auditorium     |
| 10 June 2009 | Maupin      | American Legion Hall |

Notification for the first workshop was provided in the newspaper only and one member of the public attended. Notification for the second workshop was provided in the newspaper and sent directly to all property owners within 500 of an identified project in the Transportation System Plan. This resulted in over 1,000 direct property owner notifications. This workshop had three members of the public attend.

In Wasco County most public participation occurs when members of the public feel proposed changes will either positively or negatively impact them personally. Staff concludes those receiving notification did not feel the Transportation System Plan would have any impact them and therefore did not warrant attending an evening meeting.

**D. Survey**

Based on the limited public input received during the workshops, a survey was created by Kittleson and Associates and this survey was provided to the public in multiple ways. It was posted on the County Planning Department's Website, it was printed out and available at the Planning Department front counter and finally they were included in all of the notices of decisions sent out to applicants and surrounding property owners during the period of time when the Transportation Plan was being created. A total of 34 surveys were received.

**D. Direct Mail Notification**

DLCD Pre-Notice:

Pursuant to ORS 197.610, a pre-notice was sent to DLCD on 13 August 2009 which is more than 45 days prior to the Planning Commission Hearing scheduled for 6 October 2009.

Planning Commission Workshop/Hearing:

A notice was sent by mail and email on 15 September 2009. This notice was sent to every property owner in the within the unincorporated portion of Wasco County outside of the urban growth boundaries and the National Scenic Area, any person or agency having a subscription to receive Administrative decisions, and any other local, state and federal agency that may be interested in the proposed changes. The Planning Commission hearing is scheduled for 6 October 2009, therefore the notice was sent more than 20 days in advance.

County Court Hearing

Any person or group or their representative who submitted written comments, requested in writing to receive notification of the hearing, or signed in and testified at the Workshop or Planning Commission hearing received direct notification by mail of the date, location and time of the County Governing Body hearing scheduled on 4 November 2009 at least 20 days prior to the hearing.



DLCD Post-Notice:

Pursuant to ORS 197.615, Wasco County provided notice to DLCD and any other group, agency or individual who has requested notification within 5 days of the final decision by the County Governing Body.

**E. Newspaper Notification**

Planning Commission Workshop/Hearing:

This notice was published in The Dalles Chronicle on 15 September 2009 which is more than 20 days prior to the workshop/hearing date.

County Governing Body Hearing:

The County Governing Body hearing notice was published in The Dalles Chronicle on 13 October 2009 which is more than 20 days prior to the hearing date.

**F. Information Available on Website**

The information regarding the proposed amendments began to be placed on the Wasco County Planning & Development Department Website (<http://co.wasco.or.us/planning/planhome.html>) starting December 2008. The Transportation System Plan page included all of the information and documents necessary for an interested citizen to track the entire process. At the time of this document, the following information was available:

- A listing of the Technical Advisory Group meeting dates, times and locations and any documentation associated with the meeting.
- Background and overview documents to better understand the reason for the Transportation System Plan
- A listing of the Planning Commission and County Governing Body hearing dates, times and locations as they are established
- The drafts of the proposed amendments at each step along the process
- Staff report describing the process and changes
- A way to submit comments via email

**III. APPLICABLE STANDARDS**

**A. Wasco County Comprehensive Plan**

- Section B(2) (Form of Amendment)
- Section C(1) (Who May Apply for a Revision)
- Section H (General Criteria)
- Section I (Procedure for the Amendment Process)

**B. Wasco County Land Use & Development Ordinance (LUDO)**

**Chapter 9 – Ordinance Amendments**

|                  |  |
|------------------|--|
| Section 9.040(A) | (Amendments to the Zoning Ordinance)                                     |
| Section 9.050    | (Recommendation on Amendments to the Land Use and Development Ordinance) |
| Section 9.060    | (Notice of Filing Report)  |
| Section 9.070    | (Action by County Governing Body)  |

#### IV. SUBMITTED COMMENTS/TESTIMONY

The following comments were submitted in writing and made part of the record.

Planning Commission Workshop/Hearing: Comments from the following were submitted at the workshop/hearing packet.

Judith Pointer – 20 September 2009

Wasco County Road Department - 2 October 2009

Wasco County Surveyor's Office - 5 October 2009

County Court Hearing: Comments from the following were submitted after the packet was mailed or at the hearing.

Wasco County Surveyor's Office - 27 October 2009

Wasco County Road Department - 2 November 2009

#### V. FINDINGS

##### A. WASCO COUNTY COMPREHENSIVE PLAN

##### 1. Chapter 11 – Revisions Process

##### a. Section B(2) - Form of Amendment

**A Comprehensive Plan Amendment May one of five forms, one of which is a legislative text amendment to the plan.**

**FINDING:** The proposal will result in changes that are potentially applicable to all property owners therefore the changes are legislative in nature.

##### b. Section C(1) - Who May Apply for a Revision

**A Comprehensive Plan revision may be initiated in one of three ways including a legislative revision initiated by the Wasco County Governing Body.**

**FINDING:** The Wasco County Governing Body, in a resolution dated 29 January 2009, authorized the County Planning and Development department to initiate a Post Acknowledgement Plan Amendment process for a Legislative Text Amendment to the Comprehensive Plan and Land Use & Development Ordinance to amend the transportation element and associated regulations to become consistent with the

Transportation Planning Rule, OAR 660, Division 12. A copy of this resolution is located in the file.

**c. Section H - General Criteria**

**The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:**

**(1) Compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable.**

**FINDING:** The request is consistent with criterion (1).

- There are three statewide land use goals applicable to this request.
  - Goal 1: Citizen Involvement – To develop and maintain a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Section II of this report (Public Involvement) summarizes the outreach measures by staff and opportunities for public and agency input for these proposed amendments prior to any public hearings. Additionally there were two publicly notified meetings. The first meeting included direct property owner notification to all landowners in Wasco County outside urban growth areas and the National Scenic Area. Based on these outreach measures, the County Governing Body concludes this process is in compliance with Goal 1.

- Goal 2: Land Use Planning – To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual basis for such decisions and actions.

This process was conducted pursuant to all applicable procedural requirements established in Chapter 2 (Development Approval Procedures) & Chapter 9 (Zone Change and Ordinance Amendment) of the Wasco County Land Use and Development Ordinance and Chapter 11 (Revisions Process) of the Wasco County Comprehensive Plan, including notification requirements, hearing procedures, written findings of fact, and appeal rights. These requirements establish a planning process and policy framework which will be the basis of the final decision made by the Wasco County Governing Body. The County Governing Body concludes the process is in compliance with Goal 2.

- Goal 12: Transportation - To provide and encourage a safe, convenient and economic transportation system.

The Wasco County transportation element in the Comprehensive Plan and the transportation related ordinances in the Land Use and Development Ordinance have not been meaningfully updated since they were originally adopted in the 1980's. Since then many changes have occurred at the state level to better integrate transportation and land use planning. This process will result the adoption of a Transportation System Plan as well as amendments to the Comprehensive Plan and Land Use and Development Ordinance to create consistency with the Oregon State Transportation Planning Rule, OAR 660, Division 12. The County Governing Body concludes creating consistency with the Oregon State Transportation Planning Rule is in compliance with Goal 12.

**(2) Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.**

**FINDING:** The process was set up to ensure the opportunity for citizen involvement and to be legally noticed and documented. The proposed changes are to ensure the Wasco County Comprehensive Plan and Land Use and Development Ordinances are consistent with the Oregon State Transportation Planning Rule. The County Governing Body concludes the changes are not detrimental to Goals 1, 2 or 12.

**(3) A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.**

**FINDING:** As previously indicated, no meaningful changes have occurred to the transportation elements of the Wasco Comprehensive Plan or Land Use and Development Ordinances since they were originally created in the 1980's. Since then there have been many statewide changes to better integrate transportation and land use planning. The purpose of these amendments is to implement those statewide changes. The County Governing Body therefore concludes these amendments are consistent with criterion (3).

**(4) Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.**

**FINDING:** The TSP will amend existing and add new public health and safety elements in both the Comprehensive Plan or the Land Use and Development Ordinances. These include urban and rural roadway design standards, bicycle and pedestrian access requirements. The County Governing Body therefore concludes there are factors of the proposed amendments which relate to the public need for healthful, safe and aesthetic surroundings and conditions.

**(5) Proof of change in the inventories originally developed.**

**FINDING:** The Wasco County Comprehensive Plan and Land Use and Development Ordinances are not in compliance with the Oregon Transportation Planning Rule. The

amendments will create that consistency. The County Governing Body therefore concludes this is proof of change in the inventories originally developed.

**(6) Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.**

**FINDING:** The request is consistent with criterion (6).

- To create the proposed Transportation System Plan Kittleson and Associates went through a methodical process that involved meetings with the Technical Advisory Group, a thorough discussion of each issue and solicitation of input followed by the creation of a memo and additional solicitation of feedback on the memo. Each memo then became an individual section in the Transportation System Plan. Some of these sections were then used to create the specific language amendments for both the Comprehensive Plan and the Land Use and Development Ordinance. Based on this input and documentation, The County Governing Body concludes there is adequate factual basis to support the change
- The purpose of the amendments is to create consistency with the Oregon Transportation Planning Rule. Therefore the County Governing Body concludes there is a justified public need to adopt the proposed updates.

**d. Section I - Procedure for the Amendment Process**

**(1) A petition must be filed with the Planning Offices on forms prescribed by the Commission.**

**FINDING:** The Wasco County Governing Body initiated this process by resolution on 7 January 2009.

**(2) The citizen advisory groups, whether Western, Eastern, Central, Southern, or The Dalles Urban Planning Units, must be given the opportunity to review the proposal. The advisory group will make their recommendations in writing to the Planning Commission giving reasons for their recommendations.**

**FINDING:** These citizen advisory groups have not functioned for more than a decade. Chapter 11, Revisions, and Chapter 15, Goals and Policies still reference these advisory groups. However, the Introduction to the Comprehensive Plan describes how these groups have been replaced by topic related advisory groups to be created around specialized topics. This process included a Technical Advisory Group that included citizen representatives. These individuals were instrumental in developing the language in the Transportation System Plan that is being proposed. The County Governing Body therefore concludes the amendments are consistent with Section (2).

**(3) Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.**

**FINDING:** The cities with urban growth areas where the new rules will apply have been notified.

**(4) Notification of Hearing:**

**(a) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.**

**FINDING:** The County Court finds the notices provided are consistent with criterion (4)(a).

- Section II(D) & (E) above describe the direct property owner notifications and the newspaper notices. All of these notices give a brief description of the proposed amendments and directed interested parties to the Wasco County Planning Department website where they could find a Summary of the proposal as well as all of the proposed amendments and background materials. The notices also indicated the information was available for review at the Wasco County Planning Department office.
- In a letter dated 4 November 2009 Mike Lilly, on behalf of Ken Thomas asserted the notice of the County Court Hearing was defective because it did not include amendments being proposed beyond those related to the Transportation System Plan. In the same letter Mr. Lilly gives specific citations where he indicated the proposed amendments create additional requirements for land owners.
- The changes being made, beyond implementing the Transportation System Plan, primarily clarify definitions and criteria to make them consistent with other areas of the ordinance as well as ORS's and OAR's. The only change beyond clarification or consistency involves the ability for property owners in the resource zones to create a "Private Easement Road" which is less of a process and construction burden than creating a "Private Road". This creates greater flexibility and reduces the requirements on land owners and does not create any additional requirement.
- Mr. Lilly's specific citations and the County Court's responses are included below:
  - Section 1.090 - Amended definition for "Private Road"  
This definition is being to amended to reflect the requirements that already exist in Section Sections 21.030(H)(1)(b) and 21.300. No additional requirements are being included.
  - Section 21.300 – Private Road Requirements  
Mr. Lilly asserts this change will require all farmer and timber land managers to create "Private Roads" on their property, presumably for resource related uses.

This is an incorrect interpretation. Section 21.030(H), Table 21-3, and Figures 21-3 thru 21-7 all clearly state a "Private Road" is required only when more than three properties use the same access and the primary use is resource related. If an accessway is limited to an individual property and does not provide ingress or egress to another property a "Private Road" dedication is not required by either the existing or the proposed ordinances. In fact, as indicated above, the amendments actually reduce the burden on resource zoned property owners by allowing them to create a "Private Easement Road" when up to but not exceeding three properties use the same access. Under the current ordinances, resource zoned property owners are required to dedicate a "Private Road" when more than one property uses the same access.

-Section 21.400 - Improvements

Mr. Lilly asserts amendments to this section will require subdivision street standards on simple partitions. These are not subdivision street standards. Rather they are standards, where applicable to all "street" and "private road" approvals in addition to subdivisions. Currently, if a partition required a "street" or "private road" approval, these standards, where applicable, would already be applied. The amendment is therefore not creating any additional requirements but rather clarifying this point.

-Plat Requirements of Section 21.100 are inconsistent with ORS 92.055(1)

The amended language was created by Dan Boldt, the Wasco County Surveyor and is consistent with all ORS requirements.

-Section 21.030 – Creation of New Public Roads

The trigger for the creation of public roads remains the same. No additional criteria are being added. At the 4 December 2009 hearing, Marty Matherly, the Wasco County Roadmaster testified Mr. Lilly's comments did not reflect his opinion.

- Based on the findings above, the County Court concludes no additional requirements are being made therefore the notice met all legal requirements and was not defective.

**(b) Notice of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.**

**FINDING:** The proposed amendments are consistent with criterion (b).

- ORS 215.503 requires notification only to those property owners whose property is being rezoned. The proposal does not include the rezoning of any property therefore

this type of notification is not applicable. See (a) above for further analysis on the amendments.

- The notice of the Planning Commission Workshop/Hearing was published in The Dalles Chronicle on 15 September 2009 which is more than 20 days prior to the Workshop/Hearing, 6 October 2009. Notice of the County Court hearing was published on 13 October 2009 The Dalles Chronicle. This is 22 days prior to the hearing.

**(c) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference.**

**FINDING:** Five members of the Planning Commission were present when the public hearing was initiated. Three members were present at the end of the hearing and unanimously voted in favor of the recommendation with additional amendments.

**(d) After public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision.**

**FINDING:** The Planning Commission made the recommendation with supporting facts and reasons found in this report.

**(e) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County approve the amendment until at least twenty (20) days have passed since filing the report, to allow time for remonstrance's.**

**FINDING:** The Wasco County Governing Body hearing was held on 4 November 2009. At this hearing they reviewed the record including the recommendation of the County Governing Body and will take whatever action they deem appropriate. The County Governing Body hearing was held no sooner than 20 days after the Planning Commission report had been filed.



## **B. LUDO CRITERIA**

### **1. Chapter 9 – Ordinance Amendments**

#### **a. Section 9.040(A) Amendments to the Zoning Ordinance**

**Amendments to this Ordinance may be initiated by Resolution of the County Governing Body referring a proposed amendment to the Commission for its consideration, report and recommendation.**

**FINDING:** The Wasco County Governing Body, in a resolution dated 29 January 2009, authorized the County Planning and Development department initiate a Post Acknowledgement Plan Amendment process for a Legislative Text Amendment to the Comprehensive Plan and Land Use & Development Ordinance to amend the transportation element and associated regulations to become consistent with the Transportation Planning Rule, OAR 660, Division 12. A copy of this resolution is located in the file.

#### **b. Sections 9.050 Recommendation on Amendments to the Land Use and Development Ordinance.**

**After hearing, the Approving Authority shall recommend that the proposed amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his/her assistants shall reduce to writing the Planning Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based. The Director of Planning shall forthwith file the same with the County Clerk.**

**FINDING:** The request is consistent with criterion b.

- The Planning Commission conducted a legally notified hearing on 6 October 2009 at 3:00 PM in the lower level classroom of the Discovery Center at 5000 Discovery Drive, The Dalles, Oregon. Staff presented their report and those in the audience had the opportunity to provide testimony.
- Following the hearing, the recommendation was reduced to writing which included a brief statement of the facts and reasons upon which the Planning Commission based their vote. This document was subsequently filed with the County Clerk on 7 October 2009.

#### **c. Section 9.060 Notice of Filing Report.**

**Within ten (10) days after filing the report provided in Section 9.060, the Director of Planning or his assistants shall give notice thereof to the**

**applicant or petitioner, if any, and to such other persons as may have requested the same in writing.**

**FINDING:** Criterion c will be met.

- The Wasco County Governing Body is the petitioner, therefore no notification is required to the County.
- All persons or agencies, or their representatives who submitted written testimony or provided oral testimony at the Planning Commission hearing or have requested to receive notification of the action of the Planning Commission were sent a notice of the vote of the Planning Commission on 7 October 2009 which less than 10 days after the scheduled Planning Commission hearing on 6 September 2008.

**d. Section 9.070, Action by County Governing Body**

**Upon receipt of the Planning Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Planning Commission report has been filed with the County Clerk.**

**FINDING:** Criterion was met.

- The Planning Commission report was filed on 7 October 2009, one day after the hearing. Staff concludes this report was filed in a timely manner. The County Governing Body conducted a hearing on 4 November 2009 which was 29 days after the filing of the report.

**VI. SUMMARY OF PROPOSED CHANGES**

Key to changes:

- ~~Strikeout~~ = language proposed to be deleted.
- Underline = language proposed to be added.
- Yellow Highlight** = all proposed amendments are highlighted in order to more easily locate within in each chapter.
- Blue Highlight** = proposed changes made at or after the Planning Commission hearing.
- The Transportation System Plan is an entirely new document so there are no underlines or strikeouts to describe any changes.
- The Chenowith Interchange Area Management Plan is an entirely new document so there are no underlines or strikeouts to describe any changes.

#### **A. Transportation System Plan**

Wasco County, in conjunction with the Oregon Department of Transportation (ODOT), has developed a comprehensive, coordinated, 20-year multi-modal transportation and investment framework consistent with the Oregon Transportation Planning Rule as codified in OAR 660-012-004 to better integrate land use planning and transportation. This framework is incorporated in the proposed Transportation System Plan. This plan will serve as the approved transportation element of Wasco County's Comprehensive Plan. The proposed Comprehensive Plan and Land Use and Development Ordinance language is derived from this plan.

#### **B. Chenoweth Interchange Area Management Plan (IAMP)**

##### Purpose and Intent

The IAMP is intended to protect the function of the I-84 Chenoweth Interchange and ensure that it will continue to provide safe and efficient connections between I-84 and all roadways within the vicinity of the interchange. The IAMP identifies land use management strategies, near-term, mid-term, long-term, and long-term vision transportation improvements, an access management plan, and strategies to fund identified improvements.

The IAMP planning efforts resulted in policies, ordinances, and other provisions that will be adopted into the City of The Dalles and Wasco County Transportation System Plans (TSP), Comprehensive Plans, and development review ordinances to support and implement the IAMP. The IAMP will also be adopted by the Oregon Transportation Commission (OTC) as an amendment to the Oregon Highway Plan.

##### Problem Statement

In 1997 the State of Oregon invested \$12 million into construction of the I-84 Chenoweth Interchange. The improvements serve to meet Oregon Department of Transportation (ODOT) priorities to provide access from I-84 to the west side of the City of the Dalles ("City"), the Port of the Dalles ("Port"), and the Columbia Gorge Discovery Center (Discovery Center). In 2006, WM3, Inc. ("WM3") proposed a zone change from industrial to commercial use for an approximately 67 acre parcel adjacent to the Chenoweth Interchange. The zone change was adopted by the City and subsequently appealed by ODOT. An Intergovernmental Agreement (IGA) between ODOT, the City, and WM3 was drafted in which WM3 was approved to develop 25 acres with commercial land uses and agreed not to develop any 'non-industrial' uses on the remaining 42 acres until an IAMP is adopted by ODOT and the City. The City and ODOT initiated the IAMP process to ensure that the original priorities for the interchange continue to be met, and to identify what changes to the interchange and surrounding street network may be needed for the current land uses, and future development. The IAMP identifies transportation improvements and potential funding strategies that satisfy requirements of the IGA and Oregon Administration Rule (OAR) 734-051. *The*

*IGA is provided as an attachment to Technical Memorandum #2 in the Volume 2 Technical Appendix. The IAMP was developed according to the ODOT IAMP Guidelines.*

Wasco County Role

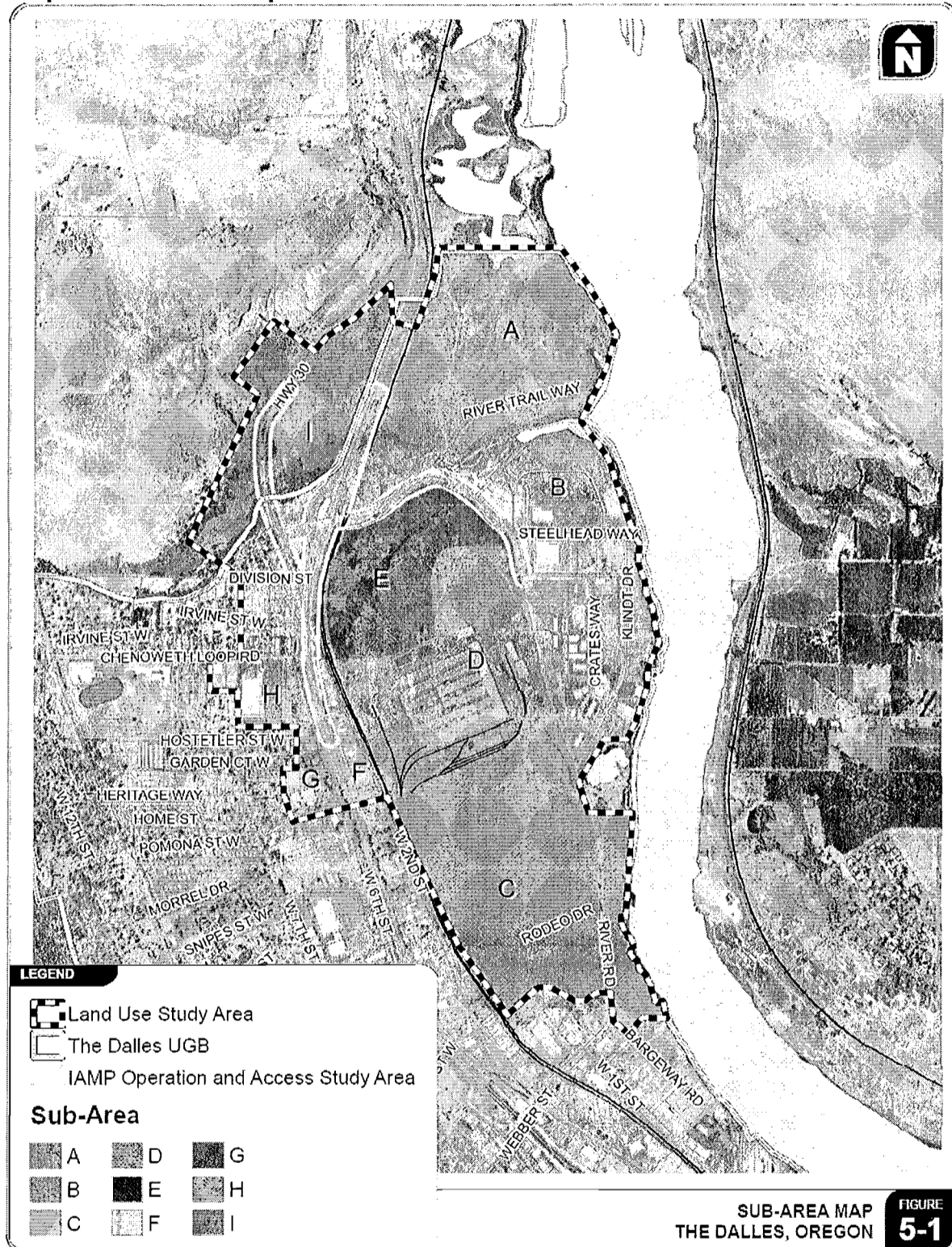
Wasco County has a limited role in relation to this plan. There are two properties located within the Interchange Management Study Area that are under the jurisdiction of Wasco County (Sub Area I of Map 1 below). Their proximity to the interchange necessitates the following language to be included in plan in Section 8 on Page 169.

*"For areas within the Interchange Management Study Area (IMSA) that are located outside of the City of The Dalles UGB, Wasco County is the land use regulatory authority. Upon the County's adoption of the IAMP, parcels within the IMSA and outside the UGB will be subject to the IAMP's Access Management Plan."*

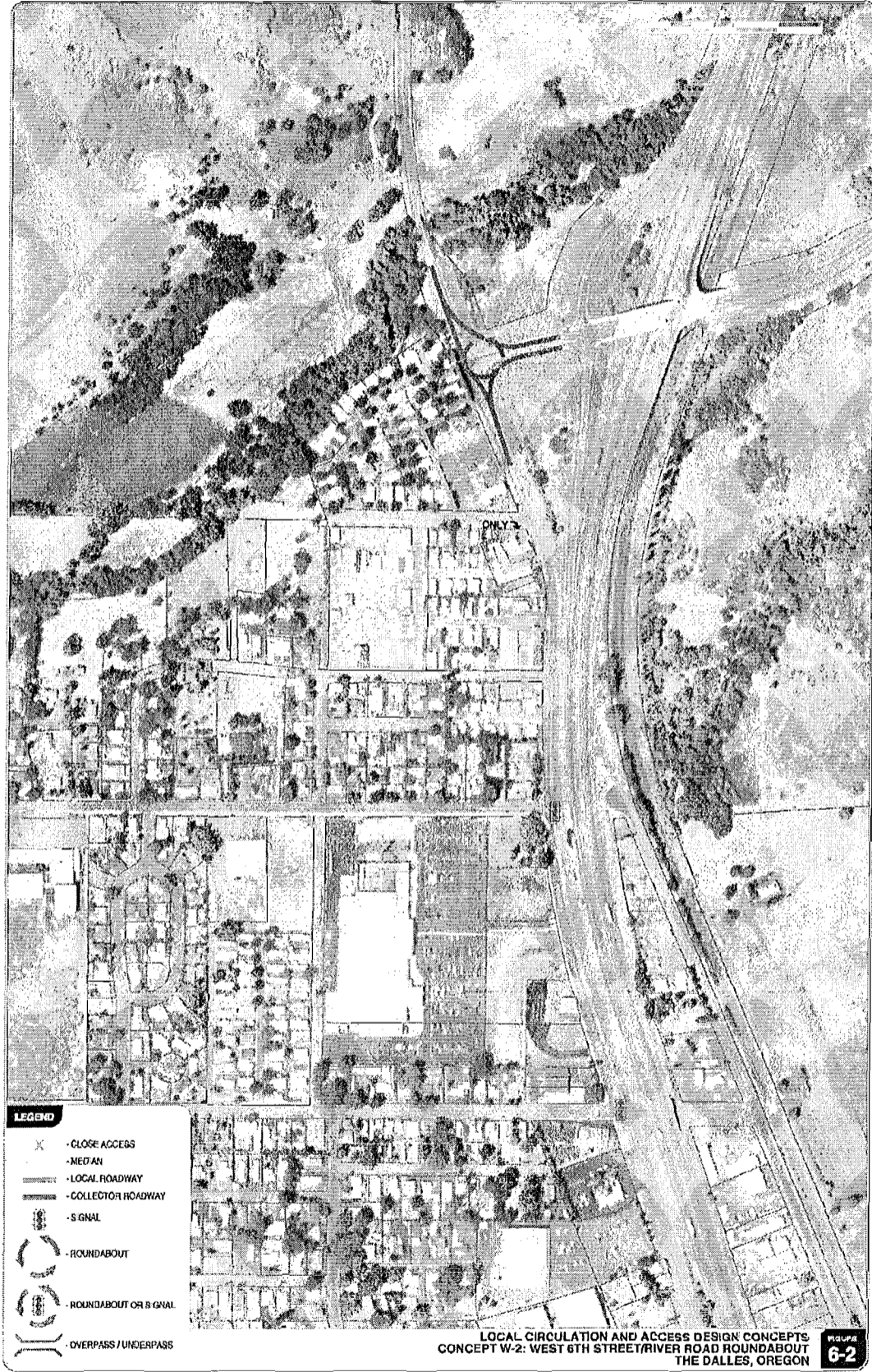
This language will result in Wasco County being required to evaluate access to Highway 30 from these properties in the event of a development review. The ¼ mile minimum spacing distance will result in the existing access located on the western property to be relocated (See top of Map 2 below) and any new access points to the eastern property to meet or exceed this distance.

The Chenowith Interchange Management Plan is a very large document with only minimal impact to the county. As such, this document is not included in the hearing packet. Instead it is available on our website at <http://co.wasco.or.us/planning/TSP.html>

Map 1 – Sub Area Map



**Map 2 – Access Design Concepts**



## **C. Comprehensive Plan**

### **1. Chapter 6 – Transportation (All Pages of Chapter)**

This is the main transportation element of the Comprehensive Plan and provides an overall description of the road system and its financing, other modes of transportation including pedestrian, bicycle, transit, marine transport and air transport as well as freight, pipeline and transmission facilities. This existing language is the original 1983 language and is out of date therefore it is being deleted in its entirety. This is being replaced by up to date information from the proposed Transportation System Plan and references the plan which becomes the approved transportation element for the Comprehensive Plan.

### **2. Chapter 10 – Summary and Analysis (Pages 10-9 thru 10-10)**

This chapter provides a brief summary of every substantive chapter of the Comprehensive Plan. Section F is the Transportation Summary which is being amended to reflect changes in Chapter 6 and reference the Transportation System Plan.

### **3. Chapter 11 – Revisions Process (All Pages of Chapter)**

This chapter includes the necessary process for any quasi-judicial or legislative revisions to the Comprehensive Plan. The primary change is located starting on Page 11-3. This requires any revision to the Comprehensive Plan to be in compliance with the Transportation Planning Rule.

Staff also took the opportunity to amend other portions of this Chapter that are inconsistent with state law or the Comprehensive Plan and to create greater clarity.

### **4. Chapter 15 – Goals & Policies (Pages 32 thru 36)**

This Chapter includes all of the applicable Statewide Planning Goals and Wasco County Policies for implementing them. This existing language is the original 1983 language and is out of date therefore it is being deleted in its entirety. This is being replaced by up to date information from the proposed Transportation System Plan.

## **D. Land Use and Development Ordinance**

### **1. Chapter 1 – Definitions (Pages 1-3 thru 1-37 or see Transportation Related Definitions Document)**

This Chapter includes all of the definitions applicable to the Land Use and Development Ordinance. The proposal involves new definitions and amendments to existing definitions necessary to implement the Transportation Planning Rule.

Staff also took the opportunity to create some new definitions and amend other definitions to create greater clarity and connectivity with Chapter 21 (Land Divisions).

**2. Chapter 2 – Development Approval Procedures (Pages 2-3 thru 2-19)**

This chapter describes the entire application process for ministerial, administrative, quasi-judicial and legislative land use applications. The primary change involves notification requirements associated with projects that could negatively impact transportation systems.

Staff also took the opportunity to amend other portions of this Chapter that are inconsistent with state law or other areas of the Land Use and Development Ordinance.

**3. Chapter 4 – Supplemental Provisions (Pages 4-5 thru 4-7)**

This chapter includes diverse criteria not significant enough to justify a separate chapter. The language being proposed is new Traffic Impact Analysis criteria consistent with the Transportation Planning Rule that must be met if someone is proposing a use that could negatively impact transportation systems.

**4. Chapter 5 – Conditional Use Review (Pages 5-4 thru 5-5)**

This chapter includes all of the criteria associated with a Conditional Use Review. The proposal involves additional review criteria associated with a transportation facility or improvement not included in the Transportation System Plan. Transportation facilities or improvements that are included in the Transportation System Plan are exempt from review.

**5. Chapter 9 – Zone Change and Ordinance Amendment (Pages 9-1 thru 9-4)**

This chapter includes the criteria associated with applying for and conducting a zone change and/or ordinance amendment. This proposal requires any text of map revision to the Land Use and Development Ordinance to be in compliance with the Transportation Planning Rule.

Staff also took the opportunity to amend other portions of this Chapter that are inconsistent with state law or other areas of the Land Use and Development Ordinance and to create greater clarity.

**6. Chapter 18 – Planned Unit Development (Pages 18-4)**

This Chapter includes the criteria associated with a Planned Unit Development. The proposal involves a reference to the requirement of a Traffic Impact Analysis in Chapter 4.

**7. Chapter 20 – Site Plan Review (Pages 20-5 thru 20-7)**

This Chapter includes the criteria associated with a Site Plan Review. All of the Parking and Loading requirements were recently relocated to this chapter



from Chapter 4. The proposal involves adding bicycle parking requirements for higher levels of development such as multifamily residences, schools and commercial businesses.

**8. Chapter 21 – Land Divisions (Pages 21-3 thru 21-50)**

This Chapter includes the criteria associated with partitions, subdivisions, property line adjustments, replats, access to properties, public road creation and private road creation. The proposal involves adding Transportation Planning Rule compliant language.

Staff also took the opportunity to amend other portions of this Chapter that are inconsistent with state law or other areas of the Land Use and Development Ordinance and to create greater clarity.

The Planning Commission recommended including Figures 21-3 through 21-7 which depict the access hierarchy of properties consistent with existing ordinance language. These are located on Pages 21-49 – 21-51.

At the request of the Wasco County Surveyor, staff also included current statutory survey requirements. These are located throughout Chapter 21.

**E. Final editorial revisions**

If approved a final editorial revision will be required. This will not change the substance of what is approved by the Wasco County Governing Body. It will be limited to editorial changes including but not limited section numbers, references to section numbers and headers and footers.

Transportation System Plan

# **Wasco County Transportation System Plan**

Wasco County, Oregon

**July 2009**

Transportation System Plan

# Wasco County Transportation System Plan

Wasco County, Oregon

Prepared For:  
**Wasco County, Oregon**  
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In Association With:  
**Angelo Planning Group**

July 2009

This project was partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation (ODOT) and the Oregon Department of Land Conservation and Development (DLCD). This TGM grant is financed, in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), local government, and the State of Oregon funds.

The contents of this document do not necessarily reflect the views or policies of the State or Oregon.

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**Appendix A** Public Involvement Process for TSP Development

**Appendix B** Transportation Improvement Project Prospectus Sheets

### TECHNICAL APPENDIX, VOLUME 2 (UNDER SEPARATE COVER)

Technical Memorandum #1: Plans, Policies, and Standards Review

Technical Memorandum #2: Goals and Objectives

Technical Memorandum #3: Existing Transportation Conditions

Technical Memorandum #4: Future Conditions Analysis

Technical Memorandum #5: Transportation Improvement Alternatives Analysis

Technical Memorandum #6-7: Preferred Transportation Plan

Technical Memorandum #8: Draft Ordinances and Policies

## Preface

The progress of this plan was guided by the Project Management Team (PMT) and the Transportation Advisory Committee (TAC). The PMT and TAC members are identified below, along with members of the consultant team. The TAC members devoted a substantial amount of time and effort to the development of Wasco County Transportation System Plan (TSP), and their participation was instrumental in the development of this document. The Consultant Team and PMT believe that Wasco County's future transportation system will be better because of their commitment.

### Project Management Team (PMT)

|   |  |                              |
|---|--|------------------------------|
| Todd Cornett<br><i>Wasco County Planning Director</i> | Marty Matherly<br><i>Wasco County Roadmaster</i> | Ana Jovanovic<br><i>ODOT</i> |
|---|--|------------------------------|

### Technical Advisory Committee (TAC)

|  |  |   |
|--|--|---|
| Gary Nychyk<br><i>Wasco County Planning</i>                              | Arthur Smith<br><i>City of Dufur</i>         | Dan Ericksen<br><i>Wasco County</i>                 |
| Dan Boldt<br><i>Wasco County Surveyor</i>                                | Dale McCabe<br><i>City of The Dalles</i>     | Dennis Smith<br><i>Mayor, City of Maupin</i>        |
| Dotty DeVaney<br><i>City of Mosier</i>                                   | Phil Kaser<br><i>Wasco County Land Owner</i> | Clay Smith<br><i>The Dalles Cycling Association</i> |
| Brad DeHart<br><i>ODOT District 9</i>                                    | David Boyd<br><i>ODOT Access Management</i>  | Sam Wilkins<br><i>ODOT District 9</i>               |
| Charles Kettenring<br><i>ODOT Rail</i>                                   | Robin Marshburn<br><i>ODOT Freight</i>       | Wade Coatney<br><i>ODOT Region 4</i>                |
| Peter Schuytema<br><i>ODOT Transportation Planning<br/>Analysis Unit</i> | Rod Cathcart<br><i>ODOT Traffic Analysis</i> | Jon Jinings<br><i>DLCD Region 4</i>                 |

### Consultant Team

|   |                                    |
|---|------------------------------------|
| <i>Kittelson &amp; Associates, Inc.</i> | <i>Angelo Planning Group, Inc.</i> |
| Matt Hughart, AICP                      | Matt Hastie, AICP                  |
| Marc Butorac, P.E., PTOE                | Darci Rudzinski, AICP              |
| Casey Bergh                             |                                    |

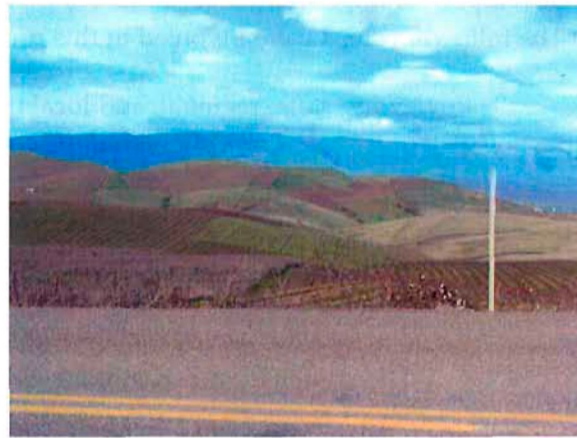


**Section 1**  
Introduction

## Introduction

### OVERVIEW

Wasco County, in conjunction with the Oregon Department of Transportation (ODOT), initiated the creation of a Transportation System Plan (TSP) in 2008. The TSP will guide the management and development of transportation facilities within Wasco County, incorporating the county's vision, while remaining consistent with state and local plans and policies. This plan provides Wasco County with the necessary elements to be adopted as the transportation element of the County's comprehensive plan. In addition, the plan provides ODOT and Wasco County with guidance in regards to their future planning efforts.



State of Oregon planning rules require that the TSP be based on the current comprehensive plan land use map and must also provide a transportation system that accommodates the expected 20-year growth in population and employment. The contents of this TSP are guided by Oregon Revised Statute (ORS) 197.712 and the Department of Land Conservation and Development (DLCD) administrative rule known as the Transportation Planning Rule (TPR). These laws and rules require that jurisdictions develop the following:

- a road plan for a network of arterial and collector streets;
- a bicycle and pedestrian plan;
- an air, rail, water, and pipeline plan;
- a transportation financing plan; and,
- policies and ordinances for implementing the transportation system plan.

The TPR requires that alternative travel modes be given consideration along with the automobile, and that reasonable effort be applied to the development and enhancement of the alternative modes in providing the future transportation system. In addition, the TPR requires that local jurisdictions adopt land use and subdivision ordinance amendments to protect transportation facilities and to provide bicycle and pedestrian facilities between residential, commercial, employment, and institutional areas.

## **TSP PROCESS**

The Wasco County TSP was developed through a process that identified transportation needs, developed and analyzed potential alternative approaches for addressing those needs, and developed an improvement and financing plan that best address Wasco County's forecasted needs. The following steps were involved in this process:

- Reviewing state, regional, and local transportation plans and policies that the Wasco County TSP must either comply with or be consistent with.
- Providing public open houses to provide project information to, and gather feedback from, the public at key points during the TSP development process, establishing project advisory committees, and developing transportation plan goals and objectives.
- Identifying a detailed inventory of existing transportation facilities and services.
- Evaluating current transportation operations and deficiencies.
- Evaluating transportation needs in the year 2030, if growth occurs as expected, but no transportation improvements are made other than those already funded.
- Identifying and evaluating improvement alternatives intended to address Wasco County's future transportation needs.
- Developing a prioritized set of improvements and strategies that meet the plan goals and objectives.
- Estimating the revenue available for transportation projects through the year 2030, assuming reduced, consistent, and increased transportation funding.
- Compiling the results of this work into this TSP document,
- Review and adoption of the TSP by Wasco County Planning Commission and County Court.

## **PUBLIC INVOLVEMENT**

The planning process was guided by a Technical Advisory Committee (TAC), which was comprised of key stakeholder agencies and other community representatives. These included Wasco County Public Works and Planning Departments, the City of The Dalles, the Oregon Department of Transportation, the Oregon Department of Land Conservation and Development, and Mid-Columbia Fire & Rescue.

The TAC was responsible for reviewing the technical aspects of the TSP. The TAC reviewed several memoranda and convened at a total of five TAC meetings during the process of developing the TSP. The TAC meetings focused on all aspects of the TSP development, including existing deficiencies and forecast needs; presentation and review of alternatives; presentation and review of a preferred transportation and funding plan; and, presentation and review of recommended ordinance amendments.

In addition to the established advisory committees, two public meetings were held at key junctures in the process to obtain public comment regarding transportation concerns, future transportation improvement projects, and priorities. These meetings were held in the City of The Dalles and the City of Maupin. All comments were addressed in the alternatives analysis and final plan development. Finally, the draft plans were discussed with the Planning Commission and County Court at public hearings.

## **PLAN STUDY AREA**

Wasco County is located in north-central Oregon and includes an area of 2,395 square miles. Figure 1-1 shows a map of Wasco County, including the urban growth boundary (UGB) of each incorporated city within the County. The primary study area for the Wasco County TSP consists of all areas of the county located outside the UGBs of incorporated cities and outside the boundary of the Confederated Tribes of Warm Springs and the Mt. Hood National Forest. Although the TSP is primarily a rural TSP, some attention was paid to the City of The Dalles urban area for project planning and coordination purposes.

Based on the requirements of the Transportation Planning Rule, the study of County roadways and intersections is generally limited to those with the highest classifications – collectors and arterials – as well as state highways. However, local street issues such as street connectivity, design standards, and safety are also discussed where appropriate.

## **TSP ORGANIZATION AND METHODOLOGY**

The development of Wasco County's TSP began with a review of the local and statewide plans and policies that guide land use and transportation planning in the County. The plan and policy review is presented in **Section 2** of this plan. Goals and objectives for the TSP, as developed by the Technical Advisory Committee (TAC) are presented in **Section 3**.

An inventory of the existing transportation system documented all major transportation-related facilities and services within the UGB. The transportation system inventory allowed for an objective assessment of the current system's operational performance, safety, and general function, which is summarized in **Section 4**.

Long-term (year 2030) transportation system forecasts were developed based on ODOT future volume estimates and input from ODOT Transportation Planning and Analysis Unit (TPAU). **Section 5** of this report details the development of anticipated long-term (year 2030) future transportation needs within the UGB.

A preferred plan was developed that reflected a consensus on which elements should be incorporated into the County's long-term transportation system. The preferred plan was based on transportation needs summarized in **Section 6**. Transportation needs were identified by the TAC, comments received from the County staff, Wasco County residents, and ODOT representatives.

Having identified a preferred set of alternatives, the next phase of the planning process involved presenting and refining the individual elements of the TSP through a series of decisions and recommendations leading to the preferred plan. The preferred plan identified in **Section 7**, Transportation System Plan, include a roadway plan and a pedestrian and bicycle plan, as well as plans for other transportation modes serving Wasco County.

**Section 8**, Transportation Finance Element, provides an analysis and summary of the alternative funding sources to finance the identified transportation system improvements. The recommended modifications presented in **Section 9**, LUDO Ordinance Modifications and Comprehensive Plan Policy Language, include specific changes in development ordinances to implement the TSP and to achieve compliance with the Oregon Transportation Planning Rule (OAR 660 Division 12).

Sections 1 through 9 comprise Volume 1 of the TSP and provide the main substance of the plan. These are supplemented by Technical Appendices in Volume 2 which contains the technical memoranda documenting the existing conditions analysis, forecast needs, and alternatives analysis.

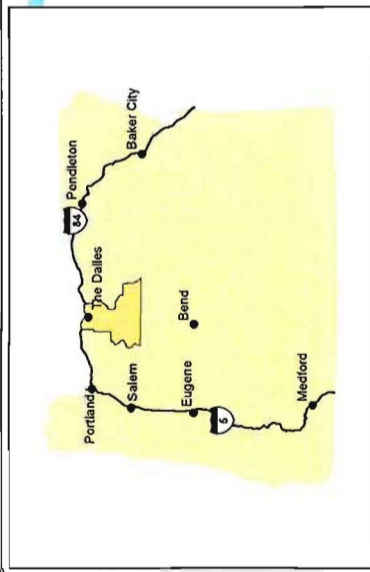
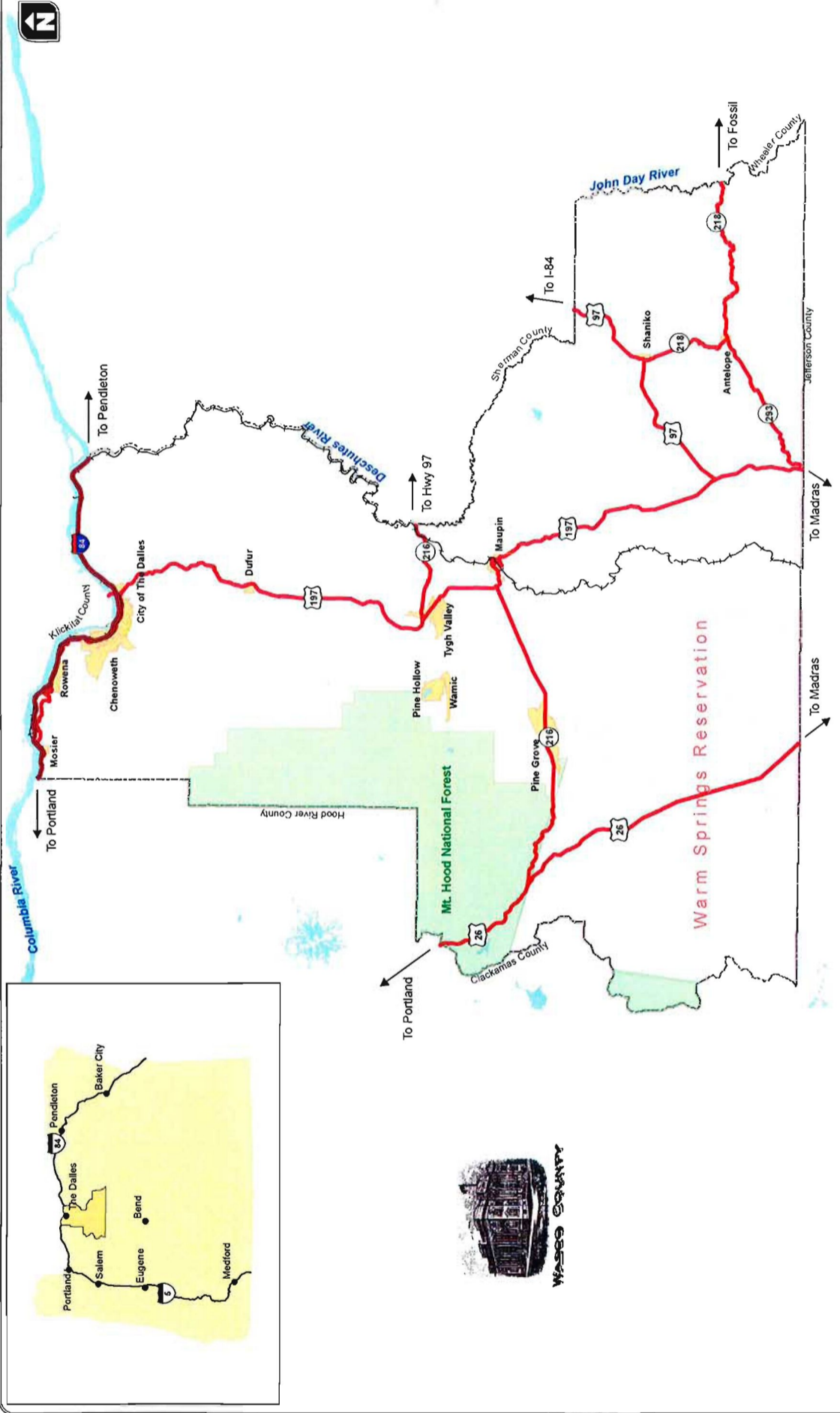


FIGURE 1-1  
STUDY AREA MAP  
WASCO COUNTY, OREGON

**Section 2**  
Plans, Policies, and  
Standards Review

## **Plans, Policies, and Standards Review**

One of the project objectives of the TSP Update is to ensure that the County's TSP reflects and is consistent with local and state transportation policies and standards. To meet these objectives, a review and evaluation of existing plans, policies, standards, and laws that are relevant to the TSP update was conducted. Detailed information from this review, including a complete list of the documents reviewed, can be found in Technical Memorandum #2 located in Volume 2 of the Technical Appendix.

The summary of federal, state, regional, and local documents, as they relate to transportation planning in Wasco County, provided the policy framework for the TSP planning process. State documents and requirements were summarized as they applied to the Wasco County TSP, as were applicable local city policies and regulations that had potential impacts on the county transportation system.

Given the prominence of the City of The Dalles, a number of local documents were also reviewed for policies that could have impacts to the Wasco County TSP. Reviewed documents include the City Comprehensive Plan (2006), the Growth Management Report (2007), Land Use and Development Ordinances (2008), and The Dalles Transportation System Plan (2006). Finally, the Downtown Local Street Network Plan for the City of Mosier (2003) was reviewed to round out the prominent local jurisdiction planning documents.

The regulatory review includes an assessment of Wasco County's Land Use and Development Ordinance and how well it complies with the requirements of the State's Transportation Planning Rule (TPR, OAR 660, Division 12). The review summarizes the requirements of TPR Section -0045, Implementation of the Transportation System Plan, lists the applicable implementation elements of the TPR, and demonstrates where the adopted County regulations comply, or where amendments to code language are needed to comply with the TPR. The recommendations were executed by the development of draft code language (see Section 9, LUDO Ordinance Modifications and Comprehensive Plan Policy Language).



**Section 3**  
Goals and Objectives

## **Goals and Objectives**

The goals and objectives presented in this section will guide the development of the transportation system in Wasco County. The goals relate to: Mobility and Connectivity; Multimodal Users; Safety; Environment; and, Planning and Funding. Objectives for each goal are also provided, which identify the course of action intended to achieve each goal.

### **GOAL 1: MOBILITY AND CONNECTIVITY**

Plan and develop an interconnected system of roads that will link communities for all users and will address existing and future needs for transportation of goods and people in the region.

#### **Objectives**

- Promote adequate transportation linkages between communities.
- Promote and maintain an integrated and linked network of arterial, collector, and local streets that minimizes travel distances.
- Maintain roadway performance standards for the efficient movement of people and goods.

### **GOAL 2: SAFETY**

Provide a transportation system that promotes the safety of current and future travel modes for all users.

#### **Objectives**

- Reduce incidence and severity of motor vehicle, pedestrian, and bicycle crashes.
- Provide a transportation system that allows for adequate emergency vehicle access to all land uses.
- Promote railway and highway safety at and near railway intersections.
- Develop access management standards for all county road facilities.

### **GOAL 3: MULTIMODAL USERS**

Provide a multimodal transportation system that permits the safe and efficient transport of people and goods.

#### **Objectives**

- Support the development of public transit opportunities.
- Promote an interconnected network of bicycle and pedestrian facilities throughout the County.

- Consider bicycle and pedestrian facilities needs during construction of new roads and during upgrades of existing roads.
- Support the development of recreational bicycling and hiking facilities.

#### **GOAL 4: ENVIRONMENT**

Provide a transportation system that balances transportation services with the need to protect the environment.

##### **Objectives**

- Develop a multimodal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
- Encourage development patterns that decrease reliance on motor vehicles.

#### **GOAL 5: PLANNING AND FUNDING**

Maintain the safety, physical integrity, and function of the County transportation network through a sound and sustainable financing plan.

##### **Objectives**

- Continue and enhance the partnering relationships with local jurisdictions and the Oregon Department of Transportation.
- Maintain long-term County Road Fund stability.
- Evaluate new innovative funding sources for transportation improvements.
- Ensure that the existing transportation network is conserved through maintenance and preservation.

#### **I-84 CHENOWETH INTERCHANGE POLICY STATEMENT**

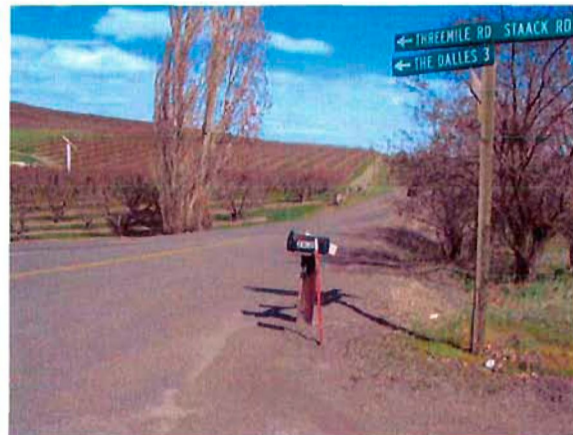
The transportation function of the I-84 Chenoweth Interchange is to provide safe and efficient access to the Port and industrial land in the western part of The Dalles (the area located east of the interchange). In addition to its primary function, the Chenoweth Interchange remains an important facility for accessing the Discovery Center and existing commercial lands in the vicinity of the city's industrial center. The interchange also serves local residential and commercial traffic circulating from I-84 to Highway 30 and West 6th Street.

**Section 4**  
Existing 2008  
Transportation Conditions

## Existing 2008 Transportation Conditions

Wasco County's transportation system provides facilities serving many different modes of transportation. This section documents the existing system, including the following modes:

- Road System (auto/truck)
- Pedestrian and Bicycle
- Public Transit
- Rail
- Marine
- Air
- Pipeline and Transmission System



### ROAD SYSTEM

Roadways serve the largest share of trips and support many of the modes discussed in this section. Automobiles/trucks, pedestrians, bicyclists, transit users, marine vessels, and freight transportation all rely on roadways to some degree for mobility and access to various land uses, such as rail, marine, air, and pipeline/transmission facilities. The following sections define the Wasco County roadways and summarize their functional classification, existing traffic operations, safety, and pavement conditions.

The following jurisdictions own and manage the entire public roadway system within Wasco County. Figure 4-1 identifies county and non-county roadway facilities.

- **Wasco County** owns and maintains approximately 697 miles of roadway, which includes 300 miles of paved roadway. The majority of the county roadways are concentrated in the central north-south portion of the County, which contains the irrigated lands and the population centers. In addition, the majority of the roads have rural characteristics: two travel lanes, no bike lanes, no sidewalks, and minimum shoulders.
- **The Oregon Department of Transportation (ODOT)** owns upwards of 270 miles of state highways within the County, including some of those most heavily traveled roadways. These highways provide regional mobility within the county and serve as major transportation links to other areas of the state.
- **The United States Forest Services (USFS)** owns and maintains the roadways within the Mt. Hood National Forest, located in the western area of the county. These roadways have been used historically to access logging areas and provide emergency fire access; however they are seeing more recreational use. This plan does not include a description of the specific roadways under USFS jurisdiction. ODOT maps of Wasco County include roadways within

the Mt. Hood National Forest and are available for download at [www.oregon.gov/ODOT/TD/TDATA/gis/CountyMaps](http://www.oregon.gov/ODOT/TD/TDATA/gis/CountyMaps). A vicinity map of Mt. Hood National Forest is available on the USFS website ([www.fs.fed.us/r6/mthood/maps/vicinity-map](http://www.fs.fed.us/r6/mthood/maps/vicinity-map)).

- **The Confederated Tribes of Warm Springs** own and maintain the roadways within the Warm Springs Indian Reservation area. The reservation is located in the southwest area of the county. The roadways within the reservation are mainly used for logging and emergency fire access. This plan does not include a description of the specific roadways under the jurisdiction of the Confederated Tribes of Warm Springs.
- **The Incorporated Cities of The Dalles, Dufur, Maupin, Mosier, Shaniko, and Antelope** own and maintain the roadways within their city limits that are not owned or maintained by ODOT or the County. These roadways provide local access and serve local trips. This plan does not summarize the roadways within the urban growth boundary of the incorporated cities. The Dalles is the only incorporated city that has an adopted Transportation System Plan (TSP); The plan can be accessed or downloaded on the city's website at [www.ci.the-dalles.or.us](http://www.ci.the-dalles.or.us).

### **County Roadways**

Wasco County owns and manages the following roadways that serve as a valuable component of the countywide and statewide transportation network:

- **Bakeoven Road** is a two-lane highway that runs parallel to and east of US 197. It serves as the primary connection to land in the southeast quadrant of the county. Bakeoven Road provides the most direct connection between the incorporated cities of Maupin and Shaniko.
- **Cherry Heights Road (Chenoweth Creek Road)** provide two-lane roadway connections between the northwest portion of The Dalles and properties in the northwest portion of Wasco County.
- **Dry Hollow Road and Olney Road** provide a circuitous route from the south side of The Dalles to properties within three to four miles of the incorporated city.
- **Dufur Valley Road** provides an east-west connection from US 197 at Dufur west to OR 35.
- **Emerson Loop Road** is a two-lane roadway that provides a circuitous route that connects lower-order roadway facilities in the northeast portion of Wasco County to Eightmile Road and US 197.
- **Fifteenmile Road** is classified by ODOT as a Rural Major Collector. The route parallels I-84 in the northeast corner of Wasco County.
- **Friend Road** is a two-lane road that connects unincorporated Friend to US 197 at a location south of Dufur, via a NE/SW alignment.
- **Sevenmile Hill Road** provides a connection from the northwest corner of The Dalles to Mosier. This route serves local traffic in the northwest portion of Wasco County.

- **Lower Eightmile Road** runs parallel to Eightmile Creek throughout the county. Lower Eightmile Road begins on the east side of The Dalles and runs east through Petersburg. The roadway runs north-south from Petersburg to US 197 and continues southwest after crossing US 197.
- **Fivemile Road, Mill Creek Road, Skyline Road, and Threemile Road** compose an arterial network that provides northeast-southwest connections between The Dalles and those portions of Wasco County that are west of US 197.

### **State Highways**

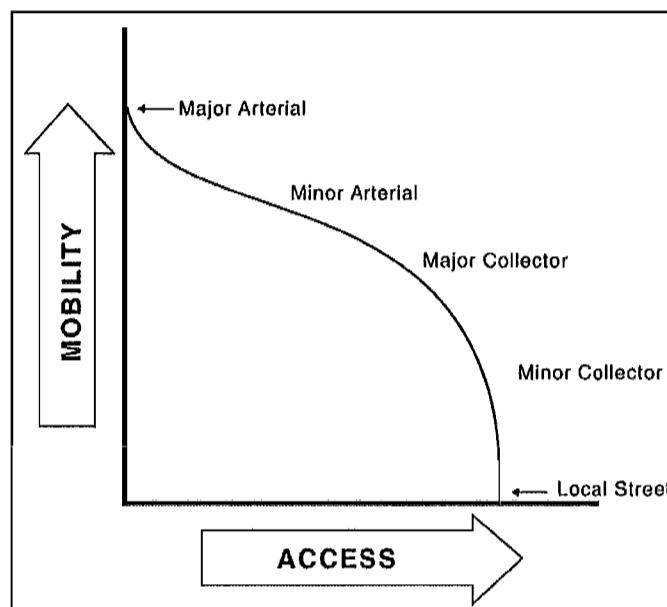
ODOT maintains the following highways in Wasco County:

- **Interstate 84 (Columbia River 002)** is a major 4-lane, east-west interstate freeway along the north edge of Wasco County which parallels the Columbia River.
- **US 26 (Warm Springs Highway 053)** is a two-lane highway that runs through the southwestern portion of Wasco County. It is a Statewide Highway, a classified Freight Route, a classified Expressway, and is part of the National Highway System. In working as part of an interconnected national and state network, US 26 and its Expressway designation provides for higher speed interurban travel with minimal disruptions.
- **US 30 (Historic Columbia River Highway 100)** is a two-lane highway that parallels I-84 from Mosier to US 197 in The Dalles. US 30 is a District Highway and is part of the National Highway System.
- **US 97 (Sherman 042)** is a two-lane highway that runs through the southeastern portion of Wasco County connecting to Sherman County to the north and Jefferson County to the south. US 97 is a Statewide Highway, a classified Freight Route, and a Scenic Byway.
- **US 197 (The Dalles-California Highway 004)** is a two-lane highway that provides connection from I-84, the City of Dufur, the unincorporated community of Tygh Valley, the City of Maupin, and ultimately to the junction with US 97 in south Wasco County. US 197 is a Regional Highway with a Special Transportation Area (STA) designation in the City of Maupin.
- **OR 206 (Celilo-Wasco 301)** is a two-lane highway that connects to I-84 in the northeast corner of Wasco County and runs parallel to I-84 for the entirety of its length in Wasco County. The highway continues to the southeast through Sherman County and provides a connection to Condon and ultimately Heppner. ODOT classifies OR 206 as a District Highway
- **OR 216 (Wapinita 044)** is a two-lane east-west highway that provides a connection between US 26 and US 197/City of Maupin. OR 216 follows the US 197 route from the City of Maupin to Tygh Valley where it splits off (**Sherars Bridge 290**) and continues east into Sherman County. Both segments of OR 216 are designated as District Highways.
- **OR 218 (Shaniko-Fossil 291)** is a two-lane highway connecting Shaniko, Antelope, and Wheeler County in the southeastern part of Wasco County. OR 218 is a District Highway and is classified as a Scenic Byway.

- **OR 293 (Antelope Highway 293)** is a two-lane highway that provides a connection between the City of Antelope and the US 97 corridor to the west. OR 293 is a District Highway.

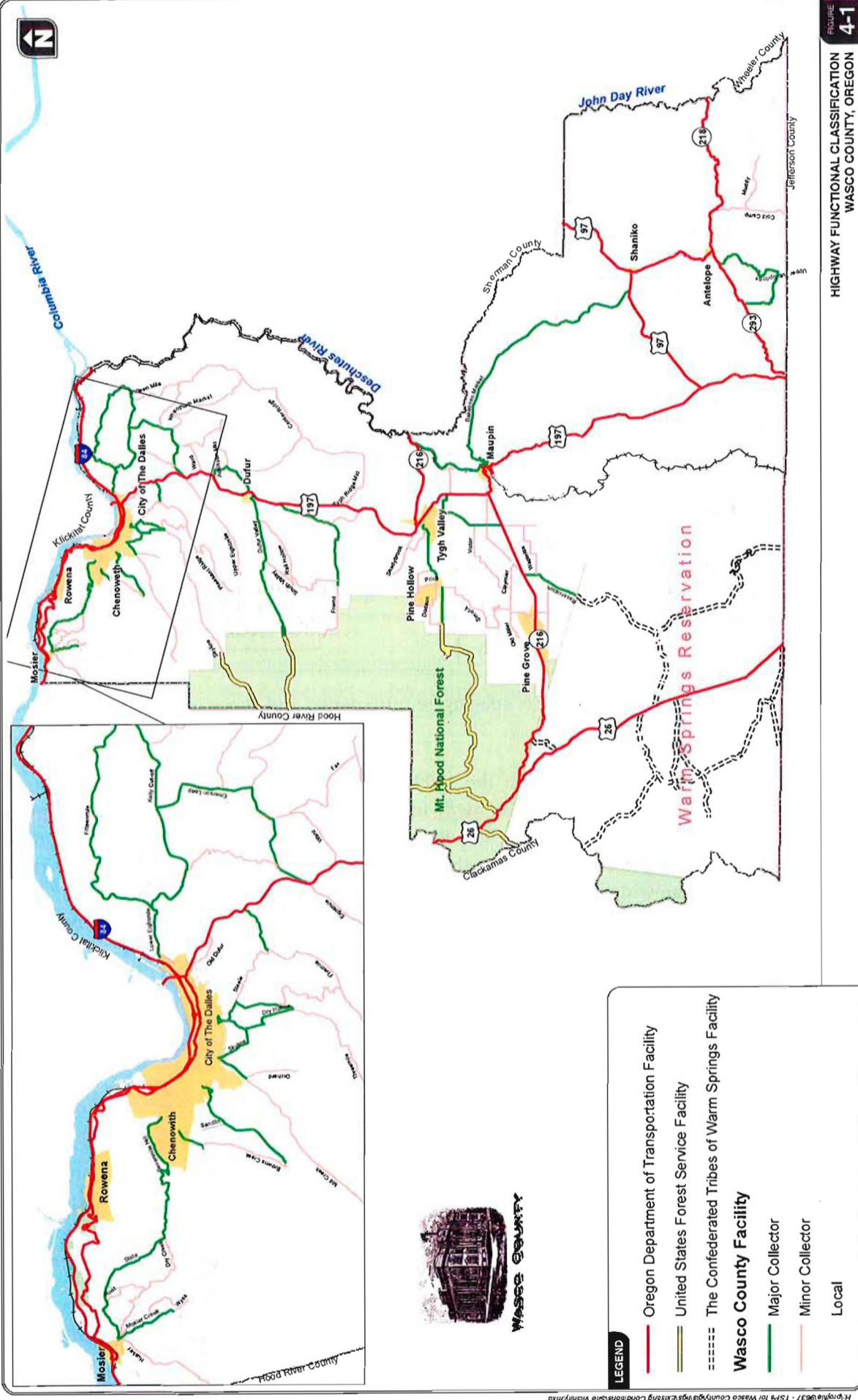
### **Functional Classification**

Figure 4-1 summarizes the existing functional classifications of county and state highways as denoted on ODOT's map rendering of Wasco County and does not represent the final classification for the TSP. A roadway's functional classification describes its role in the transportation system. The function and role of the roadway can be described in terms of the character of service the roadway provides. In general, the functional classification of a roadway is based on the varying degree of its two primary functions: 1) mobility, and 2) accessibility to adjacent land uses. Among other standards, the tools that are commonly used to govern the classification include: roadway width, posted/design speed, right-of-way dedications, access spacing requirements, and types of pedestrian and bicycle facilities provided.



ODOT classifies its highways based on the 1999 Oregon Highway Plan. The classifications are mainly based on the significance of the highway in the statewide transportation system. "Interstate Highway" is given the highest priority and is considered a freeway that provides connections between major cities within Oregon and neighboring states. "Statewide Highway" is considered to be a highway of statewide significance, providing mobility throughout the state. "Regional Highway" and "District Highway" provide regional and district-level mobility, respectively. ODOT classifications of the state highways within Wasco County are provided in Table 4-1.





**LEGEND**

- Oregon Department of Transportation Facility
- United States Forest Service Facility
- Wasco County Facility
- Major Collector
- Minor Collector
- Local

----- The Confederated Tribes of Warm Springs Facility

FIGURE 4-1  
HIGHWAY FUNCTIONAL CLASSIFICATION  
WASCO COUNTY, OREGON

Highway 97 - TSPs for Wasco County

**TABLE 4-1 ODOT HIGHWAY FUNCTIONAL CLASSIFICATIONS**

| Highway   | Classification                       | NHS      | Freight Route | Scenic Byway     | Special Designation |
|---|--------------------------------------|----------|---------------|------------------|---------------------|
| <b>I-84</b><br>(Columbia River Highway 002)             | Interstate Highway                   | Yes      | Yes           | No               | -                   |
| <b>US 26</b><br>(Warm Springs 053)                      | Statewide Highway                    | Yes      | Yes           | No               | Expressway          |
| <b>US 30</b><br>(Historic Columbia River Highway 100)   | District Highway                     | No       | No            | Yes              | -                   |
| <b>US 97</b><br>(Sherman 042)                           | Statewide Highway                    | Yes      | Yes           | Yes <sup>2</sup> | -                   |
| <b>US 197</b><br>(The Dalles-California 004)            | Regional Highway                     | No       | No            | No               | STA <sup>1</sup>    |
| <b>OR 206</b><br>(Celilo-Wasco 301)                     | District Highway                     | No       | No            | No               | -                   |
| <b>OR 216</b><br>(Wapinita 044)<br>(Sharers Bridge 290) | District Highway<br>District Highway | No<br>No | No<br>No      | No<br>No         | -<br>-              |
| <b>OR 218</b><br>(Shaniko-Fossil 291)                   | District Highway                     | No       | No            | Yes <sup>3</sup> | -                   |
| <b>OR 293</b><br>(Antelope Highway 293)                 | District Highway                     | No       | No            | No               | -                   |

<sup>1</sup> US 197 has a Special Transportation Area designation through downtown Maupin from milepost 44.97 to 45.29.

<sup>2</sup> Milepost -0.06 to 56.53 is designated as a scenic byway

<sup>3</sup> Milepost 0.00 to 23.07 is designated as a scenic byway

Wasco County has not classified non-state highways. However, in coordination with ODOT's statewide county map renderings, a functional classification of county roadways has been identified. The roadways are primarily classified as major and minor collectors. Local jurisdictions typically establish the functional classification of roadways using the following classification hierarchy:

- **Arterials** represent the highest class of roadway. These roadways are intended to provide mobility by serving high volumes of through traffic, traveling at higher speeds. They also serve truck movements and should emphasize traffic movement over local land access. In some cases, arterial streets are further designated as "major/principal" or "minor". Major/principal arterials have higher design speeds, fewer accesses per mile, and usually do not permit direct private driveways accesses. Minor arterials provide slightly lower travel speeds and have a few more accesses than major/principal arterials.
- **Collectors** represent the intermediate roadway class. As their name suggests, these roadways collect traffic from the local street system and distribute it to the arterial street system. These roadways provide a balance between traffic movement and land access and should provide extended continuous stretches of roadway to facilitate traffic circulation through the county. Collector streets are sometimes divided into two categories – urban collector/rural major collector and minor collector. Urban collector/rural major collector have the same basic roadway design, but are differentiated by urban features like bike lanes

and sidewalk as well as permitted adjacent land use (i.e., the land is inside or outside the Urban Growth Boundary). Minor collectors serve lower volume of traffic and have lower design speeds than urban collector/rural major collector.

- **Local** roads and streets are the lowest roadway class. Their primary purpose is to provide local land access and to carry locally generated traffic at relatively low speeds to the collector street system. Local streets should provide connectivity through neighborhoods, but should be designed to discourage cut-through vehicular traffic.

### **Traffic Operations**

As part of the scope of work developed for this TSP, a number of highway segments, intersections, and freeway interchanges were identified for study, as shown in Figure 4-2. The operational conditions of the identified components of the existing roadway system were evaluated to identify potential capacity constraints within Wasco County. The traffic volumes used in the analysis were developed from a compilation of count data obtained from ODOT. Traffic volume counts at interchange ramps were performed in May 2008. Additional intersection counts were conducted in December 2008.

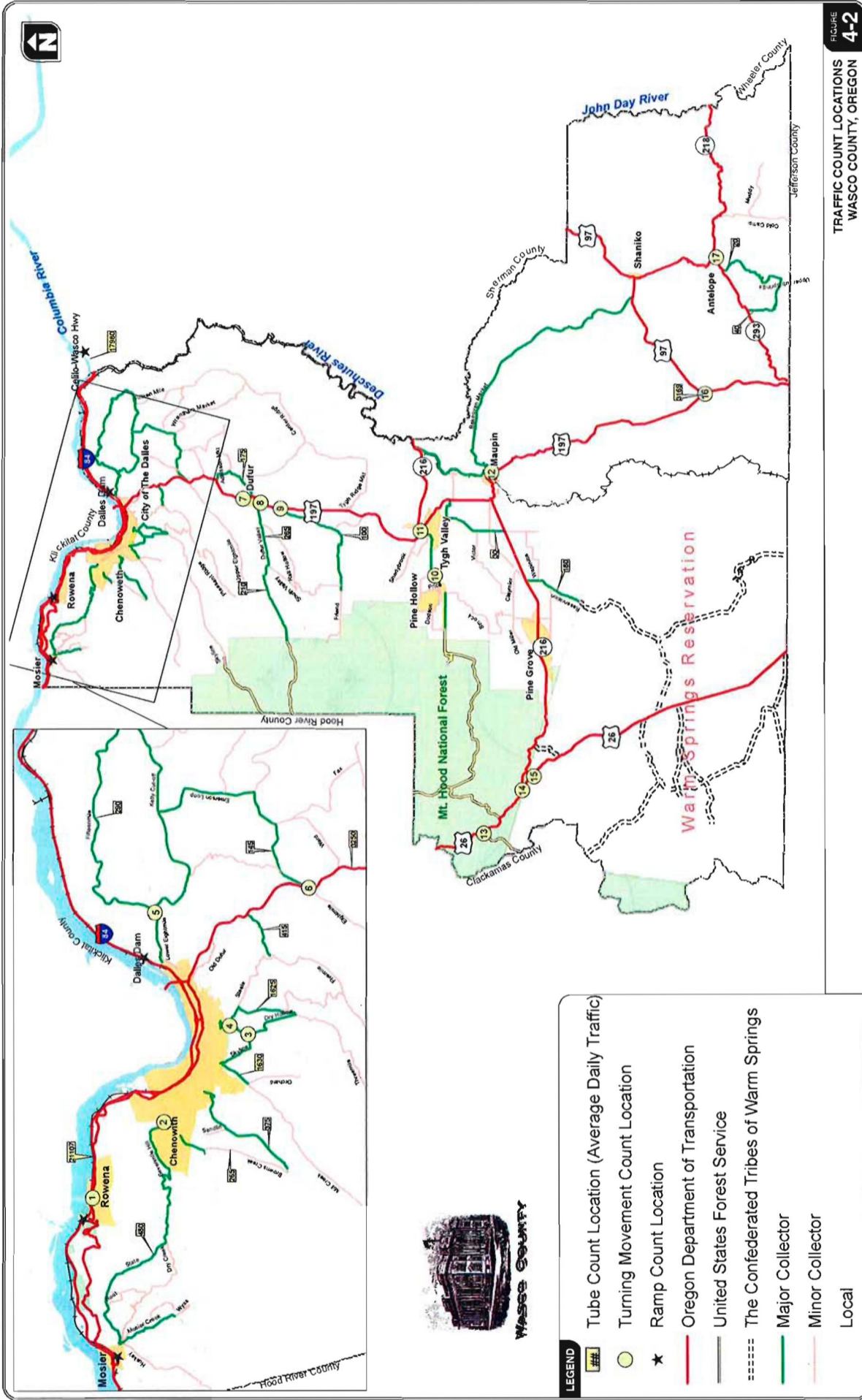
Average daily traffic (ADT) count data was obtained from ODOT permanent automatic traffic recorders (ATR), 2007 ODOT volume tables, and counts conducted in December 2008. Figure 4-2 summarizes the seasonally-adjusted existing 2008 ADT volumes on major facilities in Wasco County.

#### Intersections

Each intersection count was seasonally adjusted based on ODOT's methodology to obtain 30th highest hour volumes (additional detail regarding these adjustments can be found in the Technical Appendix Volume Two). The existing conditions traffic operational analysis was conducted based on the 30th highest hour traffic volumes at each study intersection. Figure 4-3 shows the existing lane configurations and traffic control devices. Figure 4-4 provides the 2008 30th highest hour volumes and the 2008 operational analysis results at all study intersections. As shown in Figure 4-4, all intersections were found to operate at level-of-service "C" or better and a maximum volume-to-capacity (V/C) ratio of 0.14 during the 30th highest hour condition<sup>1</sup>.

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<sup>1</sup> The mobility standard specified in the OHP is a maximum volume-to-capacity (V/C) ratio of 0.70 for interstate, statewide, and regional highways located outside of Urban Growth Boundary and surrounded by rural land. The mobility standard is 0.75 for District Highways or Local Interest Roads.

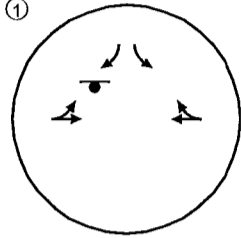


TRAFFIC COUNT LOCATIONS  
WASCO COUNTY, OREGON

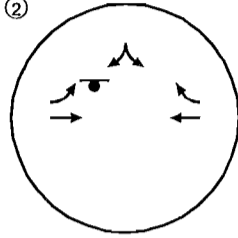
FIGURE 4-2

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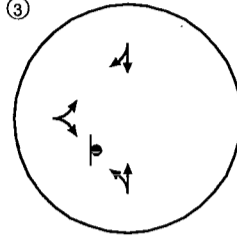
Rowena River Road & Historic Columbia River Highway



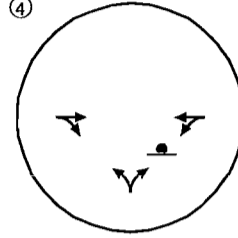
Sevenmile Hill Road & Chenoweth Creek Road



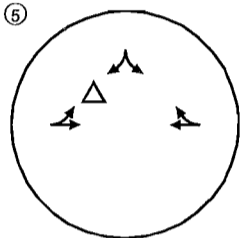
Olney Road & Dry Hollow Road



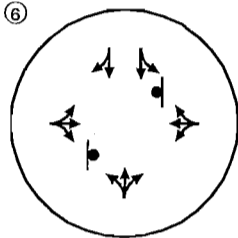
Olney Road & Threemile Road



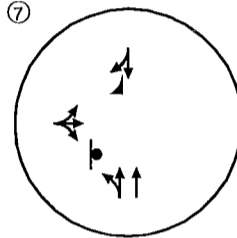
Fifteenmile Road & Lower Eightmile Road



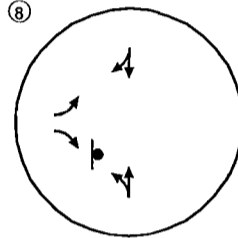
US 197 & Eightmile Road



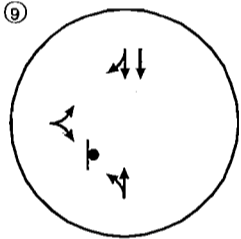
US 197 & Dufur Bypass Road (North)



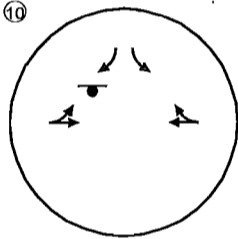
US 197 & Dufur Bypass Road (South)



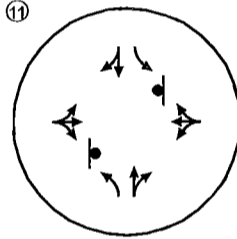
US 197 & Dufur Gap Road



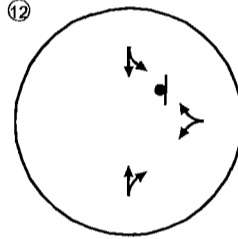
Ross Road & Wamic Market Road



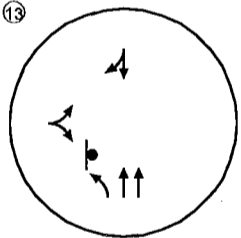
US 197 & OR 216



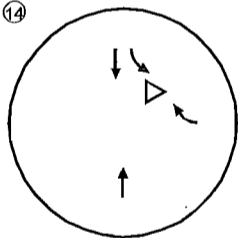
US 197 & Bakeoven Road



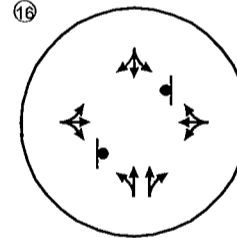
US 26 & Oregon Skyline Road



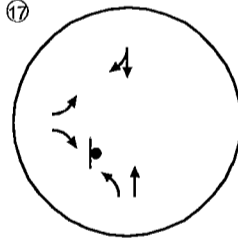
US 26 & OR 216



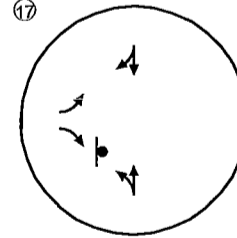
US 26 & East Gate



US 197 & US 97






OR 218 & OR 293



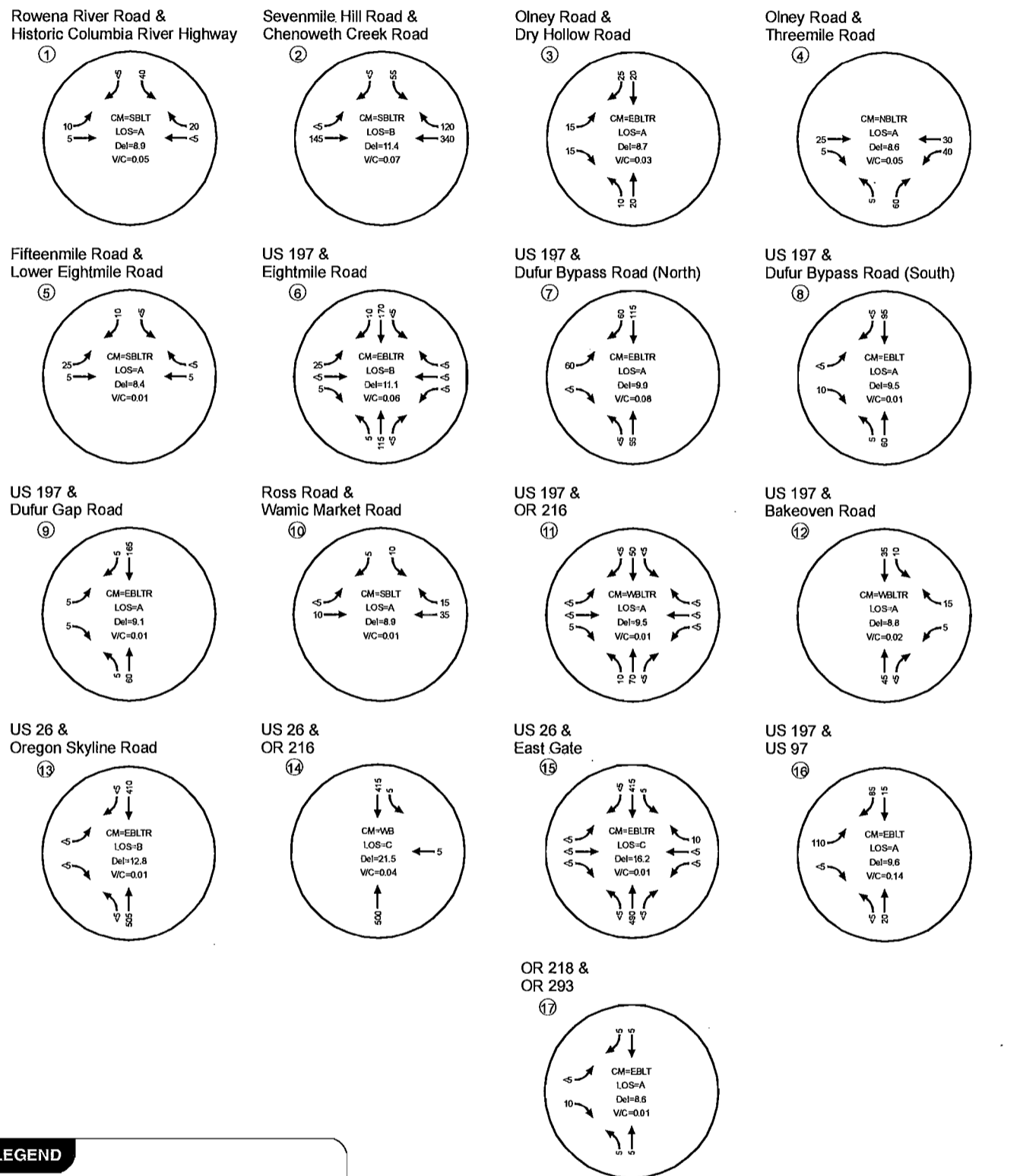
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LEGEND

-  STOP SIGN
-  YIELD SIGN
-  PORK CHOP

EXISTING LANE CONFIGURATIONS & TRAFFIC CONTROL DEVICES WASCO COUNTY, OREGON

FIGURE 4-3



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**LEGEND**

CM = INTERSECTION CRITICAL MOVEMENT  
 LOS = INTERSECTION LEVEL OF SERVICE  
 Del = INTERSECTION AVERAGE CONTROL DELAY  
 VIC = CRITICAL VOLUME-TO-CAPACITY RATIO

**EXISTING 30TH HIGHEST HOUR TRAFFIC CONDITIONS  
 WASCO COUNTY, OREGON**

Freeways/Interchanges

Highway Capacity Manual procedures were followed to conduct an analysis of freeway operations at interchanges on I-84 within Wasco County, excluding those located within The Dalles UGB. Table 4-2 provides a summary of operations at ramp terminal intersections.

**TABLE 4-2 EXISTING RAMP TERMINAL OPERATIONS**

| Ramp Terminal Intersection      | Critical Movement | V/C Ratio | Delay | LOS |
|---------------------------------|-------------------|-----------|-------|-----|
| I-84 Eastbound/Westbound Mosier | EB                | 0.16      | 9.1   | A   |
| I-84 Eastbound at Rowena        | EB                | 0.03      | 8.6   | A   |
| I-84 Westbound at Rowena        | WB                | 0.03      | 8.7   | A   |
| I-84 Eastbound at Dalles Dam    | EB                | 0.09      | 8.9   | A   |
| I-84 Westbound at Dalles Dam    | WB                | 0.01      | 8.7   | A   |
| I-84 Eastbound at Celilo-Wasco  | EB                | 0.06      | 8.6   | A   |
| I-84 Westbound at Celilo-Wasco  | WB                | 0.01      | 8.7   | A   |

As shown in Table 4-2, all I-84 ramp terminal intersections located outside the City of The Dalles in Wasco County operate with V/C ratios of less than 0.20 and level-of-service "A". All ramp terminal intersections operate well below the maximum acceptable V/C ratio of 0.70.

Table 4-3 provides a summary of freeway capacity analysis on I-84.

**TABLE 4-3 EXISTING I-84 CAPACITY ANALYSIS RESULTS**

| Segment or Ramp Merge/Diverge                   | LOS | Critical Flow Rate | Units <sup>1,2</sup> | Mobility Standard (V/C ratio) | Calculated V/C Ratio |
|---|-----|--------------------|----------------------|-------------------------------|----------------------|
| I-84 Mosier Interchange (Exit 69)               |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | B   | 815                | pc/h/l               | 0.70                          | 0.49                 |
| WB I-84 Freeway Segment                         | B   | 765                | pc/h/l               | 0.70                          | 0.46                 |
| EB Off Ramp Diverge                             | B   | 1,630              | pc/h                 | 0.70                          | 0.37                 |
| EB On Ramp Merge                                | B   | 1,495              | pc/h                 | 0.70                          | 0.33                 |
| WB Off Ramp Diverge                             | B   | 1,520              | pc/h                 | 0.70                          | 0.35                 |
| WB On Ramp Merge                                | B   | 1,565              | pc/h                 | 0.70                          | 0.34                 |
| I-84 Rowena Interchange (Exit 76)               |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 610                | pc/h/l               | 0.70                          | 0.36                 |
| WB I-84 Freeway Segment                         | B   | 760                | pc/h/l               | 0.70                          | 0.45                 |
| EB Off Ramp Diverge                             | B   | 1,520              | pc/h                 | 0.70                          | 0.35                 |
| EB On Ramp Merge                                | B   | 1,500              | pc/h                 | 0.70                          | 0.33                 |
| WB Off Ramp Diverge                             | B   | 1,530              | pc/h                 | 0.70                          | 0.35                 |
| WB On Ramp Merge                                | B   | 1,510              | pc/h                 | 0.70                          | 0.33                 |
| I-84 Dalles Dam Interchange (Exit 88)           |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 610                | pc/h/l               | 0.70                          | 0.36                 |
| WB I-84 Freeway Segment                         | A   | 760                | pc/h/l               | 0.70                          | 0.45                 |
| EB Off Ramp Diverge                             | B   | 1,215              | pc/h                 | 0.70                          | 0.28                 |
| EB On Ramp Merge                                | B   | 1,185              | pc/h                 | 0.70                          | 0.26                 |
| WB Off Ramp Diverge                             | B   | 1,080              | pc/h                 | 0.70                          | 0.25                 |
| WB On Ramp Merge                                | B   | 1,080              | pc/h                 | 0.70                          | 0.23                 |
| I-84 Celilo-Wasco Highway Interchange (Exit 97) |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 590                | pc/h/l               | 0.70                          | 0.35                 |
| WB I-84 Freeway Segment                         | A   | 515                | pc/h/l               | 0.70                          | 0.31                 |
| EB Off Ramp Diverge                             | B   | 1,180              | pc/h                 | 0.70                          | 0.27                 |
| EB On Ramp Merge                                | B   | 1,110              | pc/h                 | 0.70                          | 0.24                 |
| WB Off Ramp Diverge                             | B   | 1,035              | pc/h                 | 0.70                          | 0.24                 |
| WB On Ramp Merge                                | B   | 930                | pc/h                 | 0.70                          | 0.20                 |

<sup>1</sup>pc/h/l = passenger cars per hour per lane

<sup>2</sup>pc/h = passenger cars per hour

As shown in Table 4-3, the critical flow rates at each location on I-84 are compared to the maximum service flow rate to estimate a volume-to-capacity (V/C) ratio. At each merge or diverge point on I-84, the critical point of traffic flow was identified based on demand volumes. No ramp volumes warranted separate analysis due to low demand. The calculated V/C ratios at all points on I-84 are less than the maximum of 0.70 specified in the OHP.



#### Two-Lane Highways

An analysis of two-lane highway operations within Wasco County was conducted based on procedures outlined in the ODOT Analysis Procedures Manual (APM) and the HCM.

The peak hour volumes used in the analysis of state-owned facilities were obtained from ODOT as hourly counted volumes collected in December 2008 or as historical AADT volumes recorded in 2007. Where hourly count data was not provided, the peak hour two-way highway volumes were conservatively estimated to be 15 percent of the AADT volumes. A growth rate of two percent was applied to 2007 AADT volumes, which were developed based on an average of growth rates identified on US 97, US 197, US 26, and OR 216. All peak hour volumes were also adjusted by a peak hour factor to estimate a two-way demand flow rate during the peak 15-minute period.

Table 4-4 provides a summary of capacity analysis results on state-owned, two-lane, undivided highways.

**TABLE 4-4 EXISTING TWO-LANE HIGHWAY CAPACITY ANALYSIS OF STATE FACILITIES**

| Roadway                          | ADT   | Traffic Volume Source | PHF  | Two-Way Demand Flow | Critical Flow Rate (pc/h) | Mobility Standard (V/C Ratio) | Calculated V/C Ratio |
|----------------------------------|-------|-----------------------|------|---------------------|---------------------------|-------------------------------|----------------------|
| US 26 (at OR 216)                | 4,515 | Hourly Count          | 0.88 | 495                 | 3,200                     | 0.70                          | 0.15                 |
| US 30 (South of Discovery Drive) | 1,325 | ODOT 2007 AADT        | 0.88 | 240                 | 3,200                     | 0.70                          | 0.07                 |
| US 97 (South of US 197)          | 3,170 | Hourly Count          | 0.88 | 290                 | 3,200                     | 0.70                          | 0.09                 |
| US 97 (East of US 197)           | 2,245 | ODOT 2007 AADT        | 0.88 | 405                 | 3,200                     | 0.70                          | 0.13                 |
| US 197 (at Boyd Market Road)     | 3,250 | Hourly Count          | 0.88 | 350                 | 3,200                     | 0.70                          | 0.11                 |
| US 197 (at Fifteenmile Road)     | 1,735 | Hourly Count          | 0.88 | 180                 | 3,200                     | 0.70                          | 0.06                 |
| OR 206 (East of I-84)            | 830   | ODOT 2007 AADT        | 0.90 | 145                 | 3,200                     | 0.70                          | 0.05                 |
| OR 216 (East of US 26)           | 235   | ODOT 2007 AADT        | 0.88 | 40                  | 3,200                     | 0.70                          | 0.01                 |
| OR 216 (West of US 197)          | 620   | ODOT 2007 AADT        | 0.88 | 110                 | 3,200                     | 0.70                          | 0.03                 |
| OR 216 (East of US 197)          | 255   | ODOT 2007 AADT        | 0.88 | 45                  | 3,200                     | 0.70                          | 0.01                 |
| OR 218 (South of US 97)          | 100   | ODOT 2007 AADT        | 0.88 | 20                  | 3,200                     | 0.70                          | 0.01                 |
| OR 293 (East of US 97)           | 185   | ODOT 2007 AADT        | 0.88 | 35                  | 3,200                     | 0.70                          | 0.01                 |

AADT = Average Annual Daily Traffic

As shown in Table 4-4, the existing V/C ratios on all two-lane state highways within Wasco County are less than 0.20. The calculated V/C ratios are compared to ODOT's standard of 0.70 set forth in the OHP.

Volumes on Wasco County highways were obtained from a variety of sources. Where hourly count data could not be determined from the daily count data, the peak hour two-way highway volumes were conservatively estimated to be 15 percent of the seasonally-adjusted ADT volumes counted in December 2008. All peak hour volumes were also adjusted by a peak hour factor to estimate a two-way demand flow rate during the peak 15-minute period. Table 4-5 provides a summary of the capacity analysis results on two-lane, undivided highways maintained by Wasco County.

**TABLE 4-5 EXISTING TWO-LANE HIGHWAY CAPACITY ANALYSIS OF COUNTY FACILITIES**

| Roadway  | ADT   | Volume Source | PHF  | Two-Way Demand Flow | Critical Flow Rate (pc/h) | Mobility Standard* (V/C Ratio) | Calculated V/C Ratio |
|--|-------|---------------|------|---------------------|---------------------------|--------------------------------|----------------------|
| Boyd Loop Road (East of US 197)                    | 175   | 2008 ADT      | 0.88 | 30                  | 3,200                     | 0.70                           | 0.01                 |
| Browns Creek Road (South of Chenoweth Creek Road)  | 265   | Hourly Count  | 0.88 | 185                 | 3,200                     | 0.70                           | 0.06                 |
| Cherry Heights Road (Northeast of Wells Road)      | 375   | 2008 ADT      | 0.88 | 65                  | 3,200                     | 0.70                           | 0.02                 |
| Dufur Valley Road (West of Rall Hollow Road)       | 265   | 2008 ADT      | 0.88 | 45                  | 3,200                     | 0.70                           | 0.01                 |
| Dufur Valley Road (West of South Valley Road)      | 210   | 2008 ADT      | 0.88 | 40                  | 3,200                     | 0.70                           | 0.01                 |
| Emerson Loop Road (East of Lower Eight Mile)       | 145   | Hourly Count  | 0.88 | 5                   | 3,200                     | 0.70                           | 0.01                 |
| Fifteenmile Road (East of Moody Road)              | 290   | 2008 ADT      | 0.88 | 50                  | 3,200                     | 0.70                           | 0.02                 |
| Fivemile Road (West of OR 197)                     | 415   | Hourly Count  | 0.88 | 55                  | 3,200                     | 0.70                           | 0.02                 |
| Friend Road (West of Dufur Gap Road)               | 100   | 2008 ADT      | 0.88 | 20                  | 3,200                     | 0.70                           | 0.01                 |
| Juniper Flat Road (West of OR 216)                 | 30    | Hourly Count  | 0.88 | 25                  | 3,200                     | 0.70                           | 0.01                 |
| Lower Tub Springs (South of OR 218)                | 40    | Hourly Count  | 0.88 | 5                   | 3,200                     | 0.70                           | 0.01                 |
| Mill Creek Market Road (Northeast of Orchard Road) | 1,630 | 2008 ADT      | 0.88 | 290                 | 3,200                     | 0.70                           | 0.09                 |
| Reservation Road (South of OR 216)                 | 180   | Hourly Count  | 0.88 | 65                  | 3,200                     | 0.70                           | 0.02                 |
| State Road (at Sevenmile Hill Road)                | 480   | Hourly Count  | 0.88 | 25                  | 3,200                     | 0.70                           | 0.01                 |
| Threemile Road (Southeast of Steele Road)          | 1,625 | 2008 ADT      | 0.88 | 290                 | 3,200                     | 0.70                           | 0.09                 |
| Upper Tub Springs (South of Hwy 218)               | 20    | Hourly Count  | 0.88 | 10                  | 3,200                     | 0.70                           | 0.01                 |

\*ODOT mobility standards are not applicable to County facilities, however they are shown here as a relative measure of comparison.

As shown in Table 4-5, the existing volume-to-capacity ratios on all two-lane Wasco County facilities are less than 0.10. The calculated volume-to-capacity ratios are compared to ODOT's standard of 0.70 set forth in the OHP. County two-lane roadways are not subject to ODOT standards; however, these provide a baseline for comparison since the County has not established local mobility standards for highways.

The two-way demand flow is measured as a passenger car equivalent, which takes into account the impacts of heavy vehicles and grade on the flow of traffic. Within Wasco County, roadway grade

was assumed to not impact capacity of the roadways, although it may reduce the quality of service and increase delay. A five-percent heavy vehicle factor was applied to account for the impact of heavy vehicles within the traffic stream.

### **Road Safety**

The crash history of the collector-level and higher roadway segments and intersections within Wasco County has been summarized and compared to statewide averages for similar facilities.

#### Crash History

A summary of reported crashes was provided by ODOT's Crash Analysis and Reporting Unit. Reports were obtained for a 3-year period from January 1, 2005 to December 31, 2007 for all major state highway segments, collector-level and higher county roadway segments, and the major (collector-collector) intersections identified in the scope of work.

Summaries of the reported crashes and calculated crash rates for highway segments and intersections are provided in Table 4-6 and Table 4-7, respectively. Exposure on highway segments was measured in terms of traffic volumes based on 2007 AADT provided by ODOT. Intersection exposure was measured in terms of total entering vehicles (TEV), which was derived from the peak hour volumes used in the intersection operational analysis. The peak hour was assumed to be ten percent of the daily volume.

ODOT publishes statewide average roadway segment crash rates for the past three years for urban and rural areas, by functional classification. The statewide average roadway segment crash rates are provided in Table 4-6 for comparison to calculated crash rates for highways in Wasco County.

**TABLE 4-6 EXISTING ROADWAY SEGMENT CRASH HISTORY (JANUARY 2005 - DECEMBER 2007)**

| Highway                                    | Segment  | Mile Post     | Crash Rates |      |      | Statewide Average <sup>1</sup> |      |      |
|--|--|---------------|-------------|------|------|--------------------------------|------|------|
|  |  |               | 2005        | 2006 | 2007 | 2005                           | 2006 | 2007 |
| I-84<br>(Columbia River Highway)           | Western boundary of Wasco County to western city limits of Mosier      | 67.72 - 69.63 | 0.02        | 0.10 | 0.13 |                                |      |      |
|  | Western city limits of Mosier to eastern city limits of Mosier         | 69.63 - 70.63 | 0.04        | 0.08 | 0.20 |                                |      |      |
|  | Eastern city limits of Mosier to western city limits of The Dalles     | 70.63 - 82.27 | 0.08        | 0.09 | 0.09 | 0.31                           | 0.29 | 0.28 |
| US 26<br>(Warm Springs Highway)            | Western city limits of The Dalles to eastern city limits of The Dalles | 82.27 - 87.79 | 0.00        | 0.00 | 0.00 |                                |      |      |
|  | Eastern city limits of The Dalles to Deschutes River Bridge            | 87.79 - 99.85 | 0.06        | 0.04 | 0.06 |                                |      |      |
| US 30<br>(Historic Columbia River Highway) | Western boundary of Wasco County to southern boundary of Wasco County  | 62.16 - 96.48 | 0.01        | 0.01 | 0.02 | 0.98                           | 0.93 | 0.99 |
|  | Milepost 55 to northern city limit of Mosier                           | 55 - 57.28    | 0.00        | 0.00 | 0.30 |                                |      |      |
|  | Northern city limit of Mosier to southern city limit of Mosier         | 57.28 - 58.28 | 0.00        | 1.66 | 1.66 | 0.98                           | 0.93 | 0.99 |
| US 97<br>(Sherman Highway)                 | Southern city limit of Mosier to northern city limit of The Dalles     | 58.28 - 72.37 | 0.10        | 0.00 | 0.10 |                                |      |      |
|  | Eastern boundary of Wasco County to Northern city limits of Shaniko    | 48.81 - 56.04 | 0.17        | 0.06 | 0.17 |                                |      |      |
|  | Northern city limits of Shaniko to southern city limits of Shaniko     | 56.04 - 56.98 | 0.46        | 0.00 | 0.46 | 0.98                           | 0.93 | 0.99 |
| US 197<br>(The Dalles-California Highway)  | Southern city limits of Shaniko to southern boundary of Wasco County   | 56.98 - 68.66 | 0.21        | 0.11 | 0.07 |                                |      |      |
|  | Southern city limits of The Dalles to northern city limits of Dufur    | 1.28 - 12.74  | 0.13        | 0.13 | 0.26 |                                |      |      |
|  | Northern city limits of Dufur to southern city limits of Dufur         | 12.74 - 13.10 | 0.00        | 0.00 | 0.00 |                                |      |      |
|  | Southern city limits of Dufur to northern city limits of Maupin        | 13.10 - 43.96 | 0.14        | 0.14 | 0.16 | 0.98                           | 0.93 | 0.99 |
|  | Northern city limits of Maupin to southern city limits of Maupin       | 43.96 - 46.40 | 0.00        | 1.02 | 0.34 |                                |      |      |
| OR 216<br>(Wapinitia Highway)              | Southern city limits of Maupin to US 97                                | 46.40 - 74.26 | 0.43        | 0.25 | 0.40 |                                |      |      |
|  | US 26 to US 197  | 0.17 - 26.03  | 0.10        | 0.29 | 0.29 | 0.98                           | 0.93 | 0.99 |

| Highway                            | Segment  | Mile Post    | Crash Rates |      |      | Statewide Average <sup>1</sup> |      |      |
|------------------------------------|--|--------------|-------------|------|------|--------------------------------|------|------|
|                                    |  |              | 2005        | 2006 | 2007 | 2005                           | 2006 | 2007 |
| OR 218<br>(Antelope Highway)       | Jefferson County/Wasco County to Shaniko-Fossil Highway              | 0.79 - 13.52 | 0.84        | 1.27 | 0.00 | 0.98                           | 0.93 | 0.99 |
| OR 218<br>(Shaniko-Fossil Highway) | Southern city limits of Shaniko to northern city limits of Antelope  | 0.56 - 7.31  | 1.69        | 1.69 | 0.00 |                                |      |      |
|                                    | Northern city limits of Antelope to southern city limits of Antelope | 7.31 - 8.24  | 0.00        | 0.00 | 0.00 | 0.98                           | 0.93 | 0.99 |
|                                    | Southern city limits of Antelope to John Day River Bridge            | 8.24 - 23.07 | 0.47        | 0.00 | 0.47 |                                |      |      |

<sup>1</sup> I-84 Crash Rates were compared to statewide averages for Interstate Freeways in Rural Areas. All other non-interstate crash rates were compared to statewide averages for Minor Arterials in Rural Areas.

**TABLE 4-7 EXISTING INTERSECTION CRASH HISTORY (JANUARY 2005 – DECEMBER 2007)**

| Intersection                             | Number of Crashes | TEV   | Crash Rate | Crash Type |          |         |              |       | Severity |        |          |   |
|--|-------------------|-------|------------|------------|----------|---------|--------------|-------|----------|--------|----------|---|
|  |                   |       |            | Angle      | Rear-End | Turning | Fixed-Object | Other | PDO      | Injury | Fatality |   |
| US 26/ OR 216                            | 1                 | 9,275 | 0.10       | -          | -        | -       | 1            | -     | -        | -      | 1        | - |
| US 97/ US 197                            | 2                 | 2,360 | 0.77       | -          | -        | -       | -            | 2     | 1        | 1      | 1        | - |
| US 197/Bakeoven Road                     | 1                 | 1,048 | 0.87       | -          | -        | -       | -            | 1     | 1        | -      | -        | - |
| US 197/Dufur Bypass Road [North]         | 1                 | 2,934 | 0.31       | -          | -        | -       | 1            | -     | -        | -      | 1        | - |
| US 197/Eightmile Road                    | 2                 | 3,341 | 0.55       | -          | -        | 1       | 1            | -     | 1        | 1      | 1        | - |
| Chenoweth Creek Road/Sevenmile Hill Road | 1                 | 2,890 | 0.32       | -          | -        | -       | 1            | -     | -        | -      | 1        | - |
| Dry Hollow/Olney Road                    | 1                 | 690   | 1.32       | -          | -        | -       | 1            | -     | -        | -      | 1        | - |
| Dry Hollow/Threemile Road                | 0                 | 300   | 0          | -          | -        | -       | -            | -     | -        | -      | -        | - |

<sup>1</sup> TEV = Total entering vehicles

<sup>2</sup> PDO = Property damage only

<sup>3</sup> Crash Rate = Crashes per million entering vehicles

As shown in Table 4-6, the crash rates for several roadway segments exceed the average statewide crash rate. Further investigation of each facility that exceeded the average statewide crash rate is described below:

**US 30** – Northern city limit of Mosier to the southern city limit of Mosier

- The calculated crash rate of 1.66 crashes per million entering vehicles (MEV) is not expected to reflect a crash pattern, but is reflective of the short length of the study segment (one mile). The segment crash history shows one crash per year in 2006 and 2007.

**US 197** – Northern city limits of Maupin to southern city limits of Maupin

- The calculated average crash rate of 1.02 crashes per MEV for 2006 exceeds the statewide average of 0.93 for Minor Arterials in Rural Areas.
- A review of the reported crashes in 2006 and 2007 show that two crashes occurred at approximately the same location (milepost 45.46). Based on the crash reports, the crashes occurred on a sloped roadway with an approximately 180-degree curve. One resulted in an overturned vehicle and one resulted in collision with fixed roadside objects.
- Two of the three crashes in 2006 were reported to be caused by factors associated with the driver's physical condition (fatigued/weary and reckless driving).

**OR 218** – Wheeler County/Wasco County to Shaniko-Fossil Highway

- The calculated average crash rate of 1.27 crashes per MEV for 2006 exceeds the statewide average of 0.93 for Minor Arterials in Rural Areas.
- Three crashes were reported in 2006 which resulted in one injury and two property damage only crashes.
- Three of the five crashes reported in the three-year study period were reported at the same location (milepost 1.0). There is a curved alignment of the road and an unsignalized intersection at this location. The three crashes resulted in one overturned vehicle and two fixed objects collisions.
- Three crashes were reported as caused by improper driving and one was associated with excessive speed.
- Recent signing upgrades near milepost 1.0 were installed in 2007 by ODOT. The additional signing along with previous roadway segment improvements has potentially addressed issues associated with roadway unfamiliarity. As such, no additional improvements are recommended at this time.

**OR 218** – Southern city limits of Shaniko to northern city limits of Antelope

- The calculated average crash rate of 1.69 crashes per MEV in 2005 and 2006 exceeds the statewide averages of 0.98 and 0.93 for Minor Arterials in Rural Areas in the respective year.
- One crash was reported per year within this segment in 2005 and 2006 resulting in one injury and one property damage only crash.
- The injury crash was a single-vehicle crash that involved a motorcycle.
- No trends or countermeasures can be identified based on the limited crash frequency.

**Safety Priority Index System**

ODOT developed the Safety Priority Index System (SPIS) to identify and prioritize sites where a countermeasure or multiple countermeasures could be implemented to potentially reduce the number of crashes. One intersection, the OR 216/Reservation Road intersection, is in the 90-95th percentile of the current statewide 2005 – 2007 SPIS within Wasco County.

**Pavement Condition**

ODOT monitors the pavement condition of state highways through the Pavement Management System, which determines whether the pavement is in Very Good, Good, Fair, Poor, or Very Poor condition. Figure 4-5 provides a summary of the pavement conditions reported by ODOT in November 2008. Based on the conditions reported there are less than 5 miles of pavement that is in “very poor” condition. The only segment of “very poor” pavement conditions is on US 197 between Maupin and the US 197/OR 216 junction. Segments with “poor” pavement conditions are more frequent and include five different facilities. The longest section of “poor” pavement is on US 197 and spans a segment that begins in The Dalles and continues south through Dufur. Field observations in February 2009 confirmed these segments as those that have greater need of improvements than other segments of highway.

Wasco County Public Works department also maintains a pavement condition database for county roadways. Each year Wasco County Public Works visually inspects small segments of all paved roads and records the type, severity, and amount of distress observed. A Pavement Condition Index is calculated from the observations. The ratings are as follows: 100 to 86 is excellent, 85 to 71 is very good, 70 to 56 is good, 55 to 41 is fair, 40 to 26 is poor, 25 to 11 is very poor and 10 to 0 is considered failed. A summary of pavement conditions ratings for County collector level or higher county facilities is provided in Table 4-8.



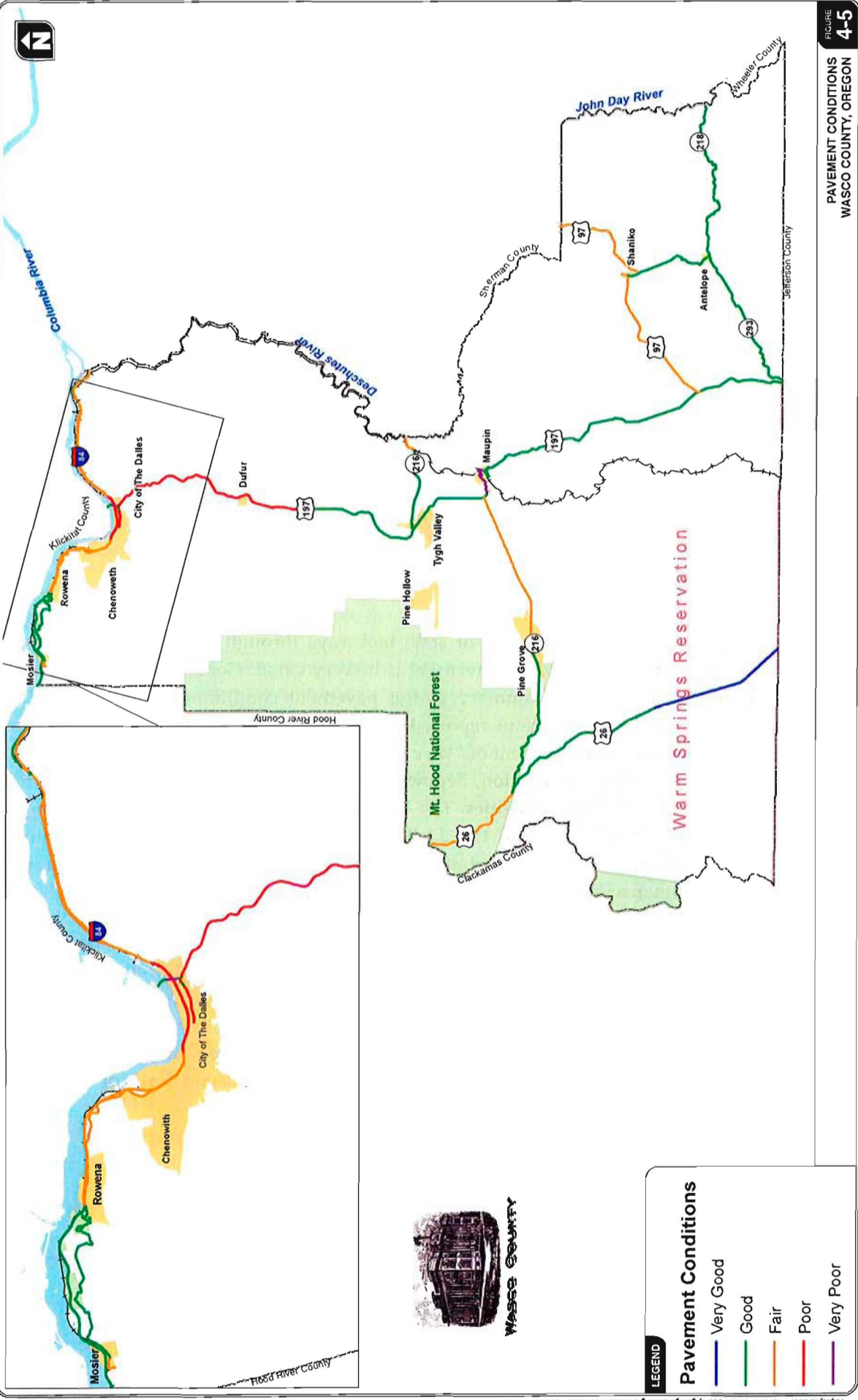


FIGURE 4-5  
PAVEMENT CONDITIONS  
WASCO COUNTY, OREGON

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**TABLE 4-8 EXISTING PAVEMENT CONDITIONS**

| Roadway                | Date   | Average PCI | Qualitative Assessment |
|------------------------|--------|-------------|------------------------|
| Boyd Loop Road         | Nov-07 | 86          | very good              |
| Browns Creek Road      | Jul-08 | 83          | very good              |
| Cherry Heights Road    | May-07 | 82          | very good              |
| Dufur Valley Road      | Jul-08 | 79          | very good              |
| Emerson Loop Road      | Dec-08 | 83          | very good              |
| Fairbanks Market Road  | Dec-08 | 85          | very good              |
| Fivemile Road          | Dec-08 | 91          | excellent              |
| Friend Road            | Dec-08 | 86          | very good              |
| Juniper Flat Road      | May-07 | 84          | very good              |
| Lower Tub Springs      | May-07 | 80          | very good              |
| Mill Creek Market Road | May-07 | 80          | very good              |
| Reservation Road       | Dec-08 | 93          | excellent              |
| State Road             | May-07 | 82          | very good              |
| Three Mile Road        | May-07 | 80          | very good              |
| Upper Tub Springs      | May-07 | 80          | very good              |

100-86 = Excellent  
 85-71 = Very Good  
 70-56 = Good  
 55-41 = Fair  
 40-26 = Poor  
 25-11 = Very Poor  
 10-0 = Fail

As shown in Table 4-8, no deficiencies were reported on all County collector level or higher two-lane highways. All highways were reported to have "very good" or "excellent" pavement conditions.

### PEDESTRIAN & BICYCLE SYSTEM

The pedestrian and bicycle modes serve a variety of needs including relatively short trips to major attractors, recreational trips, circulation within parklands, and access to transit (generally for trips under ¼-mile to bus stops). Bicycle travel can be a viable commuting option, particularly in areas where bicycle lanes, paved shoulders and other amenities (such as: secure bicycle parking, workplace showers, and bus-mounted bicycle racks) are provided. Walking is also a viable choice for commute trips in areas with mixed-use development and residential neighborhoods adjacent to employment centers. In rural areas of the County, walking and bicycling mainly serves as a form of recreation or exercise, rather than to serve as a viable mode of transportation for commerce due to the relatively long distances between originations and destinations.

In Wasco County, the majority of pedestrian and bicycle trips are short trips, including trips to the school, recreational areas, etc. However, the long distances between activity centers combined with the high speed and volume of traffic on major highways creates a transportation system that is potentially undesirable and/or unsafe for non-auto users. As a result, roadways with a low volume of traffic are preferred routes for pedestrian and bicycle use.

Existing pedestrian and bicycle facilities in Wasco County include a multi-use trail along the Columbia River and several bike routes that are commonly travelled. The multi-use trail extends a length of almost 5 miles in each direction along the Columbia River between the Columbia Gorge Discovery Center and Union Street in the City of The Dalles. Although there are many routes that cyclists use throughout the county, several have been specifically identified by The Dalles Cycling Association and mapped in order to promote cycling in The Dalles and its perimeter. The four cycling routes identified include:

- Mosier Loop: West of The Dalles the 34 mile loop connects Mosier to The Dalles. The north portion of the loop route runs along the Columbia River through Rowena and the south portion runs along rural roadways such as Sevenmile Hill Road and State Road between Mosier and The Dalles.
- The Dalles-Hood River: West of The Dalles, the out-and-back route follows the northern route of Mosier Loop from The Dalles through Rowena and Mosier, and extends to Hood River. The Dalles-Hood River route is approximately 23.2 miles in each direction.
- Cherry Heights Loop: The 17.4 mile loop begins and ends in The Dalles and runs along roadways to the southwest of The Dalles. The loop follows Chenoweth Creek Road, Browns Creek Road, and Cherry Heights Road.
- Eightmile Road and Fifteenmile Loops: A short loop (29 miles) and a long loop (38 miles) are identified in the rural areas of Wasco County to the east of The Dalles. The short loop runs along Emerson Loop Road, Kelly Cutoff Road, and Fifteenmile Road. The long loop extends on Emerson Loop Road for 9 miles before returning to Kelly Cutoff Road.

The Oregon Bicycle and Pedestrian Plan identifies the following categories of bicycle and pedestrian design treatments; Shared Roadway on roadway with average daily traffic (ADT) less than 3,000 vehicles; Shoulder Bikeways with six-foot shoulders; Bike Lanes on major collectors; Multi-Use Path adjacent to high traffic volume roadways; and Wide Paved Shoulders for walking on highways and rural County roadways.

On average state highways including: US 26, US 97, and US 197 carry daily volumes of greater than 3,000 vehicles per day. All other State and County roadways in rural parts of Wasco County have an ADT of less than 3,000 vehicles, which is consistent with ODOT guidelines for shared bicycle use. However, most of the roadways are not signed to warn motorists of the potential for encountering bicyclists on the roadways. In addition, County roadways with low volume of traffic tend to have high speed motorists and poor sight distance, making it potentially unsafe for bicyclists.

## **PUBLIC TRANSIT SERVICE**

Existing public transportation service in Wasco County is provided by the Transportation Network. The Transportation Network, a member of the Gorge TransLink, provides dial-a-ride service for The Dalles and select portions of Wasco County. Service is provided Monday-Friday from 8:00 a.m. to 5:00 p.m. More information is available on the Gorge TransLink's website at [www.gorgetranslink.com](http://www.gorgetranslink.com).

The Hood River County Transportation District offers public transportation services through Columbia Area Transit (CAT). CAT provides fixed-route service between Hood River, Mosier, and The Dalles on a daily basis and between Portland and The Dalles on a weekly basis. The current schedule provides two transit trips per day between The Dalles, Mosier, and Hood River during the morning and evening time periods. Stop locations in The Dalles include: Rosauers, Columbia Gorge Community College, and The Transportation Center, located at 201 Federal Street. The stop location in Mosier is at Pocket Park.

Service to Portland is provided on Thursdays only. In The Dalles the pick-up and drop-off location is The Transportation Center. Stops include the CAT office (Hood River), Gateway MAX Station (Portland), Portland Art Museum, Oregon Health Sciences University, and Clackamas Town Center. Up-to-date schedules, stop location descriptions, and more information on transportation services offered by The Hood River County Transportation District is provided on their website at <http://community.gorge.net/hrctd>.

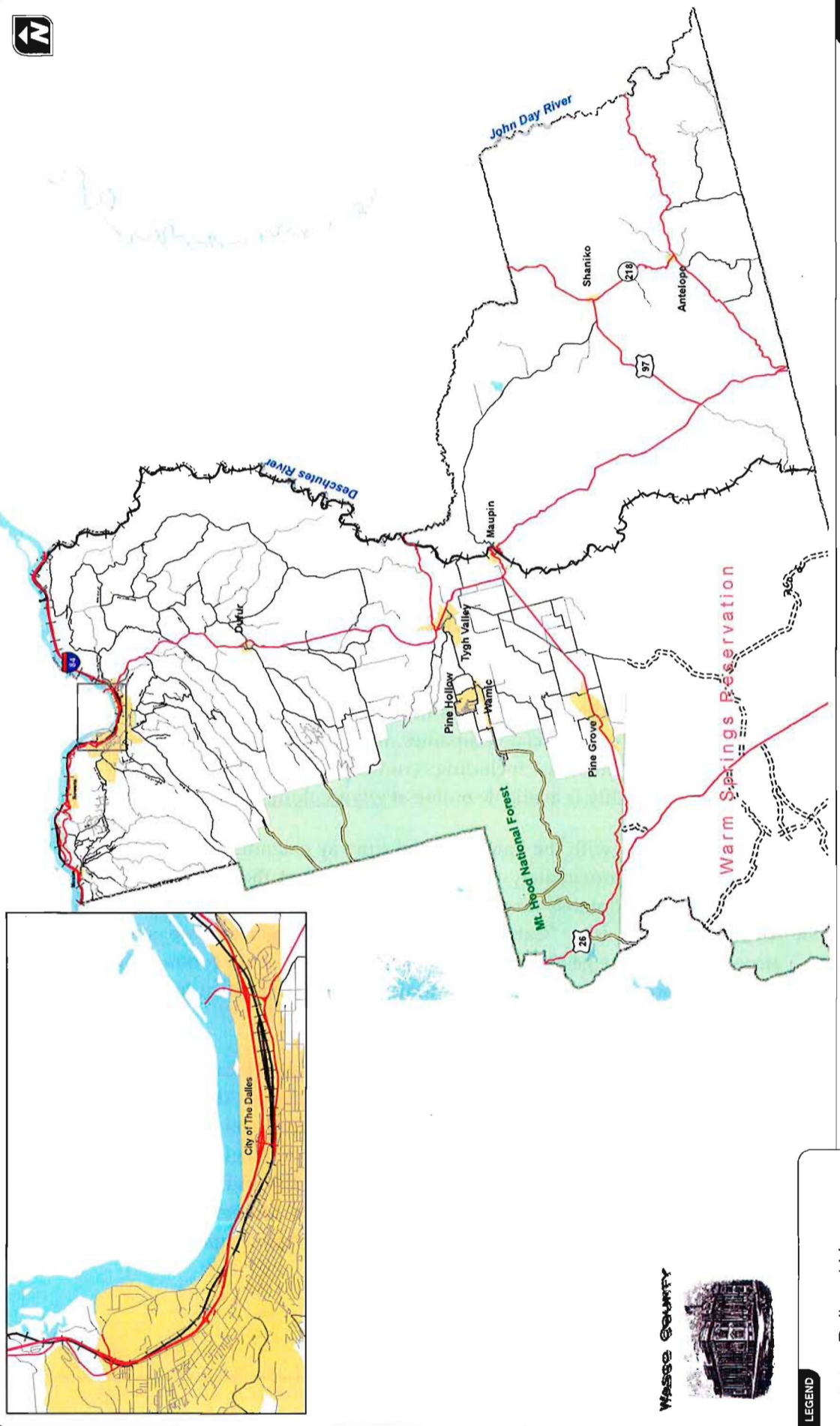
## **RAIL**

Wasco County contains part of the Union Pacific (UP) Railroad's east-west main line. As shown in Figure 4-6 the UP track runs along the south bank of the Columbia River. This UP main line provides the most direct connection from the Pacific Northwest to the Overland Route via Pocatello, Idaho, and Cheyenne, Wyoming. The UP main line is maintained in Federal Railroad Association (FRA) Class 5 condition that permits operation of freight trains at up to 80 mph and passenger trains at up to 90 mph with no weight or dimension restrictions.

The Burlington Northern Santa Fe Railway (BNSF) is Oregon's second largest transcontinental railroad. A north-south BNSF line runs roughly along the county line between Wasco County and Sherman County before diverging into the south central part of Wasco County and points south. BNSF maintains this line up to FRA Class 4 conditions with no weight or dimension restrictions. The maximum allowable speeds for Class 4 lines are 60 mph for freight and 80 mph for passenger trains. BNSF identified needed improvements to five tunnels on its north-south line through central Oregon, located along an 88-mile stretch in Wasco and Jefferson Counties. Improvements were deemed necessary to provide clearances sufficient for "high-cube," 9-foot 6-inch containers stacked one on top of another in a double-stack configuration.

Both UP and BNSF provide cargo freight rail service. BNSF services, schedules, and other information can be found online at [www.bnsf.com](http://www.bnsf.com). Similar information for UP Railroad is found online at [www.uprr.com](http://www.uprr.com).

Amtrak provides a throughway bus service at The Transportation Center in The Dalles. The service provides bus transport to nearby Amtrak stations with an established train platform. The nearest Amtrak station with a train platform is Wishram, Washington, approximately 15 miles east of The Dalles. The Wishram station is located on the Empire Builder route, which provides connections to: Portland, Oregon; Vancouver, Washington; Spokane, Washington; West Glacier, Montana; Fargo, North Dakota; St. Paul/Minneapolis, Minnesota; Milwaukee, Wisconsin; and, Chicago, Illinois. Amtrak schedules and station information is available at [www.amtrak.com](http://www.amtrak.com).



**LEGEND**

—+—+— Railroad Lines

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## **MARINE**

The Port of The Dalles is located on the Columbia River although it is primarily a marketing entity for industrial land in the region. In general, the Port owns industrial and commercial sites, some with riverfront barge access. Currently no known marine freight is loaded from sites within the Port of The Dalles, but the potential for such facilities exists. The Port also owns and operates a 120-slip marina facility with moorage for all types of boats with drafts up to 14 feet. A public boat launch ramp is also available at the marina.

Adjacent to the Port of The Dalles is a private facility that currently provides storage and transport of wheat via the Columbia River. Based on a conversation with the facility operator, approximately 800,000 bushels of wheat can be stored on site and a barge can transport up to 120,000 bushels. Opportunities to more fully utilize marine transport resources available to Wasco County residents and farmers will require development of additional facilities.

## **AIR**

One public air transportation facility, The Columbia Gorge Regional/The Dalles Municipal Airport, serves Wasco County. The Airport is not located within the County, but is located directly across the Columbia River from The Dalles, in the State of Washington. The Airport is jointly owned by the City of The Dalles and Klickitat County in Washington State. Despite the location, the Columbia Gorge Regional/The Dalles Municipal Airport is included in the statewide air transportation study, and serves many large local commercial companies, heavy industrial firms, and the United States Forest Service. More information, including: runway information, aviation services, and commercial property availability is available online at [www.columbiagorgeairport.com](http://www.columbiagorgeairport.com).

The airport has two runways with the longest paved runway extending 5,097 feet. The airport is at an elevation of 243 feet. Approximately 66 aircraft are based at the airport, with a daily aircraft operations average of approximately 45 aircraft per day. The Columbia Gorge Regional/The Dalles Municipal Airport is listed as a "Category 3" airport in Oregon's "core system" of airports. Category 3 airports serve large geographic areas with numerous small communities. They provide access to the air transportation system for communities that have surface travel times greater than 90 minutes to the next larger (Category 1 or 2) airport.

The nearest Category 1 airport is the Portland International Airport located approximately 80 miles west of The Dalles. More information about Portland International Airport is available online at [www.flypdx.com](http://www.flypdx.com). Other regional airports that provide commercial service include Redmond Municipal Airport in Redmond, Oregon and Eastern Oregon Regional Airport in Pendleton, Oregon. Redmond is approximately 115 miles south of The Dalles and Pendleton is approximately 125 miles to the east. More information about the Redmond Municipal Airport is available at [www.ci.redmond.or.us](http://www.ci.redmond.or.us). Information about flights at Eastern Oregon Regional Airport is available at [www.pendleton.or.us](http://www.pendleton.or.us).

Chenoweth Airpark is a private airport established in 1959 and located three miles west of The Dalles. Permission to use the airport is required in advance. The runway has an asphalt surface and is approximately 2,450 feet by 75 feet.

Pine Hollow Airport is located 2 miles northwest of Wamic, Oregon. It is a private air strip and permission to use the air strip is required in advance. The airstrip is turf, with a 25-foot wide gravel center. The total dimension of the airstrip is 2,400 feet by 130-feet wide.

### **PIPELINE AND TRANSMISSION SYSTEM**

Wasco County contains one major interstate transmission pipeline. The facility is a 36-inch diameter natural gas pipeline operated by Gas Transmission Northwest Corporation. This line runs through the southeast portion of the county enroute from Canada to California. The line transmits between 800 million and 1 billion cubic-feet of Canadian natural gas to California each day. Wasco County recognizes the potential for future lines to bisect the county as future demand for natural gas increases.

Additional pipeline transportation in and through Wasco County includes transport of water and sewer within incorporated cities, and transmission lines for electricity and telephone service throughout the county.



**Section 5**  
Future 2030  
Transportation Conditions

## Future 2030 Transportation Conditions

This section provides a summary of 2030 future transportation conditions and identifies transportation needs and subsequent impact on the transportation system based on future land uses, and projected population and employment demographics. Transportation needs were identified for multimodal elements of the transportation system including: auto/truck, pedestrian, bicycle, transit, rail, marine, air, and pipeline/transmission modes.



### POPULATION AND EMPLOYMENT FORECASTS

Existing and forecast year 2030 population and employment estimates were developed consistent with OAR 660-12-030, estimates prepared by the Oregon Department of Employment, and the population forecasts developed by Wasco County. The 2030 population and employment forecasts for Wasco County were prepared by Angelo Planning Group. Reporting on population and employment projections is important in understanding the demand and impact that projected growth in the county may have on transportation facilities over the next 20 years.

### FUTURE TRANSPORTATION CAPACITY NEEDS

An analysis of the forecast 2030 transportation system capacity of State highways and Wasco County collectors and arterials was conducted based on Level 1 trending forecast of traffic volumes. The operational results were analyzed to identify improvements needed to meet State and County operational standards for each respective functional class in 2030.

#### **Forecast Traffic Volume**

Annual growth rates were applied to existing 2008 volumes to estimate forecast 2030 traffic volumes. Annual growth for each ODOT facility was estimated using a Level 1 trending forecast, in accordance with ODOT's Analysis Procedures Manual (APM).

For state highways, the Future Volume Tables available on the ODOT Transportation Planning Analysis Unit (TPAU) website were used to estimate an annual growth factor. The growth factors developed from the Future Volume Tables were prepared in coordination with TPAU staff.

Historic ADT volumes for County roadways were reviewed in order to estimate future growth on County highways. Over an 8-year period from 2000 to 2008 no consistent volume growth trends were identified due to variations in the historic ADT volumes. In order to provide a conservative analysis and account for potential future growth, an annual growth rate of one percent was applied to all County roadways.

### Future Conditions Operations

The technical analysis of the forecast 2030 transportation system is based on ADT for roadway segments and 30<sup>th</sup> highest hour traffic volume forecasts for intersections. Figure 5-1 summarizes the study intersections and segments included in the analysis.

#### Intersections

The future conditions traffic operational analysis was conducted based on the peak 15-minute period of traffic flow at each study intersection. Because traffic flow patterns change over time, ODOT default peak hour factors were applied based on the level of facility (minor street, minor arterial, or major street), as outlined in the ODOT APM. Figure 5-2 illustrates the lane configurations and traffic control devices used in the future conditions analysis. No changes to the existing lane configurations and traffic control devices were incorporated in this analysis.

Figure 5-3 provides the 2030 30<sup>th</sup> highest hour volumes and operational analysis results at all study intersections. As shown in Figure 5-3, all intersections were found to operate with volume-to-capacity (V/C) ratios of less than 0.25 and level-of-service "A". The mobility standard specified in the 1999 Oregon Highway Plan is a maximum V/C ratio of 0.70 for interstate, statewide, and regional highways located outside of Urban Growth Boundary and surrounded by rural land. The mobility standard is 0.75 for District Highways or Local Interest Roads.

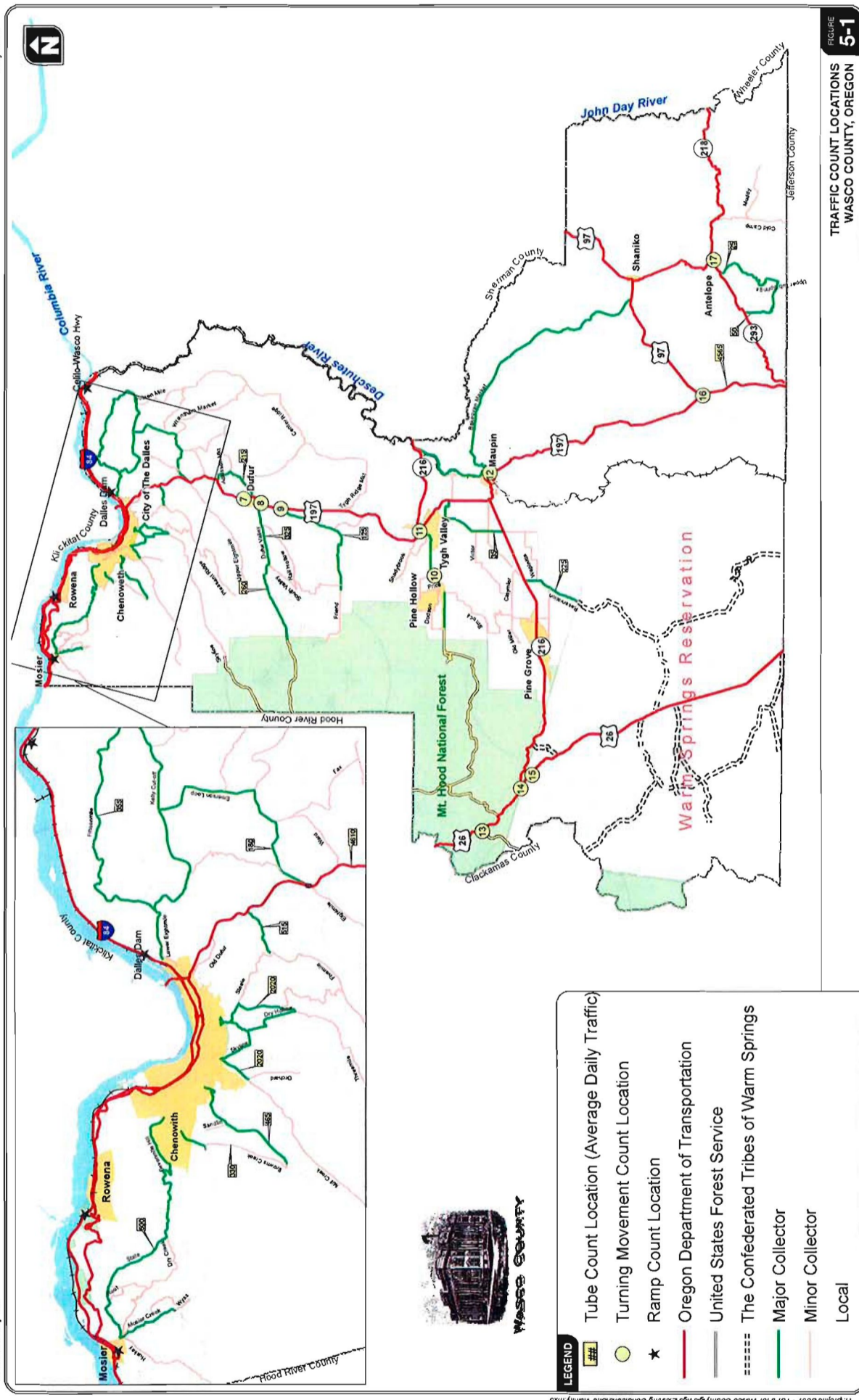
#### Freeways/Interchanges

Highway Capacity Manual procedures were followed to conduct an analysis of freeway operations at interchanges on I-84 within Wasco County, excluding those located within The Dalles UGB. A peak hour factor of 0.90, based on default values for Major streets outlined in the APM, was applied to each ramp terminal intersection. Table 5-1 provides a summary of forecasted 2030 future traffic operations at the ramp terminal intersections.

**TABLE 5-1 FORECAST 2030 FUTURE RAMP TERMINAL INTERSECTION OPERATIONS**

| Ramp Terminal Intersection      | Critical Movement | V/C Ratio | Delay | LOS |
|---------------------------------|-------------------|-----------|-------|-----|
| I-84 Eastbound/Westbound Mosier | EB                | 0.23      | 9.6   | A   |
| I-84 Eastbound at Rowena        | NB                | 0.13      | 9.6   | A   |
| I-84 Westbound at Rowena        | WB                | 0.05      | 8.8   | A   |
| I-84 Eastbound at Dalles Dam    | EB                | 0.09      | 8.9   | A   |
| I-84 Westbound at Dalles Dam    | WB                | 0.01      | 8.7   | A   |
| I-84 Eastbound at Celilo-Wasco  | EB                | 0.06      | 8.6   | A   |
| I-84 Westbound at Celilo-Wasco  | WB                | 0.01      | 8.7   | A   |

As shown in Table 5-1, all I-84 ramp terminal intersections in Wasco County (excluding those located within The Dalles UGB) are forecast to operate with V/C ratios of less than 0.25 and level-of-service "A". The OHP specifies a maximum acceptable V/C ratio of 0.70.



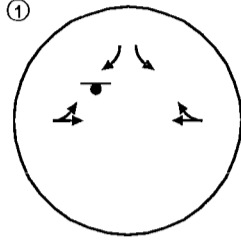
TRAFFIC COUNT LOCATIONS  
WASCO COUNTY, OREGON

FIGURE 5-1

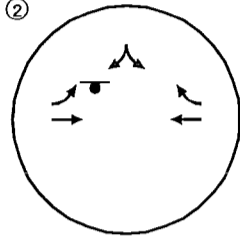
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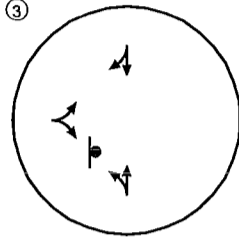
Rowena River Road & Historic Columbia River Highway



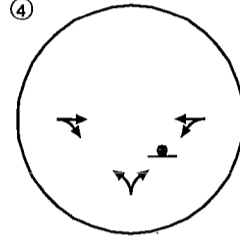
Sevenmile Hill Road & Chenoweth Creek Road



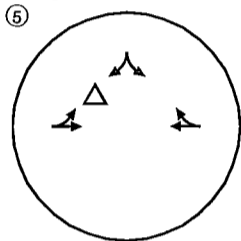
Olney Road & Dry Hollow Road



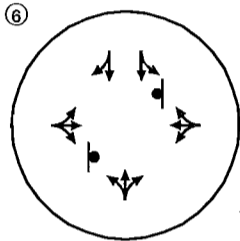
Olney Road & Threemile Road



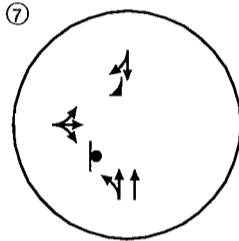
Fifteenmile Road & Lower Eightmile Road



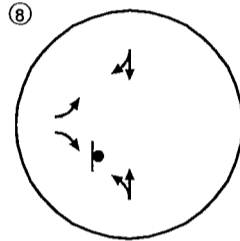
US 197 & Eightmile Road



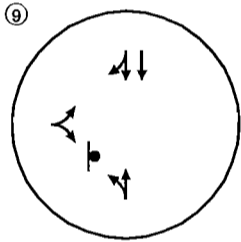
US 197 & Dufur Bypass Road (North)



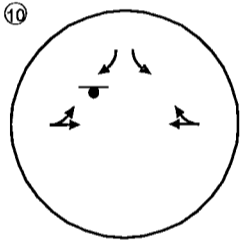
US 197 & Dufur Bypass Road (South)



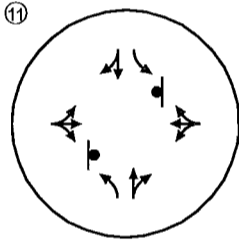
US 197 & Dufur Gap Road



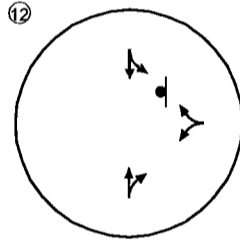
Ross Road & Warnic Market Road



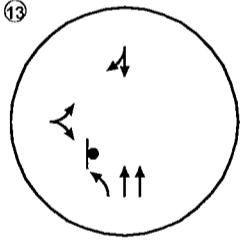
US 197 & OR 216



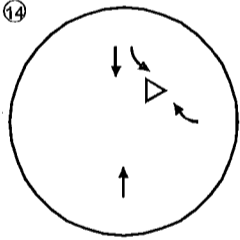
US 197 & Bakeoven Road



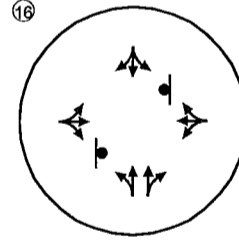
US 26 & Oregon Skyline Road



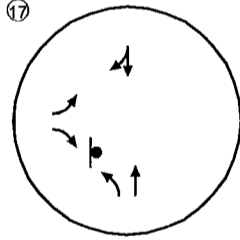
US 26 & OR 216



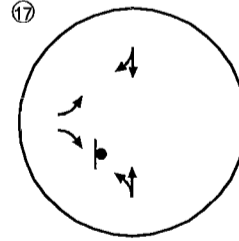
US 26 & East Gate



US 197 & US 97



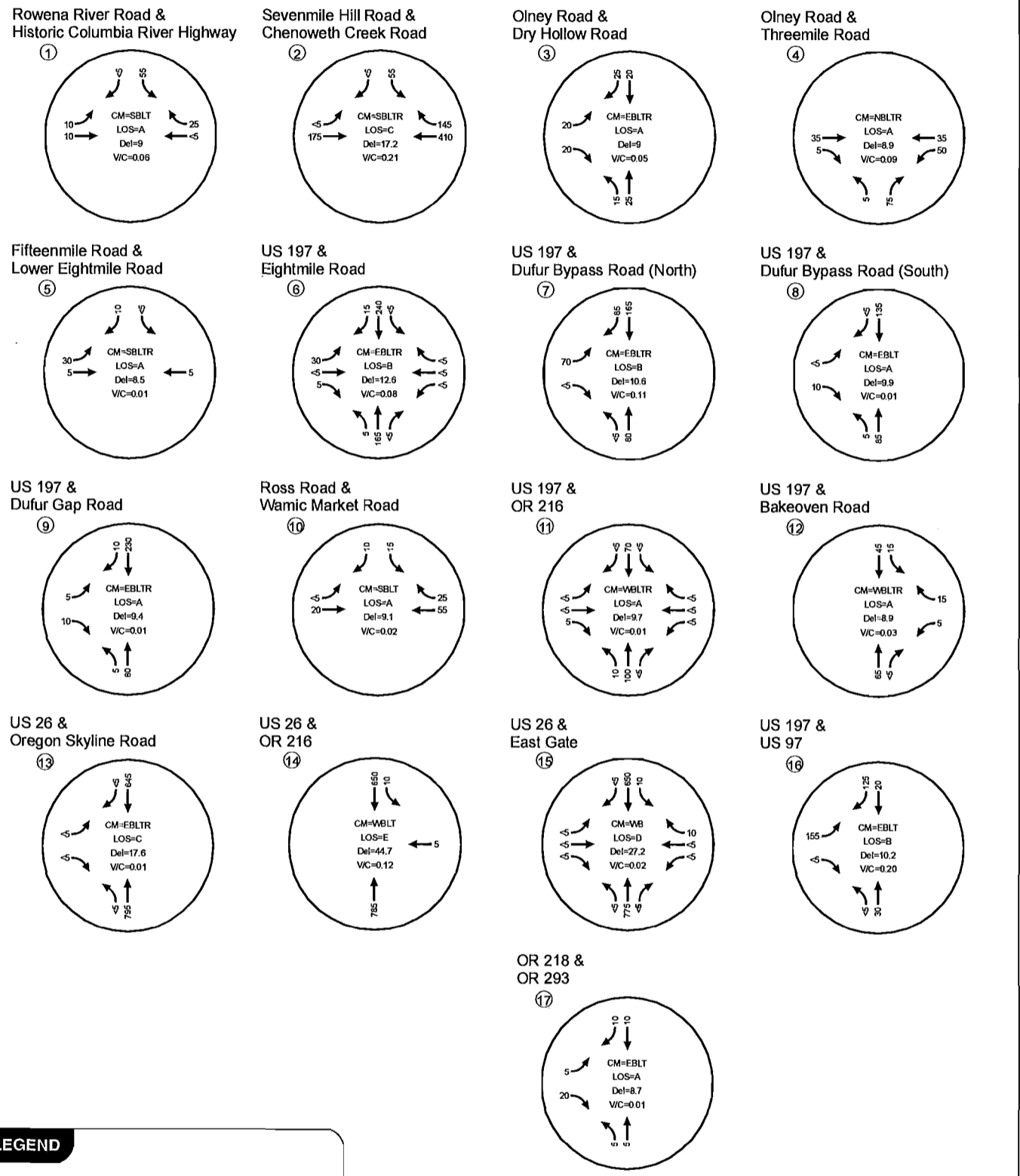
OR 218 & OR 293



LEGEND

- STOP SIGN
- YIELD SIGN
- PORK CHOP

FUTURE LANE CONFIGURATIONS & TRAFFIC CONTROL DEVICES WASCO COUNTY, OREGON



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**LEGEND**  
 CM = INTERSECTION CRITICAL MOVEMENT  
 LOS = INTERSECTION LEVEL OF SERVICE  
 Del = INTERSECTION AVERAGE CONTROL DELAY  
 VIC = CRITICAL VOLUME-TO-CAPACITY RATIO

**2030 30TH HIGHEST HOUR TRAFFIC CONDITIONS WASCO COUNTY, OREGON** **FIGURE 5-3**

Freeway capacity analysis was conducted at merge ramp, diverge ramp, and basic freeway segments at each interchange location. Table 5-2 provides a summary of the future freeway capacity analysis results on I-84.

**TABLE 5-2 I-84 FORECAST 2030 CAPACITY ANALYSIS RESULTS**

| Segment or Ramp Merge/Diverge                   | LOS | Critical Flow Rate | Units <sup>1,2</sup> | Mobility Standard (V/C ratio) | Calculated V/C Ratio |
|---|-----|--------------------|----------------------|-------------------------------|----------------------|
| I-84 Mosier Interchange (Exit 69)               |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | B   | 1,250              | pc/h/l               | 0.70                          | 0.75                 |
| WB I-84 Freeway Segment                         | B   | 1,175              | pc/h/l               | 0.70                          | 0.70                 |
| EB Off Ramp Diverge                             | B   | 1,670              | pc/h                 | 0.70                          | 0.38                 |
| EB On Ramp Merge                                | B   | 1,535              | pc/h                 | 0.70                          | 0.33                 |
| WB Off Ramp Diverge                             | B   | 1,555              | pc/h                 | 0.70                          | 0.35                 |
| WB On Ramp Merge                                | B   | 1,600              | pc/h                 | 0.70                          | 0.35                 |
| I-84 Rowena Interchange (Exit 76)               |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 935                | pc/h/l               | 0.70                          | 0.56                 |
| WB I-84 Freeway Segment                         | B   | 1,170              | pc/h/l               | 0.70                          | 0.70                 |
| EB Off Ramp Diverge                             | B   | 1,560              | pc/h                 | 0.70                          | 0.36                 |
| EB On Ramp Merge                                | B   | 1,535              | pc/h                 | 0.70                          | 0.33                 |
| WB Off Ramp Diverge                             | B   | 1,570              | pc/h                 | 0.70                          | 0.36                 |
| WB On Ramp Merge                                | B   | 1,545              | pc/h                 | 0.70                          | 0.34                 |
| I-84 Dalles Dam Interchange (Exit 88)           |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 895                | pc/h/l               | 0.70                          | 0.53                 |
| WB I-84 Freeway Segment                         | A   | 760                | pc/h/l               | 0.70                          | 0.45                 |
| EB Off Ramp Diverge                             | B   | 1,245              | pc/h                 | 0.70                          | 0.28                 |
| EB On Ramp Merge                                | B   | 1,210              | pc/h                 | 0.70                          | 0.26                 |
| WB Off Ramp Diverge                             | B   | 1,105              | pc/h                 | 0.70                          | 0.25                 |
| WB On Ramp Merge                                | B   | 1,105              | pc/h                 | 0.70                          | 0.24                 |
| I-84 Celilo-Wasco Highway Interchange (Exit 97) |     |                    |                      |                               |                      |
| EB I-84 Freeway Segment                         | A   | 870                | pc/h/l               | 0.70                          | 0.52                 |
| WB I-84 Freeway Segment                         | A   | 760                | pc/h/l               | 0.70                          | 0.45                 |
| EB Off Ramp Diverge                             | B   | 1,205              | pc/h                 | 0.70                          | 0.27                 |
| EB On Ramp Merge                                | B   | 1,135              | pc/h                 | 0.70                          | 0.25                 |
| WB Off Ramp Diverge                             | B   | 1,060              | pc/h                 | 0.70                          | 0.24                 |
| WB On Ramp Merge                                | B   | 955                | pc/h                 | 0.70                          | 0.21                 |

<sup>1</sup>pc/h/l = passenger cars per hour per lane  
<sup>2</sup>pc/h = passenger cars per hour

As shown in Table 5-2, the critical flow rates at each location on I-84 are compared to the maximum service flow rate to estimate a volume-to-capacity (V/C) ratio. At each merge or diverge point on I-84, the critical point of traffic flow was identified based on demand volumes. No ramp volumes warranted separate analysis due to low demand volume. The calculated V/C ratios at all points on I-84 are equal to or less than the maximum of 0.70 specified in the OHP, except the eastbound I-84 freeway segment at Mosier. The eastbound I-84 freeway segment at Mosier is forecast to operate with a V/C ratio of 0.75.

#### *Two-Lane Highways*

An analysis of two-lane highway operations within Wasco County was conducted based on procedures outlined in the APM and the HCM.

Peak hour two-way highway volumes were conservatively estimated to be 15 percent of the 2008 AADT volumes used in the existing conditions analysis. All peak hour volumes were also adjusted by a peak hour factor to estimate a two-way demand flow rate during the peak 15-minute period. A default peak hour factor was applied based on the ODOT APM.

The two-way demand flow is measured as a passenger car equivalent, which takes into account the impacts of heavy vehicles and grade on the flow of traffic. Within Wasco County, roadway grade is expected to have minimal effect on capacity or quality of service of the roadways. A 5-percent heavy vehicle factor was applied to account for the impact of heavy vehicles within the traffic stream, which fluctuates with the seasons and farming activities. Based on ODOT standard saturation flow rates, a critical flow rate of 3,200 passenger cars per hour (1,600 per lane) was assumed for calculation of V/C ratios.

Table 5-3 provides a summary of the future 2030 two-lane capacity analysis results on state-owned, undivided highways.



**TABLE 5-3 FORECAST 2030 TWO-LANE HIGHWAY CAPACITY ANALYSIS OF STATE FACILITIES**

| Roadway                             | Forecast 2030 ADT | Traffic Volume Source | PHF  | Two-Way Demand Flow | Calculated V/C Ratio |
|-------------------------------------|-------------------|-----------------------|------|---------------------|----------------------|
| US 26<br>(at OR 216)                | 7,095             | Hourly Count          | 0.90 | 760                 | 0.24                 |
| US 30<br>(South of Discovery Drive) | 1,880             | ODOT 2007 AADT        | 0.90 | 330                 | 0.10                 |
| US 97<br>(South of US 197)          | 4,565             | Hourly Count          | 0.90 | 410                 | 0.13                 |
| US 97<br>(East of US 197)           | 3,230             | ODOT 2007 AADT        | 0.90 | 565                 | 0.18                 |
| US 197<br>(at Boyd Market Road)     | 4,610             | Hourly Count          | 0.90 | 480                 | 0.15                 |
| US 197<br>(at Fifteenmile Road)     | 2,465             | Hourly Count          | 0.90 | 250                 | 0.08                 |
| OR 206<br>(East of I-84)            | 705               | ODOT 2007 AADT        | 0.90 | 125                 | 0.04                 |
| OR 216<br>(East of US 26)           | 350               | ODOT 2007 AADT        | 0.90 | 60                  | 0.02                 |
| OR 216<br>(West of US 197)          | 1,280             | ODOT 2007 AADT        | 0.90 | 225                 | 0.07                 |
| OR 216<br>(East of US 197)          | 525               | ODOT 2007 AADT        | 0.90 | 90                  | 0.03                 |
| OR 218<br>(South of US 97)          | 180               | ODOT 2007 AADT        | 0.90 | 30                  | 0.01                 |
| OR 293<br>(East of US 97)           | 295               | ODOT 2007 AADT        | 0.90 | 50                  | 0.02                 |

AADT = Average Annual Daily Traffic

As shown in Table 5-3, the 2030 forecast V/C ratios on all two-lane state highways within Wasco County are less than 0.25. The calculated V/C ratios are compared to ODOT's standard of 0.70 set forth in the OHP. There is expected to be available capacity to serve future forecast demand volumes as well as additional traffic, if needed.

An annual factor of one percent was applied to existing peak hour volumes developed for existing conditions analysis of County facilities to estimate forecast 2030 peak hour volumes. All peak hour volumes were adjusted by a peak hour factor to estimate a two-way demand flow rate during the peak 15-minute period. Table 5-4 provides a summary of the capacity analysis results on two-lane, undivided highways maintained by Wasco County.

**TABLE 5-4 FORECAST 2030 TWO-LANE HIGHWAY CAPACITY ANALYSIS OF WASCO COUNTY FACILITIES**

| Roadway   | Forecast 2030 ADT | Volume Source | PHF  | Two-Way Demand Flow | Calculated V/C Ratio |
|---|-------------------|---------------|------|---------------------|----------------------|
| Boyd Loop Road<br>(East of US 197)                    | 215               | 2008 ADT      | 0.85 | 40                  | 0.01                 |
| Browns Creek Road<br>(South of Chenoweth Creek Road)  | 330               | Hourly Count  | 0.85 | 60                  | 0.02                 |
| Cherry Heights Road<br>(Northeast of Wells Road)      | 465               | 2008 ADT      | 0.85 | 85                  | 0.03                 |
| Dufur Valley Road<br>(West of Rail Hollow Road)       | 325               | 2008 ADT      | 0.85 | 60                  | 0.02                 |
| Dufur Valley Road<br>(West of South Valley Road)      | 260               | 2008 ADT      | 0.85 | 50                  | 0.02                 |
| Emerson Loop Road<br>(East of Lower Eight Mile)       | 180               | Hourly Count  | 0.85 | 35                  | 0.01                 |
| Fairbanks Market Road<br>(East of Fifteenmile Road)   | 355               | 2008 ADT      | 0.85 | 65                  | 0.02                 |
| Fivemile Road<br>(West of OR 197)                     | 515               | Hourly Count  | 0.85 | 95                  | 0.03                 |
| Friend Road<br>(West of Dufur Gap Road)               | 125               | 2008 ADT      | 0.85 | 25                  | 0.01                 |
| Juniper Flat Road<br>(West of OR 216)                 | 35                | Hourly Count  | 0.85 | 10                  | 0.01                 |
| Lower Tub Springs<br>(South of OR 218)                | 50                | Hourly Count  | 0.85 | 10                  | 0.01                 |
| Mill Creek Market Road<br>(Northeast of Orchard Road) | 2,020             | 2008 ADT      | 0.85 | 375                 | 0.12                 |
| Reservation Road<br>(South of OR 216)                 | 225               | Hourly Count  | 0.85 | 40                  | 0.01                 |
| State Road<br>(at Sevenmile Hill Road)                | 600               | Hourly Count  | 0.85 | 110                 | 0.03                 |
| Three Mile Road<br>(Southeast of Steele Road)         | 2,020             | 2008 ADT      | 0.85 | 375                 | 0.12                 |
| Upper Tub Springs<br>(South of Hwy 218)               | 25                | Hourly Count  | 0.85 | 5                   | 0.01                 |

\*ODOT mobility standards are not applicable to County facilities, however they are shown here as a relative measure of comparison.

As shown in Table 5-4, the existing volume-to-capacity ratios on all two-lane Wasco County roadways are equal to or less than 0.12. The calculated volume-to-capacity ratios are compared to ODOT's standard of 0.70 set forth in the OHP. County two-lane roadways are not subject to ODOT standards; however, these provide a baseline for comparison since the County has not established local mobility standards for county roadways.

**Section 6**  
Future 2030  
Transportation Needs &  
Alternatives

## Future 2030 Transportation Needs & Alternatives

This section identifies the future multimodal transportation needs in Wasco County. As noted in the 2030 Future Conditions summary, there are no forecast capacity deficiencies identified for any of the major highway or roadway facilities serving the County. As such, the identification of future transportation needs and alternatives primarily focuses on improving roadway and intersection operations from a safety, maintenance, and modernization perspective. From these needs, a list of projects was developed, refined, and finalized as part of the formal TSP (see Section 7).



### **Roadway Network Needs and Alternatives**

Since the forecast 2030 analysis determined there are no capacity related deficiencies on any of the major highway or roadway facilities, a supplemental safety and operations assessment was conducted. Projects identified during this process were developed through a combination of windshield surveys conducted by the project team, feedback from technical advisory committee, and public input. Each project was then evaluated to determine a potential mitigation measures and a cost estimate was completed. An overview of these projects is outlined below.

#### Threemile Road/Steele Road Intersection

The existing Threemile Road/Steele Road intersection has expansive paving and traffic priority is not clearly defined on some approaches. A modification of the overall intersection geometry that reduces the paved surface area and more clearly defines the traffic priority is recommended.

#### US 97/US 197 Junction

The junction of US 97 and US 197 is a large, high-speed intersection where US 197 intersects on a horizontal curve creating some unconventional turning movements and unique skew angles that can be a challenge for large trucks. In addition, S. Junction Road creates an unconventional fourth leg to the intersection. Given that the identification of potential improvements is beyond the size and scope of this TSP, a more detailed study of potential improvements is needed.

#### US 197/Boyd Loop Road Intersection

Currently there are two intersections that provide access from Boyd Loop Road to US 197. Both connections intersect US 197 at acute angles (25-40 degrees) creating limited sight distance. To minimize connections to US 197 and improve the overall sight distance, the need for a realigned Boyd Loop Road intersection was identified.

#### US 197/Fivemile Road Intersection

A county landfill located off of Fivemile Road generates a considerable amount of daily vehicle and truck traffic. To more efficiently and safely accommodate turning movements, a northbound left-turn lane and a southbound right-turn lane are needed along US 197. Given that the highway currently has steep embankments and environmental and residential impacts, a more detailed study of potential improvements is needed.

#### US 197/Wasco County Landfill Access Road

A feasibility study is recommended to investigate the potential for a new alternate route from US 197 to the Wasco County landfill.

#### US 197 Realignment

ODOT has preliminarily identified the need for a realignment of a portion of US 197 from the Wapinita Highway Junction to the northern Mosier city limits. A detailed project scope is being developed by ODOT.

#### OR 216/Junifer Flat Road/Nature Pasture Road Intersection

A windshield survey has noted some sight distance limitations for vehicles on Juniper Flat Road accessing OR 216. A project has been recommended to minimize the sight distance limitations by reducing the impacts of the crest vertical curve on OR 216.

#### Wamic Market Road/Ross Road Intersection

Currently the eastbound left-turn from Wamic Market Road to Ross Road can occur at high speeds (45 mph or greater). The westbound right turn must stop and yield to that movement. Due to high-speed movements, required sight distance is greater than that provided due to a crest vertical curve. As such, a project has been recommended to combine multiple stop-control intersections into one stop-controlled intersection and to eliminate sight distance constraints for existing stop-controlled movements.

### ***Pedestrian and Bicycle Needs***

Based on the rural nature of Wasco County and the distances between destinations, there was no identification of specific sidewalk or other pedestrian improvement needs. At the same time, Wasco County is becoming an increasingly popular haven for recreational cycling along County roadways. A formal identification and recognition of cycling routes within the County was formally recommended as part of the TSP process.

#### Old Moody Road Shared Bike Route

For improved recreational opportunities, a recommendation was made to include the paving of a 4-mile section of Old Moody Road.

### **County TIP Roadway Needs**

Wasco County has historically maintained a list of needs on various County owned and maintained roadways. This project list makes up the formal Transportation Improvement Program (TIP) and consists of various maintenance, paving, and roadway reconstruction projects that have been identified to maintain a safe, efficient, and reliable roadway network. Each of these projects were further evaluated and refined through the TSP committee process. As a result, all of the TIP projects were recommended to be included as part of the formal TSP project list outlined in Section 7. This overlap ensures that the needs assessment of the TIP is consistent with the broader multimodal needs evaluation of the TSP.

### **ODOT STIP Needs**

Like the Wasco County TIP, current ODOT State Transportation Improvement Program (STIP) projects applicable to Wasco County were identified as part of the needs and evaluation process. There are currently a total of two projects, both involving various sections of I-84. For consistency and coordination purposes, both projects were recommended to be included as part of the formal TSP project list outlined in Section 7.

### **Future Rail, Airport, Pipeline, and Transmission Needs**

The Oregon Rail Plan (ORP) states that future growth of freight rail traffic is difficult to predict and is uncertain. Although future capacity needs are uncertain, rail companies were contacted to identify their future needs in the ORP. Within Wasco and Jefferson Counties the ORP identified a need for adequate clearance for five tunnels located on an 88-mile stretch of BNSF to allow for high-cube double-stack traffic. When the ORP was published in November 2001, the State did not have funding in place to support these improvements.

Future growth and development is a top priority of the Columbia Gorge Regional/The Dalles Municipal (CGRDM) Airport. However, there are currently no projects scheduled that are expected to increase the volume of air travel. No other long-term plans have been identified that suggest future air travel needs will increase at the CGRDM or private airports within the County over the next 20 years.

Wasco County recognizes the potential for future lines to bisect the county as future demand for natural gas increases. One proposal by Palomar Gas Transmission, a partnership between NW Natural and TransCanada, would provide additional capacity and reliability to the natural gas transmission system. Currently, NW Natural is dependent on a single interstate gas transmission pipeline for the gas it needs to serve its 655,000 home, business, and industrial customers. The proposed 36-inch-diameter underground pipeline will be approximately 217 miles long and connect to an existing gas pipeline located northeast of Shaniko. As proposed the route would run east-west through Wasco County adjacent to Maupin and Pine Grove. The project is anticipated to be completed in late 2011.

**Section 7**  
Transportation System  
Plan

## Transportation System Plan

This section outlines the preferred transportation system plan for Wasco County which includes TSP elements consistent with OAR 660-12-020 and goals of OAR 660-12-025. The preferred plan includes recommendations for the County's transportation system, including:

- Roadway System Plan
- Access Management Plan
- Pedestrian and Bicycle System Plan
- Public Transportation System Plan
- Air/Marine/Rail/Pipeline/Transmission System Plan



The transportation components presented in this section were developed in accordance with the requirements of Oregon's Transportation Planning Rule (TPR). These elements have been developed concurrent with the findings presented in the existing and future forecast conditions analysis. The plan also conveys the interests of the citizens, business owners, and governmental agencies within Wasco County, as expressed by the Technical Advisory Committee (TAC) and citizen input during the plan's development.

The preferred plan is focused on areas outside of the incorporated cities of Antelope, The Dalles, Dufur, Maupin, Mosier, and Shaniko. Information on County roadways within the incorporated cities was included, but no assessments were conducted on areas within incorporated cities. Coordination with each incorporated city is encouraged in order to provide the greatest level of planning consistency.

### ROADWAY SYSTEM PLAN

The Wasco County roadway system plan reflects the anticipated operations and circulation needs through the year 2030 and provides guidance on how to facilitate vehicular and freight traffic over the next 20 years. The plan focuses on the County owned and maintained rural roadway system including all rural local roadways. All state highways residing within the County are identified for coordination purposes.

#### **Functional Classifications**

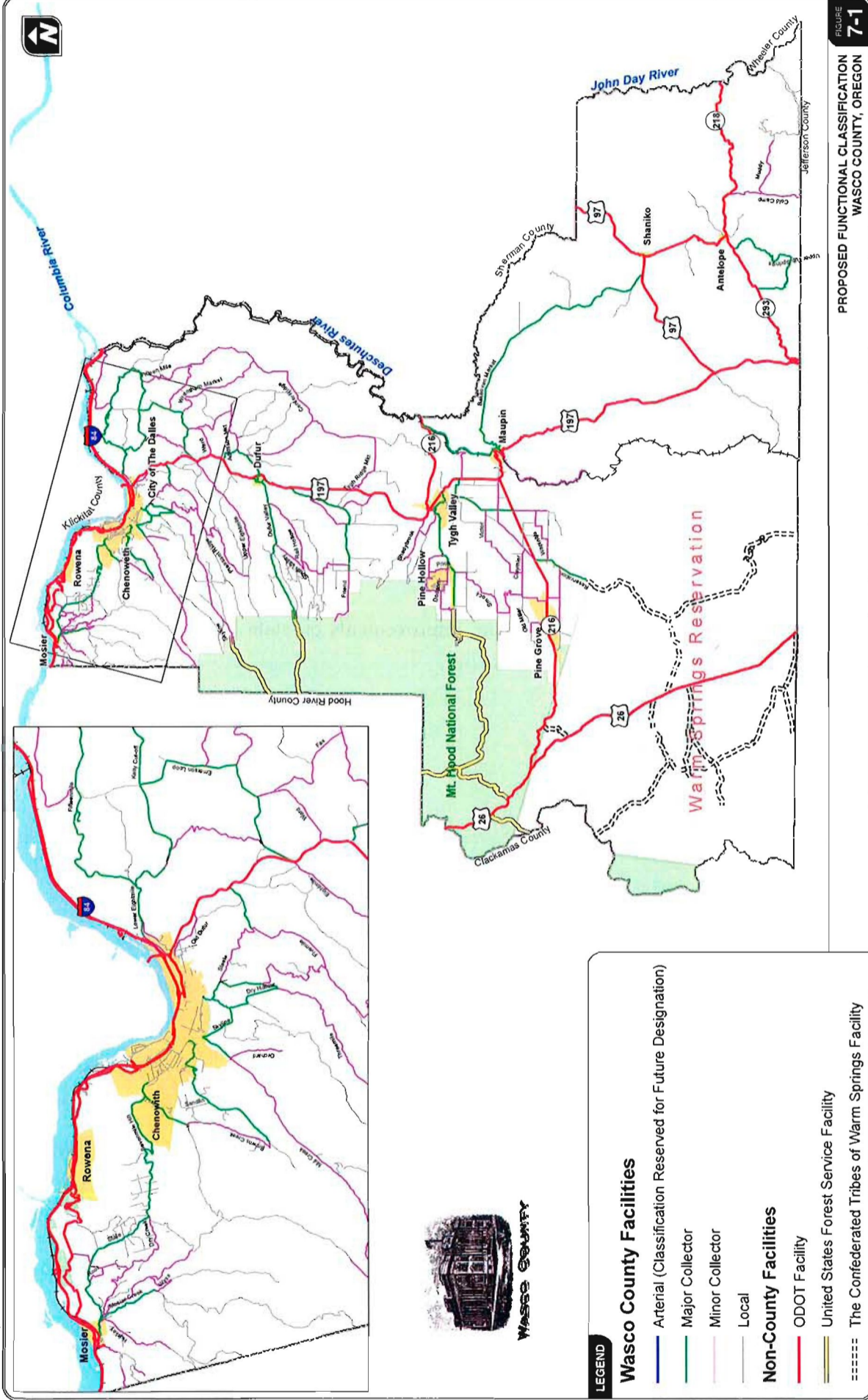
Functional classification of a roadway characterizes the intended purpose, amount and type of vehicular traffic it is expected to carry, provisions for non-auto travel, and the roadway's design standards. The classification considers access to adjacent land uses and the transportation modes that should be accommodated.



The functional classification system for Wasco County includes: Rural Arterial, Rural Major Collector, Rural Minor Collector, and Rural Local Road. Table 7-1 provides a detailed description of each classification. Figure 7-1 presents the functional classifications for all existing and planned County roadways.

**TABLE 7-1 WASCO COUNTY FUNCTIONAL CLASSIFICATION DESCRIPTIONS**

| Functional Classification | Description  | Typical Average Daily Traffic Range |
|---------------------------|--|-------------------------------------|
| Rural Arterial            | Primary function is to carry high levels of regional vehicular traffic at high speeds; connects the collector road system to freeways; provides connection to other cities and communities; serves major traffic movements; access control may be provided through medians and/or channelization;  | >2,000                              |
| Rural Major Collector     | Primary function is to serve traffic between neighborhoods and community facilities; principal carrier between arterials and local roads; provides some degree of access to adjacent properties, while maintaining circulation and mobility for all users; carries lower traffic volumes at slower speeds than arterials; typically has two or three lanes; bicycle facilities may be exclusive or shared roadways depending on traffic volumes, speeds, and extent of bicycle travel. | 500 - 2,000                         |
| Rural Minor Collector     | Primary function is to connect rural residential areas with arterials and major collector roads; has slower speeds to enhance safety; bicycle facilities may be exclusive or shared roadways depending on traffic volumes, speeds, and extent of bicycle travel.   | 250 - 400                           |
| Rural Local Road          | Primary function is to provide direct access to adjacent land uses; characterized by short roadway distances, slow speeds, and low volumes; offers a high level of accessibility; serves passenger cars, pedestrians, and bicycles, but not through trucks. Local roads may be paved or unpaved.   | <250                                |



**LEGEND**

**Wasco County Facilities**

- Arterial (Classification Reserved for Future Designation)
- Major Collector
- Minor Collector
- Local

**Non-County Facilities**

- ODOT Facility
- United States Forest Service Facility
- The Confederated Tribes of Warm Springs Facility

FIGURE 7-1  
PROPOSED FUNCTIONAL CLASSIFICATION  
WASCO COUNTY, OREGON

H:\profile\0637 - TSPs for Wasco County\g\Proposed Functional Classification.mxd

### **Design Standards**

The roadway design standards take into consideration roadway function and operational characteristics, including traffic volume, capacity, operating speed, and safety. The design standards are necessary to ensure that as the road system develops, it will be capable of safely and efficiently serving the traveling public, while also accommodating the orderly development of adjacent lands. The County's rural roadway design standards for all County owned and maintained facilities are shown by functional classification in Table 7-2.

Sidewalks and bicycle lanes have not been included in the roadway design standards because the majority of County roadways are rural in nature and sidewalks are not a typical feature on these facilities. The standards do include shoulder widths which are adequate to accommodate a low volume of pedestrian and bicycle traffic.

Design standards for County roadways within urban areas (incorporated cities) are provided in Table 7-3 in order to maintain consistency with incorporated cities within the County. Coordination with each incorporated city is encouraged in order to provide the greatest consistency with the most current design standards.

While not specifically outlined in this plan, improvements on state highways must meet ODOT design and operating standards.

**TABLE 7-2 RURAL WASCO COUNTY ROADWAY DESIGN STANDARDS**

|  | Rural Local Roads* |     |     |     |     |     |        |     |     |       |     |     | Rural Minor Collector |     |     | Rural Major Collector |     |     | Rural Arterial |     |     |     |     |     |
|--|--------------------|-----|-----|-----|-----|-----|--------|-----|-----|-------|-----|-----|-----------------------|-----|-----|-----------------------|-----|-----|----------------|-----|-----|-----|-----|-----|
|  | Unpaved            |     |     |     |     |     | Paved  |     |     |       |     |     | Paved                 |     |     | Paved                 |     |     | Paved          |     |     |     |     |     |
|  | <25                |     |     |     |     |     | 25-250 |     |     |       |     |     | 250-400               |     |     | 400 - 2,000           |     |     | >2,000         |     |     |     |     |     |
| Design ADT                                 | L                  | R   | M   | L   | R   | M   | L      | R   | M   | L     | R   | M   | L                     | R   | M   | L                     | R   | M   | L              | R   | M   | L   | R   | M   |
| Terrain <sup>1</sup>                       |                    |     |     |     |     |     |        |     |     |       |     |     |                       |     |     |                       |     |     |                |     |     |     |     |     |
| Design Speed (mph)                         | 30                 | 30  | 20  | 30  | 30  | 20  | 30     | 30  | 20  | 30    | 30  | 20  | 40                    | 30  | 20  | 50                    | 40  | 30  | 60             | 50  | 40  | 60  | 50  | 40  |
| Max Grade (%)                              | 7                  | 10  | 12  | 7   | 10  | 12  | 7      | 10  | 12  | 7     | 10  | 12  | 9                     | 9   | 12  | 6                     | 8   | 10  | 3              | 4   | 8   | 3   | 4   | 8   |
| Stopping Sight Distance (ft)               | 220                | 235 | 135 | 220 | 235 | 135 | 220    | 235 | 135 | 220   | 235 | 135 | 230                   | 230 | 135 | 475                   | 350 | 235 | 600            | 610 | 350 | 600 | 610 | 350 |
| Passing Sight Distance (ft)                | -                  | -   | -   | -   | -   | -   | 1,090  | 2   | 2   | 1,470 | 2   | 2   | 2                     | 2   | 2   | 1,835                 | 2   | 2   | 2,135          | 2   | 2   | 2   | 2   | 2   |
| Traveled Way Width (ft)                    | 18                 | 18  | 18  | 22  | 22  | 22  | 22     | 22  | 22  | 22    | 22  | 22  | 22                    | 22  | 22  | 24                    | 24  | 24  | 24             | 24  | 24  | 24  | 24  | 24  |
| Paved Shoulder Width (each side)           |                    |     |     |     |     |     |        |     |     |       |     |     |                       |     |     |                       |     |     |                |     |     |     |     |     |
| - Non Bike Route                           | -                  | -   | -   | -   | -   | -   | -      | -   | -   | -     | -   | -   | 1                     | 1   | 1   | 1                     | 1   | 1   | 1              | 1   | 1   | 2   | 2   | 2   |
| - Bike Route (ft)                          | -                  | -   | -   | -   | -   | -   | -      | -   | -   | -     | -   | -   | 2                     | 2   | 2   | 5                     | 5   | 5   | 6              | 6   | 6   | 6   | 6   | 6   |
| Gravel Shoulder Width (each side)          | -                  | -   | -   | -   | -   | -   | 2      | 2   | 2   | 2     | 2   | 2   | 2                     | 2   | 2   | 2                     | 2   | 2   | 2              | 2   | 2   | 2   | 2   | 2   |
| Roadway Width (Non Bike / Bike Route) (ft) | 18                 | 18  | 18  | 22  | 22  | 22  | 26     | 26  | 26  | 26    | 26  | 26  | 28                    | 28  | 28  | 30                    | 30  | 30  | 32             | 32  | 32  | 32  | 32  | 32  |
| Number of Lanes                            | 2                  | 2   | 2   | 2   | 2   | 2   | 2      | 2   | 2   | 2     | 2   | 2   | 2                     | 2   | 2   | 2                     | 2   | 2   | 2              | 2   | 2   | 2   | 2   | 2   |
| Minimum ROW Width (ft)                     | 50                 | 50  | 50  | 50  | 50  | 50  | 50     | 50  | 50  | 50    | 50  | 50  | 60                    | 60  | 60  | 60                    | 60  | 60  | 60             | 60  | 60  | 60  | 60  | 60  |
| Preferred Access Spacing <sup>3</sup>      | 75                 |     |     | 100 | 100 | 100 | 100    | 100 | 100 | 100   | 100 | 100 | 150                   | 150 | 150 | 300                   | 300 | 300 | 500            | 500 | 500 | 500 | 500 | 500 |

\* Table 7-2 provides standards for public roadways only. Design standards for private roadways are outlined in Wasco County's Development Ordinance.

<sup>1</sup> L= Level, R=Rolling, M=Mountainous

<sup>2</sup> See AASHIO manual for guidance.

<sup>3</sup> Lower spacing may be allowed when supported by a traffic study and/or approved by the County Engineer.

**TABLE 7-3 URBAN WASCO COUNTY ROADWAY DESIGN STANDARDS**

|  | Local Street          | Urban Minor Collector | Urban Major Collector | Urban Arterial                                    |
|--|-----------------------|-----------------------|-----------------------|---|
| <b>Design ADT</b>                                | <1,000                | 1,000-3,000           | 3,000-6,000           | >6,000  |
| <b>Design Speed (mph)</b>                        | 25                    | 25-30                 | 25-35                 | 25-35   |
| <b>Max Grade</b>                                 | 12%                   | 10%                   | 10%                   | 6%  |
| <b>Minimum ROW Width (ft)</b>                    | 58                    | 64                    | 63-76                 | 90  |
| <b>Number and Width of Lanes</b>                 | 2<br>12' Travel Lanes | 2<br>12' Travel Lanes | 2<br>12' Travel Lanes | 3<br>Two 12' Travel Lanes<br>14' Center Turn Lane |
| <b>Traveled Way Width (ft)</b>                   | 36                    | 40                    | 52                    | 50 or 66  |
| <b>On-Street Parking (ft)</b>                    | Not striped           | 8 (each side)         | 8 (each side)         | 8 (each side), optional                           |
| <b>Sidewalk Width (ft)</b>                       | 5 (each side)         | 5 (each side)         | 5 (each side)         | 5 (each side)                                     |
| <b>Bike Lane Width (ft)</b>                      | -                     | -                     | 6                     | 6   |
| <b>Preferred Access Spacing (ft)<sup>1</sup></b> | 50                    | 150-300               | 150-300               | 300-600   |

Note: The urban roadway design standards apply to all County roadways in urban areas (incorporated communities). However, local roadway design standards may be utilized when deemed appropriate.

<sup>1</sup> Decreased spacing may be allowed when supported by a traffic study and/or approved by the local jurisdiction.

### Access Management Policy

Managing access to the County's road system is necessary to preserve capacity and maintain safety of the County's arterial and collector system. Capacity is preserved by minimizing the number of points where traffic flow may be disrupted by traffic entering and exiting the roadway. Access management also enhances safety along roadways by minimizing the number of potential conflict points. Table 7-2 (rural) and Table 7-3 (urban) show the access spacing standard for all driveways and private roads accessing collector and arterial County facilities.

Access to state facilities is governed by ODOT's access management standards provided in the most current version of the 1999 Oregon Highway Plan and in Oregon Administrative Rule 734-051. Table 7-4 provides the spacing standard on ODOT facilities.

**TABLE 7-4 ODOT HIGHWAY SPACING STANDARDS**

| Posted Speed (mph) | ODOT Classification | Rural <sup>1</sup>      |       | Urban <sup>1</sup>      |       | UBA <sup>1</sup> | STA <sup>1</sup> |
|--------------------|---------------------|-------------------------|-------|-------------------------|-------|------------------|------------------|
|                    |                     | Expressway <sup>2</sup> | Other | Expressway <sup>2</sup> | Other |                  |                  |
| >= 55              | Statewide           | 5,280                   | 1,320 | 2,640                   | 1,320 |                  |                  |
|                    | Regional            | 5,280                   | 990   | 2,640                   | 990   |                  |                  |
|                    | District            | 5,280                   | 700   | 2,640                   | 700   |                  |                  |
| 50                 | Statewide           | 5,280                   | 1,100 | 2,640                   | 1,100 |                  |                  |
|                    | Regional            | 5,280                   | 830   | 2,640                   | 830   |                  |                  |
|                    | District            | 5,280                   | 550   | 2,640                   | 550   |                  |                  |
| 40 & 45            | Statewide           | 5,280                   | 990   | 2,640                   | 990   |                  |                  |
|                    | Regional            | 5,280                   | 750   | 2,640                   | 750   |                  |                  |
|                    | District            | 5,280                   | 500   | 2,640                   | 500   |                  |                  |
| 30 & 35            | Statewide           |                         | 770   |                         | 720   | 720              | *                |
|                    | Regional            |                         | 600   |                         | 425   | 425              |                  |
|                    | District            |                         | 400   |                         | 350   | 350              |                  |
| <= 25              | Statewide           |                         | 550   |                         | 520   | 520              | *                |
|                    | Regional            |                         | 450   |                         | 350   | 350              |                  |
|                    | District            |                         | 400   |                         | 350   | 350              |                  |

Notes:

<sup>1</sup>Measurement of the approach road spacing (feet) is from center to center on the same side of the roadway.

<sup>2</sup>Spacing for Expressway at-grade intersections only; refer to Table 12, Appendix C of the latest version of the OHP for interchange spacing.

UBA: Urban Business Area

STA: Special Transportation Area

\*Where driveways are allowed and land-use permits, the minimum spacing for driveways is 175 feet or mid-block if the current block spacing is less than 350 feet. (See Note ④ in Appendix C, OHP)

ODOT's standards also apply to access spacing on County facilities located within the management area of a freeway or expressway interchange, as defined by OAR 734-051.

The Oregon Transportation Planning Rule (TPR) defines access management as a set of measures regulating access to streets, roads, and highways, from public roads and private driveways. The TPR requires that new connections to arterials and state highways be consistent with designated access management categories. This TSP includes an access management policy that maintains and enhances the integrity (i.e., capacity, safety, and level of service) of Wasco County's roadways.

Access management standards vary depending on the functional classification and purpose of a given roadway. Roadways on the higher end of the functional classification system (i.e., arterials and major collectors) tend to have higher spacing standards, while facilities such as minor collectors and local streets allow more closely spaced access points. These standards apply to new development or redevelopment; existing accesses are allowed to remain as long as the land use does not change. As a result, access management is a long-term process in which the desired access spacing to a street slowly evolves over time as redevelopment occurs.

Given the general rural nature of the county, it is not expected that variances to access spacing standards will be needed often. In the unique circumstance that a variance is needed a conditional access permit may be issued by Wasco County or ODOT, as appropriate.

### **Traffic Operations Standards**

Wasco County has an obligation to maintain a safe, convenient, and economical transportation system. A maximum volume-to-capacity (v/c) ratio of 0.85 during a typical weekday peak hour should be maintained for all County-owned or maintained intersections located outside of an urban incorporated jurisdiction. At intersections where one or more approaches is maintained by another jurisdiction such as ODOT, the more restrictive standards apply. For unsignalized intersections, the v/c ratio should be based on the intersection's critical movement. For signalized intersections, the ratio is based on the overall intersection operation.

In incorporated urban areas, the locally adopted operation standards apply. For all County-owned or maintained intersections located inside the City of The Dalles urban growth boundary, the level of service standards of the City of The Dalles apply. All intersection operations analyses follow the methodology described in the latest edition of the Highway Capacity Manual (HCM), published by Transportation Research Board (TRB).

## **IMPLEMENTATION PLAN**

This section outlines specific transportation system improvement projects as well as a categorization of the identified improvements into two groups: near-term and long-term. The categorization presented reflects the relative time period in which it may be foreseeable for the County to implement the project; it is not intended to limit the selection of a project or the order in which projects will be implemented. The County will need to periodically update its TSP and will review the need and timing for improvements at those times.

Long-term projects may or may not be feasible within the twenty-year planning horizon, for reasons of both need and resources. However, they represent a vision for an efficient transportation system in the future and they have been identified to support the preservation of the opportunities as future conditions may warrant them.

The construction of roads, water, sewer, and electrical facilities in conjunction with local development activity should be coordinated if the County is to develop in an orderly and efficient way. Consequently, the planned improvements identified should be considered in light of developing infrastructure sequencing plans, and may need to be modified accordingly.

The planned transportation improvement projects in Wasco County include those identified to address various transportation issues, which generally include:

- *Operations:* These projects provide the roadway capacity needed to accommodate future traffic flows and reduce delay.
- *Safety:* These projects consider opportunities to improve existing facilities to reduce probability and severity of crashes.
- *Pedestrian and Bicycle Enhancements:* These projects improve existing facilities or create new facilities that provide greater connectivity and increase access to pedestrian and bicycle routes.
- *Heavy Maintenance:* These projects address needs identified by the County that relate to roadway, roadside, or drainage and cannot be conducted as part of regular maintenance activities.
- *Full Reconstruction:* These projects include reconstruction of the roadway including removal of existing roadway, and placement of aggregate base and asphalt pavement.
- *Feasibility Studies:* These projects have identified the need for some level of long-term improvements to different roadway segments or intersections. Given the size and complexity, a more detailed evaluation of potential improvements has been identified that is beyond the scope of the TSP.

While site-specific projects, such as adding turn lanes at an existing intersection, have been included to improve conditions at particular locations, the projects reflect a broader goal which is to develop an efficient transportation network that will reduce reliance on the state highways and limit potential for motor vehicle crashes.

### **Rural Transportation Improvements**

The planned near- and long-term transportation improvements within unincorporated areas of Wasco County are listed in Table 7-5. The table includes a project letter for reference to the project location illustrated in Figure 7-2. Additionally, the table includes preliminary cost estimates with 40-percent contingency for the projects, excluding right-of-way. Potential non-binding funding sources were also identified for each project and are subject to negotiation at the time of project execution. Wasco County Transportation Improvement Program (TIP) project costs were estimated by the County while Project "G" was estimated by ODOT. All projects identified as part of the STIP were estimated by ODOT as well.

The implementation plan incorporates the preferred financing plan, which identifies that a limited amount of money will be available to fund projects. As a result, only improvements that are planned for implementation and are expected to have funding are shown in the near-term time frame. The long-term project timeline reflects the fact that some projects are not needed immediately and it will take time to accumulate the funds to build those projects.

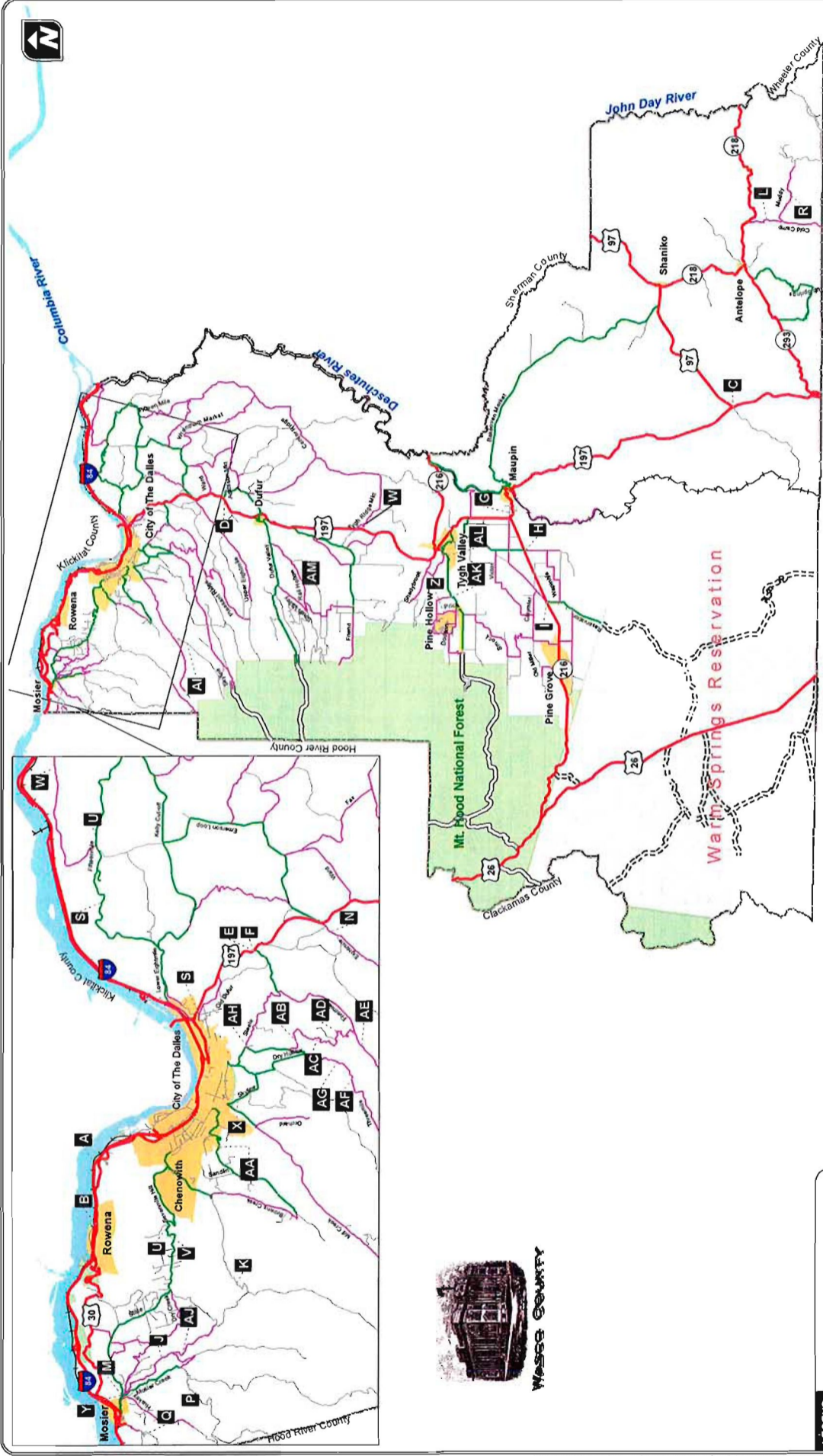


TABLE 7-5 WASCO COUNTY RURAL TRANSPORTATION IMPROVEMENT PROGRAM

| Project Identifier         | Project Name   | Project Description   | Project Category                               | Source         | Project Cost Estimate <sup>1</sup> | Potential Funding Source |        |      |
|----------------------------|--|---|--|----------------|------------------------------------|--------------------------|--------|------|
|                            |  |   |  |                |                                    | ODOT                     | County | City |
| <b>Short-Term Projects</b> |  |   |  |                |                                    |                          |        |      |
| A                          | I-84: Hood River - The Dalles Dam Access Bundle 207                          | Replace/repair bridges; preservation work; median barrier   | Bridge   | 2008-2011 STIP | \$43,000,000                       | P                        |        |      |
| B                          | I-84: Rowena Bluff Rockfall Project Development                              | Develop project for construction, coordinate with Columbia Gorge Commission   | Operations                                     | 2008-2011 STIP | \$480,000                          | P                        |        |      |
| C                          | Threemile Road/ Steele Road Intersection Reconfiguration                     | Modify intersection geometry and traffic control by realigning as a stop-controlled intersection that reduces the overall paved surface and clearly defines traffic priority.   | Operations, Safety                             | TAC            | \$15,000                           |                          | P      |      |
| <b>Long-Term Projects</b>  |  |   |  |                |                                    |                          |        |      |
| D                          | US 97/US 197 Highway Junction Intersection Reconfiguration Study             | Prepare a study to formally evaluate options for realignment/reconfiguration of the US97/US197/South Jct. Road intersection.  | Intersection Reconfiguration Feasibility Study | TAC            | \$50,000                           |                          | P      |      |
| E                          | US 197/Boyd Loop Road Intersection Study                                     | Evaluate options for realignment/reconfiguration of the US 197/Boyd Loop Road intersection to intersect US 197. Currently, there are two intersections that provide access from Boyd Loop to US 197. Both intersect US 197 at acute angles (25-40 degrees). Sight distance from Boyd Loop to US 197 is difficult due to angle of intersection.  | Intersection Reconfiguration Feasibility Study | TAC            | \$50,000                           |                          | P      |      |
| F                          | US 197/Fivemile Road Intersection Safety Feasibility Study                   | Intersection study to investigate feasibility of reconstruction of highway to include turn lanes at Fivemile Road. Highway widening could include: 16 foot northbound left-turn lane on US 197 and 14 foot southbound right-turn lane. Wasco County has received complaints that trucks heading to the County landfill (located off of Fivemile Road west of US 197) block the through traffic on US 197 while waiting to turn. Roadway has steep embankments on both sides at this location and known environmental and residential impacts. | Intersection Improvement Feasibility Study     | TAC            | \$50,000                           |                          | P      |      |
| G                          | US 197 Realignment: Wapinitia Hwy Jct. (milepost 43.0) to Maupin City Limits | Reconstruct/realign roadway onto embankment that has been placed for new alignment.   | Modernization                                  | TAC            | \$3,500,000                        |                          | P      |      |
| H                          | US 197/Wasco County Landfill Access Road Feasibility Study                   | Conduct a study of the feasibility of constructing an alternate route from US 197 (near MP 3.05) along the top of the ridge to the Wasco County Landfill.   | Roadway Planning Feasibility Study             | TAC            | \$50,000                           |                          | P      | S    |
| I                          | OR 216/Juniper Flat/Natural Pasture Road Safety Improvements                 | Reduce sight distance restrictions for minor street traffic on Juniper Flat at OR 216. Modifications to intersection and/or elevation of OR 216 to reduce impacts of crest vertical curve to the west of Juniper Flat.  | Safety   | TAC            | \$700,000                          |                          | P      |      |
| J                          | OR 216/Reservation Road Safety Improvements                                  | Monitor intersection crash history to verify that recent crash frequency and trends do not continue. Intersection is currently in 90-95th percentile on ODOT's SPIS list. There are no observable safety concerns based on field review. Improvement options could include realignment of Old Wapinitia Road to the west of the Gas Station/Market and realignment of Reservation Road at OR 216 to make a 90-degree 4-way intersection.  | Safety   | ODOT SPIS      | -                                  |                          | P      |      |
| K                          | Behrens Road Reconstruction  | Full reconstruction from Carroll to Digger Road.  | Full Reconstruction                            | TAC            | \$300,000                          |                          | P      |      |
| L                          | Chenoweth Creek Road Maintenance   | Heavy maintenance from end of pavement to Vensel Road.  | Heavy Maintenance, Safety                      | WC TIP         | \$570,000                          |                          |        | P    |
| M                          | Cold Camp Road Heavy Maintenance   | Heavy maintenance from Hwy 218 to Muddy Road.   | Heavy Maintenance, Safety                      | WC TIP         | \$300,000                          |                          |        | P    |
| N                          | Carroll Road Reconstruction  | Full reconstruction from Dry Creek to MP 1.37.  | Full Reconstruction                            | WC TIP         | \$550,000                          |                          |        | P    |
| O                          | Eightmile Road Reconstruction  | Full reconstruction from US 197 to Pine Hollow Road.  | Full Reconstruction                            | TAC            | \$1,500,000                        |                          |        | P    |
| P                          | Fifteenmile Road Reconstruction  | Full reconstruction from Lower Eightmile to Company Hollow.   | Full Reconstruction                            | TAC            | \$2,300,000                        |                          |        | P    |
| Q                          | Godbersen Road Heavy Maintenance   | Heavy maintenance on initial grade off Wilson Road.   | Heavy Maintenance, Safety                      | WC TIP         | \$100,000                          |                          |        | P    |
| R                          | Hood River Road Heavy Maintenance  | Heavy maintenance from end of pavement to Proctor Road (0.53 miles in length).  | Heavy Maintenance, Safety                      | WC TIP         | \$150,000                          |                          |        | P    |

| Project Identifier | Project Name                                     | Project Description  | Project Category                           | Source | Project Cost Estimate <sup>1</sup> | Potential Funding Source |             |
|--------------------|--|--|--|--------|------------------------------------|--------------------------|-------------|
|                    |  |  |  |        |                                    | ODOT                     | County City |
| S                  | Muddy Road Heavy Maintenance                     | Heavy maintenance from Cold Camp Road to MP 1.56.  | Heavy Maintenance, Safety                  | WC TIP | \$200,000                          |                          | P           |
| T                  | Old Dufur North Reconstruction                   | Full reconstruction from Richmond St to 3 mile creek.  | Full Reconstruction                        | TAC    | \$300,000                          |                          | P           |
| U                  | Old Moody Road Shared Bike Route                 | Pave 4-mile segment (24 feet width) of Old Moody Road for shared use by bicycles and automobiles.  | Bicycle, Pavement                          | TAC    | \$10,700,000                       |                          | P           |
| V                  | Sevenmile Hill Road Reconstruction               | Full reconstruction from Chenoweth Creek to MP 0.73.   | Full Reconstruction                        | WC TIP | \$300,000                          |                          | P           |
| W                  | Sevenmile Hill Road Reconstruction               | Full reconstruction from Harvey Pit to 1981 job.   | Full Reconstruction                        | WC TIP | \$400,000                          |                          | P           |
| X                  | Shared Bike Route on Tygh Ridge Road             | Pave 1.5 mile segment (24 feet width) of Tygh Ridge for shared bicycle use by bicycles and automobiles.  | Bicycle, Pavement                          | TAC    | \$4,000,000                        |                          | P           |
| Y                  | Skyline Road Reconstruction                      | Full reconstruction from packing plant to end of pavement.   | Full Reconstruction                        | TAC    | \$1,100,000                        |                          | P           |
| Z                  | Slate Road Reconstruction                        | Full reconstruction from Mosier Creek bridge to MP 1.23.   | Full Reconstruction                        | WC TIP | \$340,000                          |                          | P           |
| AA                 | Price Road Reconstruction                        | Reconstruct and pave from Ross Road to end of pavement.  | Pavement, Safety                           | TAC    | \$660,000                          |                          | P           |
| AB                 | Knob Hill Road Reconstruction                    | Full reconstruction from Cherry Heights to MP 0.83.  | Full Reconstruction                        | WC TIP | \$330,000                          |                          | P           |
| AC                 | Pleasant Ridge Road Reconstruction: Segment A    | Full reconstruction from Threemile Road to grindings.  | Full Reconstruction                        | WC TIP | \$500,000                          |                          | P           |
| AD                 | Pleasant Ridge Road Reconstruction: Segment B    | Full reconstruction from grindings to Dolan Rd.  | Full Reconstruction                        | WC TIP | \$600,000                          |                          | P           |
| AE                 | Pleasant Ridge Road Reconstruction: Segment C    | Reconstruct and pave from Dolan Road to Five Mile Road and provide a bicycle route.  | Full Reconstruction, Bicycle, Safety       | WC TIP | \$590,000                          |                          | P           |
| AF                 | Pleasant Ridge Road Reconstruction: Segment D    | Reconstruct and pave from 5 mile intersection to Quarter-horse Ranch (0.85 miles in length)  | Pavement, Safety                           | WC TIP | \$480,000                          |                          | P           |
| AG                 | Threemile Road Reconstruction                    | Full reconstruction from End Pavement to Skyline.  | Full Reconstruction, Safety                | WC TIP | \$3,000,000                        |                          | P           |
| AH                 | Threemile Road Reconstruction                    | Full reconstruction from Dry Hollow to End of Pavement.  | Full Reconstruction                        | WC TIP | \$670,000                          |                          | P           |
| AI                 | Upper Mill Creek Heavy Maintenance               | Heavy maintenance from end of pavement to bus turn-around.   | Heavy Maintenance, Safety                  | WC TIP | \$200,000                          |                          | P           |
| AJ                 | Vensel Road Reconstruction                       | Full reconstruction from Digger Road to Columbia River Resort.   | Full Reconstruction                        | WC TIP | \$220,000                          |                          | P           |
| AK                 | Wamic Market Road/ Ross Road Intersection Safety | Combine multiple stop-control intersections into one stop-controlled intersection to eliminate sight distance constraints for existing stop-controlled movements and encourage slower speeds for turning movements. Currently the eastbound left-turn from Wamic Market Road to Ross Road can occur at high speeds (45 mph or greater). The westbound right turn must stop and yield to that movement. Due to high-speed movements, required sight distance is greater than that provided due to a crest vertical curve. | Intersection Improvement Feasibility Study | TAC    | \$50,000                           |                          | P           |
| AL                 | Wamic Market Road Safety                         | Reconstruct roadway segments along steep grade. Phase I of the project has been completed; future sections are identified for improvements under Phase II.   | Full Reconstruction, Safety                | WC TIP | \$1,800,000                        |                          | P           |
| AM                 | Winslow Road Heavy Maintenance                   | Heavy maintenance from Rail Hollow Road to 2004 job.   | Heavy Maintenance                          | WC TIP | \$430,000                          |                          | P           |

<sup>1</sup> Cost estimate is planning level only; Does not include ROW cost  
 STIP: Statewide Transportation Improvement Project  
 TAC: Technical Advisory Committee  
 ODOT SPIS: Oregon Department of Transportation Safety Priority Index System  
 WC TIP: Wasco County Transportation Improvement Project  
 P: Primary party with potential funding and implementation responsibility  
 S: Secondary party with potential funding and implementation responsibility



**LEGEND**

Project Identifier  
(See Table 7-5 for details)

#

**RURAL TRANSPORTATION IMPROVEMENT PROJECTS  
LOCATION MAP  
WASCO COUNTY, OREGON**

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As shown in Table 7-5, only three projects identified within Wasco County are expected to be implemented in the near-term time period; two are identified in ODOT's 2008-2011 STIP. The approximate cost of near-term projects is \$43.5 million and the approximate cost of long-term projects is \$37.0 million.

Projects D, E, F, and H require a more detailed analysis and/or public involvement effort to resolve certain transportation issues. In these cases, the TSP identifies feasibility or intersection studies at an estimated cost of \$50,000; actual project costs will be determined by each study.

### **Urban Transportation Improvement Projects**

ODOT, Wasco County, and The City of The Dalles identified transportation improvement projects on County facilities within incorporated areas. All transportation improvement projects within incorporated areas of Wasco County are summarized in Table 7-6.

No improvements included in Table 7-6 are planned for implementation and are not expected to have funding in the near-term time frame. All projects are identified on the long-term project timeline, which reflects the fact that some projects are not needed immediately, and it will take time to accumulate the funds to build them.

The table includes a project letter for reference to the project location illustrated in Figure 7-3. Additionally, the table includes preliminary cost estimates. Wasco County Transportation Improvement Program (TIP) project costs were estimated by the County, Projects "AO" and "AP" were estimated by ODOT, and all others were identified in The Dalles TSP (updated December 2006). All the identified urban projects should be incorporated in the next update of the City of The Dalles TSP.

TABLE 7-6 WASCO COUNTY URBAN TRANSPORTATION IMPROVEMENT PROGRAM

| Project Identifier | Project Name                                  | Project Description  | Project Category        | Source         | Project Cost Estimate <sup>1</sup> | Potential Funding Source |      |
|--------------------|---|--|-------------------------|----------------|------------------------------------|--------------------------|------|
|                    |   |  |                         |                |                                    | ODOT                     | City |
| AN                 | US 39/Lower Eightmile Road Intersection       | Redesign Intersection.   | Safety, Operations      | The Dalles TSP | \$250,000                          | P                        | S    |
| AO                 | US 30 Chenoweth Creek Bridge Rehabilitation   | Deck widening and rail replacement of historical bridge located outside the northern boundary of The Dalles UGB. | Enhancement             | TAC            | \$575,000                          | P                        |      |
| AP                 | OR 197/Fremont Street Overpass                | New overpass at US 197.  | Safety, Operations      | The Dalles TSP | \$12,100,000                       | P                        | S    |
| AQ                 | Bret Clodfelter Way Reconstruction and Paving | Pave and add shoulders and bike lanes from US 197 to gate.   | Pavement, Bike          | WC TIP         | \$150,000                          | P                        | S    |
| AR                 | Hostetter Street Widening                     | Widen roadway from 6th Street to 10th Street and restripe to provide bike lanes; add sidewalks and curb.         | Safety, Pedestrian/Bike | The Dalles TSP | \$2,000,000                        | P                        | S    |
| AS                 | Snipes Street Widening                        | Widen to major collector cross-section from W. 9th Place to 10th Street.   | Safety, Operations      | The Dalles TSP | \$1,000,000                        | P                        | S    |
| AT                 | West 10th Street Improvements                 | Add curb and sidewalk from Walnut Street to UGB boundary near Chenoweth Creek Bridge.                            | Enhancement             | TAC            | Not Available                      | P                        | S    |
| AU                 | West 2nd Street Widening                      | Widen, re-stripe for bike lanes, add curbs and sidewalks from Webber Street to Hostetter Street.                 | Enhancement             | TAC            | Not Available                      | P                        | S    |
| AV <sup>2</sup>    | River Road Improvements                       | Widen entire length of River Road to Major Collector cross-section, add bike lanes, curb and sidewalk.           | Enhancement             | TAC            | Not Available                      | P                        | S    |

<sup>1</sup> Cost estimate is planning level only. Does not include ROW cost.

<sup>2</sup> The cost estimate developed for project AV is preliminary and will be further refined through a scoping process to be conducted in late 2009.

<sup>3</sup> Refer to the I-84 Chenoweth Interchange Area Management Plan (IAMP) for more information on specific improvements planned on River Road and preliminary cost estimates.

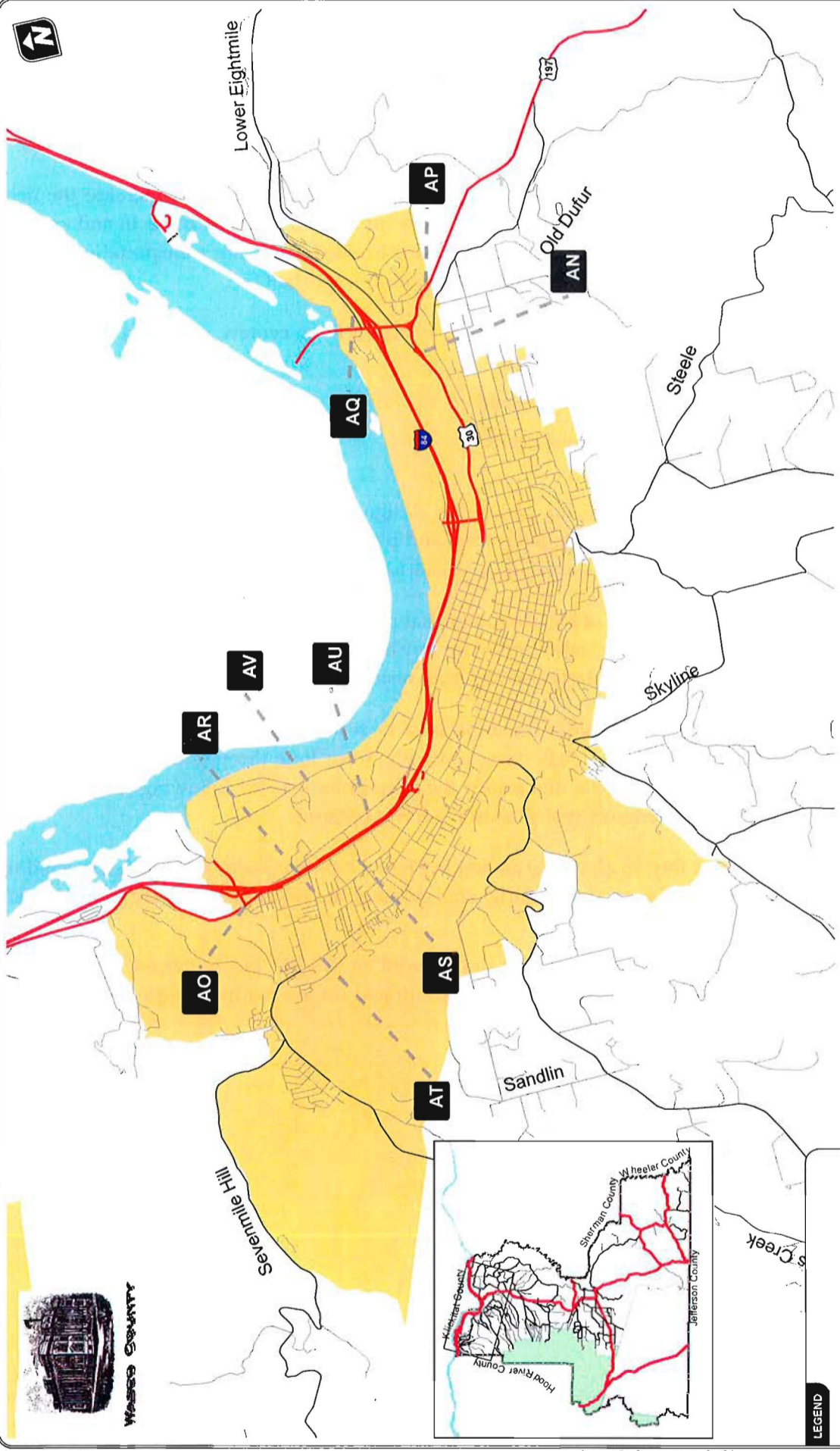
WC TIP: Wasco County Transportation Improvement Project

TAC: Technical Advisory Committee

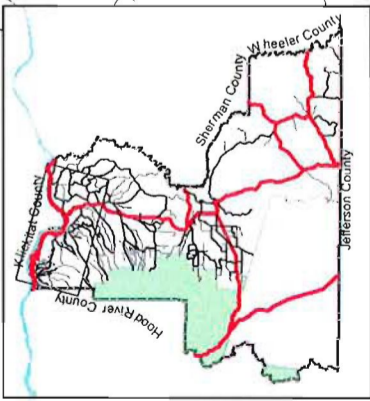
P : Primary party with potential funding and implementation responsibility

S : Secondary party with potential funding and implementation responsibility

July 2009



Wasco County TSP



LEGEND

# Project Number  
(See Table 7-6)

URBAN TRANSPORTATION IMPROVEMENT PROJECTS  
WASCO COUNTY, OREGON  
FIGURE 7-3

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## PEDESTRIAN AND BICYCLE SYSTEM PLAN

The future population growth in the incorporated areas of the County will increase the need of expanding the existing multi-use paths in the County and to provide new paths in and around the incorporated areas to encourage residents and visitors to ride bicycles for transportation. Providing a connected network of pedestrian and bicycle facilities is important for:

- Serving shorter trips from neighborhoods to area activity centers, such as schools, churches, and neighborhood commercial uses;
- Providing access to public transit; and
- Meeting residents' recreational needs.

In rural Wasco County, bicycle and pedestrian design standards provide paved shoulders on higher-volume roadways to facilitate pedestrian and bicycle travel. As development occurs, and as County funding permits, gaps in the existing pedestrian and bicycle systems will be filled.

Figure 7-4 illustrates a network of bicycle routes that provides an interconnected bicycle system for recreational and commuter use. These routes are consistent with the routes identified by The Dalles Cycling Association and are regularly used by local residents and visiting cyclists.

Bicyclists are encouraged to consider the impacts of increased volumes of heavy vehicles hauling agricultural products during the peak harvest months from June through September. In order to help cyclists choose a bicycle route that avoids the areas of harvest the following recommendations are provided based knowledge of typical season harvest patterns:

- From June 1 to July 15 all routes shown in Figure 7-4 are equally preferred. Expected traffic related to cherry harvest is primarily concentrated the roadways immediately south of The Dalles.
- From July 15 through September routes west of US-197 are preferred. Expected traffic related to wheat harvest is primarily concentrated on the roadways east of The Dalles and east of US 197.

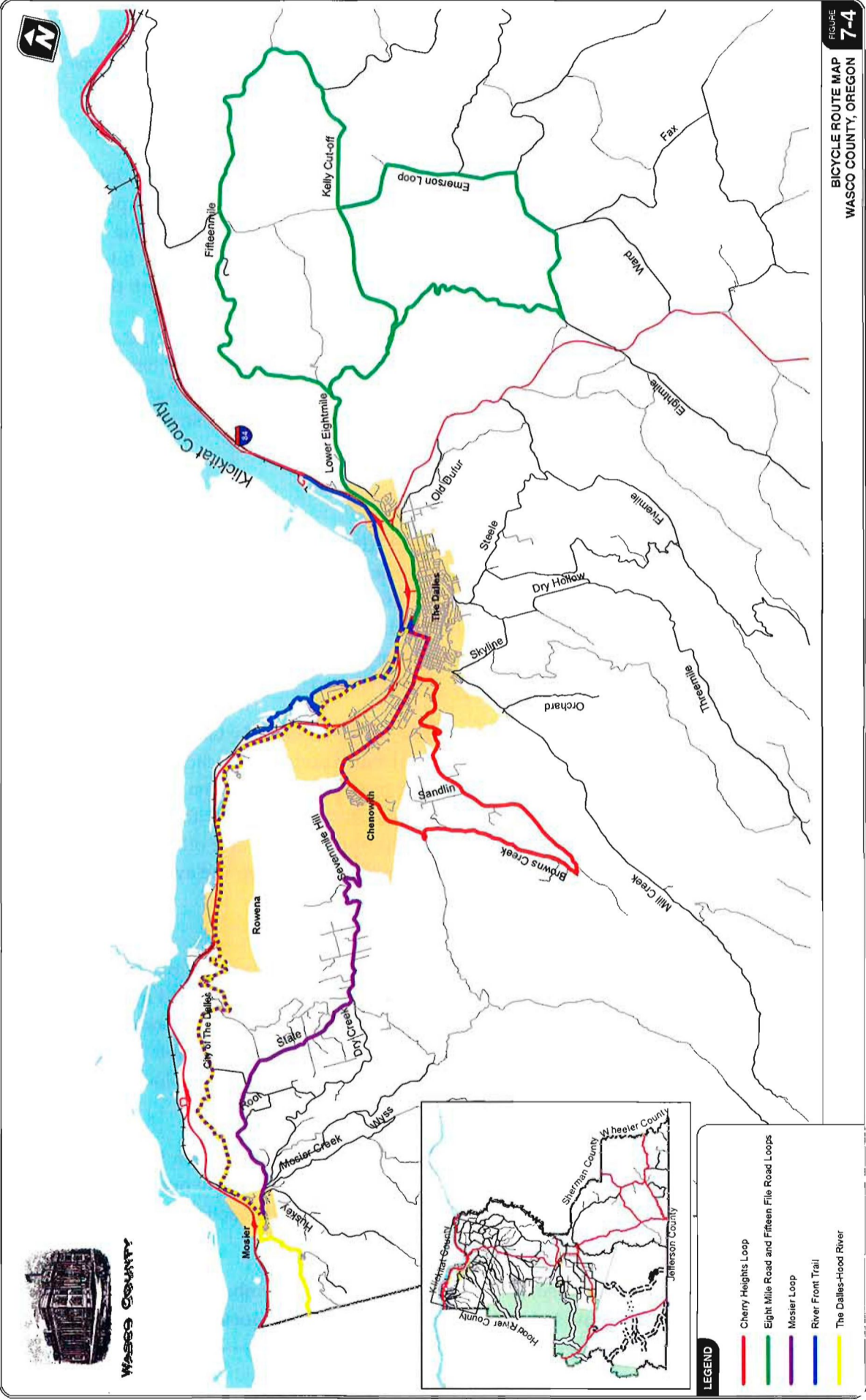


FIGURE 7-4  
BICYCLE ROUTE MAP  
WASCO COUNTY, OREGON

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### **PUBLIC TRANSPORTATION PLAN**

The Mid-Columbia Economic Development District, under contract with the Association of Oregon Counties, prepared the Wasco County Coordinated Transportation Plan (CTP) update for a four-year period from 2009 to 2012. The plan provides a framework to guide the investment of transportation resources in public transportation. As such, improvements and future funding of public transportation in Wasco County should be implemented in accordance with the CTP.

The CTP satisfies state and federal requirements for Special Transportation Fund agencies. It was developed as a tool to help local transportation providers and communities improve public transportation services, increase efficiency of services, and expand outreach to meet growing needs. The coordinated transportation plan also defines and prioritizes general strategies that the transit service providers can use to develop specific projects.

### **AIR SERVICE**

The Columbia Gorge Regional/The Dalles Municipal Airport serves Wasco County. The Airport is not located within the County, but is located directly across the Columbia River from The Dalles, in the State of Washington. The Airport is jointly owned by the City of The Dalles and Klickitat County in Washington State. Despite the location, the Columbia Gorge Regional/The Dalles Municipal Airport is included in the statewide air transportation study, and serves many large local commercial companies, heavy industrial firms, and the United States Forest Service.

Future growth and development is a top priority of the Columbia Gorge Regional/The Dalles Municipal (CGRDM) Airport. However, there are currently no projects scheduled that are expected to increase the volume of air travel. No other long-term plans have been identified that suggest future air travel needs will increase at the CGRDM or private airports within the County over the next 20 years. However, the County will consider opportunities to bring other air travel options to the region and make efforts to support those opportunities as they become available.

### **MARINE SYSTEM PLAN**

Currently no known marine freight is loaded from sites within the Port of The Dalles, but the potential for such facilities exists. The Port operates a marina that was updated in 2004 and features moorage for all types of vessels with drafts up to 14 feet (in most areas). Moorage is available for both boathouses and open moorage for power and sail vessels. Fuel is available by appointment by calling a member of The Dalles Yacht Club. A public boat launch ramp is also located at the east end of the Marina.

Adjacent to the Port of The Dalles a private facility is currently in operation that provides storage and transport services for wheat. Based on a conversation with the facility operator, approximately 800,000 bushels of wheat can be stored on site until it is shipped. The facility can load barges on-site with capacity of up to 120,000 bushels each.

A new multi-purpose dock is expected to be completed in November 2009, which will increase marine access and services provided within Wasco County. The dock is proposed at the end of

Union Street within the City of The Dalles and is currently in the design phase. Preliminary designs include a fixed-pier dock that can support a jib crane and fork lift for loading and unloading cargo. A second floating dock would serve approximately 12 to 15 pleasure boats and up to a 400 foot tour boat. Recognizing these future plans, Wasco County is committed to looking for opportunities to continue to help identify and expand marine transportation opportunities over the next 20 years.

### **RAIL SERVICE**

Wasco County contains part of the Union Pacific (UP) Railroad's east-west main line. As shown in Figure 7-5, the UP Railroad lies along the south bank of the Columbia River. This UP main line provides the most direct connection from the Pacific Northwest to the Overland Route via Pocatello, Idaho, and Cheyenne, Wyoming. The UP main line is maintained in Federal Railroad Association (FRA) Class 5 condition that permits operation of freight trains at up to 80 mph and passenger trains at up to 90 mph with no weight or dimension restrictions.

The Burlington Northern Santa Fe Railway (BNSF) is Oregon's second largest transcontinental railroad. A north-south BNSF line runs roughly along the county line between Wasco County and Sherman County before diverging into the south central part of the County and points south. BNSF maintains this line up to FRA Class 4 conditions with no weight or dimension restrictions. The maximum allowable speeds for Class 4 lines are 60 mph for freight and 80 mph for passenger trains. BNSF identified needed improvements to five tunnels on its north-south line through central Oregon, located along an 88-mile stretch in Wasco and Jefferson Counties. Improvements were deemed necessary to provide clearances sufficient for "high-cube," 9-foot 6-inch containers stacked one on top of another in a double-stack configuration.

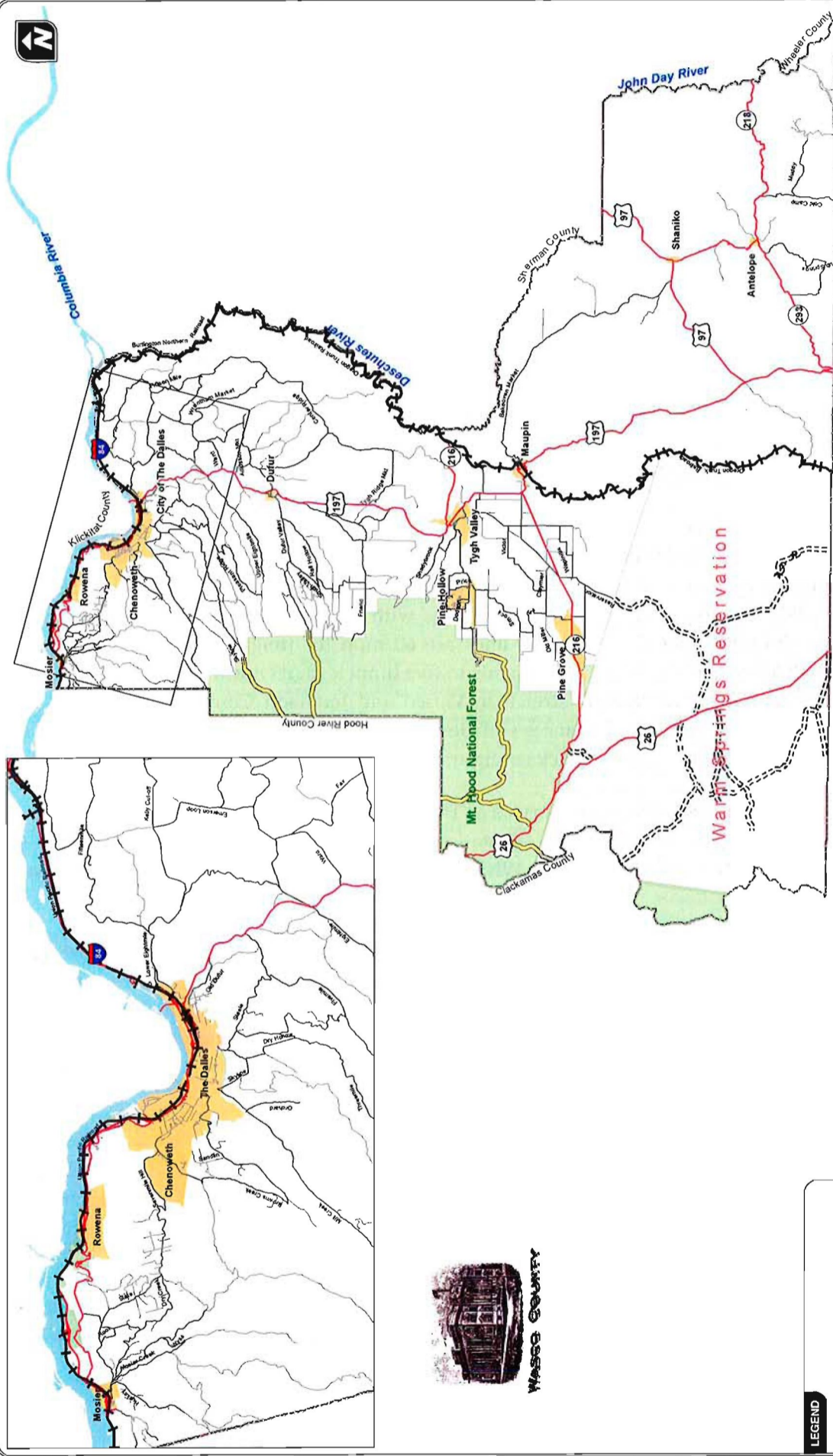
Amtrak provides a throughway bus service at The Transportation Center in The Dalles. The service provides bus transport to nearby Amtrak stations with an established train platform. The nearest Amtrak station with a train platform is Wishram, Washington, approximately 15 miles east of The Dalles.

The ORP states that future growth of freight rail traffic is difficult to predict and is uncertain. ODOT Rail does not currently have any plans for major improvements to rail service over the next 20 years within Wasco County. However, Wasco County is committed to working with all rail operators and recognizing future changes or opportunities needed maintain the existing system for the next 20 years.

### **PIPELINE AND TRANSMISSION SYSTEM PLAN**

One major interstate transmission pipeline traverses Wasco County. The facility is a 36-inch diameter natural gas pipeline operated by Gas Transmission Northwest Corporation. This line runs through the southeast portion of the county from Canada to California. The line transmits between 800 million and 1 billion cubic-feet of Canadian natural gas to California each day.

Wasco County recognizes the potential for future pipeline and transmission lines to bisect the county as future demand for natural gas increases. As a result, the County is committed to working with outside interests to safely and efficiently plan for and properly locate these lines.



LEGEND

--- Railroad Lines

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**Section 8**  
Transportation Finance  
Element

## Transportation Finance Element

Funding for transportation projects is increasingly in short supply even as existing infrastructure ages and transportation demands increase. The TPR requires that the Wasco County TSP address transportation funding, including the following elements:

- a list of planned transportation facilities and major improvements;
- a general estimate of the timing for planned transportation facilities and major improvements;
- determination of rough cost estimates for the transportation facilities and major investments identified in the TSP; and,
- a discussion of existing and potential financing sources to fund the development of each transportation facility and major improvement (which can be described in terms of guidelines or local policies).



The finance element provides a means for evaluating the likelihood that projects can be funded within the timelines identified in the TSP. Frequently, the costs for improvement projects exceed available funding. The financing element provides a context for evaluating projects and defining priorities in order to build on available opportunities and preserve existing infrastructure.

### CURRENT WASCO COUNTY TRANSPORTATION FUNDING REVENUES

Currently, the county's operation program for 700+ miles of paved and gravel roads comes almost entirely from outside sources in the form of transfer payments from the federal government and the State of Oregon. The federal payments once were related to the harvest of trees on federal forest land in the county and the payments were a means of compensating the county for wear and tear on public roads used to haul logs to mills and finished products to market. Not all county roads were used for hauling logs and wood products, but the harvest of trees was large enough that the revenue generated from logging on federal land supported the maintenance of virtually all county roads. As logging declined, the federal government in 2000 passed a five-year Safety Net law guaranteeing that counties would continue to receive annual funding at historic harvest levels but congressional support for continuing those temporary payments is waning.

Transfer payments from the State of Oregon are the second largest source of revenue the county relies on to maintain its road network. The Oregon Department of Transportation redistributes revenue that it collects from fuel sales, weight-mile taxes, driver and vehicle fees, and other sources to local governments across the state. The formula used to distribute funds differs for cities and counties.

For Wasco County and virtually all cities and counties in Oregon, gas tax revenue has not been keeping pace with costs. A combination of factors is weakening this revenue source's purchasing power. The biggest problem is that the fuel tax rate is not indexed, so inflation is eroding its purchasing power. In addition, the combination of improved vehicle fleet mileage and the use of non-taxed alternative fuel vehicles is affecting the amount of fuel sold disproportionately to vehicle miles traveled. Consequently, wear and tear on the road system is outstripping available revenues to accomplish needed maintenance and capital improvement projects. Recent forecasts by ODOT predict that without significant increases in the tax rate, fuel tax revenue will continue lagging inflation and decline in value to local road authorities.

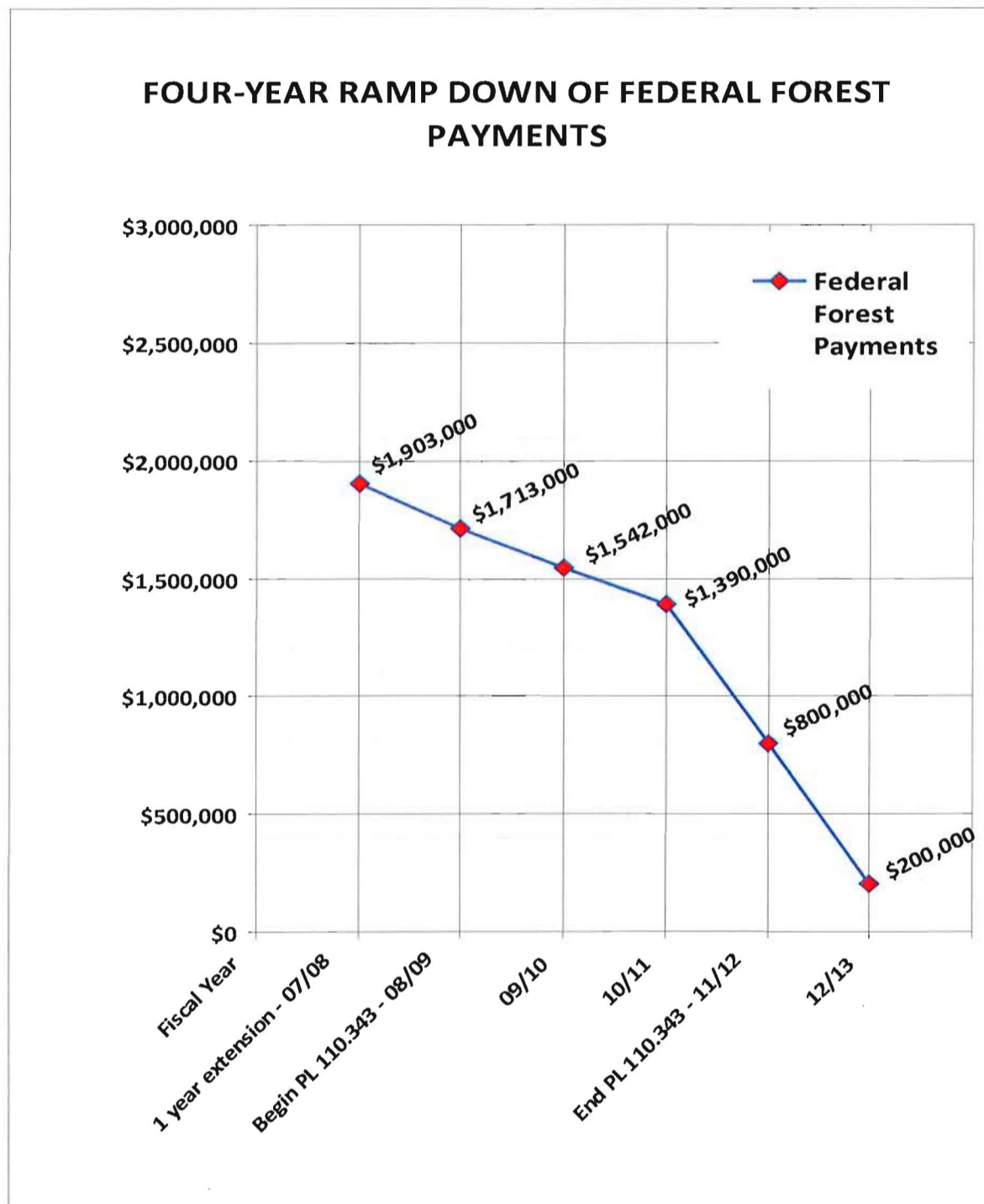
In the 2008-09 fiscal year state and federal payments accounted for most of Wasco County road fund revenue. That revenue was used to pay salaries of county employees, for materials and services, road maintenance, and minor improvements. Table 8-1 shows the sources and uses of revenue in the County road fund.

**TABLE 8-1 EXISTING WASCO COUNTY ROAD FUND**

| <b>Revenue</b>                         | <b>Amount</b>      | <b>Percentage</b> |
|--|--------------------|-------------------|
| Federal Forest Receipts                | \$1,900,000        | 55%               |
| STP (federal fund exchange with state) | \$207,000          | 6%                |
| ODOT - various transfer funds          | \$1,337,000        | 39%               |
| <i>Total Revenue</i>                   | <i>\$3,444,000</i> |                   |
| <b>Expenses</b>                        | <b>Amount</b>      | <b>Percentage</b> |
| Personal Services                      | \$1,786,200        | 52%               |
| Materials & Services                   | \$1,270,400        | 37%               |
| Capital Outlay                         | \$387,400          | 11%               |
| <i>Total Expenditures</i>              | <i>\$3,444,000</i> |                   |

While the declining purchasing power of state shared revenue is alarming and needs to be addressed, more problematic is an expectation that special federal forest payments will be phased out within four years, which will eliminate the Road Fund's primary revenue source. Figure 8-1 below, which is based on federal public law 110.343, shows what this will mean for overall payments. Under this new legislation, the first payment would be approximately \$200,000 below the prior year's Safety Net extension payment. Annual payments would decline at about \$200,000 in each of the next two years and the final payment would be reduced by around \$500,000. The cumulative effect would reduce federal contributions to the road fund by more than \$1 million over this four year span. After that, there would be no special legislation guiding federal timber payments, which will leave the county's federal timber revenue based on the annual timber harvest from the Mt. Hood National Forest. Those receipts are estimated at \$200,000 per year but it is not possible to accurately estimate those payments from year to year.

**Figure 8-1 Wasco County Federal Timber Payments**



## **ROAD FUND FINANCING OPTIONS**

Wasco County faces two inter-related financing problems: how to finance operations and how to finance capital projects. Presently, all public works funding is devoted to operations; there is no funding for capital projects. Strategies for addressing these needs may generally be grouped into six categories. Three of the seven strategies may be dismissed for technical and logistical reasons. They include privatization, earmarking, and tolling. That leaves the following strategies for meeting the road fund's fiscal needs: make better use of existing resources, lower road standards, secure more funding from outside sources, and raise local revenue through user fees and taxes. Observations on the use of these strategies are discussed below. They are not all mutually exclusive.

### ***Make Better Use of Existing Resources***

Wasco County has been employing this strategy for more than 20 years. The county road department is currently staffed with 30% fewer personnel than were on staff a decade ago. The department has streamlined procedures, reduced the size of work crews, contracted services, and bought equipment to increase worker productivity. The County has completely eliminated all capital improvement programming for county roads and uses all the revenue it has at its disposal to maintain existing roads. While the County certainly will take steps to do more with less, at the margin it is difficult to see how efficiency measures will be able to offset a 55% decline in revenue over the next four years. The amount of revenue lost is roughly equal to the salaries and benefits paid to all public works personnel. Assuming efficiency measures result in 2% to 5% savings, the county will still be facing a significant gap in its operating budget and will have no revenue for capital projects.

### ***Alter Road Network Design and Operating Standards***

While altering road standards does not generate or supplement revenue, it has the effect of reducing the cost to operate and maintain the road network and allows the County to stretch its existing resources. Assuming the efficiency measures do not address the funding problem, the County is left with two options: lower standards or raise revenue (or both).

Lowering and modifying standards could involve many actions. The most obvious is to change the design standard for certain types of roads that then would reduce operating costs. For example, the County could allow certain roads to revert from paved to gravel surfaces.

The county also could abandon certain roads now under its jurisdiction and allow them either to be classified as public roads not subject to maintenance responsibility, or transfer its authority to another entity, such as a city or a special district. Transferring authority to another entity may require that the County first bring the road up to a standard acceptable to the other road authority, but many counties have found that on a life-cycle basis, this is less costly than keeping the road.

The County also may consider altering its operating and design standards for roads to reduce costs for example by modifying its snow and ice removal protocols. These measures could marginally reduce operating costs but it is unlikely that these measures alone would have a significant effect on operating costs.



### **Secure More External Funding**

The County may elect to lobby third parties to increase the revenue it receives in transfer payments. With so much riding on the loss of third-party funding, this would seem a prudent strategy. As noted earlier, however, that strategy appears to be losing political support.

The County's main third-party source is the State of Oregon. As noted earlier, Wasco County relies heavily on state shared fuel taxes and registration and title fees to finance its road fund. Table 8-2 shows forecast allocations to Oregon Counties based on the existing revenue allocation formula. The problem with this forecast is that while the amount is increasing the rate of growth is not keeping pace with operating and construction costs, because the fuel tax rate is fixed.

**TABLE 8-2 ODOT COUNTY APPORTIONMENT REVENUE FORECAST**

| <b>Fiscal Year</b>    | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> |
|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Dollars (in millions) | \$162.2     | \$165.1     | \$173.8     | \$175.0     | \$179.3     |
| Percent Change        | -           | + 1.8%      | + 5.3%      | + 0.7%      | + 2.4%      |

A number of modifications to the current system are being studied, including a proposed one-time increase in the gas tax rate and a proposal to replace the gas tax with a mileage tax.

Although not predictable, external funding for development related transportation improvements will continue to be secured as part of the development/redevelopment review and approval process.

### **Local Taxes and User Fees**

Many types of user fees and taxes may be collected to finance road construction and operations. On that premise, it is assumed that the county will need to develop local revenue sources to supplement or replace federal resources if it hopes to maintain current levels of service and assuming that changes in state or federal financing, coupled with efficiency measures are not enough to close the funding gap. The following table lists options that the county may wish to consider for funding local roads. The sources include a mix of fees and taxes, some of which if implemented would have implications for other aspects of the county budget.

**TABLE 8-3 LOCAL REVENUE SOURCES**

| Source                          | Description   | Comments   |
|---------------------------------|---|--|
| General Fund                    | Property taxes from the county's permanent tax rate.  | Diverting general fund revenue to the Road Fund would have significant consequences for other county services.   |
| Supplemental 5-year Serial Levy | Voter approved property tax levied in addition to the county's permanent tax rate.  | A road fund serial levy would have to be approved by voters every five years. A one-time approval would buy time for the county to develop other options. This method could fund operations and capital programs, some of which might reduce future maintenance requirements.  |
| Road Utility Fee                | Monthly user fee with revenue dedicated to road operations. May be enacted legislatively but could be challenged and brought to a vote.     | This type of fee is becoming more common in cities but would require substantial investment in rate studies, administrative staffing, software and computer systems to enable the county to collect the revenue. This source is generally better suited to funding operations than for capital improvements, but it may free up existing resources for capital projects. |
| Vehicle Registration Fee        | An extra fee on all motor registered vehicles in the county. May be authorized legislatively but could be challenged and brought to a vote. | Collection would be problematic if the state were unwilling to act as a collection agent for the county, but otherwise would be easy to implement. This source could fund operations or capital programs.  |
| Motor Vehicle Title Fee         | Require that all motor vehicles registered in the county also have their title recorded as personal property with the County.               | This would generate two sources of revenue: from the fee itself and from personal property taxes levied on motor vehicles. This could be problematic for renters and would increase taxable property that the Assessor must account for.   |
| County Gas Tax                  | May be enacted legislatively but could be challenged and brought to a vote.   | A local-option fuel tax would be easy to collect because the infrastructure is already in place. Would generate revenue for the county from motorists passing through the county. This method could fund operations and capital programs.  |

**CONCLUSION**

Based on current trends, it does not appear that Wasco County will have any long-term funds for the identified capital improvement projects in the TSP. Therefore, the County will need to rely on a combination of new and expanded local revenue sources as outlined in Table 8-3 and a continuation of transfer funds from ODOT.

**Section 9**  
LUDO Ordinance  
Modifications and  
Comprehensive Plan  
Policy Language

## **LUDO Ordinance Modifications and Comprehensive Plan Policy Language**

The TPR, as codified in OAR 660-012-0045, requires that local jurisdictions amend land use regulations to reflect and implement the TSP. To that end, proposed regulatory language was developed in order to comply with the TPR and to ensure that local ordinances are consistent with the updated TSP. Proposed implementation language can be found in Volume 2 Technical Appendix, Recommended Land Use and Development Ordinance Amendments. The document reiterates the specific TPR requirements that are necessary for the County to address and provides specific text amendments to the Land Use and Development Ordinance that meet these requirements. Suggested language can be considered "best practices" and, in some instances, the *Model Development Code & Users Guide for Small Jurisdictions* was used as a reference document for recommended code revisions.

To the extent possible, proposed amendments to the Land Use and Development Ordinance were developed and formatted to be consistent with the existing structure of this regulatory document in order to expedite a code amendment process. In addition to the recommendations, further amendments to the Land Use and Development Ordinance may be necessary to ensure consistency within the document and to more seamlessly integrate new criteria with existing requirements. For this reason, the memorandum includes proposed amendments to the adopted land use ordinance but final recommended changes to the Wasco County Land Use and Development Ordinance will be part of a separate local adoption action.

**Appendix A**  
Public Involvement  
Process for TSP  
Development

## Appendix A - Public Involvement Process

The Wasco County Transportation System Plan benefited from an effective public process, facilitating the identification of transportation system deficiencies as well as potential solutions. The following table summarizes the public involvement meetings and open houses, and the dates on which they occurred.

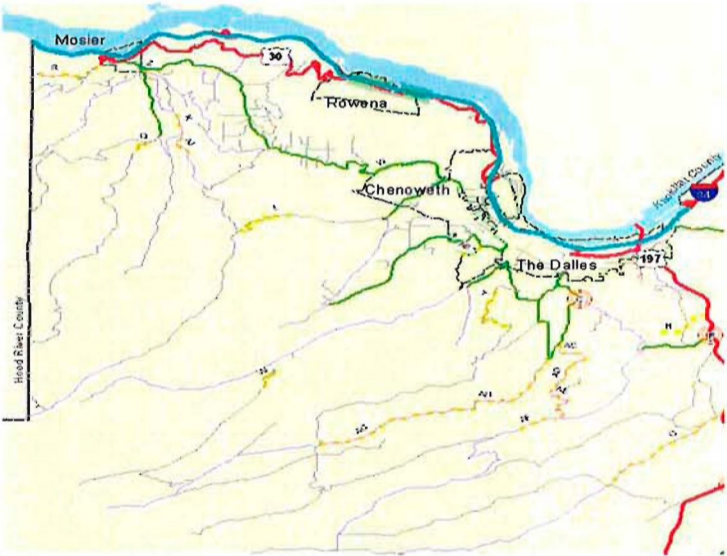
**TABLE A-1 PUBLIC INVOLVEMENT MEETINGS AND OPEN HOUSE SUMMARY**

| Event                | Location             | Date              |
|----------------------|----------------------|-------------------|
| TAC Meeting #1       | N/A: Conference Call | December 17, 2008 |
| PMT Meeting #1       | N/A: Conference Call | December 17, 2008 |
| TAC/PMT Meeting #2   | The Dalles, OR       | April 2, 2009     |
| Public Open House #1 | The Dalles, OR       | April 2, 2009     |
| TAC/PMT Meeting #3   | The Dalles, OR       | April 30, 2009    |
| TAC/PMT Meeting #4   | Maupin, OR           | June 10, 2009     |
| Public Open House #2 | Maupin, OR           | June 10, 2009     |
| TAC/PMT Meeting #5   | The Dalles, OR       | July 22, 2009     |


As shown in Table A-1, a total of five meetings were held with the TAC and PMT members over an 8-month period beginning in December 2008. Two open houses were held, one in The Dalles, one in Maupin. The open house locations were chosen in order to provide more convenient locations for residents that live in or around The Dalles (April 2, 2009) or those that live in the southern or central region of Wasco County (June 10, 2009).


Each meeting and open house agenda is attached for reference.

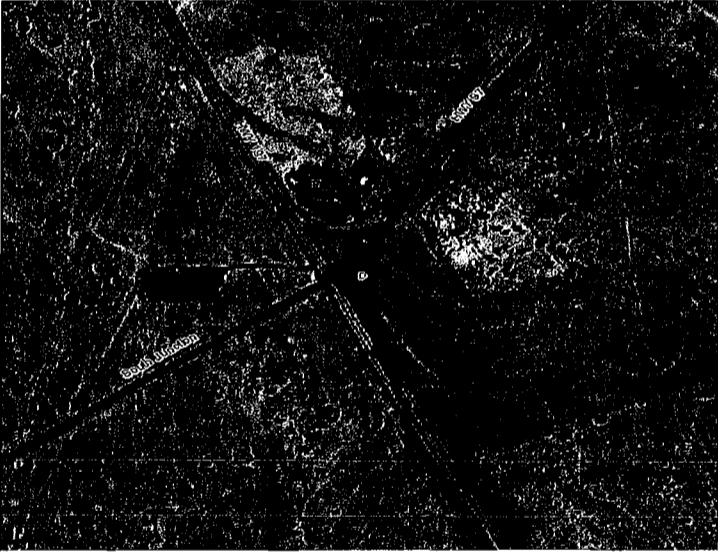
**Appendix B**  
Transportation  
Improvement Project  
Prospectus Sheets

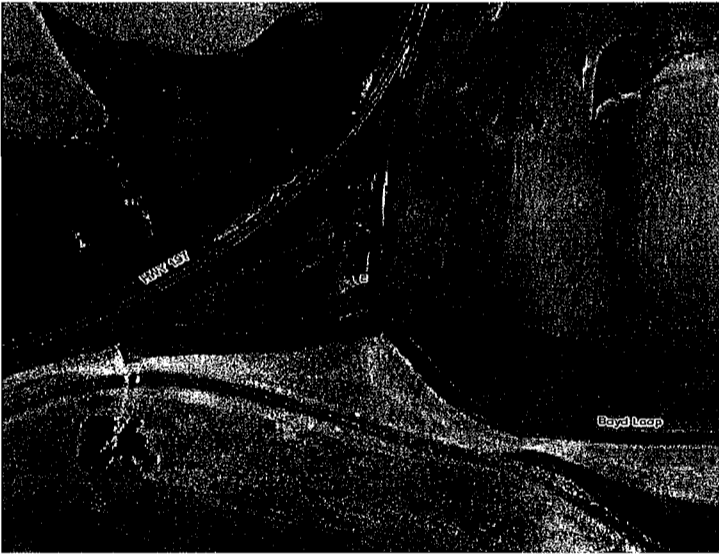
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| <b>Project #:</b> A  |  | <b>I-84: Hood River - The Dalles Dam Access Bundle 207</b> |  |   |  |
| <b>Description:</b> Replace/repair bridges; preservation work; median barrier        |  |  |  |   |  |
| <b>Category:</b><br>Bridge   |  | <b>Classification:</b><br>Interstate                       |  | <b>Potential Funding Source:</b><br>ODOT    | <b>Time Frame:</b><br>Short-Term               |
| <b>Project Costs:</b>  |  | \$43,000,000   |  |   |  |
| <b>Project Goals Met:</b>  |  |  |  |   |  |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                             | <b>Capacity</b><br><input checked="" type="checkbox"/> | <b>Safety</b><br><input type="checkbox"/>                  | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/> | <b>Maintenance</b><br><input type="checkbox"/> |
| <b>Project Location:</b>   |  |  |  |   |  |
|  |  |  |  |   |  |
| <b>Illustrative Section:</b>   |  |  |  |   |  |

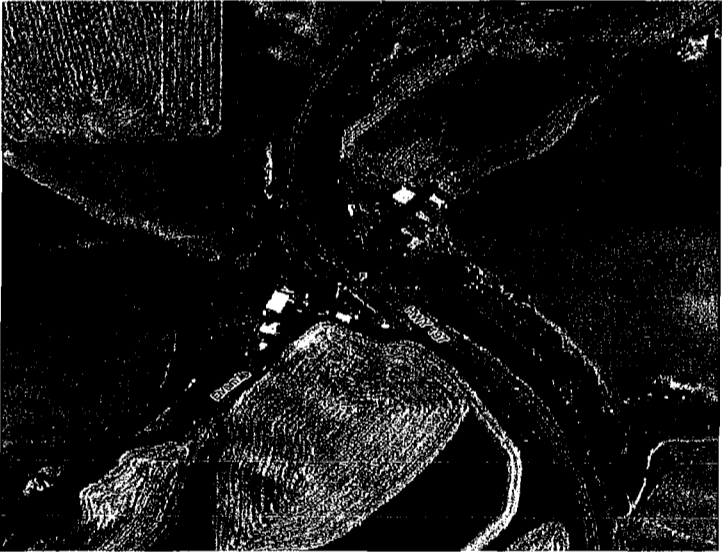



|   |                                      |  |                                     |  |   |
|---|--------------------------------------|--|-------------------------------------|--|---|
| <b>Project #:</b> B   |                                      | <b>I-84: Rowena Bluff Rockfall Project Development</b>                               |                                     |  |   |
| <b>Description:</b> Develop project for construction, coordinate with Columbia Gorge Commission |                                      |  |                                     |  |   |
| <b>Category:</b><br>Operations  |                                      | <b>Classification:</b><br>N/A  |                                     | <b>Potential Funding Source:</b><br>ODOT |   |
| <b>Project Costs:</b>   |                                      | \$480,000  |                                     |  |   |
| <b>Project Goals Met:</b>   |                                      |  |                                     |  |   |
| Efficiency<br><input type="checkbox"/>  | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>     | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>  |                                      |  |                                     |  |   |
| <b>Illustrative Section:</b>  |                                      |  |                                     |  |   |


|   |  |  |                                     |  |   |
|---|--|--|-------------------------------------|--|---|
| <b>Project #:</b> C   |  | <b>Threemile Road/ Steele Road Intersection Operations and Safety Improvements</b> |                                     |  |   |
| <b>Description:</b> Modify intersection geometry and traffic control by realigning as a stop-controlled intersection that reduces the overall paved surface and clearly defines traffic priority. |  |  |                                     |  |   |
| <b>Category:</b><br>Operations, Safety  |  | <b>Classification:</b><br>Major Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Short-Term        |
| <b>Project Costs:</b>   | \$15,000   |  |                                     |  |   |
| <b>Project Goals Met:</b>   |  |  |                                     |  |   |
| Efficiency<br><input checked="" type="checkbox"/>   | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/>                                      | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>  |  |  |                                     |  |   |
| <b>Illustrative Section:</b>  |  |  |                                     |  |   |


|  |   |  |  |   |  |
|--|---|--|--|---|--|
| <b>Project #:</b> D  |   | <b>US 97/US 197 Highway Junction Intersection Study</b>                              |  |   |  |
| <b>Description:</b> Evaluate options for realignment/reconfiguration of the US97/US197/South Jct. Road intersection. |   |  |  |   |  |
| <b>Category:</b><br>Operations, Safety   |   | <b>Classification:</b><br>State Highway  |  | <b>Potential Funding Source:</b><br>ODOT    | <b>Time Frame:</b><br>Medium-Term              |
| <b>Project Costs:</b>  |   | \$50,000   |  |   |  |
| <b>Project Goals Met:</b>  |   |  |  |   |  |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>   | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/> | <b>Maintenance</b><br><input type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |   |  |
| <b>Illustrative Section:</b>   |   |  |  |   |  |

|  |                                      |  |                                     |  |   |
|--|--------------------------------------|--|-------------------------------------|--|---|
| <b>Project #:</b> E  |                                      | <b>US 197/Boyd Loop Road Intersection Study</b>                                      |                                     |  |   |
| <b>Description:</b> Evaluate options for realignment/reconfiguration of the US 197/Boyd Loop Road intersection to intersect US 197. Currently, there are two intersections that provide access from Boyd Loop to US 197. Both intersect US 197 at acute angles (25-40 degrees). Sight distance from Boyd Loop to US 197 is difficult due to angle of intersection. |                                      |  |                                     |  |   |
| <b>Category:</b><br>Safety   |                                      | <b>Classification:</b><br>State Highway  |                                     | <b>Potential Funding Source:</b><br>ODOT | <b>Time Frame:</b><br>Medium-Term       |
| <b>Project Costs:</b>  |                                      | \$50,000   |                                     |  |   |
| <b>Project Goals Met:</b>  |                                      |  |                                     |  |   |
| Efficiency<br><input type="checkbox"/>   | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>     | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>   |                                      |  |                                     |  |   |
| <b>Illustrative Section:</b>   |                                      |  |                                     |  |   |


|   |                                      |  |  |                                      |   |
|---|--------------------------------------|--|--|--------------------------------------|---|
| <b>Project #:</b> F   |                                      | <b>US 197/Fivemile Road Intersection Safety Feasibility Study</b>                    |  |                                      |   |
| <b>Description:</b> Intersection study to investigate feasibility of reconstruction of highway to include turn lanes at Fivemile Road. Highway widening could include: 16 foot northbound left-turn lane on US 197 and 14 foot southbound right-turn lane. Wasco County has received complaints that trucks heading to th County landfill (located off of Fivemile Road west of US 197) block the trough traffic on US 197 while waiting to turn. Roadway has steep embankments on both sides at this location and known environmental and residential impacts. |                                      |  |  |                                      |   |
| <b>Category:</b><br>Operations, Safety  |                                      | <b>Classification:</b><br>State Highway  | <b>Potential Funding Source:</b><br>ODOT |                                      | <b>Time Frame:</b><br>Medium-Term       |
| <b>Project Costs:</b>   |                                      | \$50,000   |  |                                      |   |
| <b>Project Goals Met:</b>   |                                      |  |  |                                      |   |
| Efficiency<br><input checked="" type="checkbox"/>   | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/>      | Ped/Bike<br><input type="checkbox"/> | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>  |                                      |  |  |                                      |   |
| <b>Illustrative Section:</b>  |                                      |  |  |                                      |   |


|   |   |  |  |   |  |
|---|---|--|--|---|--|
| <b>Project #:</b> G   |   | <b>US 197 Realignment: Wapinitia Hwy Jct. (milepost 43.0) to Maupin City Limits</b>  |  |   |  |
| <b>Description:</b> Reconstruct/realign roadway onto embankment that has been placed for new alignment. |   |  |  |   |  |
| <b>Category:</b><br>Modernization   |   | <b>Classification:</b><br>State Highway  |  | <b>Potential Funding Source:</b><br>ODOT    | <b>Time Frame:</b><br>Long-Term                |
| <b>Project Costs:</b>   |   | \$3,500,000  |  |   |  |
| <b>Project Goals Met:</b>   |   |  |  |   |  |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>  | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/> | <b>Maintenance</b><br><input type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |   |  |
| <b>Illustrative Section:</b>  |   |  |  |   |  |


|   |  |   |                                     |  |   |
|---|--|---|-------------------------------------|--|---|
| <b>Project #:</b> H   |  | <b>US 197/Wasco County Landfill Access Road Feasibility Study</b> |                                     |  |   |
| <b>Description:</b> Conduct a study of the feasibility of constructing an alternate route from US 197 (near MP 3.05) along the top of the ridge to the Wasco County Landfill. |  |   |                                     |  |   |
| <b>Category:</b><br>Operations, Safety  |  | <b>Classification:</b><br>State Highway                           |                                     | <b>Potential Funding Source:</b><br>ODOT; Wasco County | <b>Time Frame:</b><br>Medium-Term       |
| <b>Project Costs:</b>   | \$50,000   |   |                                     |  |   |
| <b>Project Goals Met:</b>   |  |   |                                     |  |   |
| Efficiency<br><input type="checkbox"/>  | Capacity<br><input checked="" type="checkbox"/>                                      | Safety<br><input checked="" type="checkbox"/>                     | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>                   | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>  |  |   |                                     |  |   |
| <b>Illustrative Section:</b>  |  |   |                                     |  |   |


|  |  |   |                                     |  |   |
|--|--|---|-------------------------------------|--|---|
| <b>Project #:</b> I  |  | <b>OR 216/Juniper Flat/Natural Pasture Road Safety Improvements</b> |                                     |  |   |
| <b>Description:</b> Reduce sight distance restrictions for minor street traffic on Juniper Flat at OR 216. Modifications to intersection and/or elevation of OR 216 to reduce impacts of crest vertical curve to the west of Juniper Flat. |  |   |                                     |  |   |
| <b>Category:</b><br>Safety   |  | <b>Classification:</b><br>State Highway                             |                                     | <b>Potential Funding Source:</b><br>ODOT | <b>Time Frame:</b><br>Long-Term         |
| <b>Project Costs:</b>  | \$700,000  |   |                                     |  |   |
| <b>Project Goals Met:</b>  |  |   |                                     |  |   |
| Efficiency<br><input type="checkbox"/>   | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/>                       | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>     | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>   |  |   |                                     |  |   |
| <b>Illustrative Section:</b>   |  |   |                                     |  |   |





|  |                                      |  |                                     |  |   |
|--|--------------------------------------|--|-------------------------------------|--|---|
| <b>Project #:</b> J  |                                      | <b>OR 216/Reservation Road Safety Improvements</b>                                   |                                     |  |   |
| <b>Description:</b> Monitor intersection crash history to verify that recent crash frequency and trends do not continue. Intersection is currently in 90-95th percentile on ODOT's SPIS list. There are no observable safety concerns based on field review. Improvement options could include realignment of Old Wapinitia Road to the west of the Gas Station/Market and realignment of Reservation Road at OR 216 to make a 90-degree 4-way intersection. |                                      |  |                                     |  |   |
| <b>Category:</b><br>Safety   |                                      | <b>Classification:</b><br>State Highway  |                                     | <b>Potential Funding Source:</b><br>ODOT | <b>Time Frame:</b><br>Long-Term         |
| <b>Project Costs:</b>  |                                      | \$0  |                                     |  |   |
| <b>Project Goals Met:</b>  |                                      |  |                                     |  |   |
| Efficiency<br><input type="checkbox"/>   | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>     | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>   |                                      |  |                                     |  |   |
| <b>Illustrative Section:</b>   |                                      |  |                                     |  |   |


|  |                                      |  |                                     |  |  |
|--|--------------------------------------|--|-------------------------------------|--|--|
| <b>Project #:</b> K  |                                      | <b>Behrens Road Reconstruction</b>   |                                     |  |  |
| <b>Description:</b> Full reconstruction from Carroll to Digger Road. |                                      |  |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction                              |                                      | <b>Classification:</b><br>Minor Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>  |                                      | \$300,000  |                                     |  |  |
| <b>Project Goals Met:</b>  |                                      |  |                                     |  |  |
| Efficiency<br><input type="checkbox"/>                               | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |                                      |  |                                     |  |  |
| <b>Illustrative Section:</b>   |                                      |  |                                     |  |  |

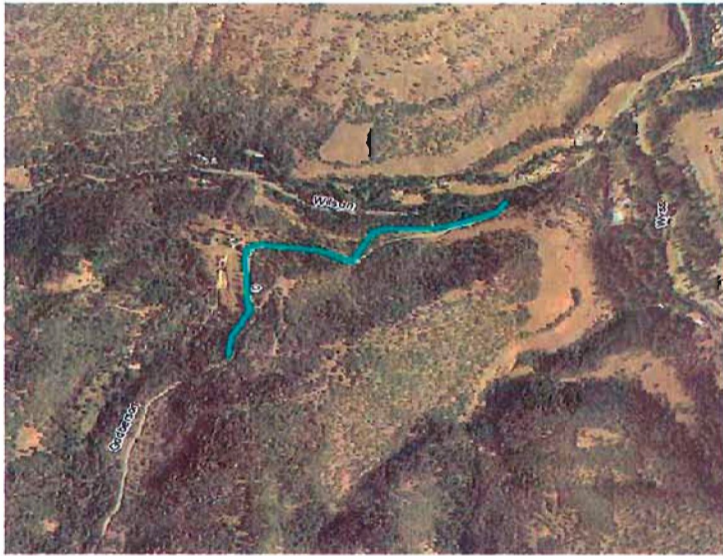
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| <b>Project #:</b> L  |   | <b>Chenowith Creek Road Maintenance</b>  |  |  |   |
| <b>Description:</b> Heavy maintenance from end of pavement to Vensel Road. |   |  |  |  |   |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety                           |   | <b>Classification:</b><br>Local  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$570,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>                              | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |

|   |   |  |  |  |   |
|---|---|--|--|--|---|
| <b>Project #:</b> M   |   | <b>Cold Camp Road Heavy Maintenance</b>  |  |  |   |
| <b>Description:</b> Heavy maintenance from Hwy 218 to Muddy Road. |   |  |  |  |   |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety                  |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$300,000  |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>                     | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>                                      |   |  |  |  |   |

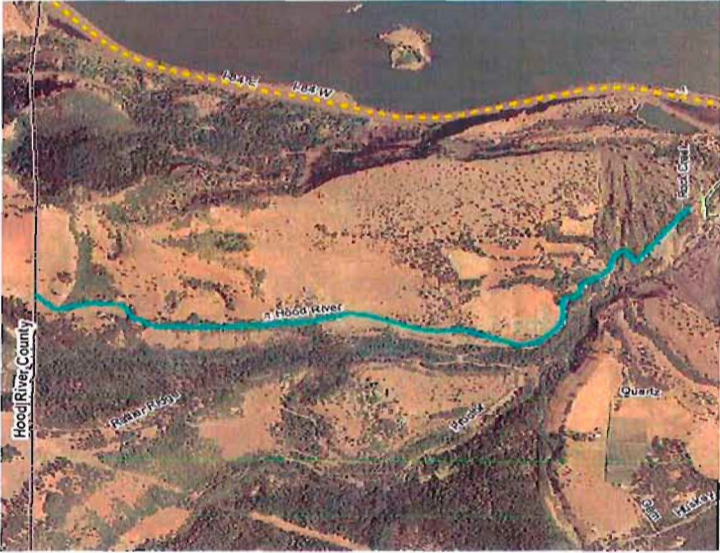
|  |   |  |  |  |   |
|--|---|--|--|--|---|
| <b>Project #:</b> N  |   | <b>Carroll Road Reconstruction</b>   |  |  |   |
| <b>Description:</b> Full reconstruction from Dry Creek to MP 1.37. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction                            |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$550,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>           | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>                                       |   |  |  |  |   |


|  |   |  |  |  |   |
|--|---|--|--|--|---|
| <b>Project #:</b> 0  |   | <b>Eightmile Road Reconstruction</b>   |  |  |   |
| <b>Description:</b> Full reconstruction from US 197 to Pine Hollow Road. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction                                  |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$1,500,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                 | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |


|   |                                      |  |                                     |  |  |
|---|--------------------------------------|--|-------------------------------------|--|--|
| <b>Project #:</b> P   |                                      | <b>Fifteenmile Road Reconstruction</b>   |                                     |  |  |
| <b>Description:</b> Full reconstruction from Lower Eightmile to Company Hollow. |                                      |  |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction   |                                      | <b>Classification:</b><br>Major Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Medium-Term                  |
| <b>Project Costs:</b>   | \$2,300,000                          |  |                                     |  |  |
| <b>Project Goals Met:</b>   |                                      |  |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>                               | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |                                      |  |                                     |  |  |
| <b>Illustrative Section:</b>  |                                      |  |                                     |  |  |


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| <b>Project #:</b> Q   |   | <b>Godberson Road Heavy Maintenance</b>  |  |  |   |
| <b>Description:</b> Heavy maintenance on initial grade off Wilson Road. |   |  |  |  |   |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety                        |   | <b>Classification:</b><br>Local  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$100,000  |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>                           | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>  |   |  |  |  |   |




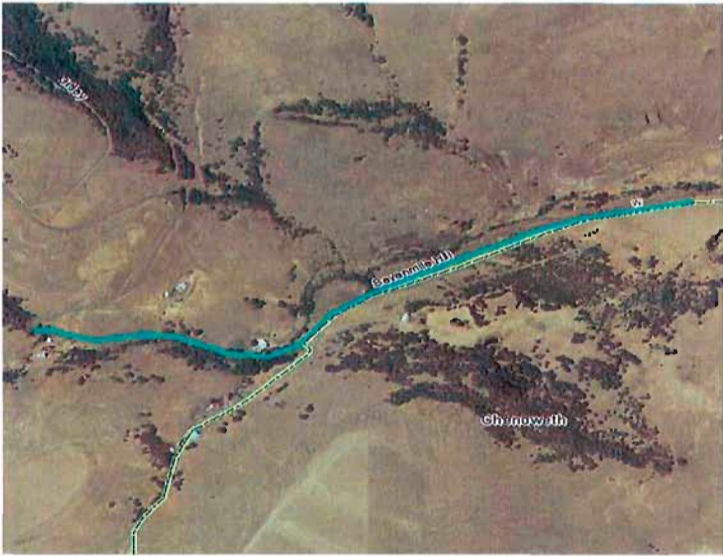
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| <b>Project #:</b> R  |   | <b>Hood River Road Heavy Maintenance</b>   |  |  |   |
| <b>Description:</b> Heavy maintenance from end of pavement to Proctor Road (0.53 miles in length). |   |  |  |  |   |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety   |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$150,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>  | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |


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| <b>Project #:</b> S   |   | <b>Muddy Road Heavy Maintenance</b>  |  |  |   |
| <b>Description:</b> Heavy maintenance from Cold Camp Road to MP 1.56. |   |  |  |  |   |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety                      |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$200,000  |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>                         | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>  |   |  |  |  |   |


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| <b>Project #:</b> T   |   | <b>Old Dufur North Reconstruction</b>  |  |   |   |
| <b>Description:</b> Full reconstruction from Richmond St to 3 mile creek. |   |  |  |   |   |
| <b>Category:</b><br>Full Reconstruction                                   |   | <b>Classification:</b><br>Minor Collector  | <b>Potential Funding Source:</b><br>Wasco County |   | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$300,000  |  |   |   |
| <b>Project Goals Met:</b>   |   |  |  |   |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                  | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/>       | <b>Ped/Bike</b><br><input type="checkbox"/> | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |   |   |
| <b>Illustrative Section:</b>  |   |  |  |   |   |

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| <b>Project #:</b> U   |   | <b>Old Moody Road Shared Bike Route</b>  |  |  |   |
| <b>Description:</b> Pave 4-mile segment (24 feet width) of Old Moody Road for shared use by bicycles and automobiles. |   |  |  |  |   |
| <b>Category:</b><br>Bicycle, Pavement   |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County       | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$10,700,000   |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>   | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input type="checkbox"/>  | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input checked="" type="checkbox"/> | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>  |   |  |  |  |   |

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| <b>Project #:</b> V  |  | <b>Sevenmile Hill Road Reconstruction</b>     |                                     |  |  |
| <b>Description:</b> Full reconstruction from Chenoweth Creek to MP 0.73. |  |   |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction                                  |  | <b>Classification:</b><br>Major Collector     |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>  | \$300,000  |   |                                     |  |  |
| <b>Project Goals Met:</b>  |  |   |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>                        | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/> | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |  |   |                                     |  |  |
| <b>Illustrative Section:</b>   |  |   |                                     |  |  |


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| <b>Project #:</b> W  |   | <b>Sevenmile Hill Road Reconstruction</b>  |  |  |   |
| <b>Description:</b> Full reconstruction from Harvey Pit to 1981 job. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction                              |   | <b>Classification:</b><br>Major Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$400,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>             | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |


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| <b>Project #:</b> X   |   | <b>Shared Bike Route on Tygh Ridge Road</b>  |  |  |   |
| <b>Description:</b> Pave 1.5 mile segment (24 feet width) of Tygh Ridge for shared bicycle use by bicycles and automobiles. |   |  |  |  |   |
| <b>Category:</b><br>Bicycle, Pavement   |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County       | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$4,000,000  |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input type="checkbox"/>   | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input type="checkbox"/>  | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input checked="" type="checkbox"/> | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>  |   |  |  |  |   |


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| <b>Project #:</b> Y  |  | <b>Skyline Road Reconstruction</b>               |                                     |  |  |
| <b>Description:</b> Full reconstruction from packing plant to end of pavement. |  |  |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction  |  | <b>Classification:</b><br>Major Collector; Local |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>  | \$1,100,000  |  |                                     |  |  |
| <b>Project Goals Met:</b>  |  |  |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>                              | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/>    | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |  |  |                                     |  |  |
| <b>Illustrative Section:</b>   |  |  |                                     |  |  |




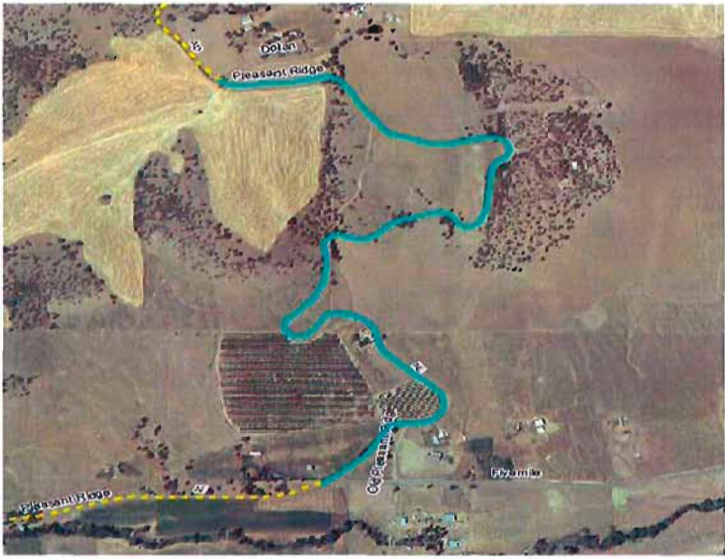
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| <b>Project #:</b> Z  |   | <b>State Road Reconstruction</b>                     |  |  |   |
| <b>Description:</b> Full reconstruction from Mosier Creek bridge to MP 1.23. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction                                      |   | <b>Classification:</b><br>Major Collector            |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$340,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                     | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/> | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |

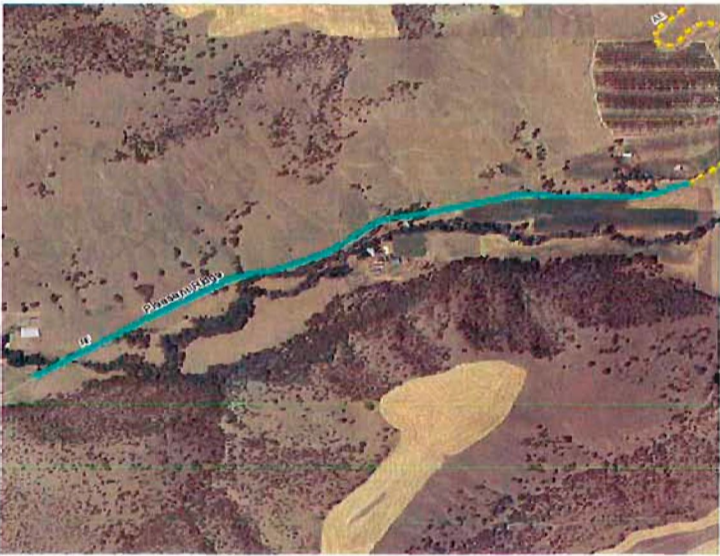
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| <b>Project #:</b> AA  |  | <b>Price Road Reconstruction</b>              |                                     |  |  |
| <b>Description:</b> Reconstruct and pave from Ross Road to end of pavement. |  |   |                                     |  |  |
| <b>Category:</b><br>Pavement, Safety  |  | <b>Classification:</b><br>Minor Collector     |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>   | \$660,000  |   |                                     |  |  |
| <b>Project Goals Met:</b>   |  |   |                                     |  |  |
| Efficiency<br><input type="checkbox"/>                                      | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/> | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |  |   |                                     |  |  |
| <b>Illustrative Section:</b>  |  |   |                                     |  |  |

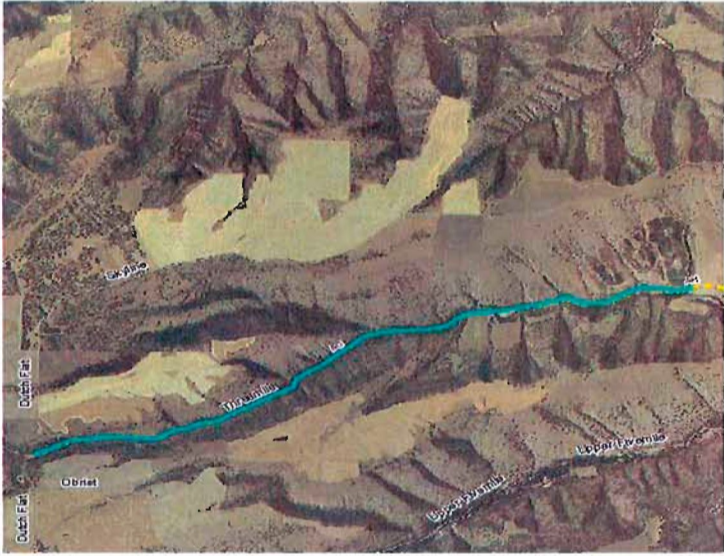
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| <b>Project #:</b> AB  |  | <b>Knob Hill Road Reconstruction</b>                 |  |   |   |
| <b>Description:</b> Full reconstruction from Cherry Heights to MP 0.83. |  |  |  |   |   |
| <b>Category:</b><br>Full Reconstruction                                 |  | <b>Classification:</b><br>Local                      | <b>Potential Funding Source:</b><br>Wasco County |   | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   | \$330,000  |  |  |   |   |
| <b>Project Goals Met:</b>   |  |  |  |   |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                | <b>Capacity</b><br><input type="checkbox"/>  | <b>Safety</b><br><input checked="" type="checkbox"/> | <b>Transit</b><br><input type="checkbox"/>       | <b>Ped/Bike</b><br><input type="checkbox"/> | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |  |  |  |   |   |
| <b>Illustrative Section:</b>  |  |  |  |   |   |

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| <b>Project #:</b> AC  |   | <b>Pleasant Ridge Road Reconstruction: Segment A</b>                                 |  |  |   |
| <b>Description:</b> Full reconstruction from Threemile Road to grindings. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction                                   |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>   |   | \$500,000  |  |  |   |
| <b>Project Goals Met:</b>   |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                  | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/>                                 | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |   |  |  |  |   |
| <b>Illustrative Section:</b>  |   |  |  |  |   |

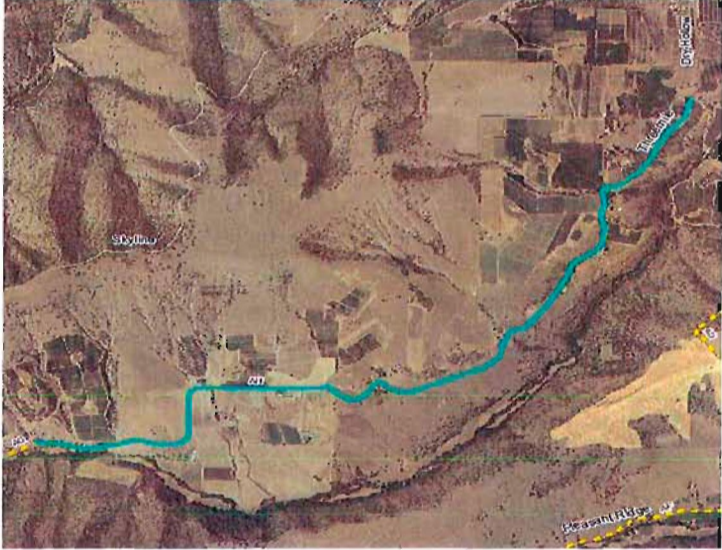
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| Project #: AD  |  | Pleasant Ridge Road Reconstruction: Segment B |   |                                      |  |
| Description: Full reconstruction from grindings to Dolan Rd. |  |   |   |                                      |  |
| Category:<br>Full Reconstruction                             |  | Classification:<br>Minor Collector            | Potential Funding Source:<br>Wasco County |                                      | Time Frame:<br>Long-Term                           |
| Project Costs:   | \$600,000  |   |   |                                      |  |
| Project Goals Met:   |  |   |   |                                      |  |
| Efficiency<br><input checked="" type="checkbox"/>            | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/> | Transit<br><input type="checkbox"/>       | Ped/Bike<br><input type="checkbox"/> | Maintenance<br><input checked="" type="checkbox"/> |
| Project Location:  |  |   |   |                                      |  |
| Illustrative Section:  |  |   |   |                                      |  |


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| <b>Project #:</b> AE   |   | <b>Pleasant Ridge Road Reconstruction: Segment C</b> |  |  |   |
| <b>Description:</b> Reconstruct and pave from Dolan Road to Fivemile Road and provide a bicycle route. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction,<br>Bicycle, Safety  |   | <b>Classification:</b><br>Minor Collector            |  | <b>Potential Funding Source:</b><br>Wasco County       | <b>Time Frame:</b><br>Long-Term                           |
| <b>Project Costs:</b>  |   | \$590,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>   | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input checked="" type="checkbox"/> | <b>Transit</b><br><input type="checkbox"/>   | <b>Ped/Bike</b><br><input checked="" type="checkbox"/> | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |


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| <b>Project #:</b> AF  |  | <b>Pleasant Ridge Road Reconstruction: Segment D</b> |                                     |  |  |
| <b>Description:</b> Reconstruct and pave from 5 mile intersection to Quarter-horse Ranch (0.95 miles in length) |  |  |                                     |  |  |
| <b>Category:</b><br>Pavement, Safety  |  | <b>Classification:</b><br>Minor Collector            |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>   | \$480,000  |  |                                     |  |  |
| <b>Project Goals Met:</b>   |  |  |                                     |  |  |
| Efficiency<br><input type="checkbox"/>  | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/>        | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |  |  |                                     |  |  |
| <b>Illustrative Section:</b>  |  |  |                                     |  |  |


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| <b>Project #:</b> AG  |                                      | <b>Threemile Road Reconstruction</b>   |                                     |  |  |
| <b>Description:</b> Full reconstruction from End Pavement to Skyline. |                                      |  |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction, Safety                       |                                      | <b>Classification:</b><br>Minor Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>   |                                      | \$3,000,000  |                                     |  |  |
| <b>Project Goals Met:</b>   |                                      |  |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>                     | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |                                      |  |                                     |  |  |
| <b>Illustrative Section:</b>  |                                      |  |                                     |  |  |





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| <b>Project #:</b> AH  |  | <b>Threemile Road Reconstruction</b>          |                                     |  |  |
| <b>Description:</b> Full reconstruction from Dry Hollow to End of Pavement. |  |   |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction                                     |  | <b>Classification:</b><br>Minor Collector     |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Medium-Term                  |
| <b>Project Costs:</b>   | \$670,000  |   |                                     |  |  |
| <b>Project Goals Met:</b>   |  |   |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>                           | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/> | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>  |  |   |                                     |  |  |
| <b>Illustrative Section:</b>  |  |   |                                     |  |  |

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| <b>Project #:</b> AI   |                                      | <b>Upper Mill Creek Heavy Maintenance</b>  |                                     |  |  |
| <b>Description:</b> Heavy maintenance from end of pavement to bus turn-around. |                                      |  |                                     |  |  |
| <b>Category:</b><br>Heavy Maintenance,<br>Safety                               |                                      | <b>Classification:</b><br>Minor Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Medium-Term                  |
| <b>Project Costs:</b>  |                                      | \$200,000  |                                     |  |  |
| <b>Project Goals Met:</b>  |                                      |  |                                     |  |  |
| Efficiency<br><input type="checkbox"/>   | Capacity<br><input type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |                                      |  |                                     |  |  |
| <b>Illustrative Section:</b>   |                                      |  |                                     |  |  |

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| <b>Project #:</b> AJ   |   | <b>Vensel Road Reconstruction</b>  |  |  |   |
| <b>Description:</b> Full reconstruction from Digger Road to Columbia River Resort. |   |  |  |  |   |
| <b>Category:</b><br>Full Reconstruction  |   | <b>Classification:</b><br>Minor Collector  |  | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Medium-Term                         |
| <b>Project Costs:</b>  |   | \$220,000  |  |  |   |
| <b>Project Goals Met:</b>  |   |  |  |  |   |
| <b>Efficiency</b><br><input checked="" type="checkbox"/>                           | <b>Capacity</b><br><input type="checkbox"/> | <b>Safety</b><br><input type="checkbox"/>  | <b>Transit</b><br><input type="checkbox"/> | <b>Ped/Bike</b><br><input type="checkbox"/>      | <b>Maintenance</b><br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |   |  |  |  |   |
| <b>Illustrative Section:</b>   |   |  |  |  |   |

|  |   |  |                                     |  |   |
|--|---|--|-------------------------------------|--|---|
| <b>Project #:</b> AK   |   | <b>Wamic Market Road/ Ross Road Intersection Safety</b>                              |                                     |  |   |
| <b>Description:</b> Combine multiple stop-control intersections into one stop-controlled intersection to eliminate sight distance constraints for existing stop-controlled movements and encourage slower speeds for turning movements. Currently the eastbound left-turn from Wamic Market Road to Ross Road can occur at high speeds (45 mph or greater). The westbound right turn must stop and yield to that movement. Due to high-speed movements, required sight distance is greater than that provided due to a crest vertical curve. |   |  |                                     |  |   |
| <b>Category:</b><br>Operations, Safety   |   | <b>Classification:</b><br>Major Collector  |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term         |
| <b>Project Costs:</b>  |   | \$50,000   |                                     |  |   |
| <b>Project Goals Met:</b>  |   |  |                                     |  |   |
| Efficiency<br><input type="checkbox"/>   | Capacity<br><input checked="" type="checkbox"/> | Safety<br><input checked="" type="checkbox"/>  | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input type="checkbox"/> |
| <b>Project Location:</b>   |   |  |                                     |  |   |
| <b>Illustrative Section:</b>   |   |  |                                     |  |   |

|  |  |   |                                     |  |  |
|--|--|---|-------------------------------------|--|--|
| <b>Project #:</b> AL   |  | <b>Wamic Market Road Safety</b>               |                                     |  |  |
| <b>Description:</b> Reconstruct roadway segments along steep grade. Phase I of the project has been completed; future sections are identified for improvements under Phase II. |  |   |                                     |  |  |
| <b>Category:</b><br>Full Reconstruction, Safety  |  | <b>Classification:</b><br>Major Collector     |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>  | \$1,800,000  |   |                                     |  |  |
| <b>Project Goals Met:</b>  |  |   |                                     |  |  |
| Efficiency<br><input checked="" type="checkbox"/>  | Capacity<br><input type="checkbox"/>   | Safety<br><input checked="" type="checkbox"/> | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |  |   |                                     |  |  |
| <b>Illustrative Section:</b>   |  |   |                                     |  |  |

|  |  |                                       |                                     |  |  |
|--|--|---------------------------------------|-------------------------------------|--|--|
| <b>Project #:</b> AM   |  | <b>Winslow Road Heavy Maintenance</b> |                                     |  |  |
| <b>Description:</b> Heavy maintenance from Rail Hollow Road to 2004 job. |  |                                       |                                     |  |  |
| <b>Category:</b><br>Heavy Maintenance                                    |  | <b>Classification:</b><br>Local       |                                     | <b>Potential Funding Source:</b><br>Wasco County | <b>Time Frame:</b><br>Long-Term                    |
| <b>Project Costs:</b>  | \$430,000  |                                       |                                     |  |  |
| <b>Project Goals Met:</b>  |  |                                       |                                     |  |  |
| Efficiency<br><input type="checkbox"/>                                   | Capacity<br><input type="checkbox"/>   | Safety<br><input type="checkbox"/>    | Transit<br><input type="checkbox"/> | Ped/Bike<br><input type="checkbox"/>             | Maintenance<br><input checked="" type="checkbox"/> |
| <b>Project Location:</b>   |  |                                       |                                     |  |  |
| <b>Illustrative Section:</b>   |  |                                       |                                     |  |  |

# **I-84 Chenoweth Interchange Area Management Plan**

The Dalles, Oregon

**December 2009**

# I-84 Chenoweth Interchange Area Management Plan

The Dalles, Oregon

Prepared For:  
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Project No. 9600.00

December 2009





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- Appendix A** Technical Memorandum #1: Definition & Background
- Appendix B** Technical Memorandum #2: Review of Adopted Plans and Regulations
- Appendix C** Technical Memorandum #3/4: Existing Land Use and Transportation
- Appendix D** Technical Memorandum #5/6: Future Conditions
- Appendix E** Technical Memorandum #7: Local Circulation and Design Concept Analysis
- Appendix F** Cost Estimates
- Appendix G** Development Threshold Analysis Summary Memorandum
- Appendix H** Crossing Evaluation Memorandum
- Appendix I** Supplemental Transportation System Development Charge Memorandum
- Appendix J** Interchange Area Management Overlay District Code Amendments
- Appendix K** Hostetler At-Grade Rail Crossing Evaluation Memorandum



## Preface

The progress of this plan was guided by the Project Management Team (PMT), Technical Advisory Committee (TAC), and Steering Committee (SC). The PMT, TAC, and SC members are identified below, along with members of the consultant team. The PMT members were all part of the TAC and primarily coordinated between meetings on project management tasks related to project schedule and meeting logistics. The PMT included representation from ODOT, the City of The Dalles, and the consultant team. The TAC and SC members were responsible for reviewing all work products and guiding the planning work. They devoted a substantial amount of time and effort to the development of the I-84 Chenoweth Interchange Area Management Plan (IAMP), and their participation was instrumental in the development of the recommendations that are presented in this report.

### **Project Management Team (PMT)**

|   |   |
|---|---|
| Ana Jovanovic<br>ODOT Region 4 Program and Planning | Dick Gassman<br>City of The Dalles Planning |
|---|---|

### **Technical Advisory Committee (TAC)**

|   |  |
|---|--|
| Marty Matherly<br>Wasco County Engineering                    | Gary Nychyk<br>Wasco County Planning           |
| Dale McCabe<br>City of The Dalles Engineering                 | David Boyd<br>ODOT Region 4 Access Management  |
| Mark Devoney<br>ODOT Region 4 4 Program and Planning          | Rod Cathcart<br>ODOT Region 4 Traffic Analysis |
| Peter Schuytema<br>ODOT Transportation Planning Analysis Unit | Tracy White<br>ODOT Access Management          |

### **Steering Committee (SC)**

|  |                                |
|--|--------------------------------|
| Todd Cornett<br>Wasco County Planning    | Sam Wilkins<br>ODOT District 9 |
| Dan Durow<br>City of The Dalles Planning | Brad DeHart<br>ODOT District 9 |

### **Consultant Team**

|  |   |
|--|---|
| <i>Kittelson &amp; Associates, Inc.</i><br>Susan Wright, PE - <i>Project Manager</i><br>Marc Butorac, PE, PTOE - <i>Project Principal</i><br>Casey Bergh - <i>Transportation Analyst</i> | <i>Angelo Planning Group, Inc.</i><br>Darci Rudzinski, AICP<br>DJ Heffernan<br><i>CH2M Hill, Inc.</i><br>Darren Hippenstiel, PE |
|--|---|

**Section 1**  
Introduction

## Introduction

An Interchange Area Management Plan (IAMP) was prepared for the Interstate-84 (I-84) Chenoweth Interchange in The Dalles, Oregon. The following section provides an overview of the purpose and intent of the IAMP and defines: the interchange function, the project goals and objectives, and the study area. These elements were defined through a collaborative effort between the project Technical Advisory Committee (TAC) and the Steering Committee (SC).



## PURPOSE AND INTENT

The IAMP is intended to protect the function of the I-84 Chenoweth Interchange and ensure that it will continue to provide safe and efficient connections between I-84 and all roadways within the vicinity of the interchange. The IAMP identifies land use management strategies, near-term, mid-term, , long-term, and long-term vision transportation improvements, an access management plan, and strategies to fund identified improvements.

The IAMP planning efforts resulted in policies, ordinances, and other provisions that will be adopted into the City of The Dalles and Wasco County Transportation System Plans (TSP), Comprehensive Plans, and development review ordinances to support and implement the IAMP. The IAMP will also be adopted by the Oregon Transportation Commission (OTC) as an amendment to the Oregon Highway Plan.

## PROBLEM STATEMENT

In 1997 the State of Oregon invested \$12 million into construction of the I-84 Chenoweth Interchange. The improvements serve to meet Oregon Department of Transportation (ODOT) priorities to provide access from I-84 to the west side of the City of the Dalles ("City"), the Port of the Dalles ("Port"), and the Columbia Gorge Discovery Center (Discovery Center). In 2006, WM3, Inc. ("WM3") proposed a zone change from industrial to commercial use for an approximately 67 acre parcel adjacent to the Chenoweth Interchange. The zone change was adopted by the City and subsequently appealed by ODOT. An Intergovernmental Agreement (IGA) between ODOT, the City, and WM3 was drafted in which WM3 was approved to develop 25 acres with commercial land uses and agreed not to develop any 'non-industrial' uses on the remaining 42 acres until an IAMP is adopted by ODOT and the City. The City and ODOT initiated the IAMP process to ensure that the original priorities for the interchange continue to be met, and to identify what changes to the interchange and surrounding street network may be needed for the current land uses, and future development. The IAMP identifies transportation improvements and potential funding strategies

that satisfy requirements of the IGA and Oregon Administration Rule (OAR) 734-051. The IGA is provided as an attachment to Technical Memorandum #2 in the Volume 2 Technical Appendix. The IAMP was developed according to the ODOT IAMP Guidelines.

## **INTERCHANGE FUNCTION**

The I-84 Chenoweth Interchange is an urban interchange located near the City's northwestern boundary that connects I-84 with Highway 30 on the west side of the interchange and River Road on the east side. Highway 30 is a District Highway that runs parallel to I-84 and ends just south of River Road at Division Street. Highway 30 then turns into West 6th Street which runs through much of the City and has several interchanges connecting it to I-84. River Road is a Wasco County facility from the Chenoweth Interchange to Bargeway Road at which point it becomes Webber Street, a City of The Dalles facility. These roadways provide a loop connection through the city's industrial area, much of which is owned by the Port, from the Chenoweth Interchange to the Webber Street Interchange. The land uses served by the Chenoweth Interchange are primarily industrial although some commercial land is located on the east side of the interchange and a mix of commercial and residential is located on the west side of the interchange.

When it was originally designed in 1996, the I-84 Chenoweth Interchange was intended to function as a service-level interchange that would safely and efficiently accommodate the traffic demands associated with the Port, industrial property in the vicinity of the I-84, and the Discovery Center. Visitor traffic to the Discovery Center has been lower than originally projected and the function of the interchange today is principally to provide safe and efficient access to the Port and industrial land in the western part of The Dalles (the area located east of the interchange). In addition to its primary function, the Chenoweth Interchange remains an important facility for accessing the Discovery Center and existing commercial lands in the vicinity of the City's industrial center. The interchange also serves local residential and commercial traffic circulating from I-84 to Highway 30 and West 6th Street.

The City of The Dalles is currently considering designating land northwest of the I-84 Chenoweth Interchange for residential development to meet the City's 20-year projected population needs. This requires amending the Columbia River Gorge National Scenic Area boundary in order to expand the City Urban Growth Boundary (UGB). If both of these changes happen, then the I-84 Chenoweth Interchange would provide a link from new residential development northwest of the interchange to I-84 and to the employment area southeast of the interchange. No decision has been made regarding future UGB expansion in this area; therefore, the interchange function for the I-84 Chenoweth IAMP does not assume it is intended to serve future growth outside of the current UGB.

## **INTERCHANGE MANAGEMENT STUDY AREA**

To provide a comprehensive study and to achieve effective results, the Interchange Management Study Area (IMSA) includes developable and re-developable properties and major roadways that could significantly affect the interchange function over the next 20 years. At a minimum, the IMSA includes properties within ½-mile from the existing I-84 Chenoweth Interchange as defined by

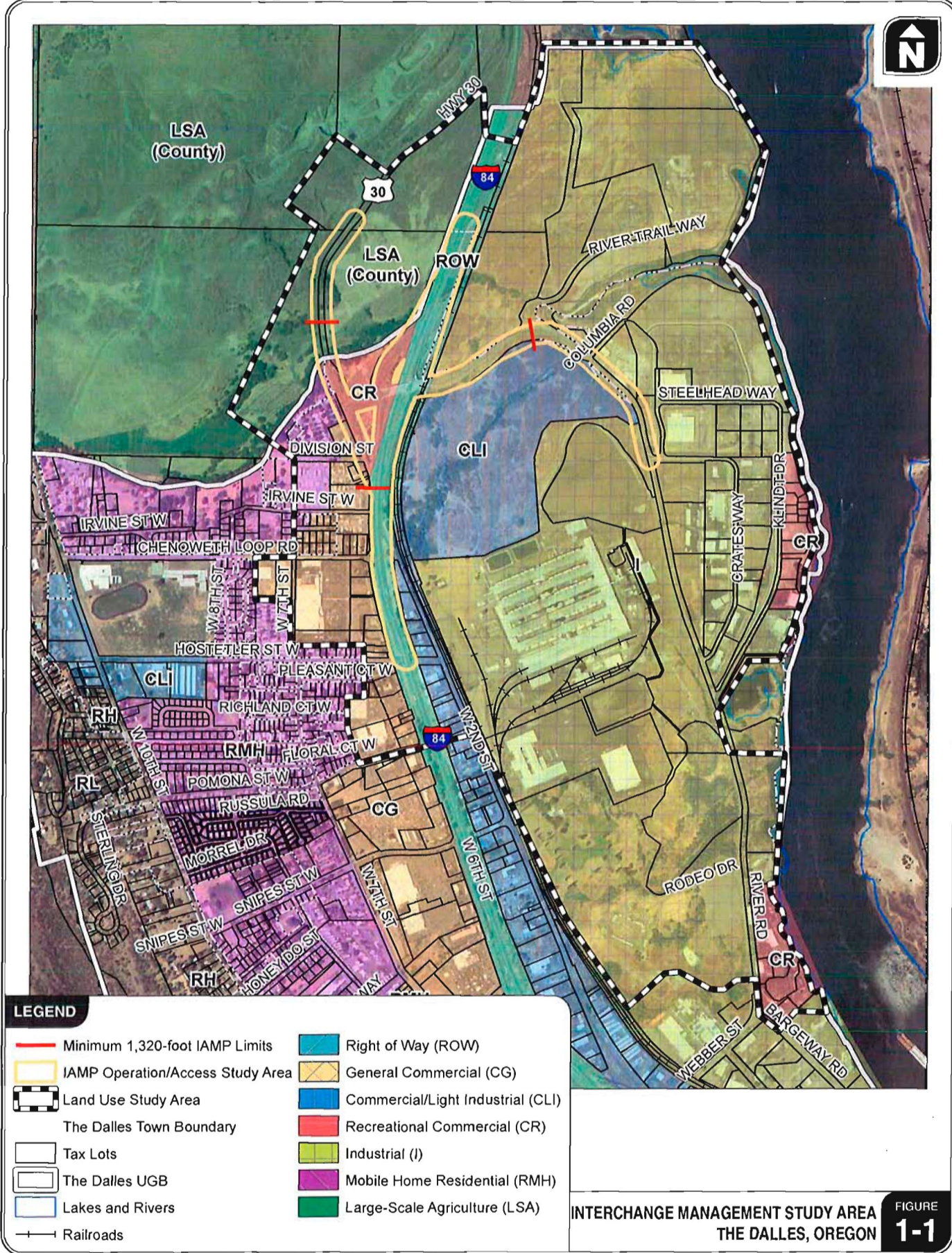
ODOT's IAMP Guidelines. The study area also takes into account facilities and properties that will impact the operations of the interchange and any natural (e.g., Columbia River) or cultural resources in the vicinity of the interchange.

The IMSA map is shown in Figure 1-1, which identifies key features and boundaries of the area included in the IAMP. As shown on the IMSA map, two study boundaries are identified: the IAMP Operations and Access Study Area and the Land Use Study Area. Each of these study areas are described below.

### **Operations and Access Study Area**

The Operations and Access Study Area includes all access points and intersections within approximately ½-mile from the existing I-84 Chenoweth Interchange and encompasses key intersections that have potential to affect traffic operations in the interchange area over the planning period. This study boundary identifies the area for which operational analysis was completed and the area that was considered for the Access Management Plan. Interchange crossroad access spacing requirements are ¼ mile, as identified in Figure 1-1. The study intersections include:

- I-84 Eastbound Ramps/River Road
- I-84 Westbound Ramps/River Road
- Historic Columbia River Hwy (US 30)/River Road
- Historic Columbia River Hwy (US 30)/Division Street
- Historic Columbia River Hwy (US 30)/Chenoweth Loop
- Historic Columbia River Hwy (US 30)/Hostetler Street
- River Road/Columbia Road
- River Road/Crates Way
- River Road/River Way Trail



H:\profile\9600 - I-84 Chenoweth IAMP\GIS\_Report\Fig1-1\_IMSA.mxd

### **Land Use Study Area**

The Land Use Study Area includes all properties that lie within a ½-mile of the interchange. The Land Use Study Area extends beyond a ½ mile in places to incorporate developable and re-developable properties that are expected to significantly affect the interchange function over the next 20 years. Properties identified with potential to affect the interchange include those that are expected to utilize the interchange as the primary connection to I-84 or those that may be impacted by actions needed to improve local circulation. Developments to the east of I-84 were included if their primary access to the interchange is provided via River Road, including those located on Klindt Drive, Crates Way, and Steelhead Way. To the west of I-84, properties included in the Land Use Study Area primarily include those properties with potential access needs within the interchange crossroad access spacing standard distance of ¼-mile. The boundary of the Land Use Study Area extends south of the interchange to encompass the Northwest Aluminum Company parcels and all of the Port of The Dalles property.

Future development located within the Land Use Study Area will be required to comply with the City of The Dalles Development Code which incorporates code amendments proposed in this IAMP.

### **GOALS AND OBJECTIVES**

The goal of the IAMP is to protect the function of the interchange for the next 20 years while accounting for changes in land use and traffic patterns. Potential capacity for development of existing industrial land within the Port and redevelopment of land adjacent to the interchange will impact the traffic patterns over this period. As stated in Policy 3C of the 1999 Oregon Highway Plan, "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." From this definition, the objectives of the I-84 Chenoweth IAMP are to:

- Protect the function and operation of the Chenoweth Interchange as a local service facility and Interstate-84 as a facility of statewide significance.
- Protect the function and operation of the existing local street network within the IAMP study area.
- Ensure changes to the planned land use are consistent with protecting the long-term function of the interchange and the local street system.
- Ensure that the interchange will function to support future local economic development over the next 20 years by managing the allowed land uses within the vicinity of the interchange.
- Identify the existing and potential land use designations, intensities, conditions, and actions that could have a *favorable* effect on the facility, or an *adverse* effect on the facility.
- Identify and prioritize transportation improvements and apply access management techniques needed to maintain acceptable traffic operations at the interchange while providing safe access to adjacent land uses.

- Provide certainty to the public, property and businesses owners, The City of The Dalles, Wasco County, and ODOT regarding transportation and land use actions within the vicinity of the interchange.
- Collaborate throughout the planning process with design professionals, jurisdictional representatives, developers, and local property and business owners.
- Comply with the intent of Statewide Planning Goal 1: Public Involvement, 2: Land Use Planning, 5: Natural Resources, 6: Air, Water and Land Resources Quality, 7: Areas Subject to Natural hazards, 8: Recreation Needs, 9: Economic Development, 12: Transportation, and 14: UrbanizationUrbanization.
- Develop implementation policies and monitoring tools to be adopted into the City and County comprehensive plans, transportation system plans, interchange access standards, and zoning ordinances, as appropriate.

## **EVALUATION CRITERIA**

Based on the above objectives, the following evaluation criteria were assembled to ensure that each concept would be evaluated for consistency with the overall intent of the community and the project. The six evaluation categories are as outlined below:

- **Transportation Operations:** This category consists of those criteria that assess the ability for vehicles to travel through and within the study area. Special considerations within this category include safety, local connectivity and mobility, including freight mobility.
- **Land Use:** This category consists of those criteria that assess right-of-way impacts, consistency with adopted land use and economic development plans, transportation capacity impacts of changes in land use intensity, impacts to utilities, and impacts to existing and proposed developments.
- **Economic Development:** This category consists of those criteria that assess the potential for near-term growth (1-5 years), mid-term growth (5-15 years), and long-term growth (15+ years)
- **Cost:** This category consists of those criteria that assess the practicality of a design concept from a construction cost and feasibility perspective.
- **Environmental, Social, and Equity:** This category consists of those criteria that assess the degree to which an alternative is compatible with the natural and built environment including environmental impacts (i.e., storm water drainage and hazardous waste) and socio-economic impacts (i.e., stakeholders' needs).
- **Accessibility:** This category consists of those criteria that assess the ability to access properties and businesses within the study area to/from the regional infrastructure network including the balance between local access and roadway function, future access for undeveloped properties, and adherence to the access spacing standards.



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## **DEVELOPMENT OF THE IAMP**

The I-84 Chenoweth IAMP was guided by the Technical Advisory Committee (TAC) and a Steering Committee (SC), technical and policy review committees each made up of representatives from the Oregon Department of Transportation (ODOT), the City of The Dalles, and Wasco County. The TAC and SC roster list is provided in the Preface of this document and in Section 2. The TAC and SC convened jointly throughout the course of the project to review and guide the technical analysis prepared by the consultant team. *A summary of the individual TAC and SC meetings is provided in Appendix "A."*

### **Public Involvement**

In addition to the technical review work provided by the TAC and SC, local citizens, property owners, and business owners participated in two public workshops and a joint work session of the City of The Dalles Planning Commission and City Council. The workshops and work session provided members of the public with opportunities to comment on the design alternatives. Property and business owners within the IAMP Land Use area were individually interviewed at the beginning of the IAMP process. Members of the public submitted comments on the project website ([http://www.oregon.gov/ODOT/HWY/REGION4/I84\\_Chenoweth\\_IAMP/I84\\_Chenoweth\\_IAMP](http://www.oregon.gov/ODOT/HWY/REGION4/I84_Chenoweth_IAMP/I84_Chenoweth_IAMP)) and directly to the project management team. In addition, adoption of the plan included public hearings for The City of The Dalles, Wasco County, and the Oregon Transportation Commission. *Summaries of the public meetings are provided in Appendix "A."*

## **IAMP ORGANIZATION AND METHODOLOGY**

The development of the I-84 Chenoweth IAMP began in September 2008 when the Project Management Team (PMT) first met. Work with the TAC and SC began in December 2008. Since December 2008, these groups have undergone an extensive process that has involved a review of existing and future transportation conditions, future land use analyses, potential Union Pacific railroad crossing alignments and design, local access and circulation alternatives, and financing options.

Sections 1 through 9 comprise Volume 1 of the IAMP and provide the main substance of the plan. These are supplemented by Technical Appendices in Volume 2 which contains the technical memoranda documenting each step in the process. The organization and description of each element of the IAMP are outlined below:

**Section 1** describes the IAMP process, purpose, and goals and outlines the remainder of the document;

**Section 2** details the interagency and public involvement program;

**Section 3** provides the plan and policy review;

**Section 4** outlines the existing land use patterns and transportation facilities within the IAMP study area;

**Section 5** documents the future land use and transportation conditions and how they were addressed by the planning effort;

**Section 6** provides a description of the alternatives analysis and transportation planning efforts involving the selection of a preferred interchange form, supporting local access and circulation network, access management plan, and land use management plan;

**Section 7** is the I-84 Chenoweth IAMP, including the local circulation and access elements and the and the transportation improvement projects that are necessary to ensure the continued long-term safety and function of the interchange;

**Section 8** provides guidance on IAMP adoption, monitoring, and updates; and ,

**Section 9** documents how the I-84 Chenoweth IAMP complies with the Oregon Administrative Rules for the development of an interchange area management plan as well as the Oregon Highway Plan.

**Section 2**  
Interagency and Public  
Involvement Program

## Interagency and Public Involvement Program

As part of the I-84 Chenoweth Interchange Area Management Plan (IAMP), interagency and public involvement occurred through: stakeholder interviews conducted with business owners at the beginning of the IAMP process; a Technical Advisory Committee (TAC) and a Steering Committee (SC) that had regular meetings; two public Open Houses involving local citizens, property owners, and business owners; public comments posted on the project website; and, a joint work session of the City of The Dalles Planning Commission and City Council that was



open to the public; and public adoption hearings at The City of The Dalles, Wasco County, and the Oregon Transportation Commission. An overview of the TAC and SC meetings and open houses is summarized below.

### TECHNICAL ADVISORY AND STEERING COMMITTEES

The TAC and SC guided the planning work and were responsible for reviewing all work products, providing input on all planning recommendations such as the project study area, goals and objectives, level of public involvement, technical analysis, and the proposed alternatives. Ultimately the TAC and SC helped select the preferred local circulation/access, land use management, and coordination elements of the IAMP. A Project Management Team (PMT) performed a coordination function, planning and executing project management tasks related to project schedule and meeting logistics. The PMT included representation from ODOT, the City of The Dalles, and the consultant team and were all members of the TAC.

Membership on the TAC and SC was established through input from City, County, and ODOT representatives. A proposed TAC and SC membership roster was presented and finalized at a project kick-off meeting of the Project Management Team (PMT) held September 15<sup>th</sup>, 2008. A list of TAC and SC members is included in Table 2-1.

**TABLE 2-1 TECHNICAL ADVISORY AND STEERING COMMITTEES**

| Agency                   | Name            | Position/Title                                | Role                                |
|--------------------------|-----------------|---|-------------------------------------|
| ODOT Region 4            | Ana Jovanovic   | ODOT Region 4 Planner                         | ODOT Project Manager<br>PMT and TAC |
|                          | Mark Devoney    | ODOT Region 4 Planner                         | TAC                                 |
|                          | David Boyd      | ODOT Region 4 Access Management<br>Engineer   | TAC                                 |
|                          | Rod Cathcart    | ODOT Region 4 Traffic Analyst                 | TAC                                 |
| ODOT District 9          | Brad DeHart     | ODOT District 9 Area Manager                  | TAC                                 |
|                          | Sam Wilkins     | ODOT District 9 Manager                       | SC                                  |
| ODOT Statewide<br>Office | Peter Schuytema | ODOT Transportation Planning<br>Analysis Unit | TAC                                 |
|                          | Tracy White     | ODOT Access Management Planner                | TAC                                 |
| Wasco County             | Marty Matherly  | Wasco County Roadmaster                       | TAC                                 |
|                          | Todd Cornett    | Wasco County Planning Director                | SC                                  |
|                          | Gary Nychyk     | Wasco County Senior Planner                   | TAC                                 |
| City of The Dalles       | Richard Gassman | City of The Dalles Senior Planner             | City Project Manager<br>PMT and TAC |
|                          | Dan Durow       | City of The Dalles Planning Director          | SC                                  |
|                          | Dale McCabe     | City of The Dalles Engineer                   | TAC                                 |
| Wasco County             | Marty Matherly  | Wasco County Roadmaster                       | TAC                                 |
|                          | Todd Cornett    | Wasco County Planning Director                | SC                                  |
|                          | Gary Nychyk     | Wasco County Senior Planner                   | TAC                                 |
| DLCD                     | Mark Radabaugh  | DLCD Field Representative                     | TAC                                 |

The TAC and SC members were selected in order to provide representation from both the planning and public works departments for each agency involved. An outline of all of the TAC and SC meetings is included in the next section.

**PUBLIC INVOLVEMENT PLAN**

To ensure that adequate project coordination and public participation occurred throughout the development of the Chenoweth IAMP, a series of joint TAC and SC meetings, public workshops, and public joint work sessions were held over the course of the project. The City of The Dalles and Wasco County also conducted public hearings to adopt the plan. A summary of all of the meetings associated with the project, as well as the meeting objectives, are summarized in Table 2-2.

**TABLE 2-2 MEETING SUMMARY**

| Meeting Event                         | Date/Location  | Meeting Purpose/Objectives   |
|---------------------------------------|--|--|
| PMT Kick-off Meeting                  | September 15 <sup>th</sup> , 2008/<br>The Dalles – ODOT<br>District 9 Office | <ul style="list-style-type: none"> <li>- Review TAC and SC Membership</li> <li>- Review Project Schedule</li> </ul>  |
| TAC/SC Meeting #1                     | December 3 <sup>rd</sup> , 2008/<br>The Dalles – City Hall                   | <ul style="list-style-type: none"> <li>- Review Project Schedule</li> <li>- Presentation: IAMP 101</li> <li>- Review Tech Memorandums #1 and #2 (IAMP Definition and Background and Plans and Policy Review)</li> </ul> <p>The purpose of the Meeting #1 was to introduce the I-84 Chenoweth Interchange project and the consultant team; review the project schedule; review the project goals, objectives, and evaluation criteria; confirm the study area; confirm the project schedule; and review the project's policy framework.</p>   |
| TAC/SC Meeting #2                     | February 11 <sup>th</sup> , 2009/<br>The Dalles - City Hall                  | <ul style="list-style-type: none"> <li>- Review Tech Memorandums #3/4 and #5/6 (Existing and Future Conditions)</li> <li>- Review Stakeholder Interview Summary</li> <li>- Presentation: Interchange 101 and Local Circulation 101</li> <li>- Brainstorm Design Alternatives</li> </ul> <p>The purpose of Meeting #2 was to provide an overview of the IAMP process and principals of local circulation; review the existing and future land use and traffic operations; review a summary of stakeholder interviews that were conducted; and involve the TAC and SC in a brainstorming exercise to develop roadway, local circulation, and access management alternatives for the existing roadway system.</p> |
| Public Workshop #1                    | March 5 <sup>th</sup> , 2009<br>The Dalles – Civic<br>Auditorium             | <ul style="list-style-type: none"> <li>- Project Overview</li> <li>- Summary of Existing and Future Conditions</li> <li>- Review, Comment, Brainstorm Alternatives</li> </ul> <p>The purpose of the first public workshop was to present the project goals and objectives and findings to date; educate the public and stakeholders on the IAMP process and access management practices; and engage the participants to help develop potential local circulation and access management alternatives.</p>   |
| TAC/SC Meeting #3                     | April 8 <sup>th</sup> , 2009/<br>The Dalles – City Hall                      | <ul style="list-style-type: none"> <li>- Review Tech Memorandums #7 (Alternatives Analysis)</li> <li>- Screen Alternatives</li> <li>- Presentation: Access Management 101</li> <li>- Brainstorm Access Management Plan</li> </ul> <p>The purpose of Meeting #3 was to review the Alternatives Analysis and reduce the number of alternatives for refined analysis.</p>   |
| TAC/SC Meeting #3B<br>(extra meeting) | April 30 <sup>th</sup> , 2009/<br>The Dalles – ODOT<br>District 9 Office     | <ul style="list-style-type: none"> <li>- Review Updated Tech Memorandums #7 (Alternatives Analysis)</li> <li>- Presentation: System Development Charges 101</li> </ul> <p>The purpose of Meeting #3B was to review the Updated Technical Memorandum #7, review the qualitative evaluations of the refined alternatives, brainstorm land use management alternatives and funding options, and select a preferred alternative to carry forward for the Draft IAMP document.</p>  |
| TAC/SC Meeting #4                     | May 27 <sup>th</sup> , 2009/<br>The Dalles – City Hall                       | <ul style="list-style-type: none"> <li>- Review Interchange Design Plans</li> <li>- Review Access Management Recommendations</li> <li>- Review Land Use and Implementation Recommendations</li> </ul> <p>The purpose of Meeting #4 was to review design plans for the Draft Preferred Alternative selected in Meeting #3B and select a preferred access management alternative to carry forward for the Draft IAMP document.</p>   |

| Meeting Event                      | Date/Location   | Meeting Purpose/Objectives  |
|------------------------------------|---|---|
| Public Workshop #2                 | June 11 <sup>th</sup> , 2009/<br>The Dalles - Civic Auditorium    | - Summary of Alternatives Analysis and Draft Plan (Interchange Design, Draft Access Management Plan and Land Use and Implementation Recommendations)<br>The purpose of the second public workshop was to present the qualitative evaluations of the local access and circulation alternatives for the Interchange Area developed during Public Workshop #1 and collect input on the Draft Preferred Alternative for the Draft IAMP.   |
| Joint Work Session #1              | June 18 <sup>th</sup> , 2009/<br>The Dalles - Civic Auditorium    | - Summary of Alternatives Analysis and Draft Plan (Interchange Design, Draft Access Management Plan and Land Use and Implementation Recommendations)<br>- Confirm direction for Draft IAMP<br>The purpose of the joint work session of the City Council and Planning Commission was to present the qualitative evaluations of the local access and circulation alternatives for the Interchange Area developed during Public Workshop #2 and collect input on the Draft Preferred Alternative for the Draft IAMP. |
| TAC/SC Meeting #5                  | July 22 <sup>nd</sup> , 2009<br>The Dalles - City Hall            | - Draft IAMP<br>- Draft Ordinance Amendments<br>The purpose of the PPMT Meeting #5 was to review the complete Draft IAMP document and recommendations, draft SDC methodology, and draft ordinances and code amendments.   |
| City Council Work Session #2       | July 27 <sup>th</sup> , 2009<br>The Dalles - City Hall            | - Crossing Alternatives Technical Memorandum<br>- At-Grade Rail Analysis Memorandum<br>The purpose of the Work Session #3 was for the City Council to review the supplemental information prepared to compare the UP railroad crossing alternatives, West 6 <sup>th</sup> Street intersection treatment alternatives, and operational impacts associated with an at-grade crossing at Hostetler (as opposed to a grade-separated option).   |
| TAC/SC Meeting #6                  | August 5 <sup>th</sup> , 2009<br>The Dalles - City Hall           | - Updated Draft IAMP<br>- Updated Draft Ordinance Amendments<br>The purpose of Meeting #6 was to review the Updated Draft IAMP document and recommendations, SDC methodology, and ordinances and code amendments.   |
| Joint Work Session #2              | September 3 <sup>rd</sup> , 2009<br>The Dalles - Civic Auditorium | - Summary of Draft IAMP<br>- Summary of Draft Ordinance Amendments<br>The purpose of the joint work session of the City Council and Planning Commission was to provide supplemental education and summary of the IAMP process. The following elements of the Draft IAMP were summarized: 6 <sup>th</sup> Street cross-section, at-grade vs. grade-separated railroad crossing, and preferred east-west crossing location.   |
| City Planning Commission Hearing   | September 17 <sup>th</sup> , 2009<br>The Dalles - City Hall       | The Draft IAMP was presented to the Planning Commission for adoption. The public hearing was continued until the Planning Commission could have questions answered by the city attorney.  |
| City Planning Commission Hearing   | October 1 <sup>st</sup> , 2009<br>The Dalles - City Hall          | The Draft IAMP was approved and forwarded with a recommendation for approval with modifications to the City Council.  |
| County Planning Commission Hearing | October 6 <sup>th</sup> , 2009<br>The Dalles - Discovery Center   | The Draft IAMP was approved and forwarded with a recommendation for approval to the County Court.   |

| Meeting Event                            | Date/Location   | Meeting Purpose/Objectives  |
|--|---|---|
| City Council Hearing                     | October 26 <sup>th</sup> , 2009<br>The Dalles – City Hall | The Draft IAMP was presented to the City Council for adoption. The public hearing was closed but the vote was postponed to allow additional review time for the Councilors. |
| County Court Hearing                     | November 4 <sup>th</sup> , 2009                           | A public hearing was held on the Draft IAMP however a decision was deferred until action was taken by The City of The Dalles City Council.                                  |
| City Council Hearing                     | November 9 <sup>th</sup> , 2009<br>The Dalles – City Hall | The Draft IAMP was approved with modifications.   |
| County Court Hearing                     | November 25 <sup>th</sup> , 2009                          | Update once meeting occurs  |
| Oregon Transportation Commission Hearing | January, 2009   | Update once meeting occurs  |



**Section 3**  
Plan and Policy Review

## Plan and Policy Review

One of the project objectives of the IAMP is to ensure that the plan is consistent with local and state transportation policies and standards. To meet this objective, a review and evaluation of existing plans, policies, standards, and laws that are relevant to the IAMP study area was conducted. A summary of the documents reviewed is provided below. Detailed information from this review can be found in the Technical Appendix.



### DOCUMENTS REVIEWED

The following transportation and land use plans were reviewed for policies and regulations applicable to the I-84 Chenoweth Interchange.

#### Federal

- Columbia River Gorge National Scenic Area Management Plan

#### State/ODOT

- Statewide Planning Goal 1 (Public Involvement), Goal 2 (Land Use Planning), Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces), Goal 6 (Air, Water and Land Resources Quality), Goal 7 (Areas Subject to Natural Hazards), Goal 8 (Recreational Needs), Goal 9 (Economic Development), Goal 12 (Transportation) and Transportation Planning Rule (TPR) Oregon Administrative Rule 660 Division 12, and Goal 14 (Urbanization)
- Oregon Administrative Rule 731, Division 15, Department of Transportation Coordination Rules
- Oregon Transportation Plan (1992)
- Oregon Highway Plan (1999)
- Oregon Administrative Rule 734, Division 51 (Highway Approaches, Access Control, Spacing Standards and Medians)
- Highway Design Manual
- Port of The Dalles Chenoweth Interchange, Columbia River/Interstate 84, Final Environmental Impact Statement (1995)
- Intergovernmental Agreement/Settlement Agreement (No. 23886) – ODOT, City of The Dalles, and WM3, Inc. (2007)

Local

- Wasco County Comprehensive Plan (1983)
- Wasco County Land Use and Development Ordinance (1985, Updated 1999)
- City of The Dalles Comprehensive Plan (2006)
- City of The Dalles Growth Management Report (2007)
- City of The Dalles Land Use and Development Ordinance (1998, Updated 2008)
- City of The Dalles Transportation System Plan (1999, Updated 2006)
- City of The Dalles Capital Improvement Program, 2007-2012 (CIP)

**CONSISTENCY WITH EXISTING PLANS**

The IAMP has been developed to be consistent with local and state transportation policies. The review of local policies and regulations did not reveal conflicts with the primary goal of the IAMP to protect the function of the interchange but, at the same time, the existing regulatory tools also do not adequately address the future transportation needs in the area. Additional requirements regarding access management, local street connectivity, and transportation financing must be adopted if the transportation system in this area of The Dalles is going to support future planned growth. See Sections 7 and 8 for proposed amendments to existing plans required to make existing plans consistent with the IAMP.

**Section 4**  
Inventory of Existing  
Transportation/Land Use  
Conditions

## Inventory of Existing Transportation/Land Use Conditions

This section provides a review of existing land uses and transportation facilities as well as natural and cultural resources within the vicinity of the I-84 Chenoweth Interchange. As shown in Figure 4-1, the interchange is located at the northwest end of the city and has a service area much larger than the study area (shown in Figure 1-1). The information identified in this section is intended to provide a basis for identifying opportunities and constraints for meeting the goals and objectives of the IAMP.



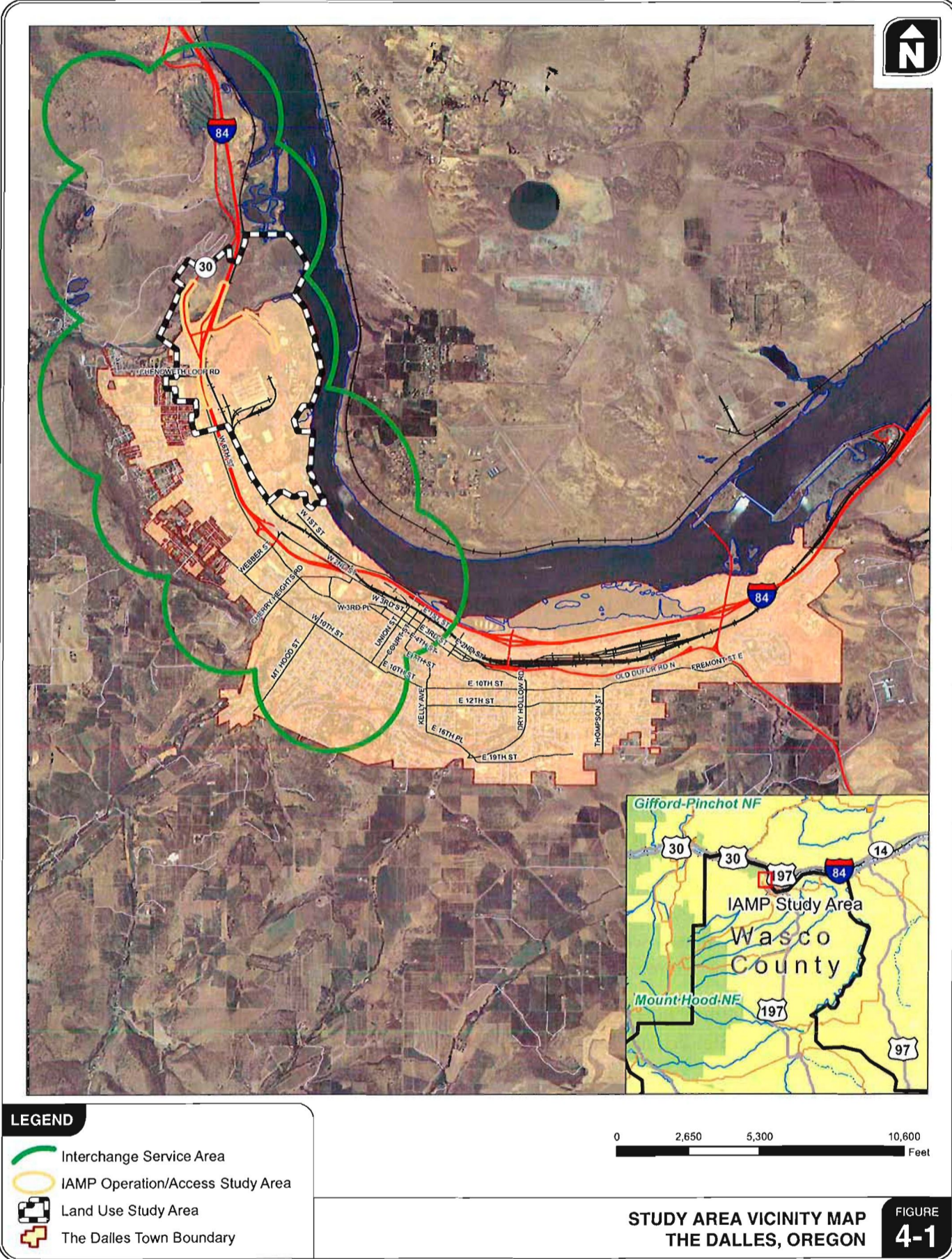
### INTERCHANGE MANAGEMENT STUDY AREA

The Land Use Study Area shown in Figure 4-1 includes all properties that lie within a ½-mile of the interchange. Additionally, the Land Use Study Area includes the areas with trip-generation potential that are expected to have a direct affect on the design and function of the interchange. Developments to the east of I-84 were included if their primary access to the interchange is provided via River Road, including those located on Klindt Drive, Crates Way, and Steelhead Way. To the west of I-84, properties included in the Land Use Study Area primarily include those properties with potential access needs within the interchange crossroad access spacing standard distance of ¼-mile. The boundary of the Land Use Study Area extends south of the interchange to encompass the Northwest Aluminum Company parcels and all of the Port of The Dalles property.

Generally speaking, land uses outside of the Land Use Study Area in the Interchange Service Area (the area where trips using the interchange are likely to have a trip end) use the facility and are impacted by traffic using the facility, but are not anticipated to directly impact the function of the interchange because: they are already developed, have limited redevelopment potential, or are outside of The Dalles Urban Growth Boundary (UGB). Specific trip generation from land uses within the Land Use Study Area was calculated based on individual property development or redevelopment potential, while growth from outside of this area was represented through a regional traffic growth forecast as part of the traffic analysis for the IAMP.

Figure 4-1 also outlines the Interchange Operations/Access Review Area. The operations and access management of intersections and driveways within this area is the subject of analysis described later in this section.

A majority of the Land Use Study Area contains industrial land, which lies to the east of I-84. Many of the industrial properties gain access to I-84 through the Chenoweth Interchange via River Road, including those located on Klindt Drive, Crates Way, Columbia Road, and Steelhead Way. Land to the west and north of the interchange includes undeveloped and underdeveloped land, both inside and outside of The Dalles UGB.



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## **EXISTING LAND USE**

Pursuant to the requirements stated in the Oregon Administrative Rule 734-051-0155 for the preparation of an IAMP, a land use inventory was prepared for the I-84 Chenoweth IAMP study area. This section provides a description of the existing land-use patterns and zoning regulations that currently exist within the interchange study area.

## **DESIGNATIONS AND DEVELOPMENT STANDARDS**

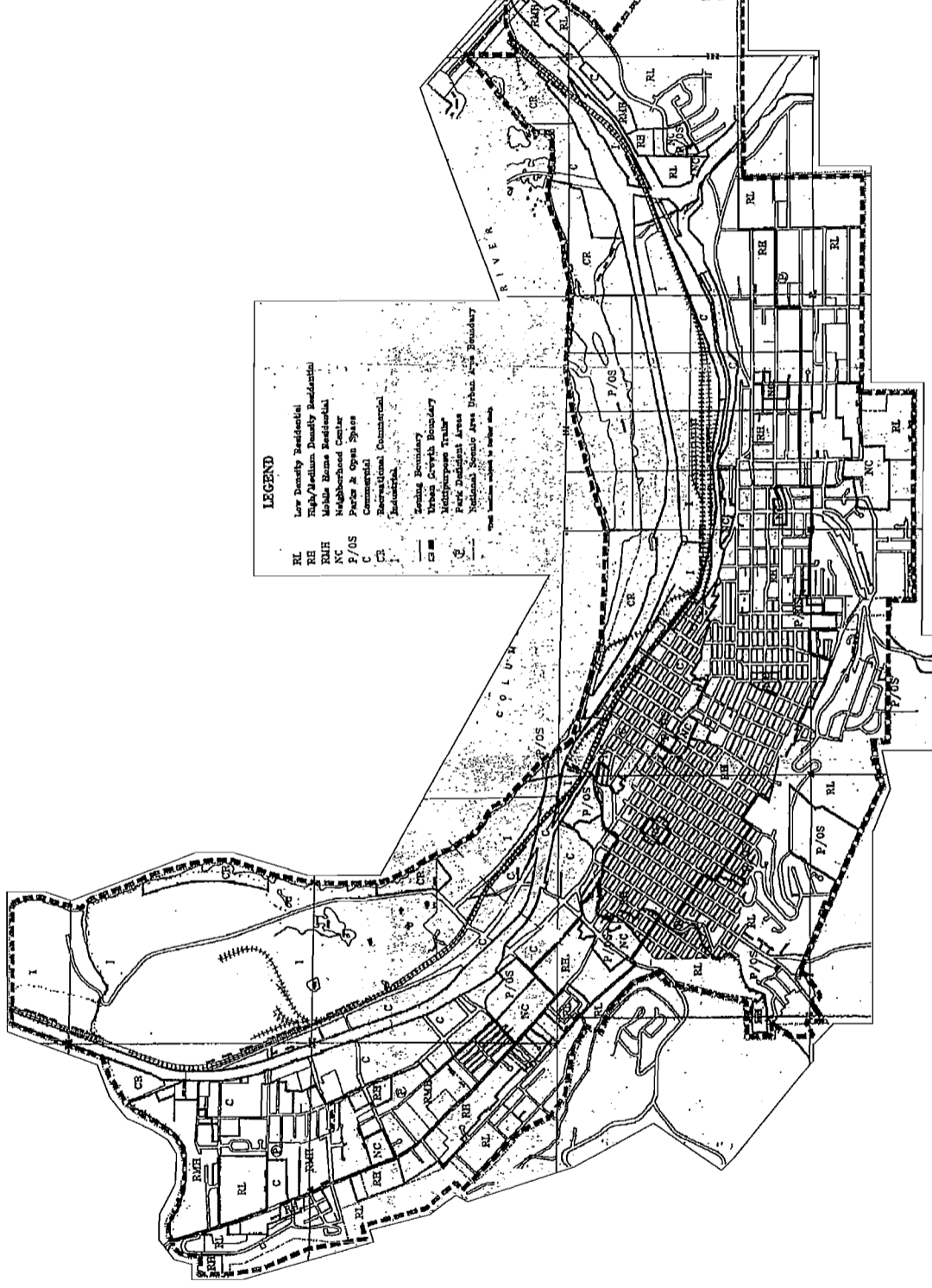
As shown in Figure 4-2, The Dalles Comprehensive Plan assigns the following designations to parcels within the Land Use Study Area and The Dalles city limits:

- Low Density Residential (RL)
- High/Medium Density Residential (RH)
- Mobile Home Residential (RMH)
- Neighborhood Center (NC)
- Park & Open Space (P/OS)
- General Commercial (C)
- Recreational Commercial (CR)
- Industrial District (I)

The Dalles' Land Use and Development Ordinance (LUDO) implements policies established in the City's Comprehensive Plan and regulates development through zoning designations and provisions that apply generally to all development and particularly to land divisions within the city. As shown in Figure 4-3, LUDO zoning is relatively consistent with The Dalles Comprehensive Plan designations, with the exception of the recent zoning designation of Commercial/Light Industrial District (CLI) in the immediate vicinity of the interchange. For the purposes of this IAMP, the analysis assumed land uses as designated in the City's Comprehensive Plan.

The majority of the land in the Land Use Study Area east of I-84 is zoned Industrial District. Uses allowed in this zone include what is generally considered "heavy industrial" uses, such as manufacturing and storage services; rail yards; shipyards; commercial docking facilities; rock and mineral processing; and, warehousing. With the exception of uses that support personal and professional services (e.g., restaurant, laundry, and cleaning services), commercial and retail uses are prohibited. The minimum lot size for development zoned Industrial is 10,000 square-feet. There are no upper limitations on lot size or lot coverage; however, building heights are limited to 55 feet in I zones.

Several properties are zoned for Recreational Commercial, including properties east of Klindt Drive, east of River Road near Webber Street, and between I-84 and West 6th Street near River Road. Light industrial uses that are compatible with commercial and recreational uses are allowed in this zone, as are restaurants, administrative offices, lodging, and campgrounds. Retail services with limited floor area (15,000 square feet) are allowed, but shopping centers are prohibited.



H:\p1919600 - I-84 Chenoweth IAMP\GIS\_Report\500\figs\_Section4-5.dwg Jul 20, 2009 - 4:40pm - cbeigh Layout Tab: Fig. 4-2

EXISTING COMPREHENSIVE PLAN LAND USE THE DALLES, OREGON **FIGURE 4-2**





The 67-acre property in the southeast quadrant of the interchange is zoned Commercial/Light Industrial (CLI) and is the subject of an Intergovernmental Agreement (IGA) between the property owner (WM3, Inc.), the City of The Dalles, and ODOT. Uses allowed in the zone that can be considered "light industrial" include: engineering; research and development; manufacturing; and, warehousing. Retail uses, including shopping centers and grocery stores, are also allowed. As in the Industrial zone, there is a minimum lot size required for development in the CLI zone (10,000 square feet), but no maximum limits on size, lot coverage, or lot width or depth. Building heights are also limited to 55 feet in the CLI zone.

Currently, land to the northwest of the interchange is largely outside of the city's existing UGB. The Wasco County LUDO governs land outside the city's UGB. County zoned land within the Land Use Study Area is A-1 (160), which corresponds to Exclusive Farm Use (EFU) zoning with a 160-acre minimum. The county portion of the IAMP study area, which is part of the Columbia River Gorge National Scenic Area (CRGNSA), and outside of the Urban Area, is also designated as General Management Area (GMA). Applicable provisions of the CRGNSA Management Plan are described in Technical Memorandum #2 in the Technical Appendix.

Permitted uses in the A-1 zone are limited to agricultural uses and structures for agricultural use. Transportation improvements, consistent with state law, are also permitted, as are schools, places of worship, and mineral and geothermal operations. Parks and community centers are allowed conditionally.

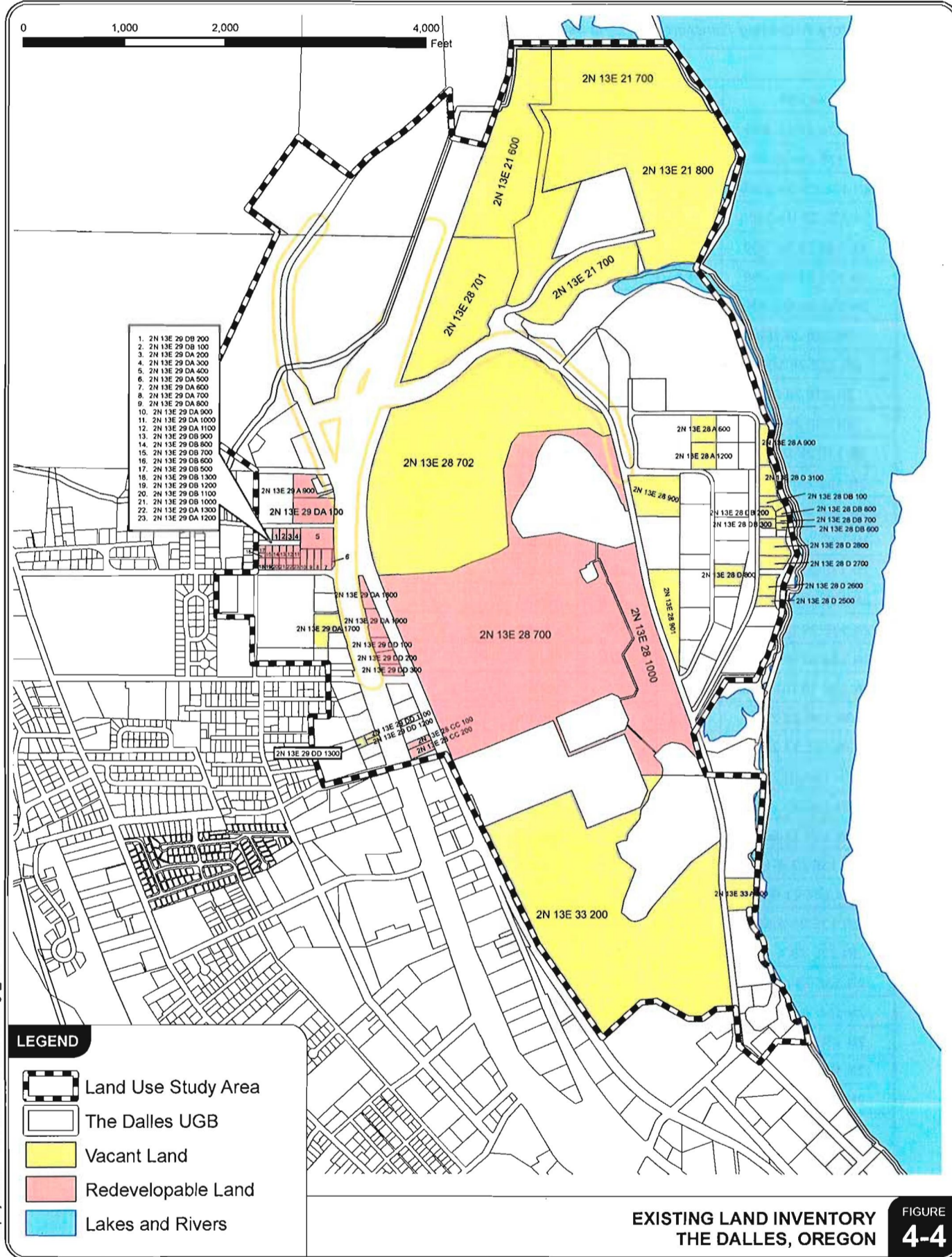
#### **LAND USE INVENTORY**

Existing land uses in the Land Use Study Area are largely consistent with the uses allowed by the underlying zoning. There are 200 acres in the Port Industrial Area, some in private ownership. The largest property owner is the Port of The Dalles, with multiple businesses leasing land, including Munsen Paving, a large rock crushing and aggregate company.

Another large land-holder is Northwest Aluminum Company, which currently owns an approximately 100-acre site that is being prepared for redevelopment. During its operation, Northwest Aluminum Specialties, a secondary aluminum casting operation, had 100 employees and was located to the south of the WM3, Inc. site.

An inventory of land within the IAMP Land Use Study Area was prepared based on GIS data and site observations. Figure 4-4 illustrates the identified vacant and re-developable lands. Re-developable land includes parcels that can be expected to be cleared and redeveloped without requiring deconstruction of valuable infrastructure. Vacant lands include parcels that have no buildings, which allows for the potential for new developments to be constructed. All other land is expected to continue to be used by existing tenants, or tenants with similar trip generation potential, through the 20-year study period. These classifications were used for analysis only and do not replace LUDO definitions of development, redevelopment, or improvements requiring development review.

Table 4-1 provides supporting information for each vacant and re-developable parcel. The tax lot identification for each parcel is labeled on the map for reference.



H:\profile\9600 - I-84 Chenoweth IAMP\GIS\Fig2\_Tax Lots.mxd

**TABLE 4-1 EXISTING LAND INVENTORY**

| Tax Lot           | Acres | Zoning | Existing Development  | Owner                           |
|-------------------|-------|--------|-----------------------|---------------------------------|
| 2N 13E 28 CC 100  | 0.3   | CLI    | Various               | LEE ERNEST W & MARY L           |
| 2N 13E 28 CC 200  | 0.6   | CLI    | Various               | LEE ERNEST W & MARY L           |
| 2N 13E 29 DA 1800 | 0.6   | CLI    | Various               | VELADOR AMADO & CHARLOTTE       |
| 2N 13E 29 DA 1900 | 1.0   | CLI    | Various               | KOOPS DUANE C & JEAN M          |
| 2N 13E 29 DD 100  | 0.6   | CLI    | Various               | STEELE CLARA S ET AL            |
| 2N 13E 29 DD 200  | 0.6   | CLI    | SPEE DEE HAULERS INC  | SPEE DEE HAULERS INC            |
| 2N 13E 29 DD 300  | 0.5   | CLI    | SPEE DEE HAULERS INC  | SPEE DEE HAULERS INC            |
| 2N 13E 28 700     | 94.3  | I      | NORTHWEST ALUMINUM CO | NORTHWEST ALUMINUM CO           |
| 2N 13E 28 1000    | 18.7  | I      | NORTHWEST ALUMINUM CO | NORTHWEST ALUMINUM CO           |
| 2N 13E 28 900     | 4.4   | I      | Vacant                | CHENOWITH CREEK DEVELOPERS LLC  |
| 2N 13E 28 901     | 4.3   | I      | Vacant                | NORTHWEST ALUMINUM CO           |
| 2N 13E 28 DB 600  | 0.2   | CR     | Vacant                | RIVERFRONT ASSETS LLC           |
| 2N 13E 28 DB 300  | 0.3   | CR     | Vacant                | RIVERFRONT ASSETS LLC           |
| 2N 13E 28 DB 700  | 0.2   | CR     | Vacant                | RIVERFRONT ASSETS LLC           |
| 2N 13E 29 DA 1500 | 0.8   | CG     | Vacant                | HOME DEPOT USA INC              |
| 2N 13E 29 DA 1501 | 1.0   | CG     | Vacant                | MAGID ROBERT N                  |
| 2N 13E 29 DA 1700 | 1.6   | CG     | Vacant                | METRO INVESTMENTS LLC           |
| 2N 13E 29 DD 1100 | 0.2   | CG     | Vacant                | DEAN SANDY ET AL                |
| 2N 13E 29 DD 1200 | 0.2   | CG     | Vacant                | DEAN SANDY ET AL                |
| 2N 13E 29 DD 1300 | 0.2   | CG     | Vacant                | DEAN SANDY ET AL                |
| 2N 13E 28 701     | 20.5  | I      | Vacant                | NORTHWEST ALUMINUM CO           |
| 2N 13E 33 200     | 76.9  | I      | Vacant                | NORTHWEST ALUMINUM CO           |
| 2N 13E 28 702     | 67.2  | CLI    | Vacant                | WM3 INC                         |
| 2N 13E 21 700     | 40.9  | I      | Vacant                | PORT OF THE DALLES              |
| 2N 13E 21 800     | 42.5  | I      | Vacant                | PORT OF THE DALLES              |
| 2N 13E 33 A 100   | 7.6   | I      | Vacant                | FORT DALLES RIVERFRONT PROP LLC |
| 2N 13E 21 600     | 22.2  | I      | Vacant                | NORTHWEST ALUMINUM CO           |
| 2N 13E 28 A 600   | 1.5   | I      | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 A 900   | 0.8   | I      | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 A 1200  | 1.6   | I      | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 3100  | 1.1   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 3000  | 1.2   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 2800  | 1.3   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 2700  | 0.9   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 2600  | 0.7   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 2500  | 0.9   | CR     | Vacant                | PORT OF THE DALLES              |
| 2N 13E 28 D 800   | 1.4   | I      | Vacant                | PORT OF THE DALLES              |

CR=Recreational Commercial, CLI=Commercial/Light Industrial, I=Industrial, CG=General Commercial



## EXISTING TRANSPORTATION INVENTORY

The second major component of the I-84 Chenoweth IAMP existing conditions evaluation process is the transportation system. The existing transportation inventory provides a detailed description of all transportation facilities and travel modes within the study area. In addition, the inventory identifies the current operational, traffic control, and geometric characteristics of roadways and other transportation facilities, a safety analysis, access inventory, and identifies existing deficiencies.

### ROADWAY FACILITIES

The roadways within the study area include state, county, and city facilities. A description of each of the roadway facilities is summarized in Table 4-2. Figure 4-5 illustrates the existing lane configurations and traffic control devices at the respective study intersections.

**TABLE 4-2 EXISTING TRANSPORTATION FACILITIES AND ROADWAY DESIGNATIONS**

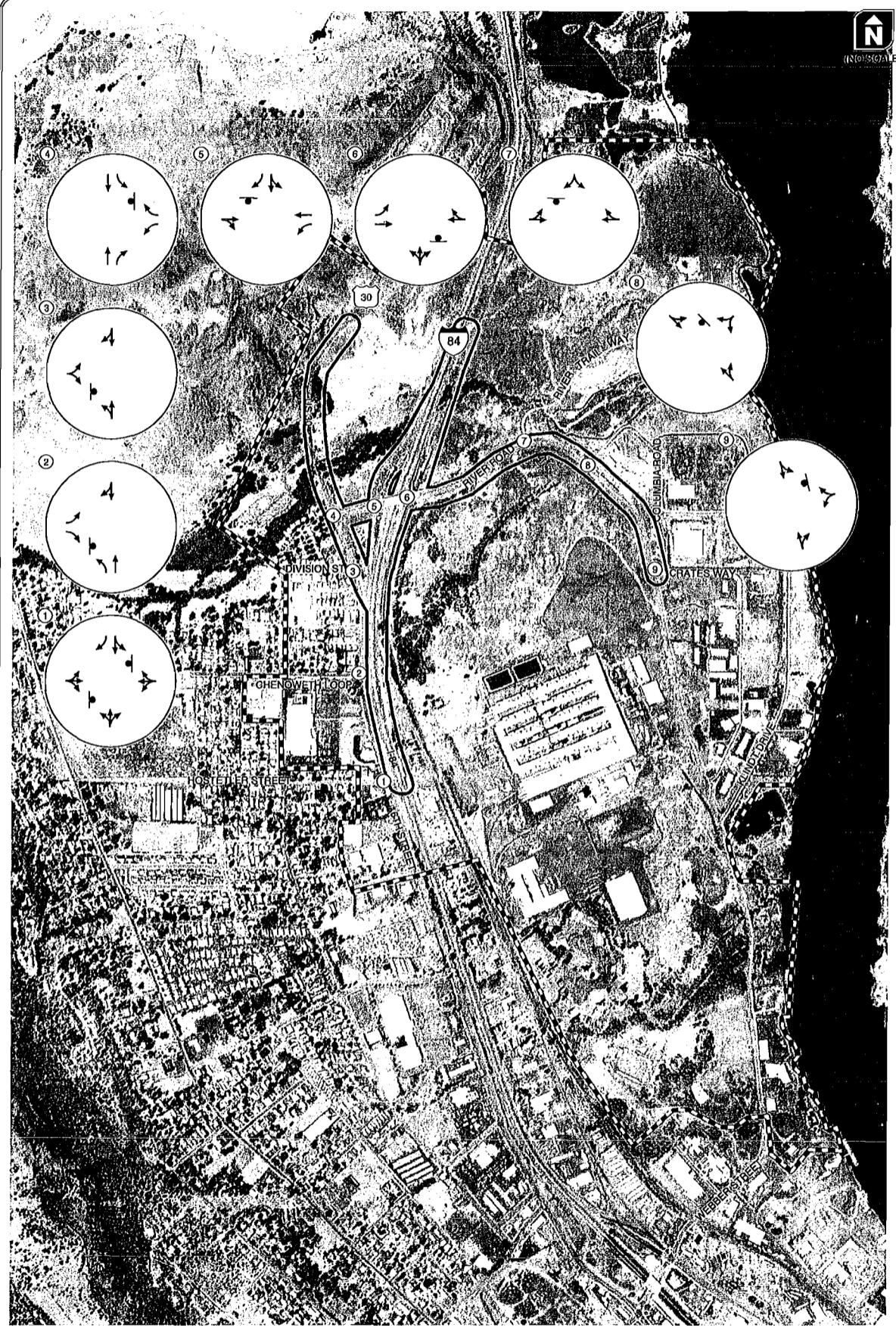
| Roadway                     | Existing Roadway Ownership/ Functional Classification | Cross-section | Surface Type | Posted Speed (mph) | Side-walks? | Bicycle Lanes?                      | On-Street Parking? |
|-----------------------------|---|---------------|--------------|--------------------|-------------|-------------------------------------|--------------------|
| I-84                        | ODOT/ Interstate Highway                              | 4-lane        | Paved        | 65                 | No          | No <sup>1</sup>                     | No                 |
| West 6 <sup>th</sup> Street | <sup>2</sup> City/ Arterial                           | 2-lane        | Paved        | 40                 | Partial     | South of River Rd.                  | No                 |
| River Road                  | Wasco County/ Collector                               | 2-lane        | Paved        | 40                 | No          | Yes                                 | No                 |
| Hostetler Road              | Wasco County/ Collector <sup>3</sup>                  | 2-lane        | Paved        | 30                 | Partial     | West of West 6 <sup>th</sup> Street | Yes                |
| Chenoweth Loop              | Wasco County/ Collector                               | 2-lane        | Paved        | 25                 | Partial     | Yes                                 | Yes                |
| Division Street             | Wasco County/ Local                                   | 2-lane        | Paved        | 25                 | No          | No                                  | Yes                |
| River Trail Way             | Local <sup>4</sup>                                    | 2-lane        | Paved        | Not Posted         | No          | No                                  | No                 |
| Columbia Road               | Local <sup>4</sup>                                    | 2-lane        | Paved        | 20                 | Partial     | No                                  | No                 |
| Crates Way                  | Local <sup>4</sup>                                    | 2-lane        | Paved        | 20                 | Partial     | No                                  | No                 |

<sup>1</sup> It is illegal to operate a bicycle or other non-motorized vehicle on an interstate.

<sup>2</sup> 6<sup>th</sup> Street is a ODOT facility North of Division Street and is classified as a district highway and Oregon Scenic Byway



<sup>3</sup> East of West 6<sup>th</sup> Street the City of The Dalles maintains Hostetler and classifies it as a local street.

<sup>4</sup> Not documented in the City of The Dalles TSP; currently functioning as local streets.



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**LEGEND**

-  - STOP SIGN
-  - TRAFFIC SIGNAL

**EXISTING LANE CONFIGURATIONS & TRAFFIC CONTROL DEVICES  
THE DALLES, OREGON**

**FIGURE  
4-5**

#### Interstate-84

I-84, a four-lane interstate highway that runs roughly north-south through The Dalles,, is the main east-west travel route within the State of Oregon providing connections between Portland, Oregon and Boise, Idaho. I-84 is part of the National Highway System and is designated in the 1999 Oregon Highway Plan (Reference 1) as an Interstate Highway, Freight Route, and Truck Route. The pavement conditions on Interstate-84 were observed to be in good condition in the vicinity of the I-84/Chenowith Interchange at the time of the study.

#### Interstate-84 Ramps

The interstate ramps are single-lane, paved connections between the right lane of travel on I-84 and River Road. The eastbound ramp provides approximately 900 feet for deceleration and queue storage from the ramp gore to the ramp terminal intersection. Right-turn storage is provided for approximately eight passenger cars on the eastbound I-84 off-ramp at the intersection with River Road. The Westbound ramp approach to the intersection with River Road provides approximately 800 feet for deceleration and queue storage from the ramp gore to the ramp terminal. The approach is flared to provide right-turn storage for approximately one passenger car. Due to the need to elevate River Road over I-84 and the parallel railroad tracks, the overpass has a grade that slopes down to the west from the high point located just east of the westbound ramp terminal as shown in Exhibit 4-1.

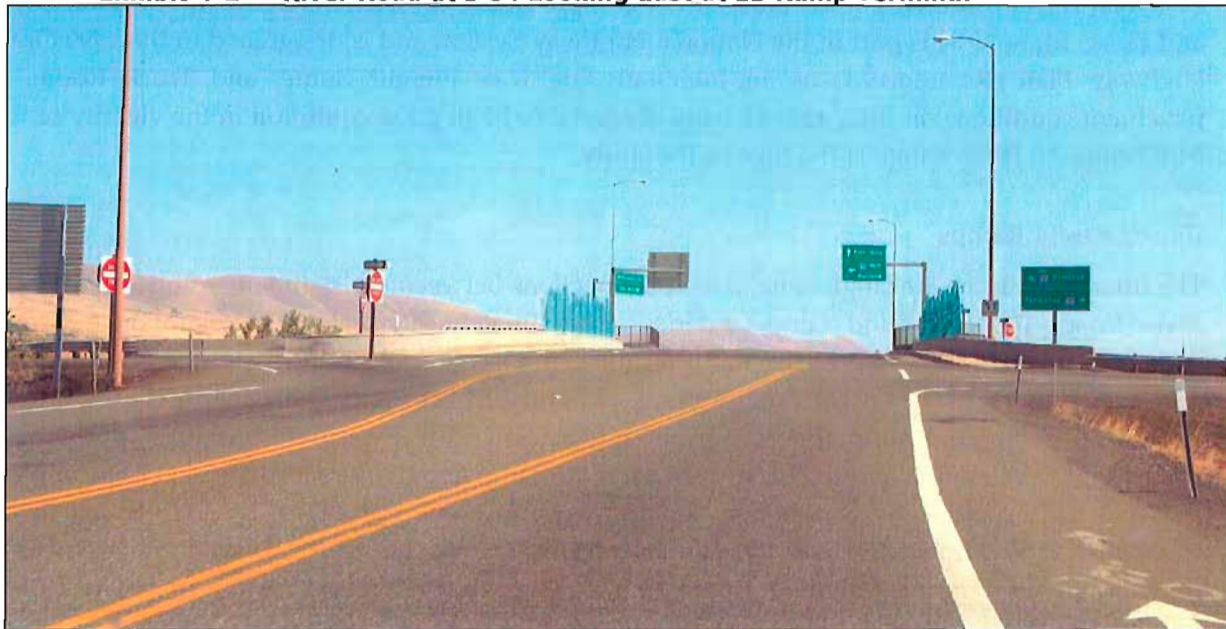
**Exhibit 4-1 I-84 Chenoweth Interchange from North looking South at WB On-Ramp**



Because the westbound ramp terminal is located at approximately the high point of the interchange, the eastbound ramp terminal is located at a lower elevation. Consequently, sight

distance from the eastbound off-ramp terminal is limited due to vertical curve when looking towards the east, as shown in Exhibit 4-2.

**Exhibit 4-2 River Road at I-84 Looking East at EB Ramp Terminal**



Although no crashes were reported at the ramp terminal intersection over a three-year period from January 1, 2005 to December 31, 2007, the perception by some local residents is that sight distance is inadequate and poses a traffic hazard at this location.

Based on field observations, the available sight distance to the east from the shared left/through lane on the eastbound off-ramp is approximately 275 feet. The design speed of the overpass is 35 miles per hour (mph); however, no speed limit is posted on the overpass. The closest speed limit sign designates a limit of 45 mph on River Road in the westbound direction approximately 1,750 feet east of the westbound ramp terminal intersection. On level grade the required stopping sight distances on 35 and 40 mph roadways is 250 and 305 feet, respectively. Accounting for the existing grade, estimated to be 3% or less, at the ramp terminal, the required stopping sight distances are 257 feet and 315 feet, respectively. Considering that the overpass was designed for and is estimated to provide adequate sight distance at a speed of 35 mph on the overpass, it is suggested that the actual sight distance be measured in the field and consideration be given to posting a speed limit of 35 mph on the overpass.

#### West 6th Street (US 30)

Highway 30, designated by the Oregon Highway Plan as a District Highway and an Oregon Scenic Byway, runs parallel to I-84 west of the study area and ends just south of River Road at Division Street. South of Division Street Highway 30 becomes West 6th Street, a city facility, which has a posted speed limit of 40 mph and in general has a two-lane cross-section with bicycle lanes and intermittent sidewalks along the west side. At some intersections there are exclusive left-turn and/or right-turn lanes. West 6th Street connects to I-84 again at the Webber Street interchange



approximately 1.5 miles south of the Chenoweth Interchange at River Road. The Dalles TSP classifies West 6th Street as an arterial.

#### River Road

River Road is a two-lane collector road that links US 30 and 1st Street. River Road is a Wasco County facility from the Chenoweth Interchange to Bargeway Road at which point it becomes Webber Street, a City of The Dalles facility. River Road has a posted speed of 40 mph and provides a connection between the I-84 Chenoweth and Webber Street Interchanges on the east side of I-84. It is the main access to the Port of The Dalles.

#### Hostetler Road

Hostetler Road is a Wasco County road running east-west connecting West 10th Street to West 2nd Street. It is the only crossing of I-84 between the Chenoweth and Webber Street Interchanges (this location is an underpass). The main access to the Northwest Aluminum Company industrial property is at the intersection of Hostetler Road and West 2nd Street. Hostetler Road is maintained by Wasco County east of West 6th Street and by the City west of West 6th Street. The county portion is classified as collector and the city portion is a local road. The speed limit is 30 mph near the West 6th Street intersection.

#### Chenoweth Loop

Chenoweth Loop is a two-lane Wasco County collector road that provides an east-west connection from West 10th Street to West 6th Street. The posted speed limit is 25 mph on Chenoweth Loop.

#### Division Street

Division Street is an un-striped, two-way local street maintained by the county. It provides access to a residential area west of I-84 and has a posted speed limit is 25 mph.

#### River Trail Way, Columbia Boulevard, and Crates Way

River Trail Way, Columbia Boulevard, and Crates Way are not classified in the City of The Dalles TSP. All three streets function as local streets providing access to local properties.

### **PUBLIC TRANSPORTATION FACILITIES**

Existing public transportation service in The Dalles is provided by the Transportation Network. The Transportation Network, a member of the Gorge TransLink, provides dial-a-ride service for The Dalles and select portions of Wasco County. Service is provided Monday-Friday from 8:00 a.m. to 5:00 p.m. More information is available on the Gorge TransLink's website at [www.gorgetranslink.com](http://www.gorgetranslink.com).

The Hood River County Transportation District offers public transportation services through Columbia Area Transit (CAT). CAT provides fixed-route service between Hood River, Mosier, and The Dalles on a daily basis and between Portland and The Dalles on a weekly basis. The current schedule provides two transit trips per day between The Dalles, Mosier, and Hood River during the

morning and evening time periods. Stop locations in The Dalles include: Rosauers, Columbia Gorge Community College, and The Transportation Center, located at 201 Federal Street.

Service to Portland is provided on Thursdays only. In The Dalles the pick-up and drop-off location is The Transportation Center. Stops include the CAT office (Hood River), Gateway MAX Station (Portland), Portland Art Museum, Oregon Health Sciences University, and Clackamas Town Center. Up-to-date schedules, stop location descriptions, and more information on transportation services offered by The Hood River County Transportation District is provided on their website at <http://community.gorge.net/hrctd>.

### **PEDESTRIAN AND BICYCLE FACILITIES**

Pedestrian facilities throughout the study area include sidewalks on the west side of West 6th Street and on other local and collector facilities as outlined in Table 4-2. The existing segments of sidewalk form an incomplete system that does not provide consistent pedestrian connections. Pedestrian volumes were observed to be minimal.

Designated bicycle lanes provide connections between the Port of The Dalles and other properties located on the east side of I-84 and residential and commercial developments along West 6th Street west of I-84. Hostetler Road and Chenoweth Loop provide partial bicycle facilities west of West 6th Street. Low levels of bicycle activity were observed within the study area.

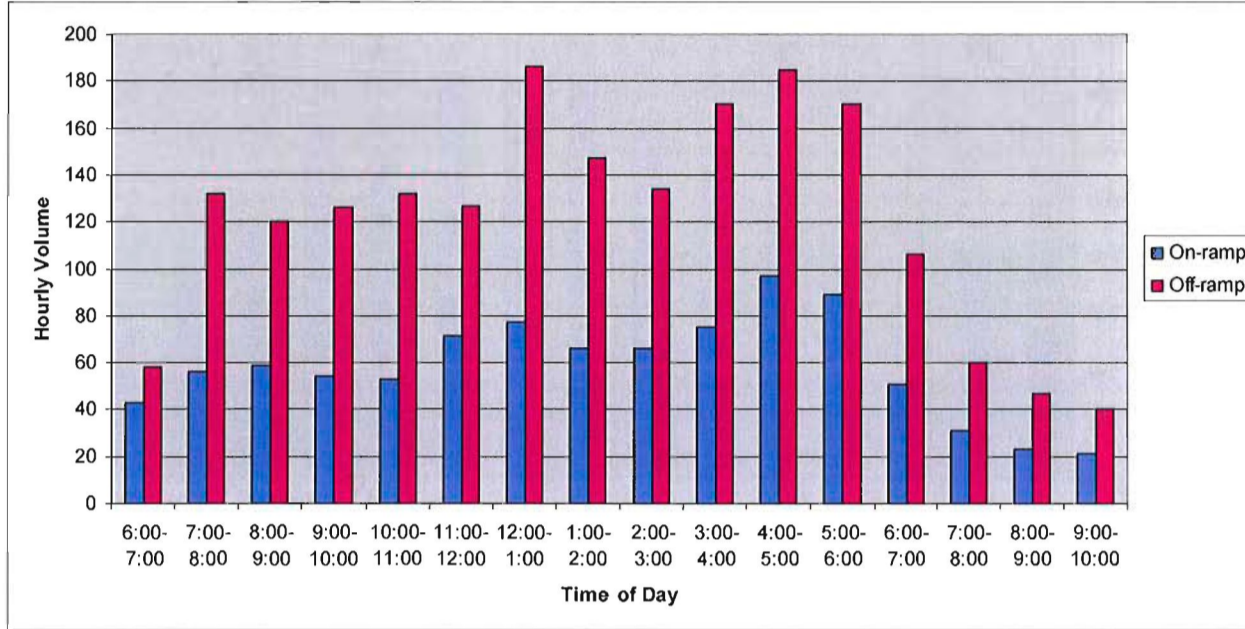
### **EXISTING TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS**

Manual intersection turning movement counts were obtained from ODOT at each of the study intersections to assess the operational performance and characteristics within the study area. These counts were conducted on mid-week days in July 2008. These traffic volume counts were supplemented with data from the July 2007 traffic counts collected for the WM3 Traffic Impact Analysis completed by DKS Associates. A description of the analysis conducted with this data is summarized in the following sections.

#### **Peak Hour Intersection Volumes**

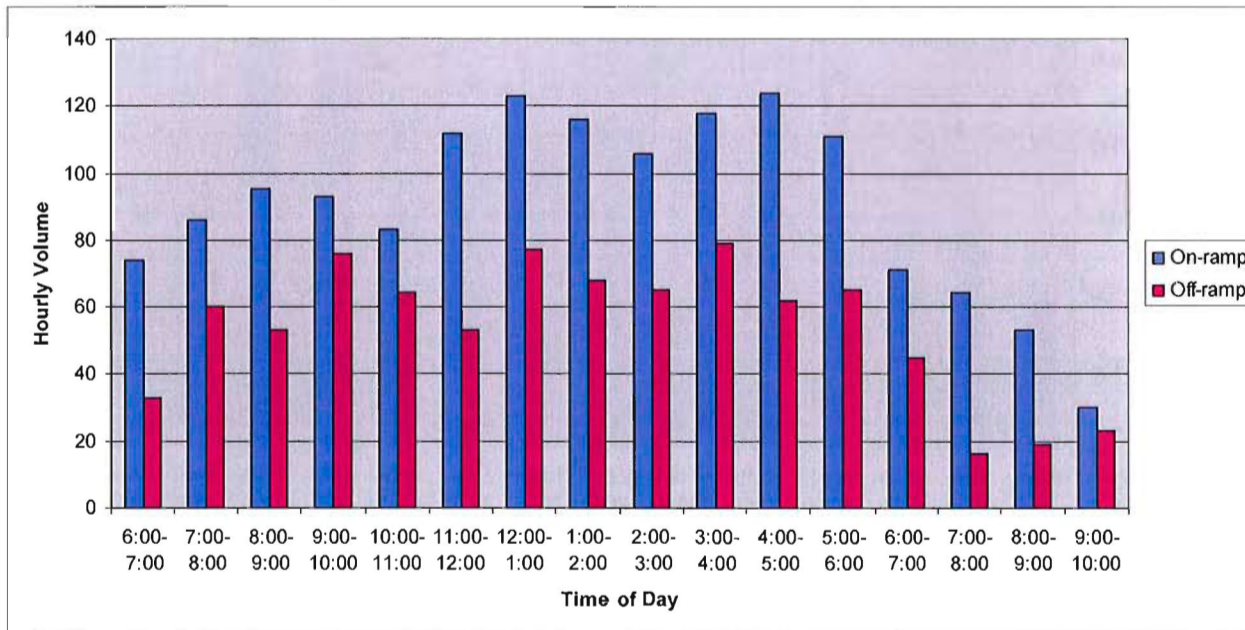
Turning movement counts at each intersection were recorded from 6:00 a.m. to 10:00 p.m. Because of the close proximity of the intersections, a system-wide peak hour was identified based on the volumes at all study intersections. The weekday p.m. peak hour in the study area was found to occur between 4:45–5:45 p.m. Exhibit 4-3 through Exhibit 4-5 illustrate the daily volume peaking characteristics of the I-84 ramp and through traffic. Exhibit 4-6 illustrates the daily volume peaking characteristics of River Road east of US 30.

**Exhibit 4-3 Daily Traffic Volume Profile for I-84 Eastbound Ramps at Chenoweth**



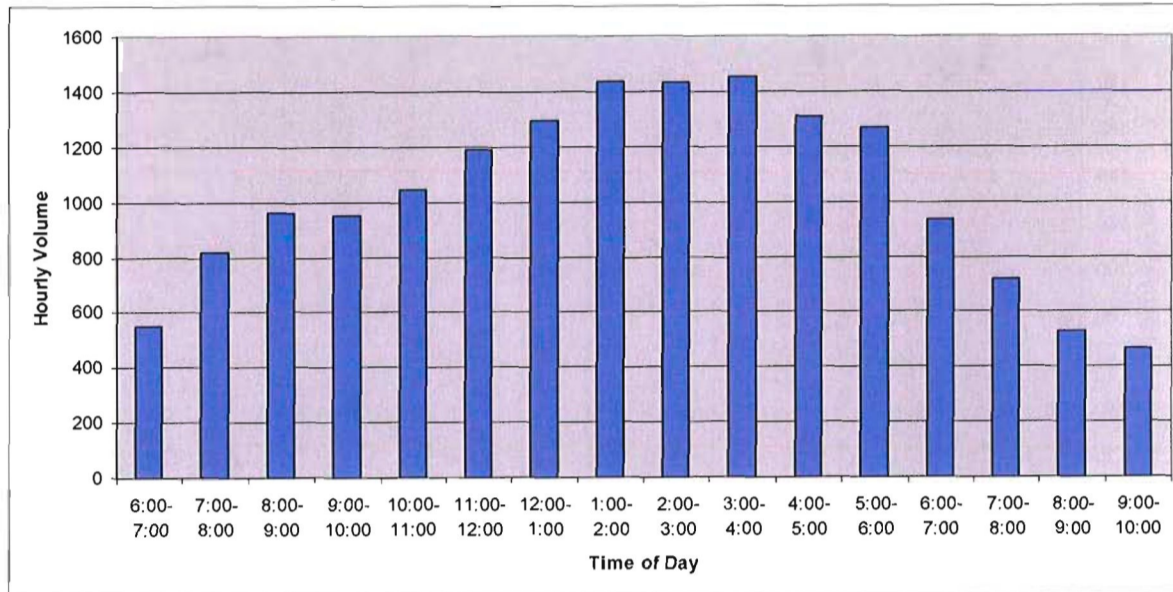
Note: On-ramp volumes collected in August 2008, Off-ramp Volumes collected in April 2008.

**Exhibit 4-4 Daily Traffic Volume Profile for I-84 WB Ramps at Chenoweth**

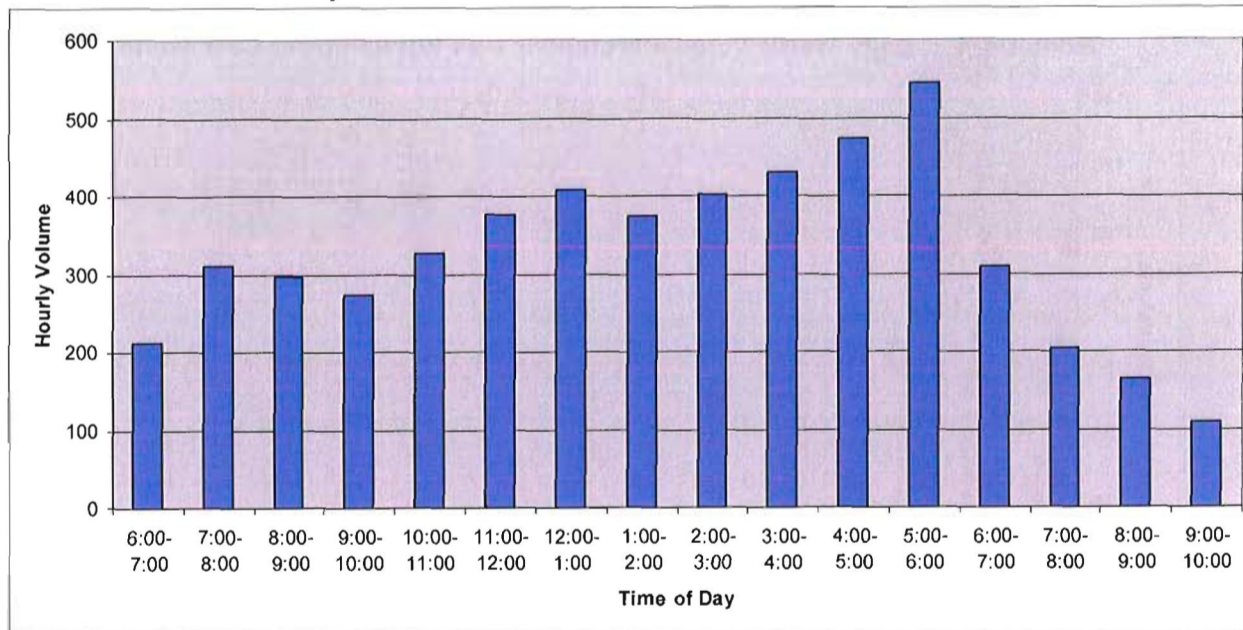


Note: On-ramp volumes collected in August 2008, Off-ramp Volumes collected in April 2008.

**Exhibit 4-5 Daily Traffic Volume Profile for I-84 (bi-directional) at Chenoweth**



**Exhibit 4-6 Daily Traffic Volume Profile on River Road (East of US 30)**



As shown in Exhibit 4-6, the weekday a.m. peak hour traffic volumes on River Road are less than half of the weekday p.m. peak hour traffic volumes. Therefore, the existing and future traffic operations analysis was conducted during the weekday p.m. peak hour only.

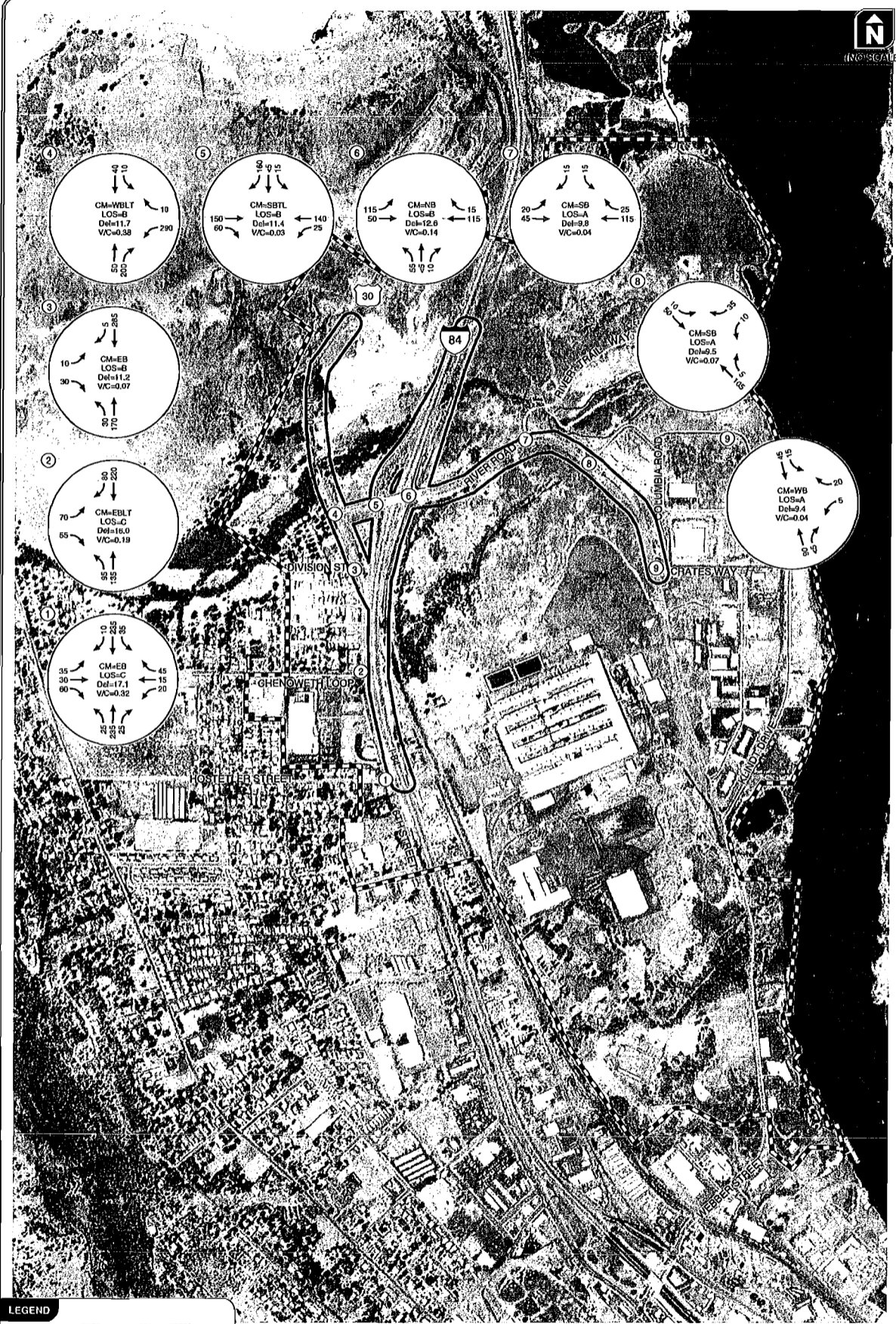
#### Seasonal Adjustments

Following the methodology outlined by ODOT's Analysis Procedures Manual (Reference 2), a seasonal adjustment factor was not applied to the traffic counts collected for the existing conditions

analysis. The counts were collected in late July, which was found to be the peak traffic volume time period of the year during four of the last five years at ODOT Automatic Traffic Recorder location 03-001, approximately 6 miles west of the Chenoweth Interchange on I-84. The weekday p.m. peak hour intersection turning movement counts used for the existing conditions analysis are shown in Figure 4-6.

### ***Existing Intersection Operations***

All level of service analyses described in this analysis was performed in accordance with the procedures stated in the 2000 Highway Capacity Manual (Reference 3). The operational standard for the ramp terminals is a volume-to-capacity ratio of 0.75. The operational standard for all other study intersections is a LOS D. As shown in Figure 4-6, all study intersections currently operate acceptably. The existing conditions operations worksheets are provided in the *Appendix "C" of the Technical Appendix*.



**LEGEND**

- CM = CRITICAL MOVEMENT (UNSIGNALIZED)
- LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
- Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
- V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS, WEEKDAY PM PEAK HOUR THE DALLES, OREGON **FIGURE 4-6**

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## **TRAFFIC SAFETY**

The crash histories at the respective study intersections and three study roadway sections were reviewed in an effort to identify potential existing intersection safety issues. The three study roadway sections include: I-84 one mile in each direction of the Chenoweth Interchange, River Road from West 6th Street (US 30) to Klindt Drive, and West 6th Street (US 30) from Discovery Drive to Hostetler Street. Crash records were obtained from ODOT for the three-year period from January 1, 2005 through December 31, 2007.

No crashes were reported for the following intersections and roadway sections:

- Intersections
  - River Road/I-84 eastbound and westbound ramp terminals,
  - West 6th Street (US 30) /River Road,
  - River Road/Columbia Road,
  - River Road/Crates Way, and
  - River Road/River Trail Way.
- Segments
  - River Road from West 6th Street (US 30) to Klindt Drive.

Reported crashes on I-84 and West 6th Street are summarized in Table 4-3. There was one fatal crash involving a collision with a deer on West 6th Street (US 30) between Discovery Drive and Hostetler Street. The crash rates calculated along these segments were compared to statewide averages for similar facilities. As shown in Table 4-3 the crash rates for similar facilities in Oregon are greater than or equal to the crash rates for the study roadways. Further review of the crash patterns on I-84 shows that 67 percent of crashes were fixed object crashes. This proportion of fixed-object crashes is comparable to other single-vehicle crashes in Wasco County and on Oregon State Highways.

Table 4-4 summarizes the reported crashes at the study intersections where crashes occurred. No observable crash patterns have been identified within the study area; therefore, no traffic safety mitigation has been proposed. No crash rates are available at a statewide level for comparison with the calculated rates shown here. Generally a crash rate of 1.0 or greater indicates the need for further investigation. Given the relatively low entering volume and number of crashes, no patterns could be identified.

**TABLE 4-3 ROADWAY SECTION CRASH HISTORIES (JANUARY 1, 2005 THROUGH DECEMBER 31, 2007)**

| Roadway Section  | Segment Length (Miles) | Number of Crashes | Crash Type   |          |          |         |       | Severity |        |          | Crashes/MVM | Statewide Comparison          |
|--|------------------------|-------------------|--------------|----------|----------|---------|-------|----------|--------|----------|-------------|-------------------------------|
|  |                        |                   | Fixed Object | Rear-End | Overturn | Turning | Other | PDO      | Injury | Fatality |             |                               |
| I-84: 1 Mile Each Direction from Chenoweth Interchange           | 2.0                    | 15                | 10           | 2        | 2        | 0       | 1     | 8        | 7      | 0        | 0.38        | Interstate Freeway            |
| West 6th Street (US 30) from Discovery Drive to Hostetler Street | 1.9                    | 5                 | 1            | 1        | 1        | 1       | 2     | 2        | 1      | 1        | 0.51        | Rural Cities, Minor Arterials |

MVM = Million Vehicle Miles

**TABLE 4-4 INTERSECTION CRASH HISTORIES (JANUARY 1, 2005 THROUGH DECEMBER 31, 2007)**

| Intersection                     | Number of Crashes | Crashes/MEV | Crash Type |          |         |       |     | Severity |          |  |
|----------------------------------|-------------------|-------------|------------|----------|---------|-------|-----|----------|----------|--|
|                                  |                   |             | Angle      | Rear-End | Turning | Other | PDO | Injury   | Fatality |  |
| West 6th Street/Hostetler Street | 3                 | 1.1         | 1          | 1        | 1       | 0     | 3   | 0        | 0        |  |
| West 6th Street/Chenoweth Loop   | 1                 | 0.4         | 0          | 0        | 1       | 0     | 0   | 1        | 0        |  |
| West 6th Street/Division Street  | 1                 | 0.5         | 0          | 0        | 1       | 0     | 0   | 1        | 0        |  |

MEV = Million Entering Vehicles





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### **EXISTING ROADWAY ACCESS CONDITIONS**

There are currently ten private access points located within the Operations and Access Study Area, all of which are located on West 6th Street. There are an additional eight public road access points in the Operations and Access Study Area. Figure 4-7 shows the location and type (public or private) of each of the access locations within the access study area. Table 4-5 identifies the tax lots and existing businesses served by each of the access points.

Oregon Administrative Rule 734, Division 51 and the Oregon Highway Plan (OHP) identify ODOT's access management standards within the vicinity of interchanges. Within 1,320 feet from the ramp terminals no partial or full access is allowed according to the OHP. Figure 4-7 shows the 1,320 foot access control area as measured from the I-84 ramp terminal intersections. As shown, four private and three public accesses are located within the 1,320-foot control area west of the interchange. The three public accesses include the River Road/River Trail Way, River Road/West 6th Street/US 30 and West 6th Street/Division Street intersections. It should be noted that access to the recently approved WM3 commercial development comes via the River Road/River Trail Way intersection which is within the 1,320-foot access control area.

Access spacing standards are 500 feet for US 30, a District Highway, based on the spacing requirements stipulated in the OHP. South of Division Street, West 6th Street is designated as a City Arterial and minimum spacing standards are 300-400 feet between driveways and/or streets. Accesses #2 through #13 are in conflict with one or more access points, which will require access consolidation or modifications, particularly in the mid- or long-term when traffic volumes increase on West 6th Street. Minimum spacing standards for River Road, a major collector, are 150-300 feet between driveways and/or streets according to the City of The Dalles TSP. The public and private accesses on River Road within the Operations and Access Study Area meet these spacing standards.

**TABLE 4-5 EXISTING PUBLIC/PRIVATE ACCESS APPROACH INVENTORY**

| Access Number | Approach Type (Jurisdiction) | Roadway         | Side  | Serves Tax Lot Number             | Property Owner/ Business Name               | Zoning       | Acreage |
|---------------|------------------------------|-----------------|-------|-----------------------------------|---|--------------|---------|
| 1             | Public (City)                | West 6th Street | West  | Hostetler Street                  | Wasco County                                | NA           | NA      |
| 2             | Private (City)               | West 6th Street | West  | 2N 13E 29 DD 1900                 | Columbia Star LLC/ Adult Shop               | CG           | 0.8     |
| 33            | Private (City)               | West 6th Street | West  | 2N 13E 29 DA 1600                 |   | CG           | 0.6     |
| 4             | Private (City)               | West 6th Street | West  | 2N 13E 29 DA 1700                 | MetroMetro Investments LLC/Vacant           | CG           | 1.6     |
|               |                              |                 |       | 2N 13E 29 DA 1501, 1400, and 1500 | Home Depot USA Inc.                         | CG           | 11.2    |
| 5             | Public (City)                | West 6th Street | West  | Chenoweth Loop Rd                 | Wasco County                                | NA           | NA      |
| 6             | Private (City)               | West 6th Street | West  | 2N 13E 29 DA 600                  | Donnell Martin & Carlee                     | CG           | 0.5     |
| 7             | Private (City)               | West 6th Street | West  | Lee Street                        | Private                                     | NA           | NA      |
| 8             | Public (City)                | West 6th Street | West  | Irvine Street                     | City of The Dalles                          | NA           | NA      |
|               | Private (City)               |                 |       | 2N 13E 29 DA 400                  | Robinson Family/ Ideal Homes                | CG           | 1.6     |
|               |                              |                 |       | 2N 13E 29 DA 100                  | Robinson Family/ Marlett Homes              | CG           | 2.4     |
| 9             | Private (City)               | West 6th Street | West  | 2N 13E 29 A 900                   | Robinson Family                             | CG           | 1.3     |
| 10            | Private (City)               | West 6th Street | West  | 2N 13E 29 A 1100                  | Long Stephen Marco                          | CG           | 0.4     |
| 11            | Private (City)               | West 6th Street | West  | 2N 13E 29 A 1000                  | Lindley Marion D/ Doug's Affordable Muffler | CG           | 0.3     |
| 12            | Public (ODOT)                | West 6th Street | West  | Division Street                   | Wasco County                                | NA           | NA      |
| 13            | Private (ODOT)               | West 6th Street | West  | 2N 13E 29 A 200                   | Hattenhauer John                            | CG           | 1.6     |
| 14            | Public (ODOT)                | River Road      | West  | West 6 <sup>th</sup> Street       | City of The Dalles                          | NA           | NA      |
| 15            | Private (ODOT)               | US 30           | West  | 2N 13E 29 100                     | Spee Dee Haulers                            | LSA (County) | 155.0   |
| 16            | Public (County)              | River Road      | North | River Trail Way                   | City of The Dalles                          | NA           | NA      |
| 17            | Public (County)              | River Road      | East  | Columbia Road                     | City of The Dalles                          | NA           | NA      |
| 18            | Public (County)              | River Road      | East  | Crates Way                        | City of The Dalles                          | NA           | NA      |



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### **EXISTING ROADWAY DEFICIENCIES**

No significant existing roadway deficiencies were identified within the study area along the paved sections of roadway, with the exception of sight-distance limitations at the east-bound off-ramp terminal at the I-84 Chenoweth Interchange. As summarized previously in the existing facilities inventory subsection, although no crashes were reported at the ramp terminal intersection from January 1, 2005 to December 31, 2007, the perception by some local residents is that sight distance is inadequate and poses a traffic hazard at this location.

The length and grade of the I-84 ramps are not consistent with current ODOT design standards based on the speed of vehicles entering and exiting I-84.

Traffic operations at each of the study intersections are currently acceptable during the critical weekday p.m. peak hour and there are no identified safety issues based on the crash history.

### **NATURAL AND CULTURAL RESOURCES**

Land in the I-84/Chenoweth IAMP study area includes two Columbia River Gorge National Scenic Area (CRGNSA) designations: Urban Area and General Management Area (GMA) A-1 (160). These designations are intended to preserve natural resources within the CRGNSA; however, the land within the UGB is "urban exempt" and not subject to the CRGNSA.

Based on a regulatory review of state and local government publications (see Technical Memorandum #2) there are currently no known fish or wildlife habitat, flood plains, historic properties, or archeological resources, hazardous materials, or major utilities identified within the IAMP study area boundary. Due to the historic presence of indigenous peoples in the area, it is possible that unknown archeological resources related to the Confederated Tribes of Warm Springs are in existence in the area.

Two significant natural resources in or adjacent to the study area include Chenoweth Creek and the Columbia River. Development in areas identified as natural drainageways, or within the FEMA 100-year flood boundary are subject to provisions in Chapter 8 (Physical and Environmental Constraints) of the City's Development Code.

Existing wetland boundaries are currently unknown; a survey to be completed by the Department of State Lands in late 2009 is planned for the portion of the IMSA that is owned by WM3, Inc.

The study area also includes a portion of the Columbia River Gorge Historic Highway, which is popular with recreational drivers and cyclists. Also referred to as the Mosier-The Dalles Highway or US 30, the highway is classified in the Oregon Highway Plan as a District Highway and a Scenic Byway. The highway is also subject to the design standards in the Historic Columbia River Highway Master Plan. The 2006 Master Plan addresses history, highway section recommendations, management activities, restoration progress, and funding plans. The chapter on management activities describes general cultural resource management for the roadway, bridges, viaducts, tunnels, retaining walls, parapets, footbridges, picnic areas and campgrounds. The same chapter also describes scenic resource management and resource management measures such as access control, speed zones, shuttle buses, and signage.

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## **SUMMARY**

- The primary roadways within the study area include Interstate-84, West 6th Street, US 30, and River Road.
- All of the study roadways have a two-lane cross-section with the exception of Interstate-84 which is a four-lane facility.
- All of the study intersections operate at a volume-to-capacity ratio of 0.38 or less and a Level-of-Service "C" or better during the weekday p.m. peak hour which satisfies the ODOT volume-to-capacity thresholds and local mobility standards, respectively.
- Based on a review of the most recent five years of available crash data, there are no identified safety issues within the study area.
- Sight distance at the I-84 eastbound off-ramp is limited by the vertical curve of the bridge over I-84 and the UPRR. Given the distance (over 1500 feet) between the interchange and the nearest speed limit sign, a speed limit sign posted at 35 miles per hour (the design speed of the overpass) may help to reduce potential for crashes due to limited sight distance.
- There are currently 1818 access points (8 public/10 private) located within the Operations and Access Study Area along West 6th Street and River Road. The existing access points are a combination of public and private approaches.
- ODOT's access spacing standard within the vicinity of the interchange is 1,320 feet from the ramp terminals to any type of access (partial or full). Three private access points and two public accesses (River Road/River Trail Way and West 6th Street/Division Street intersections) do not meet ODOT's current access spacing standard. One of the private approaches that does not meet ODOT's standard is north of River Road on Highway 30; the other two private approaches are located on West 6th Street south of River Road.
- Access spacing standards for US 30, a district highway, are based on the spacing requirements stipulated in the OHP of 500 feet.
- Access spacing standards for West 6<sup>th</sup> Street, a City Arterial south of Division Street, are based on the spacing requirements stipulated in the City of The Dalles TSP of 300-400 feet. The driveways and streets on West 6th Street in the Operations and Access Study Area do not consistently meet these spacing standards.
- There are no consistent pedestrian or bicycle facilities providing connection between properties east and west of I-84.
- Two significant natural resources in or adjacent to the study area include Chenoweth Creek and the Columbia River. Based on a regulatory review of state and local government publications (*see Technical Memorandum #2 in the Volume 2 Technical Appendix*) there are currently no known fish or wildlife habitat, flood plains, historic properties, archeological resources, hazardous materials, or major utilities identified within the IAMP study area boundary. Due to the historic presence of indigenous peoples in the area, it is possible that unknown archeological resources related to the Confederated Tribes of Warm Springs are in existence in the area.

- 
- Department of State Lands is to complete a wetlands study in 2009 identifying wetland impacts in the Chenoweth IAMP area, specifically for the WM3 property. From preliminary reports, it appears these wetlands can be mitigated.

**Section 5**  
2030 Future Conditions

## 2030 Future Conditions

This section documents the future land use as well as the forecast traffic operations in the vicinity of the I-84 Chenoweth Interchange. Two future land use scenarios were developed with guidance from the Technical Advisory Committee (TAC) and Steering Committee (SC). The two Land Use Scenarios were assessed in year 2030 assuming no improvements are made to the system, beyond those already scheduled and funded.



## FUTURE LAND USES

The analysis of future land uses within the vicinity of the I-84 Chenoweth Interchange was focused on parcels that are expected to have development or redevelopment potential that would generate traffic at the interchange. The analysis is intended to identify actions that could have a *favorable* effect on the facility, or an *adverse* effect on the facility. Figure 5-1 illustrates the parcels identified for study. The Land Use Study Area includes parcels that cumulatively include approximately 750 acres and incorporate a variety of land uses, including: commercial, industrial, residential, and agricultural. The majority of the land is zoned industrial.

For the purposes of forecasting future development potential and access alternatives, the study area was divided into eight sub-areas, as illustrated in Figure 5-1. The sub-areas were defined based on current zoning, the travel shed served, and point of primary access.

Each sub-area shown in Figure 5-1 is described in Table 5-1.





**TABLE 5-1 FUTURE CONDITIONS SUB-AREA ANALYSIS ZONES**

| Sub-area | Zoning Classifications | Developable or Re-Developable Land (Acres) | Non-Buildable | Developed/Occupied | Total Acreage | Primary Access                |
|----------|------------------------|--|---------------|--------------------|---------------|-------------------------------|
| A        | I                      | 126.2                                      | 0.00          | 10.3               | 136.5         | River Trail Way at River Road |
| B        | I                      | 14.0                                       | 0.00          | 89.1               | 109.4         | Crates Way at River Road      |
|          | CR                     | 6.3  |               |                    |               |                               |
| C        | I                      | 79.1                                       | 47.6          | 20.3               | 147.0         | River Road                    |
|          | CR                     | 0.0  |               |                    |               |                               |
| D        | I                      | 113.0                                      | 29.2          | 0.00               | 142.2         | River Road, Hostetler Street  |
| E        | CLI                    | 25.0                                       | 2.5           | 0.00               | 67.2          | River Road at River Trail Way |
|          | I                      | 36.4                                       | 3.3           |                    |               |                               |
| F        | CLI                    | 4.3  | 0.0           | 3.0                | 7.3           | Hostetler Street              |
| G        | CG                     | 0.6  | 0.0           | 10.5               | 11.1          | West 6th Street               |
| H        | CG                     | 11.6                                       | 0.0           | 34.7               | 46.3          | West 6th Street               |
| I        | LSA                    | 0.0  | 0.0           | 80.6               | 80.6          | US 30                         |
| Total    |                        | 416.5                                      | 82.6          | 248.5              | 747.6         |                               |

Zoning Classifications: I – Industrial; CR – Recreational Commercial; CLI – Commercial/Light Industrial; CG – General Commercial

As shown in Table 5-1, sub-areas 'A', 'C', 'D', and 'E' have the greatest potential for development and each gain access to the I-84 Chenoweth Interchange via River Road. The following section describes the characteristics of the sub-areas.

**Sub-Area "A"**

Sub-area "A" is located in the NE corner of the Land Use Study Area. The majority of land within Sub-area "A" is currently vacant, except for a power sub-station located in the center of the Sub-area. All parcels within Sub-area "A" are designated for industrial use and are accessed via River Trail Way, which connects to River Road east of the I-84 Chenoweth Interchange. This plan was developed assuming land within sub-area "A" develops consistent with existing land use designations. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

**Sub-Area "B"**

The land within sub-area "B" is composed of currently developed and vacant parcels zoned for Industrial (I) and Recreational Commercial (CR) use. A total of 20.3 acres in the Sub-area have been estimated to be developable or to have the potential to be redeveloped. Access to the developable or re-developable parcels is primarily served through an unsignalized intersection on River Road at Crates Way (North). The IAMP was developed assuming land within sub-area "B" develops

consistent with existing land use designations. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

### **Sub-Area "C"**

Sub-area "C" is composed of multiple properties on the east side of River Road just north of Webber Street and one large parcel west of River Road. The majority of land within Sub-area "C" is currently vacant, with the exception of several smaller developments on the east side of River Road. A total of 47.6 acres within sub-area "C" consists of non-buildable land, which has been designated as a Brownfield area. It is assumed that traffic generated by new development within Sub-area "C" will utilize the Chenoweth and Webber Street interchanges to access I-84. This plan was developed assuming land within sub-area "C" develops consistent with existing land-use designations. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

### **Sub-Area "D"**

The largest redevelopment opportunity within the Land Use Study Area is the Northwest Aluminum site which solely comprises Sub-area "D." The sub-area is located southeast of the I-84 Chenoweth Interchange and currently has two accesses to River Road. The current plan for the 100-acre site is to make it shovel ready for future industrial uses. According to Northwest Aluminum's project manager, there have been several inquiries and site visits by future industrial users and discussion about how best to utilize the site. One potential plan would include dividing it into smaller parcels for future uses. Future users would likely continue to access River Road. The site is reportedly a fairly clean site, having gone through PCB abatement in the 1990s, and ongoing soil sampling as part of a final work plan that will be submitted to DEQ in early 2009. The site is also anticipated to be certified by the Oregon Economic and Community Development Department as a certified "shovel ready" industrial site. The project manager anticipates that there will be new industrial uses on the site by 2010. This plan was developed assuming land within sub-area "D" develops consistent with existing land use designations. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

### **Sub-Area "E"**

Sub-area "E" was comprised of one 67.2 acre parcel zoned Commercial/Light Industrial District (CLI) but has recently been partitioned into five parcels, all of which are owned by WM3, Inc. (WM3). Twenty-five acres of sub-area will be developed with commercial uses, consistent with existing zoning. A development application for a 149,147 square-foot Wal-Mart to be constructed on 18.08 of the 25 acres has been approved by the city and the remaining 6.92 acres are expected to be developed with commercial uses. As discussed in *Technical Memorandum #2 in the Technical Appendix*, the type of use that is allowed to develop on the additional 42.2 acres is dependent on the outcome of this analysis as identified by the Interchange Area Management Plan and Implementation, as described in Section 7 and Section 8.

Two future land use scenarios were developed for the future analysis based on variation of the development potential within Sub-area "E." The following identifies the assumptions of each Land Use Scenario:

Scenario #1

- Commercial development of 25 acres.
- Industrial development of 36.4 acres.
- Dedicated right-of-way and wetland tract to utilize 5.8 acres.

Scenario #2

- Commercial development of 61.4 acres of buildable land.
- Dedicated right-of-way and wetland tract to utilize 5.8 acres.

**Sub-Area "F"**

Multiple parcels within Sub-area "F" make up 4.3 acres of land zoned CLI that is expected to have potential for re-development. Access to the Sub-area "F" parcels is provided via West 2nd Street, which connects to West 6th Street via Hostetler Street. These land uses will likely utilize both the Chenoweth and Webber Street interchanges to access I-84 depending on the ultimate origination/destination of the trips. Given the nature of existing development and size/shape of the parcels in sub-area "F" it was assumed, for future estimation of traffic demand, the land will redevelop with uses that generate trips more similar to a light industrial use than shopping center use. Under CLI zoning both uses are allowed. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

**Sub-Area "G"**

Three vacant parcels on the west side of West 6th Street comprise approximately 0.6 acres of land. The parcels are currently zoned General Commercial (CG) and are expected to attract similar commercial development. Development with more intense uses than CG may have an adverse effect on the I-84 Chenoweth Interchange.

**Sub-Area "H"**

Sub-area "H" is zoned CG. The majority of land within sub-area "H" is currently developed, with the exception of one retail pad associated with the Home Depot development that is currently for sale. Several parcels west of West 6th Street and between Division Street and Chenoweth Loop are currently developed with mobile homes, but the existing zoning classifications and comprehensive plan map classify these parcels as CG. In order to provide a reasonably conservative analysis of a 20-year development horizon, it is assumed these parcels will redevelop as commercial uses over the next 20 years. The parcels expected to redevelop combine to make up 11.6 acres adjacent to West 6th Street. Development with more intense uses may have an adverse effect on the I-84 Chenoweth Interchange.

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### **Sub-Area "I"**

Sub-area "I" is comprised of land in the northwest quadrant of the I-84 Chenoweth Interchange. The majority of this land is not included in the existing City of The Dalles Urban Growth Boundary (UGB) and is zoned Large-Scale Agriculture (LSA) by Wasco County. An approximately 3.6 acres parcel in the NW quadrant of the Chenoweth Interchange within sub-area "I" is within the UGB boundary, but is owned by ODOT and is not expected to be developed in the next 20 years.

It is difficult to anticipate when, or if, development outside the existing City of The Dalles UGB will occur in the 20-year planning horizon. Currently, this land is designated a National Scenic Area (NSA) and is governed by the provisions of the Columbia River Gorge National Scenic Area (CRGNSA) Act. The purpose of the CRGNSA Act is to protect and provide for the enhancement of the scenic, cultural, recreational and natural resources of 292,500 acres within the Gorge; and, to protect and support the economy of the Columbia River Gorge area by encouraging growth to occur in existing urban areas and by allowing future economic development. Uses and development on county land in the IMSA must comply with both Wasco County and CRGNSA Management Plan regulations according to applicable land use designations.

The City of The Dalles 2007 Growth Management Report provides findings to support a proposed expansion of the 2026 UGB, the expansion of The Dalles "Urban Area" consistent with the CRGNSA Act, and the establishment of the 2056 The Dalles Urban Reserve Area (URA). The current NSA designation must be converted to Urban Area in order to accommodate the adoption of the UGB expansion and the establishment of a URA. A rules committee convened by the Columbia River Gorge Commission must determine whether this conversion constitutes a "minor" or "major" amendment to the NSA management plan (see Columbia River Gorge National Scenic Area Management Plan/National Scenic Area Act section in *Technical Memorandum #2 in Appendix "B" of the I/84 Chenoweth IAMP Technical Appendix*). A minor amendment could be decided by the Columbia River Gorge Commission while a major amendment would need to be decided by Congress. It is possible that the rules committee decision and subsequent action, including potential appeals, will take several years.

According to the Generalized Comprehensive Plan (Map 6 in the Growth Management Report) the UGB expansion and designation of URA areas to the north/northwest of the city, including lands in the vicinity of the I-84 Chenoweth Interchange, are intended primarily for residential use. The Growth Management Report documents a twenty-year land need (to 2026, and in addition to land already inside the UGB) of approximately 540 gross buildable acres of residential land and approximately 85-120 buildable acres for employment throughout the City of The Dalles. This is the amount of land that is being proposed for inclusion in the UGB.

Given that there is uncertainty as to whether or not the UGB may be expanded, the land outside of the existing UGB is not assumed to generate new trips prior to 2030. However, if future expansion of the UGB includes the land in the northwest quadrant of the interchange, the interchange area should be evaluated, and the IAMP updated, as part of the amendment.

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## **YEAR 2030 NO-BUILD TRAFFIC VOLUMES FORECAST METHODOLOGY**

Year 2030 "No-Build" traffic volume forecasts for intersection turning movements and street segments were developed in order to analyze the effects of traffic growth on the I-84 Chenoweth Interchange and the surrounding transportation system. The year 2030 "No-Build" scenario was developed based on the currently adopted Wasco County and the City of The Dalles comprehensive plans. The remainder of this section describes the methodology and assumptions used to develop year 2030 forecasts.

Future year 2030 no-build traffic volumes were developed by considering the following traffic growth through year 2030:

- Future traffic growth related to development and redevelopment of land in the vicinity of the I-84 Chenoweth Interchange (including sub-areas "A" through "I").
- Future traffic related to regional growth within The Dalles UGB and along the I-84 Interstate corridor.

The specific assumptions used in each of these traffic growth components are summarized below.

### ***Development and Redevelopment Traffic***

To account for local traffic growth attributed to the development and redevelopment of vacant and re-developable land in the vicinity of the I-84 Chenoweth Interchange, the reasonable "worst-case" trip-generating potential of the properties was calculated.

The reasonable "worst-case" trip-generation potential of each parcel was estimated using a two-step approach. Step one included reducing the developable or re-developable area (summarized in Table 5-2) by 20 percent to account for utility and roadway right-of-way. Step two applied a Floor Area Ratio (FAR) of 0.25 for commercial zones and 0.40 for industrial lands. The Technical Advisory Committee agreed that these FARs represent a maximum FAR that could be expected for the area. Table 5-2 and Table 5-3 provide a summary of the development assumed to occur under Land Use Scenario #1 and #2, respectively.

The City of The Dalles Development Code does not specify a maximum FAR, but limits the height of development to 40 feet in CR zones and 55 feet in I, CLI, and CG zones.

**TABLE 5-2 I-84 CHENOWETH INTERCHANGE AREA DEVELOPMENT ASSUMPTIONS – SCENARIO #1**

| Land Use                                  | Total Developable or Re-developable Land Area (Acres) | Utilities and ROW (20%) | Net Developable or Re-developable Land Area (Acres) | FAR  | Size (1,000 Sq. Feet GLA) |
|---|---|-------------------------|---|------|---------------------------|
| <i>Sub-area "A"</i>                       |   |                         |   |      |                           |
| Industrial                                | 126.2   | (25.0)                  | 101.2   | 0.40 | 1,763                     |
| <i>Sub-area "B"</i>                       |   |                         |   |      |                           |
| Industrial                                | 14.0  | (3.0)                   | 11.0  | 0.40 | 192                       |
| Commercial                                | 6.3   | (1.0)                   | 5.3   | 0.25 | 58                        |
| <i>Sub-area "C"</i>                       |   |                         |   |      |                           |
| Industrial                                | 79.1  | (16.0)                  | 63.1  | 0.40 | 1,099                     |
| <i>Sub-area "D"</i>                       |   |                         |   |      |                           |
| Industrial                                | 113.0   | (23.0)                  | 90.0  | 0.40 | 1,567                     |
| <i>Sub-area "E"</i>                       |   |                         |   |      |                           |
| Commercial/ Light Industrial <sup>1</sup> | 25.0  | -                       | 25.0  | 0.25 | 272                       |
| Industrial <sup>1</sup>                   | 36.4  | -                       | 36.4  | 0.40 | 634                       |
| <i>Sub-area "F"</i>                       |   |                         |   |      |                           |
| Commercial/ Light Industrial              | 4.3   | (1.0)                   | 3.3   | 0.25 | 35                        |
| <i>Sub-area "G"</i>                       |   |                         |   |      |                           |
| Commercial                                | 0.6   | 0.0                     | 0.6   | 0.25 | 6                         |
| <i>Sub-area "H"</i>                       |   |                         |   |      |                           |
| Commercial                                | 11.6  | (2.0)                   | 9.6   | 0.25 | 104                       |
| <i>Sub-area "I"</i>                       |   |                         |   |      |                           |
| LSA                                       | 0.0   | 0.0                     | 0.0   | -    | -                         |
| Total Industrial                          |   |                         |   |      | 5,255                     |
| Total Commercial                          |   |                         |   |      | 168                       |
| Total Commercial/Light Industrial         |   |                         |   |      | 307                       |
| <b>TOTAL</b>                              |   |                         |   |      | <b>5,730</b>              |

<sup>1</sup> The developable land for Sub-area "E" includes a 5.83 acre reduction for utility and ROW land needs based on the Chenoweth Station Subdivision development application dated October 17, 2008.



**TABLE 5-3 I-84 CHENOWETH INTERCHANGE AREA DEVELOPMENT ASSUMPTIONS – SCENARIO #2**

| Land Use                                  | Total Developable or Re-developable Land Area (Acres) | Utilities and ROW (20%) | Net Developable or Re-developable Land Area (Acres) | FAR  | Size (1,000 Sq. Feet GLA) |
|---|---|-------------------------|---|------|---------------------------|
| <i>Sub-area "A"</i>                       |   |                         |   |      |                           |
| Industrial                                | 126.2   | (25.0)                  | 101.2   | 0.40 | 1,763                     |
| <i>Sub-area "B"</i>                       |   |                         |   |      |                           |
| Industrial                                | 14.0  | (3.0)                   | 11.0  | 0.40 | 192                       |
| Commercial                                | 6.3   | (1.0)                   | 5.3   | 0.25 | 58                        |
| <i>Sub-area "C"</i>                       |   |                         |   |      |                           |
| Industrial                                | 79.1  | (16.0)                  | 63.1  | 0.40 | 1,099                     |
| Commercial                                | 0.0   | 0.0                     | 0.0   | 0.25 | 0                         |
| <i>Sub-area "D"</i>                       |   |                         |   |      |                           |
| Industrial                                | 113.0   | (23.0)                  | 90.0  | 0.40 | 1,567                     |
| <i>Sub-area "E"</i>                       |   |                         |   |      |                           |
| Commercial/ Light Industrial <sup>1</sup> | 61.4  | -                       | 61.4  | 0.25 | 669                       |
| <i>Sub-area "F"</i>                       |   |                         |   |      |                           |
| Commercial/ Light Industrial              | 4.3   | (1.0)                   | 3.3   | 0.25 | 35                        |
| <i>Sub-area "G"</i>                       |   |                         |   |      |                           |
| Commercial                                | 0.6   | 0.0                     | 0.6   | 0.25 | 6                         |
| <i>Sub-area "H"</i>                       |   |                         |   |      |                           |
| Commercial                                | 11.6  | (2.0)                   | 9.6   | 0.25 | 104                       |
| <i>Sub-area "I"</i>                       |   |                         |   |      |                           |
| LSA                                       | 0.0   | 0.0                     | 0.0   | -    | -                         |
| Total Industrial                          |   |                         |   |      | 4,621                     |
| Total Commercial                          |   |                         |   |      | 168                       |
| Total Commercial/Light Industrial         |   |                         |   |      | 704                       |
| <b>TOTAL</b>                              |   |                         |   |      | <b>5,493</b>              |

<sup>1</sup> The developable land for Sub-area "E" includes a 5.83 acre reduction for utility and ROW land needs based on the Chenoweth Station Subdivision development application dated October 17, 2008.

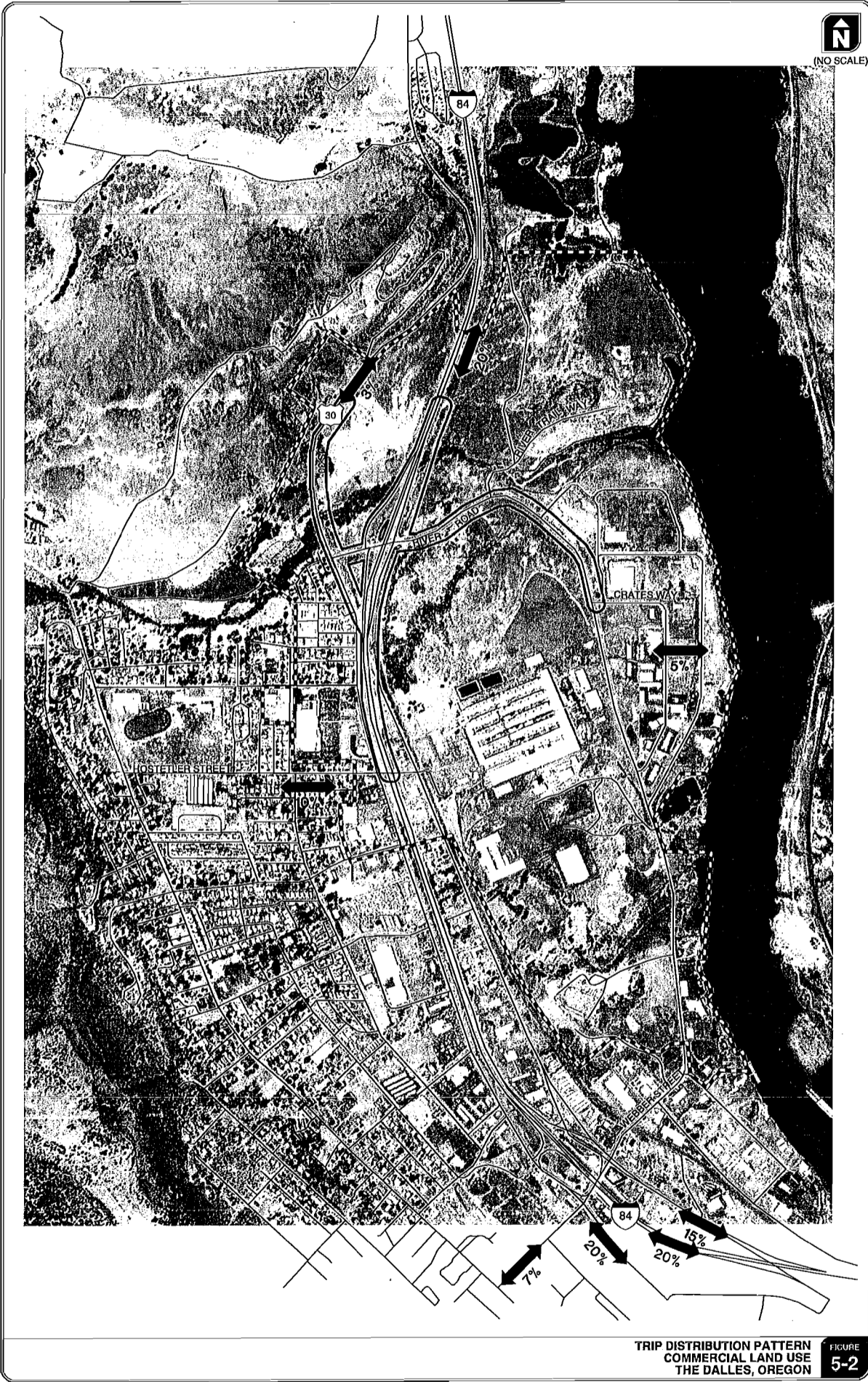
The trip generation potential for each sub-area was calculated for the weekday p.m. peak hour using the 7<sup>th</sup> Edition of Trip Generation (Reference 4), published by the Institute of Transportation Engineers (ITE). ITE trip generation rates for General Light Industrial developments were applied to the estimated square footage of buildings that could be constructed on parcels zoned Industrial. ITE's Shopping Center trip generation rates (fitted curve equation) were applied to the estimated



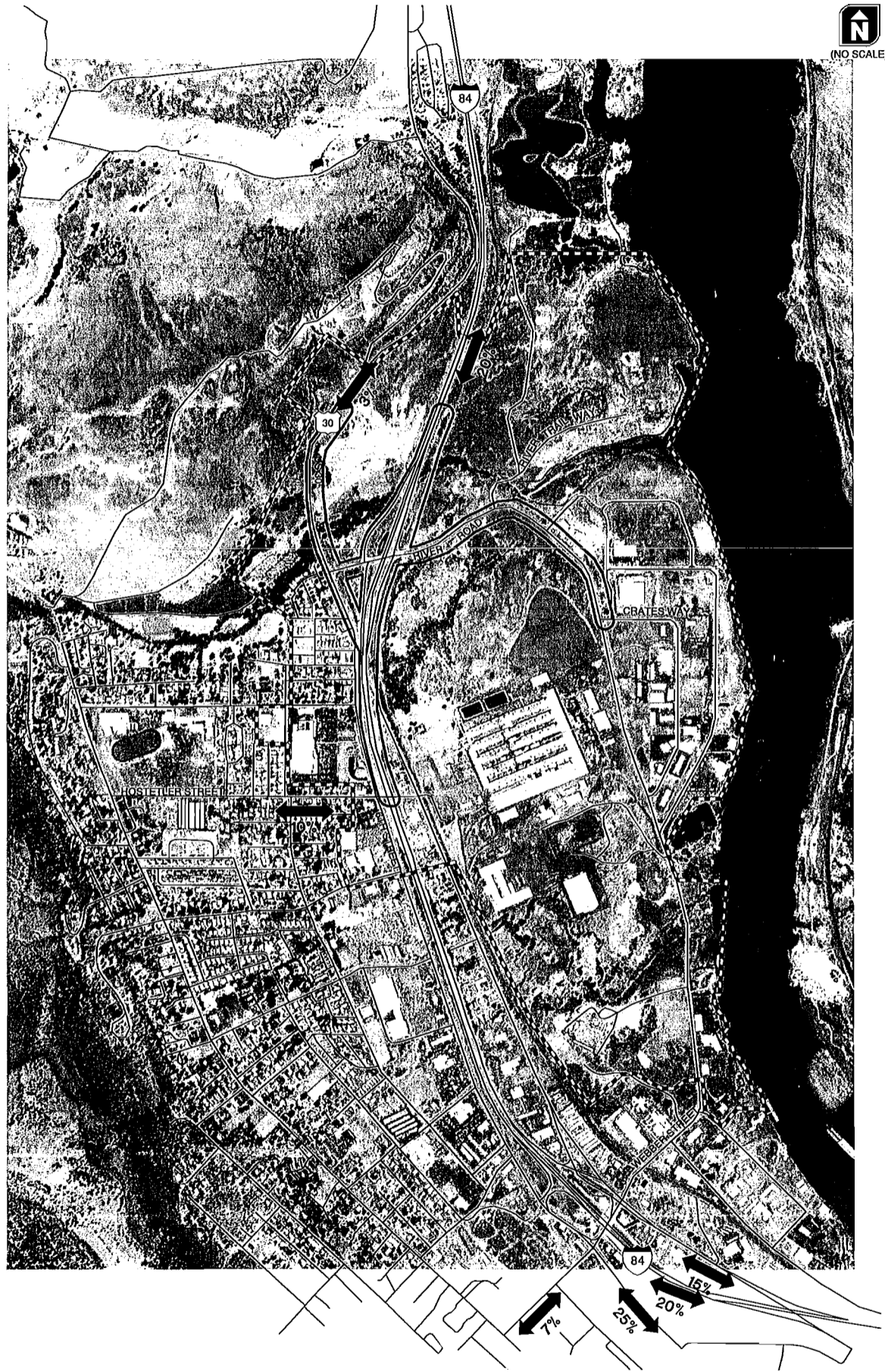
building sizes on parcels zoned CG. Parcels zoned CR were estimated by ITE's Specialty Retail rates. Pass-by trip reductions were applied to ITE Shopping Center trip generation rates only.

The assumed distribution patterns of trips generated within each sub-area were based on the existing zoning and relative attractions within the overall study area. Trip distribution patterns for Commercial and Industrial uses was developed based on trip distribution patterns developed for the WM3 site and knowledge of existing travel patterns within the City of The Dalles. Figure 5-2 and Figure 5-3 illustrate the estimated trip distribution patterns for commercial and industrial sub-areas, respectively.

A summary of the estimated net new trip generation potential of vacant and re-developable lands under Scenarios #1 and #2 are shown in Table 5-4 and Table 5-5, respectively. Net new trip generation potential reflects pass-by trip reductions. It was assumed that up to 34 percent of new trips generated by commercial developments are pass-by trips as long as the number of pass-by trips did not exceed 10 percent of through volumes at the site access point along River Road or West 6th Street. Under Scenario #2 the number of pass-by trips associated with commercial development within sub-area "E" was limited to 24 percent of new trips so that the commercial pass-by trips would be no more than ten percent of the traffic volumes projected on River Road from industrial development.



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TRIP DISTRIBUTION PATTERN  
INDUSTRIAL LAND USE  
THE DALLES, OREGON

FIGURE  
5-3

**TABLE 5-4 FORECASTED TRIP GENERATION – SCENARIO #1**

| Land Use                            | ITE Code | Size<br>(1,000 sq. feet) | Weekday PM Peak Hour |              |              |
|-------------------------------------|----------|--------------------------|----------------------|--------------|--------------|
|                                     |          |                          | Total                | In           | Out          |
| <i>Sub-Area "A"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,763                    | 1,730                | 210          | 1,520        |
| <i>Sub-Area "B"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 192                      | 190                  | 25           | 165          |
| Commercial Recreational             | 814      | 58                       | 160                  | 70           | 90           |
| <i>Sub-Area "C"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,099                    | 1,080                | 130          | 950          |
| <i>Sub-Area "D"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,567                    | 1,540                | 185          | 1,355        |
| <i>Sub-Area "E"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 634                      | 620                  | 75           | 545          |
| Commercial Light Industrial         | 820      | 272                      | 1,210                | 605          | 605          |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (410)                | (205)        | (205)        |
| Net New Commercial Trips            |          |                          | 800                  | 400          | 400          |
| <i>Sub-Area "F"</i>                 |          |                          |                      |              |              |
| Commercial Light Industrial         | 110      | 35                       | 30                   | 5            | 25           |
| <i>Sub-Area "G"</i>                 |          |                          |                      |              |              |
| General Commercial                  | 820      | 6                        | 100                  | 50           | 50           |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (30)                 | (15)         | (15)         |
| Net New Trips                       |          |                          | 70                   | 35           | 35           |
| <i>Sub-Area "H"</i>                 |          |                          |                      |              |              |
| Commercial                          | 820      | 104                      | 640                  | 320          | 320          |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (220)                | (110)        | (110)        |
| Net New Trips                       |          |                          | 420                  | 210          | 210          |
| Total New Trips                     |          |                          | 7,300                | 1,675        | 5,625        |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (660)                | (330)        | (330)        |
| <b>Net New Trips</b>                |          |                          | <b>6,640</b>         | <b>1,345</b> | <b>5,300</b> |

<sup>1</sup>ITE Land Use 820: Shopping Center was applied for Commercial zoning using the fitted equation.

<sup>2</sup>ITE Land Use 110: Light Industrial was applied to Industrial Sub-areas using the average trip rate.

As shown in Table 5-4, Scenario #1 assumes that 634,000 square feet of industrial development and 272,000 square feet of commercial could occur in sub-area "E" resulting in a total of 1,420 net new weekday p.m. peak hour trips generated by sub-area "E." A total of 6,640 net new weekday p.m. peak hour trips are expected to be generated under Scenario #1 from 5,730,000 square feet of

development (5,255,000 square feet of industrial and 475,000 square feet of commercial). Table 5-5 summarizes forecast trip generation for Scenario #2.

**TABLE 5-5 FORECASTED TRIP GENERATION – SCENARIO #2**

| Land Use                            | ITE Code | Size<br>(1,000 sq. feet) | Weekday PM Peak Hour |              |              |
|-------------------------------------|----------|--------------------------|----------------------|--------------|--------------|
|                                     |          |                          | Total                | In           | Out          |
| <i>Sub-Area "A"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,763                    | 1,730                | 210          | 1,520        |
| <i>Sub-Area "B"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 192                      | 190                  | 25           | 165          |
| Commercial Recreational             | 814      | 58                       | 160                  | 70           | 90           |
| <i>Sub-Area "C"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,099                    | 1,080                | 130          | 950          |
| <i>Sub-Area "D"</i>                 |          |                          |                      |              |              |
| Industrial                          | 110      | 1,567                    | 1,540                | 185          | 1,355        |
| <i>Sub-Area "E"</i>                 |          |                          |                      |              |              |
| Commercial Light Industrial         | 820      | 669                      | 2,190                | 1,095        | 1,095        |
| <i>Pass-By Trip Reduction (24%)</i> |          |                          | (530)                | (265)        | (265)        |
| Net New Trips                       |          |                          | 1,660                | 830          | 830          |
| <i>Sub-Area "F"</i>                 |          |                          |                      |              |              |
| Commercial Light Industrial         | 110      | 35                       | 30                   | 5            | 25           |
| <i>Sub-Area "G"</i>                 |          |                          |                      |              |              |
| General Commercial                  | 820      | 6                        | 100                  | 50           | 50           |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (30)                 | (15)         | (15)         |
| Net New Trips                       |          |                          | 70                   | 35           | 35           |
| <i>Sub-Area "H"</i>                 |          |                          |                      |              |              |
| Commercial                          | 820      | 104                      | 640                  | 320          | 320          |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (220)                | (110)        | (110)        |
| Net New Trips                       |          |                          | 420                  | 210          | 210          |
| Total New Trips                     |          |                          | 7,660                | 2,090        | 5,575        |
| <i>Pass-By Trip Reduction (34%)</i> |          |                          | (780)                | (390)        | (390)        |
| <b>Net New Trips</b>                |          |                          | <b>6,880</b>         | <b>1,700</b> | <b>5,185</b> |

<sup>1</sup>ITE Land Use 820: Shopping Center was applied for Commercial zoning using the fitted equation provided.

<sup>2</sup>ITE Land Use 110: Light Industrial was applied to Industrial Sub-areas using the average trip generation rate.

As shown in Table 5-5, Scenario #2 assumes that 61.4 acres in sub-area "E" will be developed with commercial uses resulting in a total of 1,660 net new trips generated by sub-area "E." A total of



6,880 net new p.m. peak hour trips are expected to be generated under Scenario #2 from 5,493,000 square feet of development (4,621,000 square-feet of industrial and 872,000 square-feet of commercial), which reflects an increase of 240 net new weekday p.m. peak hour trips above Scenario #1.

**Background Traffic Growth**

The proposed annual growth rates were determined based on a review of ODOT’s Future Year Volume Tables, historical ADT counts, and future development assumptions within the study area. The growth was applied to the existing traffic volumes described in Section 4 to obtain future year forecast volumes.

**US Highway 30 – West of 6th Street**

An annual local growth rate was applied to the existing through volumes along West 6th Street, all turning movements at the Highway 30/River Road intersection, and turning movements to/from I-84 to the west. An annual growth rate was not be applied to local and collector street turning movements along West 6th Street as these trips are generated by existing development that is not impacted by regional growth. Given that growth rates were not applied consistently to all study intersections, future volumes were adjusted to address the overlap in trips being generated directly from within the land use sub-areas and those of a regional nature calculated by the growth rates along I-84, US Highway 30, and West 6th Street.

Based on a review of ODOT’s Future Year Volume Tables (which are based on historic traffic volumes), a local growth rate was estimated for the IMSA based on two data points; one north of the US 30/River Road intersection, and one south of the intersection. To estimate a growth rate, volumes for the year 2007 were compared with ODOT’s 2027 estimates. Table 5-6 illustrates the estimated local growth rates.

**TABLE 5-6 BACKGROUND GROWTH RATE CALCULATIONS ON US 30**

| Mile Point     | Location   | Average Annual Daily Traffic |       | R-Squared Value | Per Year Growth Rate (2007-2027) <sup>1</sup> |
|----------------|--|------------------------------|-------|-----------------|---|
|                |  | 2007                         | 2027  |                 |   |
| 38.00          | 0.05 mile north of connection from Columbia River Highway (I-84) | 1,700                        | 2,300 | 0.79            | 1.76%   |
| 38.53          | 0.13 mile south of connection from Columbia River Highway (I-84) | 5,500                        | 8,100 | 0.97            | 1.45%   |
| <b>Average</b> |  |                              |       |                 | <b>1.6%</b>                                   |

<sup>1</sup> Per Year Growth Rate = [(2027 AADT- 2007 AADT) / (2007 AADT)] / (2027 - 2007)

The R-Squared Value shown in Table 5-6 indicates the degree of correlation between the dependent variable (historical traffic volume) and the independent variable (time). The ODOT Analysis Procedures Manual states that values over 0.75 are preferred, which indicates that the chosen

locations are acceptable for this analysis. As shown in Table 5-6, a 1.6% annual growth rate was identified for background traffic volumes in the vicinity of the I-84 Chenoweth Interchange. Therefore, through traffic volumes on Highway 30 and West 6th Street from 2008 will be increased by 35.2% to the forecast year 2030.

#### River Road

An annual growth rate will not be applied to intersections on River Road that are east of I-84 because this area has very limited through traffic volumes and all growth will be related to future redevelopment or new development as previously defined.

#### Interstate-84

The I-84 traffic growth rate will be applied to the existing through traffic volumes to forecast future traffic projections for I-84. Traffic volume analyses on I-84 east and west of the I-84 Chenoweth Interchange indicate that the interstate traffic volume have been steadily increasing over the past 10 years. Based on a review of ODOT's Future Volume Tables, a background growth rate was estimated for I-84 near the Chenoweth Interchange. Two data points on I-84 were used in the calculation, including one on each side of the interchange. To determine a growth rate estimate, volumes for the year 2005 were compared with ODOT's 2027 estimates. Table 5-7 summarizes the estimated growth rates.

**TABLE 5-7 BACKGROUND GROWTH RATE CALCULATIONS ON I-84**

| Mile Point     | Location                             | Average Annual Daily Traffic |        | R-Squared Value | Per Year Growth Rate (2005-2027) <sup>1</sup> |
|----------------|--------------------------------------|------------------------------|--------|-----------------|---|
|                |                                      | 2005                         | 2027   |                 |   |
| 77.15          | 0.05 mile east of Rowena Interchange | 19,900                       | 31,300 | 0.93            | 2.6%  |
| 82.62          | Hostetler Way Overcrossing           | 19,300                       | 30,500 | 0.92            | 2.1%  |
| <b>Average</b> |                                      |                              |        |                 | <b>2.4%</b>                                   |

<sup>1</sup> Per Year Growth Rate = [(2027 AADT - 2005 AADT) / (2005 AADT)] / (2027 - 2005)

The R-Squared Value indicates the degree of correlation between the dependent variable (historical traffic volume) and the independent variable (time). The APM states that values over 0.75 are preferred, which indicates that the chosen locations are acceptable for this analysis. As shown in Table 5-7, a 2.4% annual growth rate was identified for background traffic volumes on I-84 in the vicinity of the Chenoweth Interchange. Therefore, through traffic volumes on I-84 from 2008 will be increased by 52.8% to the forecast year 2030.

## PLANNED TRANSPORTATION IMPROVEMENTS

No transportation improvements inside the IMSA are identified in ODOT's Statewide Transportation Improvement Plan (STIP) or the City of The Dalles Transportation System Plan.

Mitigations associated with the 25-acre commercial development approved on the WM3 Property in Sub-area "E" are expected to be completed by 2030. The mitigations associated with the WM3 commercial development, as outlined in the Chenoweth Station subdivision application, are outlined in Table 5-8. These improvements were included in the 2030 No-Build scenario analysis. Figure 5-4 illustrates the year 2030 no-build lane configurations and traffic control devices.

**TABLE 5-8 WM3 DEVELOPMENT MITIGATIONS**

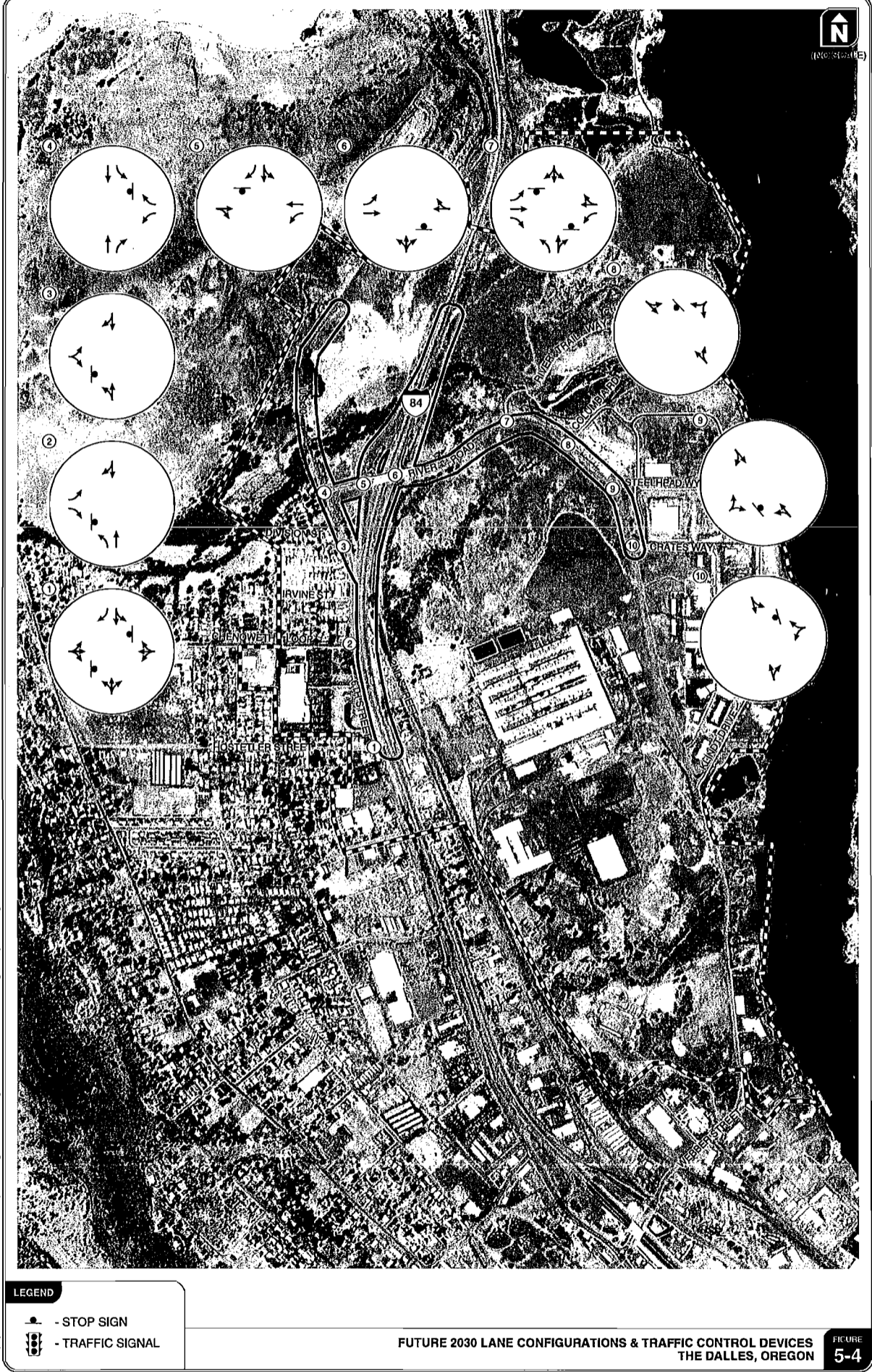
| Intersection/ Roadway                   | Recommended Mitigation  | Completion By        |
|---|---|----------------------|
| River Road/<br>River Trail Way          | Install 75-foot eastbound and westbound left-turn lanes with taper on River Road.                           | Day of Opening       |
| River Road/<br>River Trail Way          | Install 100-foot eastbound right-turn lane on River Road.   | Day of Opening       |
| River Road/<br>River Trail Way          | Install northbound left-turn and shared through/right lanes out of development.                             | Day of Opening       |
| West 6th Street (Hwy 30)/<br>River Road | Restripe northbound West 6th Street approach to include a 100-foot right-turn lane with taper at River Road | Year 2027 or Earlier |
| West 6th Street (Hwy 30)/<br>River Road | Restripe westbound left-turn lane on River Road to provide a minimum of 250 feet of storage                 | Year 2027 or Earlier |
| I-84 EB Ramp/<br>River Road             | Install Traffic Signal  | Year 2027 or Earlier |
| I-84 WB Ramp/<br>River Road             | Install Traffic Signal  | Year 2027 or Earlier |

**YEAR 2030 NO-BUILD TRAFFIC CONDITIONS**

Future year 2030 "No-Build" weekday p.m. peak hour traffic volumes were determined for each future scenario by applying growth rates and trip generation estimates to the existing 2008 traffic network. The resulting year 2030 No-Build weekday p.m. peak hour traffic volumes for Scenarios #1 and #2 are shown in Figure 5-5 and Figure 5-6, respectively.

All level of service analyses were performed in accordance with the procedures stated in the 2000 Highway Capacity Manual (Reference 3). The operational standard for the ramp terminals is a volume-to-capacity ratio of 0.75. The operational standard for all other study intersections is a LOS D. Traffic operations analysis was performed for the study intersections using the forecast year 2030 No-Build weekday p.m. peak hour traffic volumes for Scenarios #1 and #2.

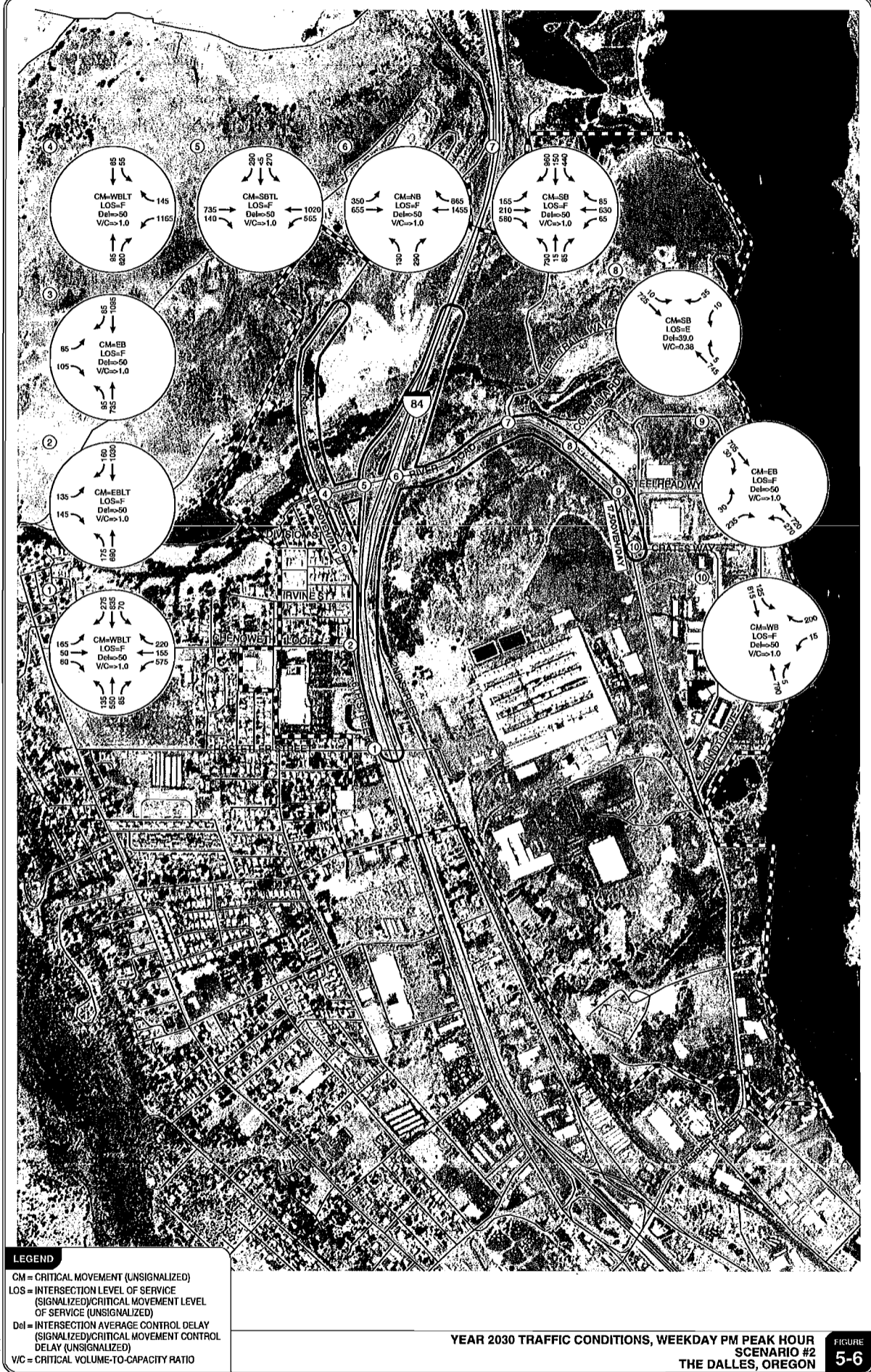




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As shown in Figure 5-5 and Figure 5-6, the volume-to-capacity ratios of the ramp terminal intersections exceed 1.0 and all other intersections are forecast to operate with a LOS F under Scenarios #1 and #2.

### **SUMMARY OF YEAR 2030 FUTURE YEAR CONDITIONS**

The year 2030 "No-Build" forecasts and analysis resulted in the following findings:

- Based on historic volumes on US 30, local growth is forecast at a rate of 1.6% per year from 2008 to 2030 resulting in a total of 35.2% growth over 22 years. This growth rate was applied to through-traffic volumes on West 6th Street, all turning movements at the West 6th Street (Hwy 30)/River Road intersection, and turning movements to/from West 6th Street at the I-84 ramp terminal intersections.
- The potential for new development or redevelopment of properties within the IMSA was accounted for by developing estimates of trip generation for two No-Build scenarios, based on reasonable worst-case development that could occur through 2030. Scenario #1 assumes the WM3 site will be developed with 25 acres of commercial and 36.4 acres of industrial uses. Scenario #2 assumes the WM3 site will be developed entirely as commercial uses. Both scenarios assume development of all other sub-areas will be consistent with existing land use designations in the City of The Dalles Comprehensive Plan and the Wasco County Comprehensive Plan.
  - a. Land Use Scenario #1 is forecast to generate approximately 6,640 net new trips during the weekday p.m. peak hour associated with 5,255,000 square-feet of industrial space and 475,000 square-feet of commercial space.
  - b. Land Use Scenario #2 is forecast to generate 6,880 net new trips during the weekday p.m. peak hour associated with 4,656,000 square-feet of industrial space and 837,000 square-feet of commercial space.
- No capacity enhancing transportation improvements were identified inside the IAMP study area in ODOT's STIP or the City of The Dalles TSP.
- Mitigations associated with the 25-acre commercial development approved on the WM3 Property in Sub-area 'E' are expected to be completed by 2030 and were included in the 2030 "No Build" scenario analysis.
- Under Scenarios #1 and #2, the I-84 ramp terminal intersections at River Road are forecast to operate with volume-to-capacity ratios greater than 1.0 during the weekday p.m. peak hour. ODOT's volume-to-capacity ratio standard for the interchange ramp terminals is 0.75.
- Under Scenarios #1 and #2 all unsignalized intersections on River Road and on West 6th Street within the IAMP Operation and Access Study Area are forecast to operate at LOS F during the weekday p.m. peak hour. The City of The Dalles specifies a LOS D or better be maintained.

**Section 6**  
Alternative  
Development and  
Analysis

## Alternative Development and Analysis

This section documents the development and evaluation of the local circulation and access concepts as part of the IAMP process. Twenty-two concepts were developed and taken through a thorough screening process that included input from Technical Advisory Committee (TAC), Steering Committee (SC), local property and business owners, and the public at-large. Based on results of the initial screening, a refined analysis was conducted that resulted in the identification of a preferred alternative. The following sections document the concepts that were evaluated and the results of the screening process.



### CONCEPT DEVELOPMENT PROCESS

The development of the initial local circulation and access concepts for the I-84 Chenoweth Interchange began with a design workshop at a joint meeting of the TAC and SC on February 11, 2009. Additional concepts were developed at a public workshop that was attended by local agency representatives, interested citizens, business owners, and landowners on March 5, 2009.

Workshop participants were presented with an overview of applicable design parameters and local circulation/access management techniques. Following the presentation, participants were asked to sketch their ideas for improving the future local circulation and access system. Participants were encouraged to consider improvement opportunities at all intersections within the IMSA, including the I-84 Chenoweth Interchange, and opportunities to create new connections to support the collector/local street circulation network.

Following the completion of the public workshop, the consultant team refined the ideas generated during TAC and SC Meeting and public workshops to develop a series of individual local circulation and access concepts in the north, south, and east regions of the IMSA. These concepts are described in the following sections.

### LOCAL CIRCULATION AND ACCESS DESIGN CONCEPTS

Based on the general design ideas developed as part of the workshop exercises, a set of local circulation and access concepts were developed and grouped by geographic location. A total of 22 concepts were developed, including: 6 to the west of I-84; 13 to the east of I-84 and south of the River Road; and, 3 to the north of River Road. These concepts represent a culmination of the individual design ideas developed by the workshop participants. Each of the concepts and key design components are described below.

---

### **Westerly Local Circulation and Access Design Concepts**

Local circulation and access design concepts developed for the portion of the study area west of I-84 include: access control along West 6th Street (US 30) and modifications to traffic control at the intersections on West 6th Street (US 30) at River Road, Division Street, Chenoweth Loop, and Hostetler Street. Each westerly (W-X) concept is described below and illustrated in Figure 6-1 through Figure 6-6.

#### Concept W-1 (Combined West 6th Street and I-84 EB Ramp Terminal Roundabout)

- Combine adjacent intersections of West 6th Street (US 30)/River Road and I-84 Eastbound Ramp Terminals/River Road at a single roundabout.
- Convert the intersections of Chenoweth Loop and Hostetler Way at West 6th Street to signal control.
- Restrict access on West 6th Street between River Road and Chenoweth Loop to public streets including Division Street, Irvine Street, and Lee Street. The existing private approaches on West 6th Street would be routed via backage roads and/or cross-over easements to West 6th Street via Division Street and Irvine Street.
- Provide a local street access from Division Street to property in the northwest quadrant of the West 6th Street/Division Street intersection.
- Relocate the private driveway on the west side of US 30 (just north of Chenoweth Creek) to a location further north of the West 6th Street (US 30)/River Road intersection to meet the 1,320-foot access spacing standard.

#### Concept W-2 (West 6th Street/River Road Roundabout)

- Convert West 6th Street (US 30)/River Road intersection from stop control to a roundabout.
- Convert the intersections of Chenoweth Loop and Hostetler Way at West 6th Street from stop control to signal control.
- Restrict eastbound left-turn movements from Division Street to West 6th Street.
- Restrict access on West 6th Street between River Road and Chenoweth Loop to public streets, including Division Street, Irvine Street, and Lee Street. The existing private approaches on West 6th Street would be routed to West 6th Street via Division Street and Irvine Street.
- Provide a local street access from Division Street to property in the northwest quadrant of the West 6th Street/Division Street intersection.
- Relocate the private driveway on the west side of US 30 (just north of Chenoweth Creek) to a location further north of the West 6th Street (US 30)/River Road intersection to meet the 1,320-foot access spacing standard.

Concept W-3 (Dual Roundabouts with West 6th Street Center Median)

- Convert West 6th Street (US 30)/River Road and West 6th Street/Chenoweth Loop intersections from stop control to roundabouts.
- Construct a median on West 6th Street from River Road to Chenoweth Loop.
- Convert the intersection of West 6th Street/Hostetler Way from stop control to signal control.
- Relocate the private driveway on the west side of US 30 (just north of Chenoweth Creek) to a location further north of the West 6th Street (US 30)/River Road intersection to meet the 1,320-foot access spacing standard.

Concept W-4 (Reconfigured West 6th Street/River Road Intersection)

- Modify geometry of West 6th Street (US 30)/River Road intersection to provide continuous through movements between River Road and West 6th Street to the south. US 30 would be realigned to intersect River Road as a perpendicular, stop-controlled approach.
- Convert the intersections of Chenoweth Loop and Hostetler Way at West 6th Street to signal control.
- Restrict access on West 6th Street between River Road and Chenoweth Loop to public streets, including Division Street, Irvine Street, and Lee Street. The existing private approaches on West 6th Street would be routed to West 6th Street via access to Division Street and Irvine Street.
- Provide a local street access from Division Street to property in the northwest quadrant of the West 6th Street/Division Street intersection.
- Relocate the private driveway on the west side of US 30 (just north of Chenoweth Creek) to a location further north of the West 6th Street (US 30)/River Road intersection to meet the 1,320-foot access spacing standard.

Concept W-5 (Traffic Signals with West 6th Street Center Median)

- Convert the following intersections from stop control to signal control:
  - West 6th Street (US 30)/River Road
  - West 6th Street/Division Street
  - West 6th Street/Irvine Street
  - West 6th Street/Chenoweth Loop
  - West 6th Street/Hostetler Street
- Construct median on West 6th Street from River Road to Irvine Street.

Concept W-6 (Local Frontage Road on West 6th Street)

- Convert the following intersections from stop control to signal control:
  - West 6th Street (US 30)/River Road



- 
- West 6th Street/Division Street
  - West 6th Street/Chenoweth Loop
  - West 6th Street/Hostetler Street
  - Restrict access on West 6th Street between River Road and Irvine Street and develop a frontage road that would provide access to commercial and residential properties.
  - Extend West 7th Street from Irvine Street to Division Street to improve local connectivity and provide a connection from Division Street to West 6th Street.
  - Relocate the private driveway on the west side of US 30 (just north of Chenoweth Creek) to a location further north of the West 6th Street (US 30)/River Road intersection to meet the 1,320-foot access spacing standard.









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### **Easterly Local Circulation and Access Design Concepts**

Local circulation and access design concepts developed for the portion of the study area in the southeast quadrant of the interchange include: constructing additional connections from River Road to West 2<sup>nd</sup> Street and ultimately to West 6<sup>th</sup> Street; modifications to traffic control at the River Road/River Trail Way intersection; and, construction of local streets to improve connectivity and circulation between West 2<sup>nd</sup> street and River Road. Each easterly (E-X) concept is described below and illustrated in Figure 6-7 through Figure 6-18.

#### Concept E-1 (New Interchange)

- Construct a new fly-over style interchange with I-84 between the existing Chenoweth and Webber interchanges. The new interchange would provide connections from River Road (at River Trail Way and Crates Way) to I-84.

#### Concepts E-2A through E-2C (Two Grade-Separated Crossings of the Union Pacific (UP) railroad at West 2nd Street and Hostetler Street)

- Construct an overpass crossing of the UP railroad north of Hostetler Street to provide access from River Road to West 2nd Street (Concepts E-2A and E-2B2B).
- Construct an underpass crossing of the UP railroad north of Hostetler Street to provide access from River Road to West 2nd Street (Concepts E-2C).
- Construct an underpass crossing of the UP railroad at Hostetler Street to provide access from River Road to West 2nd Street (Concepts E-2A through E-2C).
- Develop a local street network to provide circulation and improve connectivity between West 2nd Street and River Road.
- Convert stop control at River Road/River Trail Way intersection to a roundabout or a signal.

#### Concept E-3A through E-3C (One Northern Grade-Separated Crossing of the UP)

- Construct an overpass crossing of the UP railroad at West 2nd Street or an underpass of the UP at Hostetler Street to provide access from River Road to West 2nd Street and ultimately West 6th Street.
- Develop a collector and local street network that will alleviate congestion on River Road by providing an alternative north-south route between the River Road/River Trail Way intersection and Webber Street.

#### Concept E-4A and E-4B (Two Grade-Separated Crossings of the UP at Hostetler Street and Snipes Street)

- Construct a grade-separated crossing (overpass or underpass) of the UP Railroad at Hostetler Street and Snipes Street.
- Construct a grade-separated crossing (overpass or underpass) of I-84 at Snipes Street. (Concept E-4A only).



- Develop a local street network to provide circulation and improve connectivity between West 2nd Street and River Road.

Concept E-5 (One Southern Grade-Separated Crossing of the UP)

- Construct a grade-separated crossing (overpass or underpass) of the UP Railroad on the south side of West 2nd Street (north of Webber Street).
- Develop a local street network to provide circulation and improve connectivity between West 2nd Street and River Road.

Concept E-6 (At-grade Crossings of the UP at Hostetler Street)

- Maintain the existing at-grade crossing of the UP at Hostetler Street and enhance its connections to River Road. The intersection will be signal or roundabout controlled.
- Develop a local street network to provide circulation and improve connectivity between the West 2nd Street/Hostetler Street intersection and River Road.

Concept E-7 (Close At-Grade Crossing of the UP at Hostetler Street)

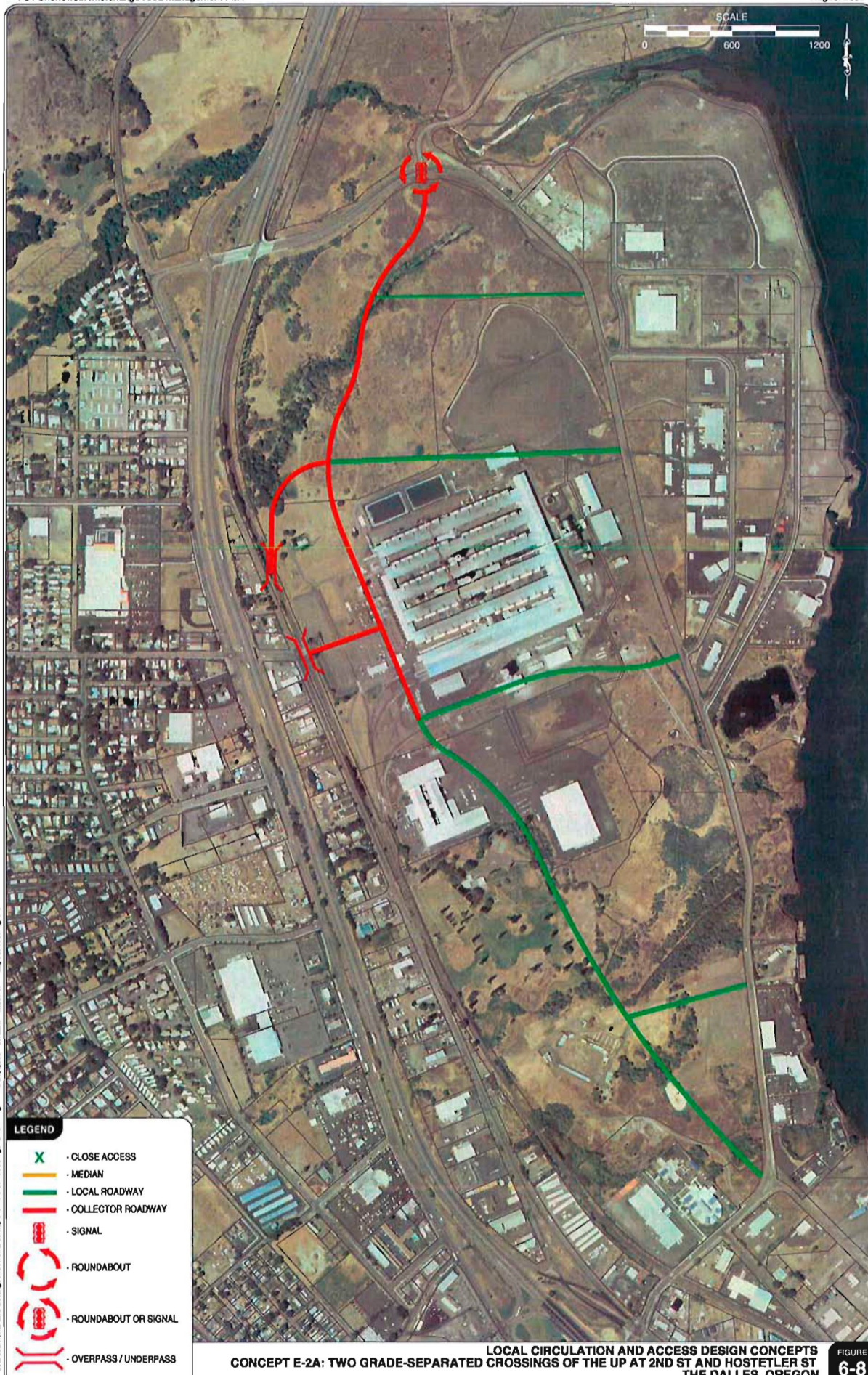
- Restrict access to Hostetler and West 2nd Street from the existing Northwest Aluminum property.
- Develop a collector and local street network west of River Road.

Concept E-8 (One Grade-Separated Crossing of the UP at Chenoweth Loop Road)

- Construct a grade-separated underpass of the UP Railroad at Chenoweth Loop Road.
- Develop a local street network to provide circulation and improve connectivity between West 2nd Street and River Road.



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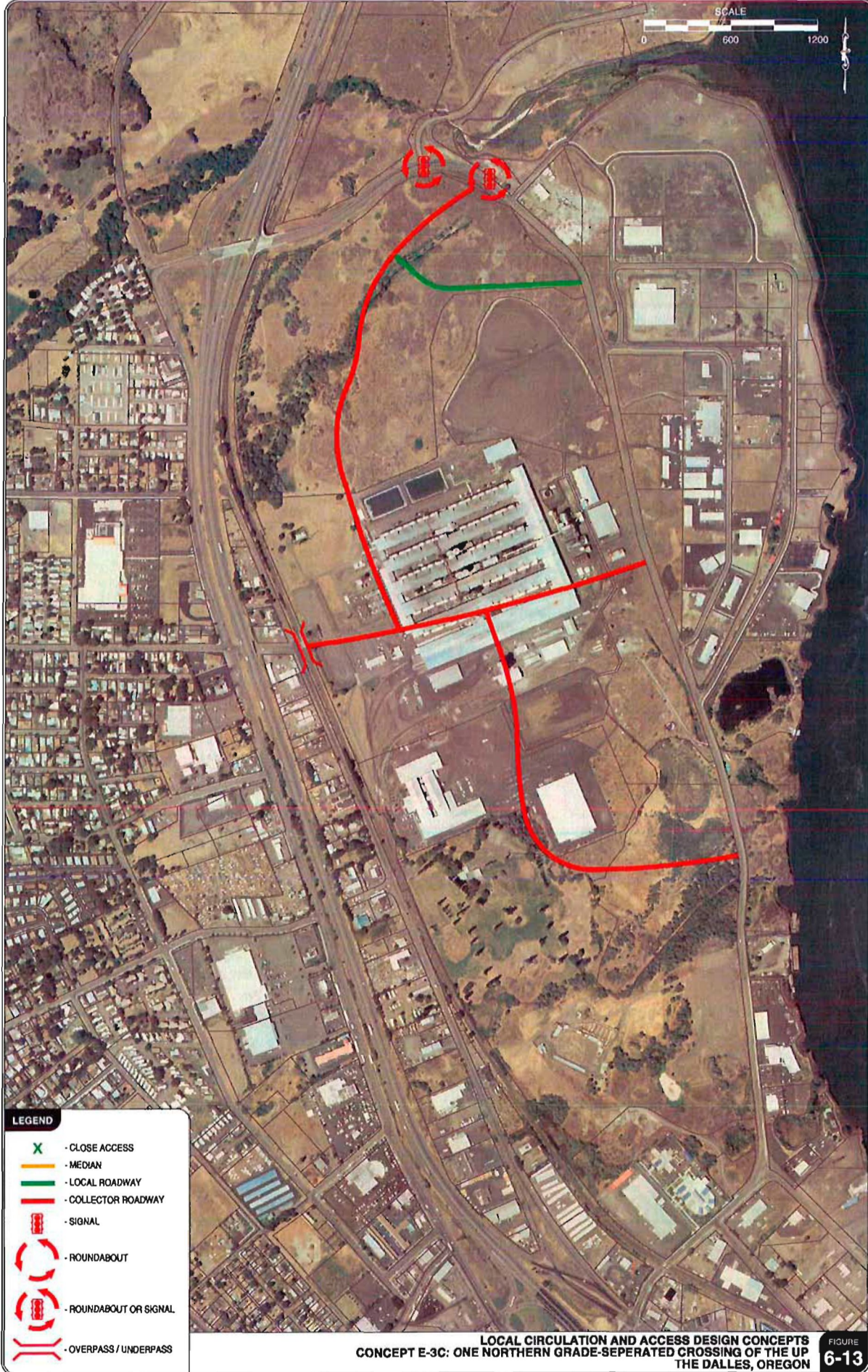


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**LOCAL CIRCULATION AND ACCESS DESIGN CONCEPTS**  
**CONCEPT E-3A: ONE NORTHERN GRADE-SEPERATED CROSSING OF THE UP**  
**THE DALLES, OREGON** FIGURE 6-11





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- | LEGEND  |                        |
|---|------------------------|
|  | - CLOSE ACCESS         |
|  | - MEDIAN               |
|  | - LOCAL ROADWAY        |
|  | - COLLECTOR ROADWAY    |
|  | - SIGNAL               |
|  | - ROUNDABOUT           |
|  | - ROUNDABOUT OR SIGNAL |
|  | - OVERPASS / UNDERPASS |

**LOCAL CIRCULATION AND ACCESS DESIGN CONCEPTS**  
**CONCEPT E-3C: ONE NORTHERN GRADE-SEPERATED CROSSING OF THE UP**  
**THE DALLES, OREGON**

**FIGURE 6-13**





**LEGEND**

- CLOSE ACCESS
- MEDIAN
- LOCAL ROADWAY
- COLLECTOR ROADWAY
- SIGNAL
- ROUNDABOUT
- ROUNDABOUT OR SIGNAL
- OVERPASS / UNDERPASS

**CONCEPT E-4A: TWO GRADE-SEPARATED CROSSINGS OF THE UP (HOSTETLER ST AND SNIPES ST) THE DALLES, OREGON**

FIGURE  
**6-14**

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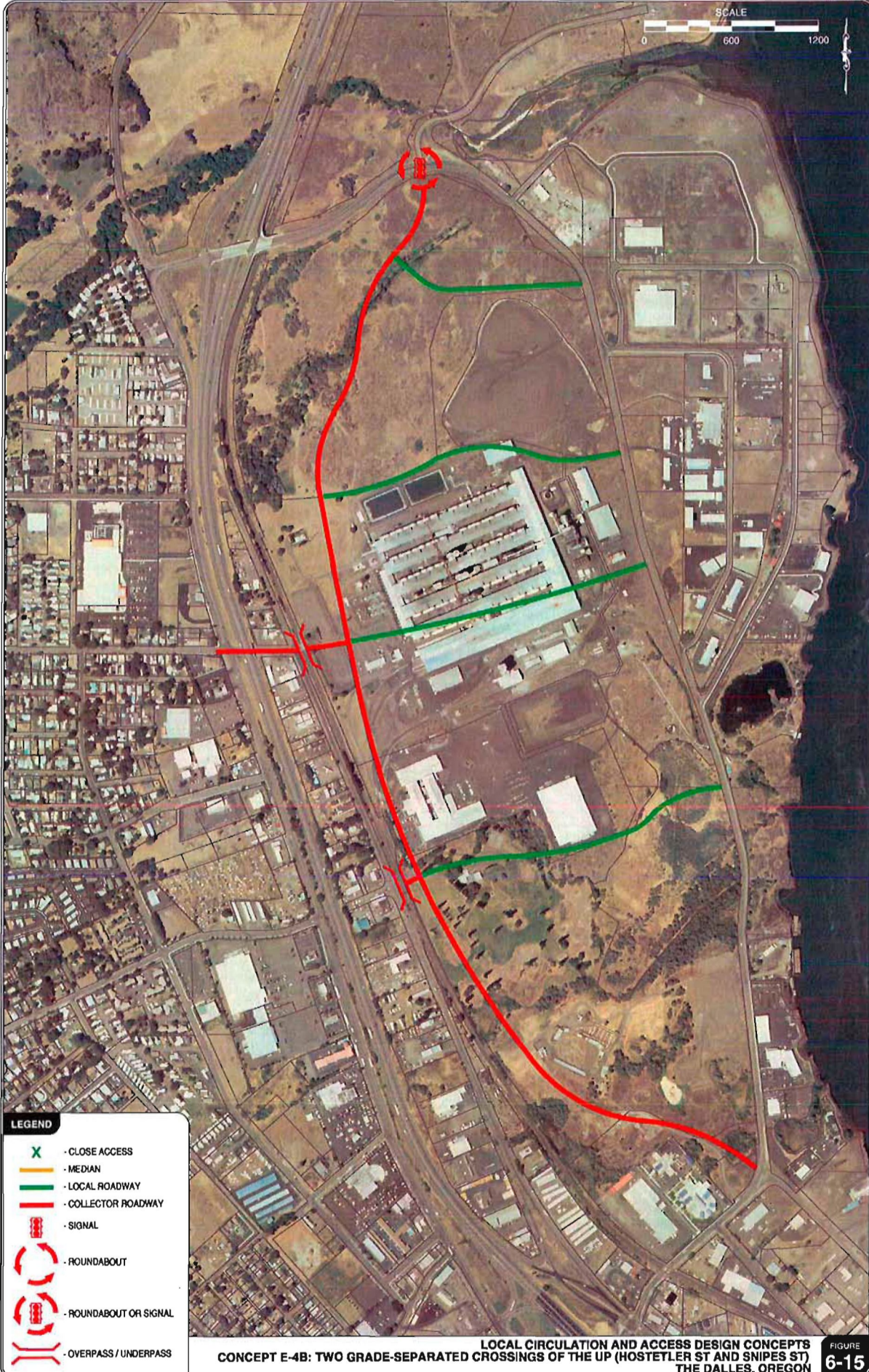
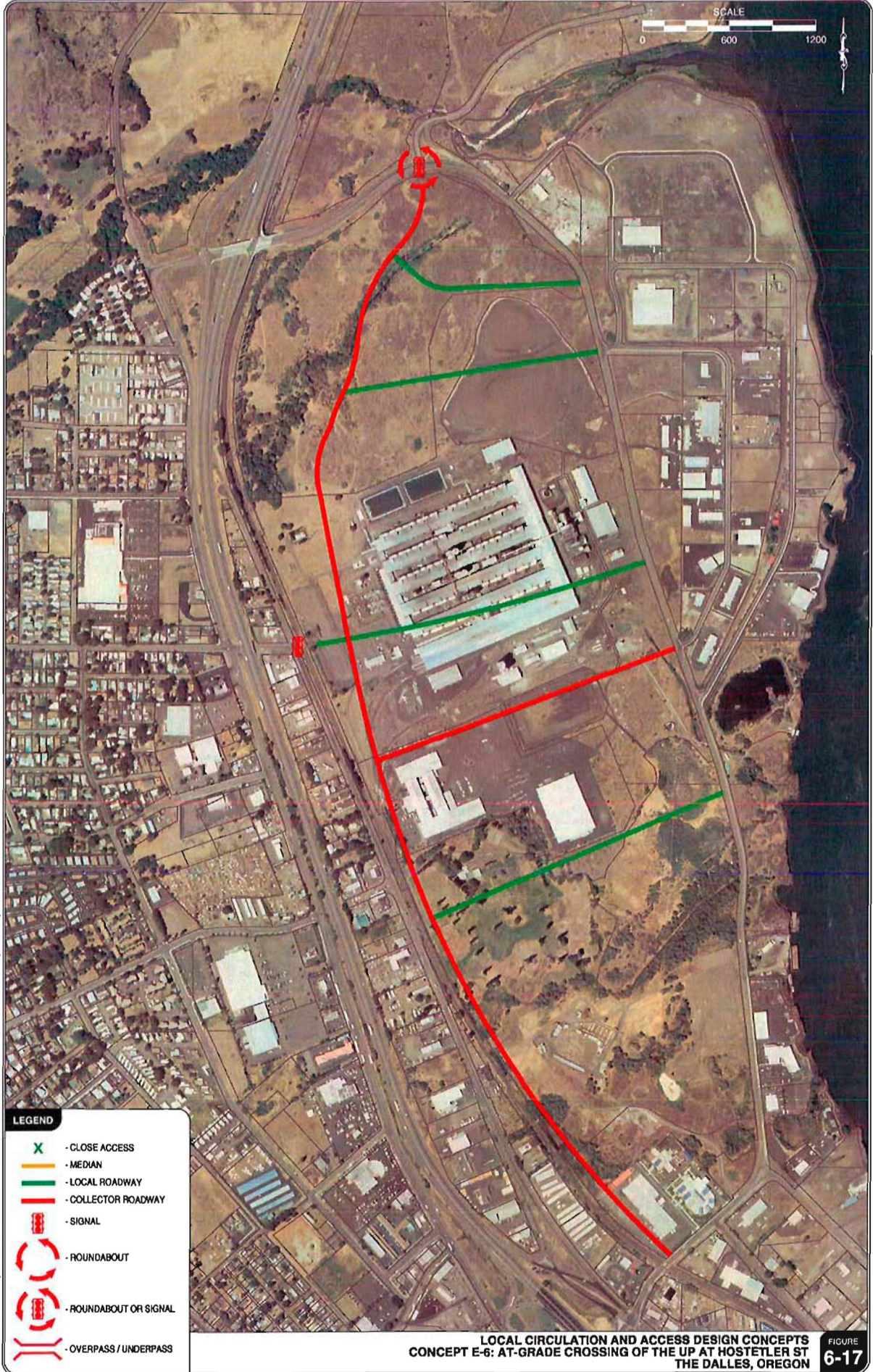




FIGURE 6-16



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FIGURE 6-17



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### **Northerly Local Circulation and Access Design Concepts**

Local circulation and access design concepts developed for the portion of the study area to the north of River Road and east of I-84 include: developing a collector and local street network; constructing an I-84 overpass north of the existing Chenoweth Interchange to connect to US 30 on the west side of I-84; and, constructing a bridge over Chenoweth Creek to connect River Trail Way to Columbia Road. Each northerly (N-X) concept is described below and illustrated in Figure 6-20 through Figure 6-22.

#### Concept N-1 (Local Street Network Only)

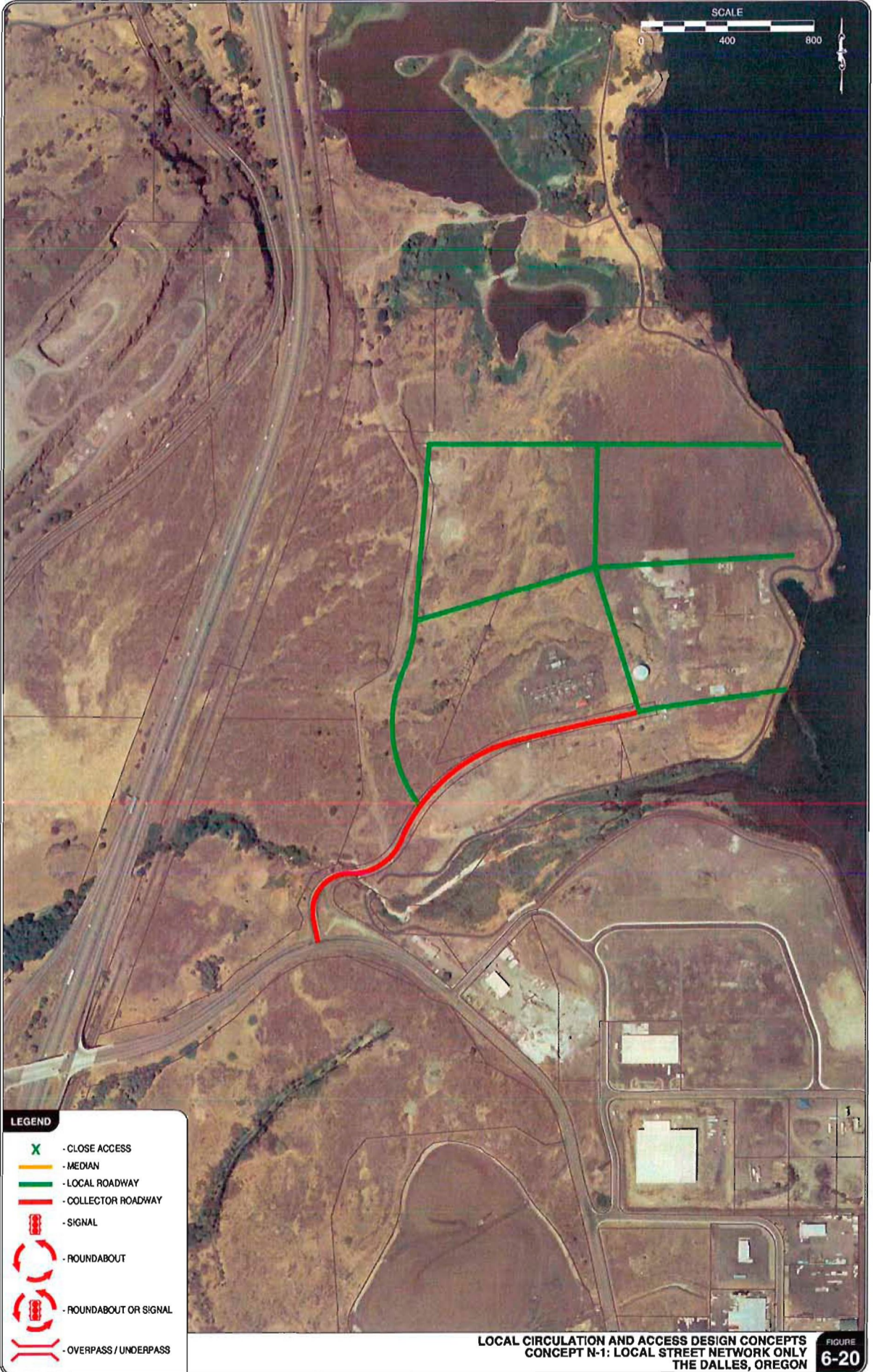
- Develop a collector and local street network.

#### Concept N-2 (I-84 Overpass)






- Construct an I-84 overpass north of the existing Chenoweth Interchange to connect to US 30 on the west side of I-84.
- Develop a collector and local street network.

#### Concept N-3 (Chenoweth Creek Bridge)

- Construct a bridge over Chenoweth Creek to connect River Trail Way to Columbia Road.
- Develop a collector and local street network.

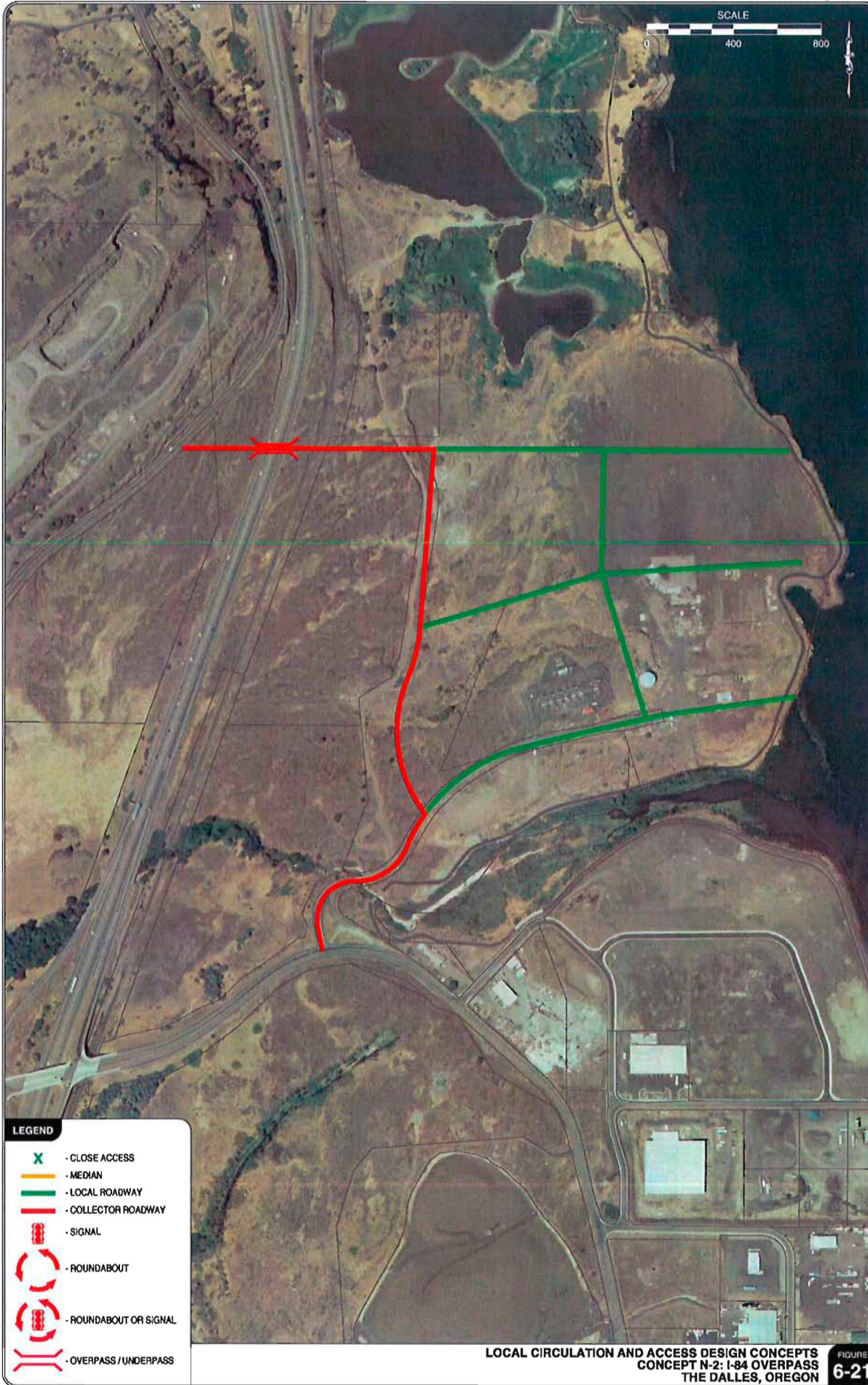


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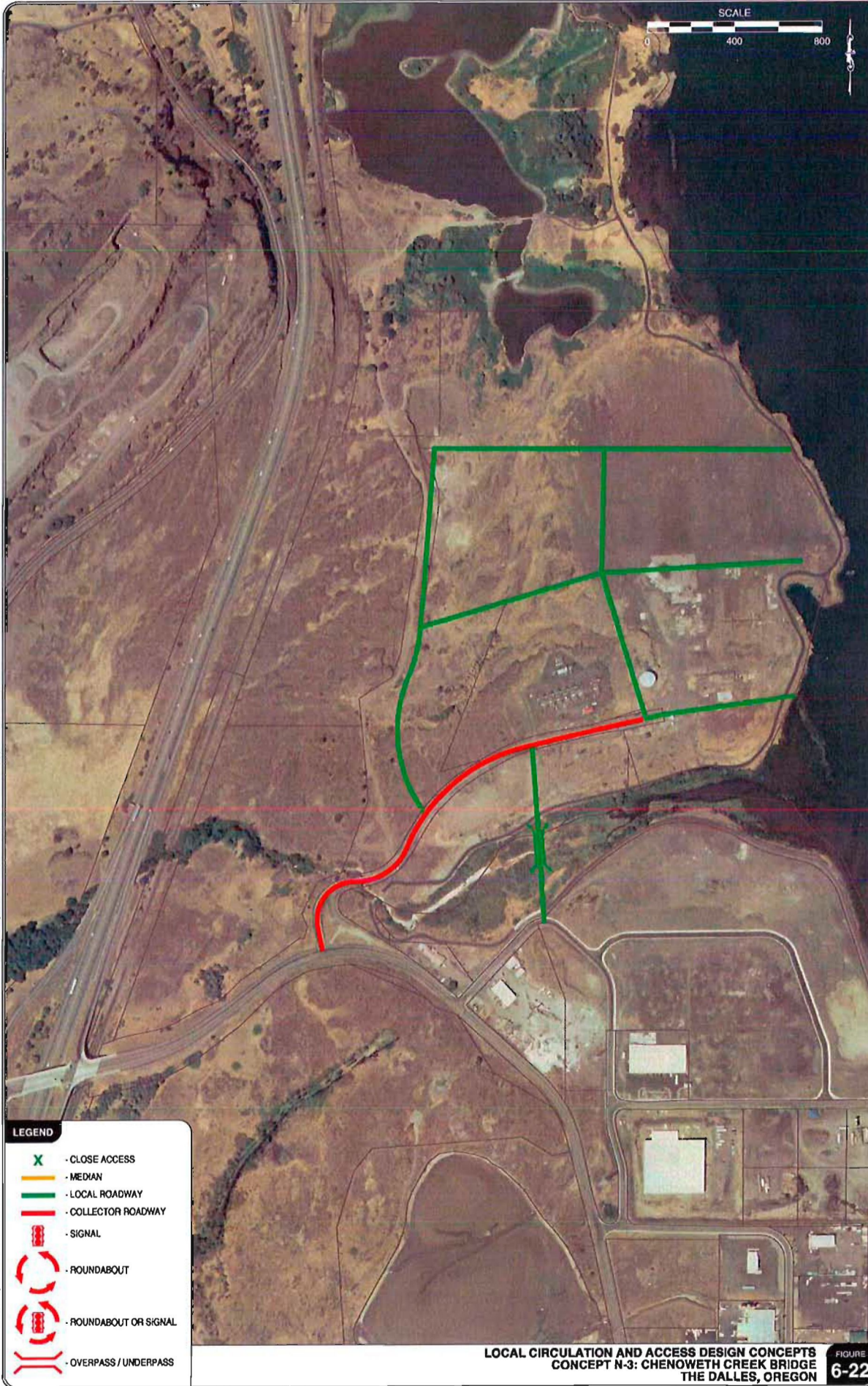
- LEGEND**
-  - CLOSE ACCESS
  -  - MEDIAN
  -  - LOCAL ROADWAY
  -  - COLLECTOR ROADWAY
  -  - SIGNAL
  -  - ROUNDABOUT
  -  - ROUNDABOUT OR SIGNAL
  -  - OVERPASS / UNDERPASS

LOCAL CIRCULATION AND ACCESS DESIGN CONCEPTS  
CONCEPT N-1: LOCAL STREET NETWORK ONLY  
THE DALLES, OREGON **FIGURE 6-20**





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## **PRELIMINARY SCREENING ANALYSIS**

A screening analysis was conducted to separate those concepts that warranted further evaluation from those that did not. The screening process was conducted at a qualitative level and was based on a relative comparison of each concept. The concepts were compared based on the extent of the improvements needed to accommodate forecasted land use projections. The following section provides detailed explanation of this preliminary screening analysis with respect to roadway cross-sections and intersection operations, and identifies which concepts were forwarded by the TAC and SC for further evaluation.

All analysis of future conditions was based on traffic volumes developed for Land Use Scenario #2, as outlined in Section 5. Land Use Scenario #2 assumes that the WM3 property will be developed as General Commercial land, which generates 240 more net new trips than Land Use Scenario #1 and is expected to provide a conservative analysis of future conditions.

### **Roadway Cross-Section Comparison**

Section 5 summarizes the forecast traffic conditions analysis, which assumed no capacity improvements to the existing facilities. The analysis showed that future development, in accordance with existing land use designations, would increase traffic demand beyond capacity of the existing network. Further analysis shows that if no land use restrictions are imposed, no alternative mobility standards are adopted, and no geometric changes are made to the study area roadways, the resulting theoretical cross-section need on the I-84 Chenoweth Interchange bridge would require nine lanes, including:

- Three westbound through lanes
- Two westbound left-turn lanes to I-84 eastbound
- Two eastbound left-turn lanes to I-84 westbound
- Two eastbound through lanes

A nine-lane cross-section on River Road was determined not to be a feasible option, due to the surrounding street network, construction costs, and right-of-way impacts. A six-lane section on the River Road overpass is the widest structure that could feasibly be constructed. A bridge structure with more than six lanes would include two-lane ramps to support dual left-turn lanes to I-84 westbound, which is infeasible to construct without moving the entire interchange. Railroad lines on the east side of I-84 limit the ability to increase the width of westbound off and on-ramps. Due to the pressure of Chenoweth Creek to the north, relocating the interchange was not considered due to interchange spacing requirements. Additionally, providing more than two through lanes in each direction on the River Road overpass at I-84 would require greater cross-sections on West 6th Street and River Road than are suitable for their intended function.

A feasible future scenario was assumed to require the use of a combination of: system-wide improvements, alternative mobility standards, and/or land use management (e.g. trip cap/trip budget) alternatives. System-wide improvements include a new connection to West 2nd Street from

River Road and other localized improvements, as shown in the local circulation and access design concepts. In addition, a combination of these measures could be implemented to address future forecast travel demand.

In order to evaluate and compare roadway improvements to alternative development measures, a development threshold analysis was completed based on cross-sections of the River Road overpass and West 6th Street. Table 6-1 provides a summary of the minimum cross-sections required to minimize queuing and satisfy ODOT mobility standards, based on incremental levels of development. Full development in accordance with Land Use Scenario #2 is assumed, except where a trip cap/trip budget is shown to limit development. For example, a trip cap/trip budget of 85 percent reflects a 15-percent reduction from full development (or a corresponding alternative mobility standard that would allow for the additional 15 percent of forecasted development).

**TABLE 6-1 DEVELOPMENT THRESHOLD ANALYSIS OF STUDY ROADWAYS**

| Cross-Section                             |   |                               | I-84 Interchange Cross-Section Feasible (Yes/No) | Connection to W. 2 <sup>nd</sup> Street | Trip Cap/ Trip Budget or Alternative Mobility Standards | Allowable FAR (Commercial/ Industrial) |
|---|---|-------------------------------|--|---|---|--|
| I-84 Interchange (Between Ramp Terminals) | West 6th Street (North of Hostetler Street) | Hostetler Street (Under I-84) |  |   |   |  |
| 9-lanes                                   | 5-lanes                                     | 2-lanes                       | No   | No                                      | None  | (0.25/0.40)                            |
| 6-lanes                                   | 5-lanes                                     | 2-lanes                       | No   | No                                      | 50%   | (0.13/0.20)                            |
| 8-lanes                                   | 5-lanes                                     | 5-lanes                       | No   | No                                      | None  | (0.25/0.40)                            |
| 7-lanes                                   | 5-lanes                                     | 5-lanes                       | No   | No                                      | 85%   | (0.21/0.34)                            |
| 6-lanes                                   | 5-lanes                                     | 4-lanes                       | Yes  | Yes                                     | 85%   | (0.21/0.34)                            |
| 4-lanes                                   | 5-lanes                                     | 4-lanes                       | Yes  | Yes                                     | 75%   | (0.19/0.30)                            |
| 4-lanes                                   | 5-lanes                                     | 4-lanes                       | Yes  | No                                      | 55%   | (0.14/0.22)                            |

As shown in Table 6-1, a connection from River Road to West 2nd Street is needed in order to reduce the cross-section of River Road from nine lanes to eight lanes at the I-84 Interchange. In order to further reduce the cross-section, land use management strategies (e.g., trip cap/trip budget) or alternative mobility standards are needed in combination with a West 2nd Street Connection.

#### Interchange Form Evaluation

Alternative interchange forms were considered, but due to the location of the interchange with respect to existing rail lines, Chenoweth Creek, and West 6th Street it was determined that other interchange forms are not feasible. The most likely alternative interchange form would include loop ramps, as they provide free-flow turning movements. However loop ramps require a large amount of right-of-way which is not available to the east or west of I-84. Section 7 identifies specific modifications for the existing interchange.

#### West 6th Street Evaluation

The cross-section of West 6th Street is shown as a 5-lane section, which includes: two southbound lanes, two northbound lanes, and a northbound left-turn lane. Two through lanes are only required in the southbound direction at the West 6th Street/River Road and the West 6th Street/Hostetler Street intersections; however, for continuity purposes and consistency with The Dalles TSP, a continuous 5-lane section is assumed. Given that analysis was performed on the evening peak hour, an equal lane configuration is assumed in the northbound direction to serve weekday morning peak hour traffic, in order to account for directional distributions during the peak hour time periods.

#### West 2nd Street Connection Evaluation

A connection to West 2nd Street is shown to reduce traffic demand on River Road at the I-84 Interchange. Although the design concepts show connections to West 2nd Street at various locations (see Concepts E-4 and E-5), all screening analyses assumed the benefits of a connection at Hostetler Street. It is expected that the reduction in traffic on the River Road overpass will not be as great if a connection to West 2nd Street is south of Hostetler Street. If concepts E-4 and E-5 are selected for further evaluation, traffic volumes within the study area will be redistributed to account for the connection location. Traffic is more likely to redistribute from the Chenoweth Interchange if a new connection to West 2nd Street is closer to the Chenoweth Interchange than the Webber Street Interchange.

Based on the identified benefits of a new connection to West 2nd Street, **Concept E-7 was removed from further evaluation because the concept does not include new connections to West 2nd Street**. All other concepts are compatible with the analysis shown in Table 6-1.

### **Intersection Operations**

All study intersections are forecast to exceed capacity during the forecasted year 2030 peak hour, except the River Road/Columbia Road intersection. Mitigations to the intersections include installation of roundabouts or traffic signals at unsignalized intersections. See *Appendix D of the Technical Appendix for the 2030 no-build operational analysis details*.

Operational analysis of roundabouts was conducted during the preliminary screening process at the following locations where design concepts suggested single-lane or double-lane roundabouts:

- River Road/River Trail Way
- West 6th Street/River Road
- West 6th Street/Chenoweth Loop

#### Roundabout vs. Signalization Analysis

The operational analysis of roundabout alternatives is summarized in Table 6-2, based on NCHRP Report 572 methodology for single-lane and double-lane roundabouts. *Technical Memorandum #7 in Appendix "E" of the I-84 Chenoweth IAMP Technical Appendix provides a summary of the lane geometry assumed on each approach and summarizes the operational analysis*.

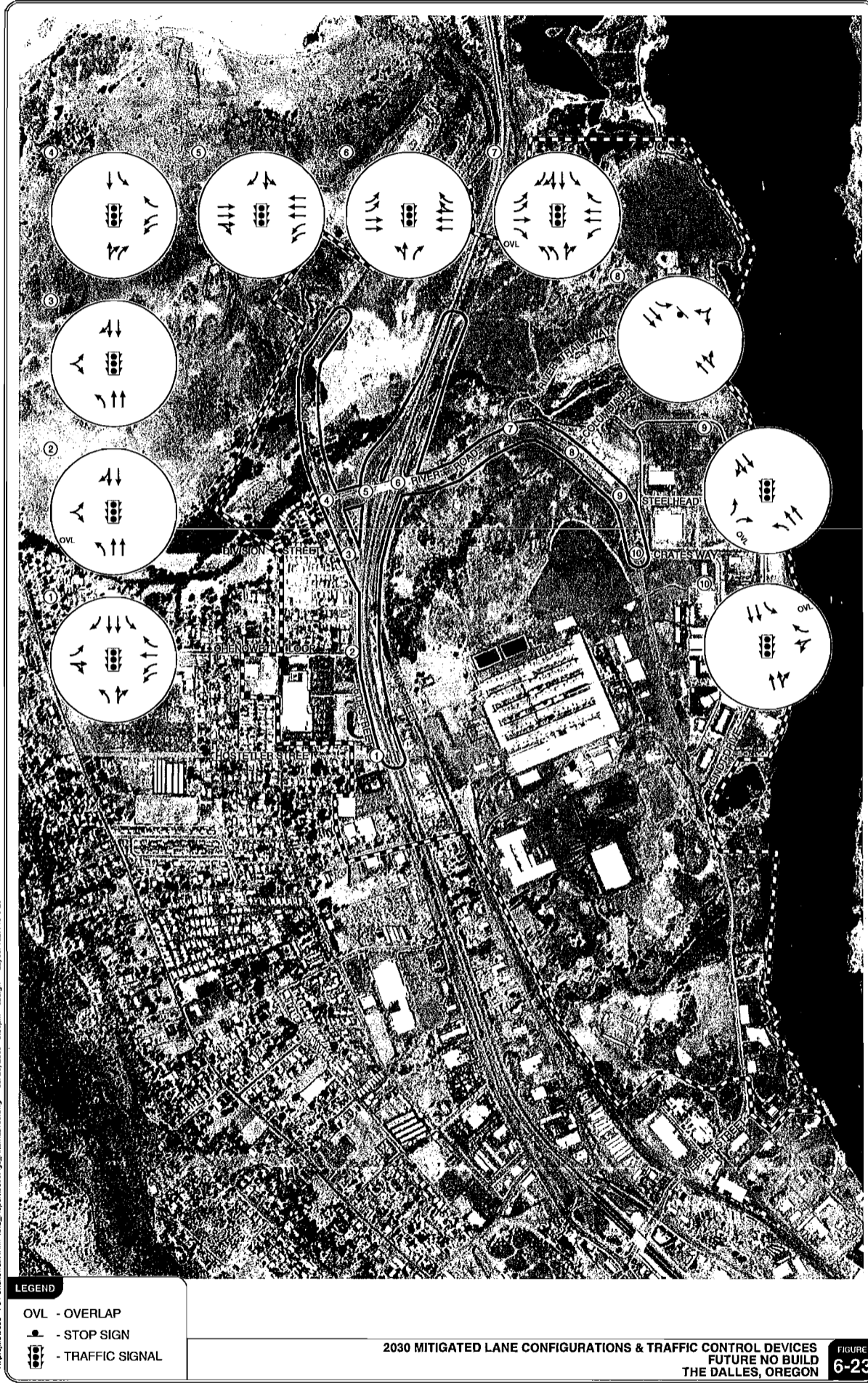


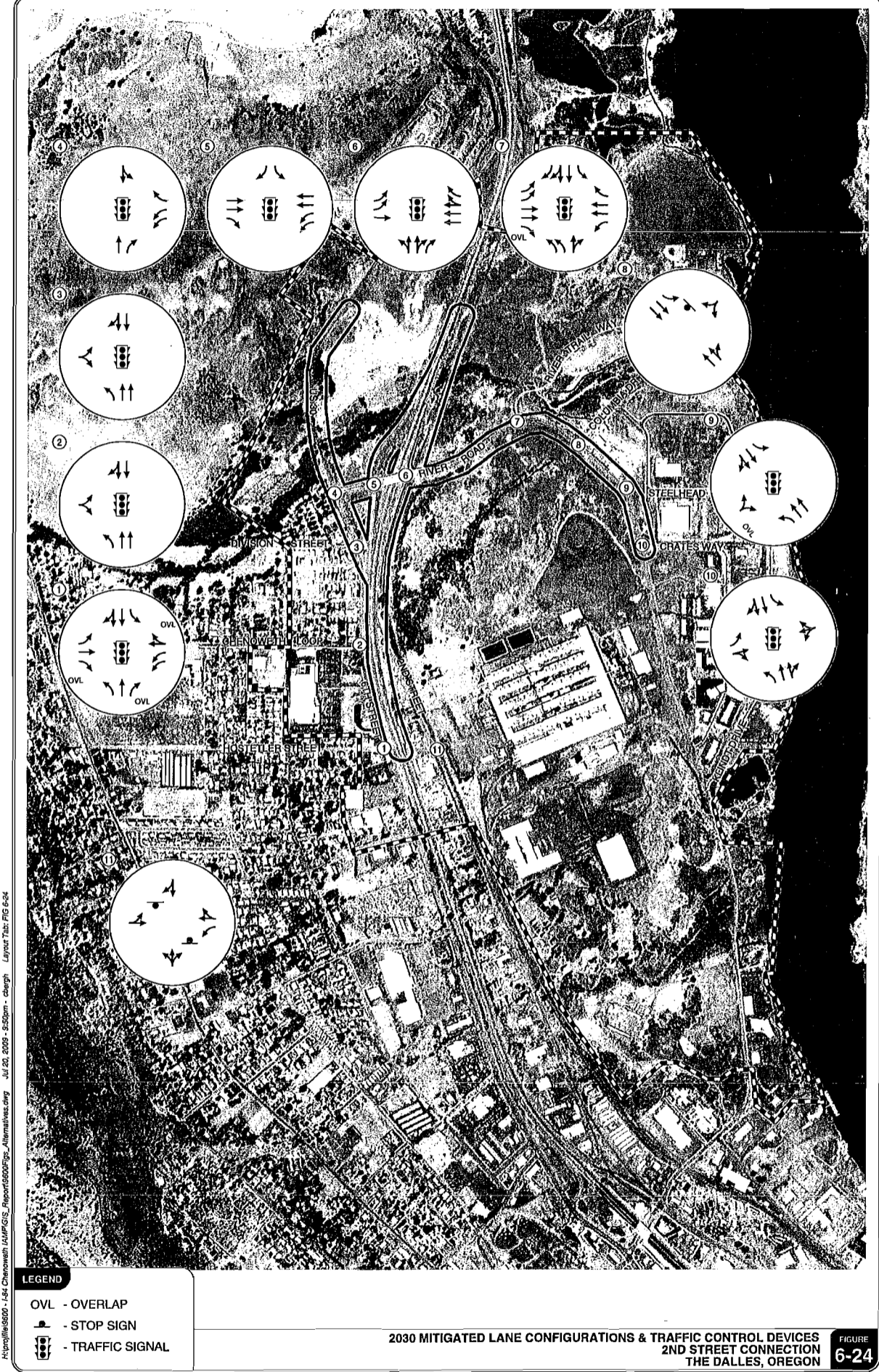
**TABLE 6-2 ROUNDABOUT OPERATIONAL ANALYSIS SUMMARY**

| Geometry Information              | West 6th Street/<br>Chenoweth Loop                               |          |           | West 6th Street/<br>River Road |           |           | River Road/River Trail Way |           |          |           |
|-----------------------------------|--|----------|-----------|--------------------------------|-----------|-----------|----------------------------|-----------|----------|-----------|
|                                   | North Leg  | West Leg | South Leg | East Leg                       | North Leg | South Leg | East Leg                   | North Leg | West Leg | South Leg |
| Number of Entry/<br>Exit Lanes    | 2/2  | 1/1      | 2/2       | 2/2                            | 1/1       | 2/2       | 2/1                        | 2/1       | 2/2      | 2/2       |
| Right Turn By-Pass                | No   | No       | No        | No                             | No        | No        | No                         | Yes       | No       | No        |
| Circulating Lanes                 | 1  | 2        | 1         | 1                              | 2         | 1         | 2                          | 2         | 2        | 2         |
| <b>Performance Measure</b>        | <b>2030 Operations without New Connection to West 2nd Street</b> |          |           |                                |           |           |                            |           |          |           |
| Critical Lane Volume//Capacity    | 0.63   | 0.51     | 0.70      | 0.64                           | 0.24      | 0.75      | 0.65                       | 0.71      | 0.81     | 0.65      |
| Critical Lane Average Delay (sec) | 10.0   | 13.2     | 11.6      | 9.4                            | 9.5       | 12.7      | 16.3                       | 27        | 23       | 15.2      |
| 95% Queue Length (ft)             | 125  | 75       | 150       | 125                            | 25        | 200       | 125                        | 150       | 225      | 125       |
| <b>Performance Measure</b>        | <b>2030 Operations with New Connection to West 2nd Street</b>    |          |           |                                |           |           |                            |           |          |           |
| Critical Lane Volume//Capacity    | 0.54   | 0.46     | 0.60      | 0.56                           | 0.22      | 0.67      | 0.55                       | 0.75      | 0.83     | 0.52      |
| Critical Lane Average Delay (sec) | 8.2  | 10.6     | 9.0       | 7.9                            | 8.3       | 9.7       | 13.1                       | 28.2      | 25.7     | 9.3       |
| 95% Queue Length (ft)             | 100  | 75       | 125       | 100                            | 25        | 150       | 100                        | 175       | 250      | 100       |

As shown in Table 6-2, the roundabouts are forecast to operate acceptably under Land Use Scenario #2 volume conditions, with or without a new connection to West 2nd Street. However, a connection to West 2nd Street reduces average delay at the West 6th Street/Chenoweth Loop and West 6th Street/River Road intersections. The operational analysis shows that a two-lane roundabout is needed at the River Road/River Trail Way intersection. At the West 6th Street/River Road intersection a partial two-lane roundabout is needed, which includes a two-lane circulatory roadway on the north approach and a single-lane circulatory roadway at the south and east approaches.

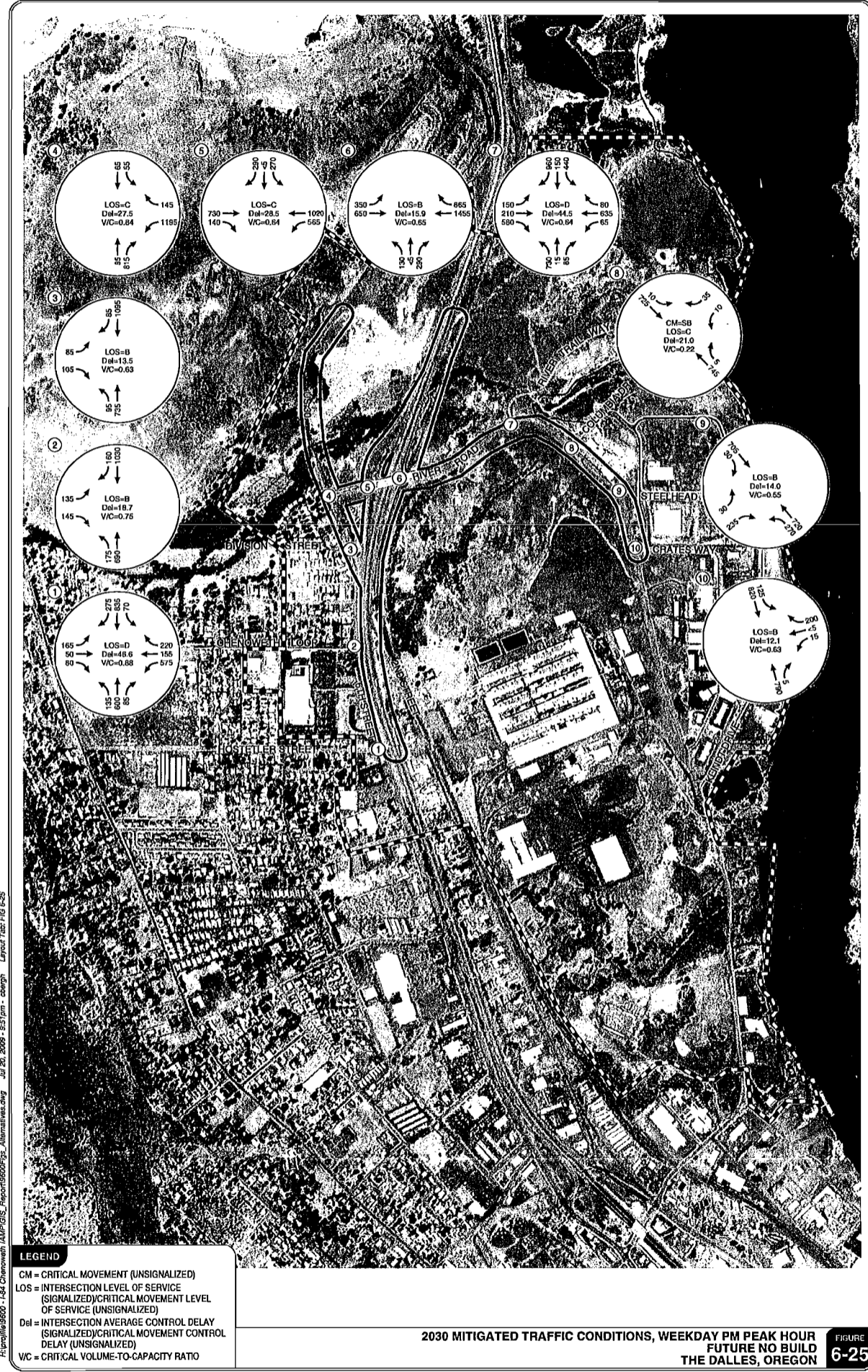
Signalized intersection alternatives were analyzed using Highway Capacity Manual procedures (Reference 3). Three signalized scenarios were evaluated with and without a new connection to West 2nd Street. Lane configurations were developed to provide acceptable operations at all study intersections. Given the directionality of the weekday p.m. peak hour volumes, through lanes were assumed to be equal in each direction of major traffic flow. A summary of mitigated lane configurations and traffic control devices are shown in Figure 6-23 and Figure 6-24. Figure 6-25 and Figure 6-26 summarize the operational analysis of the signalized mitigated scenarios.



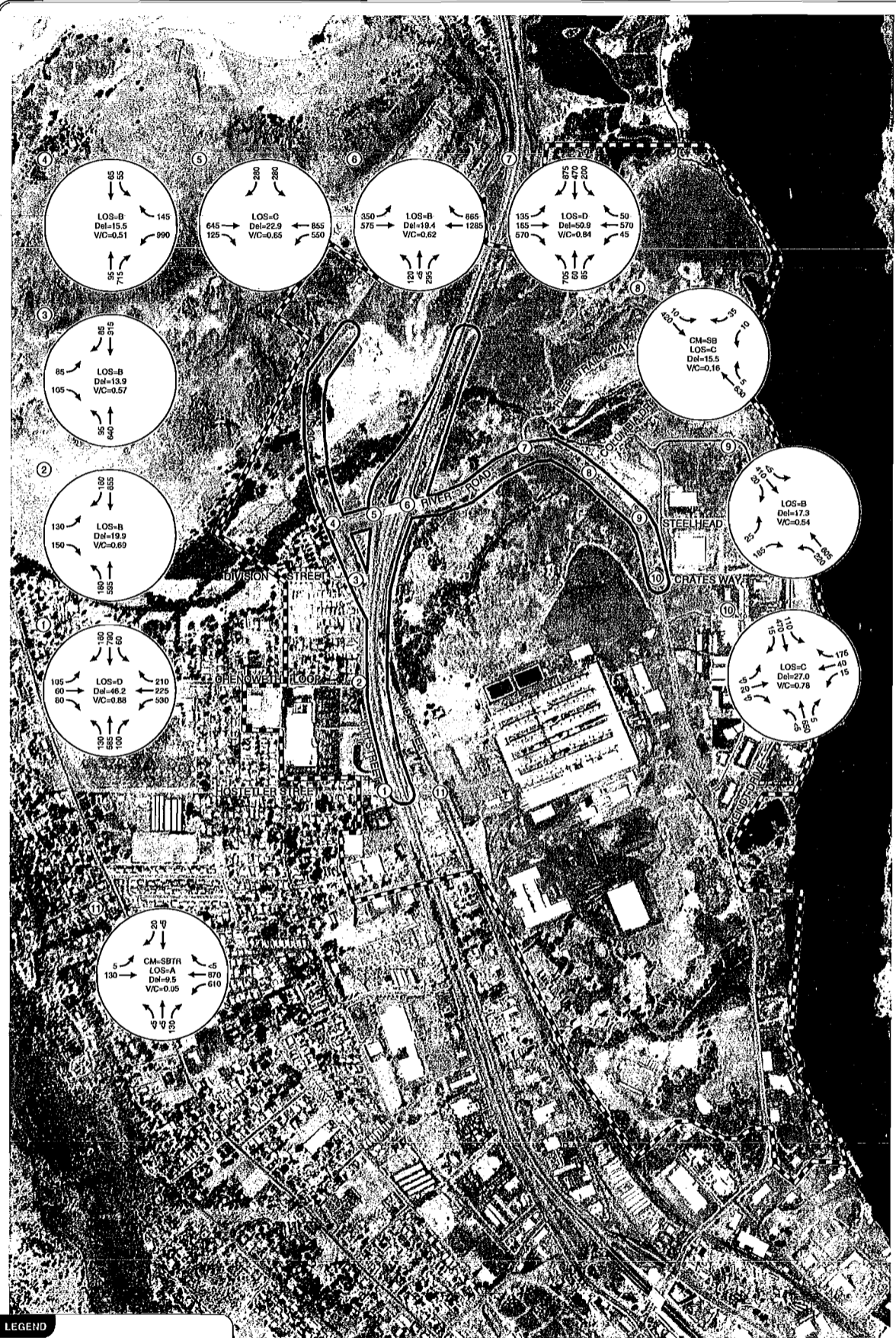


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**LEGEND**  
 CM = CRITICAL MOVEMENT (UNSIGNALIZED)  
 LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)  
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)  
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

2030 MITIGATED TRAFFIC CONDITIONS, WEEKDAY PM PEAK HOUR  
 2ND STREET CONNECTION  
 THE DALLES, OREGON **FIGURE 6-26**

Table 6-3 provides a summary of roadway cross-section for the critical approach to the three roundabout intersections as compared to the signalized options. The lane configurations are based on a maximum V/C ratio of 0.85 and future concepts with a new connection to West 2nd Street.

**TABLE 6-3 INTERSECTION CONTROL CROSS-SECTION COMPARISONS**

| <b>Intersection</b>                | <b>Intersection Control</b> | <b>Critical Approach</b> | <b>Entering Lanes</b> | <b>Exiting Lanes</b> | <b>Total</b> |
|------------------------------------|-----------------------------|--------------------------|-----------------------|----------------------|--------------|
| River Road/<br>River Trail Way     | Roundabout                  | Eastbound                | 2                     | 2                    | 4            |
|                                    | Traffic Signal              |                          | 5                     | 2                    | 7            |
| West 6th Street/<br>River Road     | Roundabout                  | Westbound                | 2                     | 1                    | 3            |
|                                    | Traffic Signal              |                          | 3                     | 1                    | 4            |
| West 6th Street/<br>Chenoweth Loop | Roundabout                  | Eastbound                | 1                     | 1                    | 2            |
|                                    | Traffic Signal              |                          | 1                     | 1                    | 2            |

As shown in Table 6-3, roundabouts can effectively minimize the width of intersection approaches as compared to signalized alternatives. At the River Road/River Trail Way intersection a roundabout is expected to reduce the number of lanes by three on the critical approach. If the intersection were to operate with a traffic signal, the eastbound approach would require two left-turn lanes, two through lanes, and an exclusive right-turn lane. Roundabouts are evaluated in greater detail in the Refined Concept Evaluation later in this section.

Concept W-1 included a roundabout option that combines the intersections of River Road at West 6th Street and I-84 Eastbound. Operational analysis of this roundabout option showed that this design could not provide adequate capacity. Therefore, **Concept W-1 was excluded from further study.** *Technical Memorandum #7 in Appendix "E" of the I-84 Chenoweth IAMP Technical Appendix includes a sketch of the roundabout alternative.*

## **PRELIMINARY QUALITATIVE EVALUATION**

An initial comparison of the remaining 20 concepts was conducted based on a qualitative assessment of the evaluation criteria outlined in Section 1. The comparison is intended to identify those concepts that do not have any "fatal flaws" and warrant further detailed evaluation.

To rank each of the concepts according to the evaluation criteria, a scoring system was developed. In essence, each evaluation criterion was assigned a range of numerical values (+2, +1, 0, -1, or -2). The concepts that achieve each metric better than others receive a "+2", those that do not impact the metric receive a "0", those that underperform compared to other concepts receive a "-2" score, and those that fall in between receive a "+1" or "-1" score. The following outlines the elements considered in the initial evaluation and aspects of each that characterized the variations between concepts:

---

*Operations/Land Use/Economic Development*

- Ability to develop land within the study area per existing zoning designations, with little or no restrictions (dependant on operational capacity).
- Additional connection to West 2nd Street is expected to reduce through traffic on River Road and West 6th Street, which provides for higher intensity of development and greater potential for growth.
- Additional connection to West 6th Street over/under I-84 (at Hostetler Street, Chenoweth Loop, or Snipes Street) is expected to reduce the number of lanes and congestion on the River Road overpass of I-84, which provides for higher intensity of development and greater potential for growth.

*Cost*

- Overpass/underpass crossing(s) of UP railroad.
- Overpass/underpass crossing of I-84.
- Bridge structure required for crossing Chenoweth Creek.

*Property Impacts/Accessibility*

- The ability to access properties and businesses within the study area to/from the regional infrastructure network.
- Non-perpendicular crossing of West 2nd Street impacts existing development more than perpendicular crossing.
- Crossings of West 2nd Street require retaining walls and extended length of roadway to return from above or below grade to existing grade.
- Collector or local roadways run parallel to West 2nd Street and impact existing businesses.

*Environmental*

- Roadway location conflicts with existing natural resource (Chenoweth Creek).
- Multiple local roadways increase the amount of paved roadway within the area and impact the amount of storm water runoff.

Table 6-4 provides a summary of the initial evaluation of concepts based on these elements.

**TABLE 6-4 INITIAL QUALITATIVE CONCEPT EVALUATION**

| Concept | Operations | Cost | Property Impacts | Environmental | Average Score | Forwarded for Further Consideration?                   |
|---------|------------|------|------------------|---------------|---------------|--|
| E-1     | 1          | -2   | -2               | 0             | -0.75         | No   |
| E-2A    | 1          | -2   | -1               | 0             | -0.50         | No   |
| E-2B    | 1          | -2   | -2               | -1            | -1.00         | No   |
| E-2C    | 1          | -2   | -1               | 0             | -0.50         | No   |
| E-3A    | 1          | -1   | -1               | 0             | -0.25         | Yes  |
| E-3B    | 1          | -1   | -1               | -1            | -0.50         | Yes – combined with E-3C                               |
| E-3C    | 1          | -1   | -1               | 0             | -0.25         | Yes – combined with E-3B                               |
| E-4A    | 2          | -2   | -2               | -1            | -0.75         | Yes – modified to include Snipes Street underpass only |
| E-4B    | 2          | -2   | -1               | -1            | -0.50         | No   |
| E-5     | 0          | -1   | -1               | -1            | -0.75         | No   |
| E-6     | 1          | 0    | -2               | -2            | -0.75         | No   |
| E-8     | 1          | -1   | 0                | -1            | -0.25         | Yes  |
| W-2     | 1          | -1   | 0                | 0             | 0.00          | Yes  |
| W-3     | 1          | -1   | 0                | 0             | 0.00          | Yes  |
| W-4     | 1          | -1   | 0                | 0             | 0.00          | Yes  |
| W-5     | 0          | -1   | 0                | 0             | -0.25         | Yes  |
| W-6     | 0          | -1   | -1               | 0             | -0.50         | No   |
| N-1     | -1         | 0    | 0                | 0             | -0.25         | Yes  |
| N-2     | 1          | -1   | 0                | 0             | 0.00          | Yes  |
| N-3     | 0          | -1   | 0                | -1            | -0.50         | No   |

Each concept was compared to other concepts within each sub-area of the study area and the lowest scoring concepts were removed from further consideration. Each concept that scored an average of -0.50 or less was not forwarded for further evaluation with two exceptions (E-3C and E-4A which were forwarded for further evaluation with modifications to improve their viability). Five easterly, four westerly, and two northerly concepts were forwarded for additional evaluation based on this criteria. Table 6-5 provides additional information on the primary reason a concept was recommended for elimination or modification.

**TABLE 6-5 PRIMARY REASON FOR CONCEPT ELIMINATION OR MODIFICATION**

| Concept | Average Score | Recommended for Further Evaluation? | Primary Reason for Concept Elimination or Modification  |
|---------|---------------|-------------------------------------|---|
| E-1     | -0.75         | No                                  | Proposed interchange would not meet interchange spacing standards and would not provide new local east-west connectivity.   |
| E-2A    | -0.50         | No                                  | There is no significant operational benefit of providing two grade-separated crossings to West 2nd Street as compared to one as provided in Concept E-3A, B, and C.   |
| E-2B    | -1.00         | No                                  | There is no significant operational benefit of providing two grade-separated crossings to West 2nd Street as compared to one as provided in Concept E-3A, B, and C.   |
| E-2C    | -0.50         | No                                  | There is no significant operational benefit of providing two grade-separated crossings to West 2nd Street as compared to one as provided in Concept E-3A, B, and C.   |
| E-3A    | -0.25         | Yes                                 | NA  |
| E-3B    | -0.50         | Yes                                 | Concept E-3B and E-3C are similar in that they both include one grade-separated crossing located at Hostetler Street and were combined into one alternative (E-3D) that reduces the property impacts at Webber Street and the proposed collector roadway and combines the intersections of River Trail Way, the proposed north-south collector roadway, and River Road as the intersection spacing in Concept E-3-C is undesirable. |
| E-3C    | -0.25         | Yes                                 |   |
| E-4A    | -0.75         | Yes                                 | Modify to remove the Hostetler Street underpass as there is no significant operational benefit of providing two grade-separated crossings and Concept E-3 presents the Hostetler Street grade-separation Concept.   |
| E-4B    | -0.50         | No                                  | A grade-separated crossing of the UP line to West 2nd Street is infeasible due to the constraints of distance for grade-transition and property access.   |
| E-5     | -0.75         | No                                  | Does not provide operational relief to the Chenoweth Interchange and directs additional traffic to the Webber Street Interchange.   |
| E-6     | -0.75         | No                                  | An at-grade crossing of the UP line with a public roadway is unlikely to be permitted.  |
| E-7     | N/A           | No                                  | Does not provide necessary connectivity to West 2nd Street and results in the need for severe reduction of development potential.   |
| E-8     | -0.25         | Yes                                 | NA  |
| W-1     | N/A           | No                                  | Operational analysis indicated the roundabout operations would not meet mobility standards.   |
| W-2     | -0.50         | Yes                                 | NA  |
| W-3     | 0.00          | Yes                                 | NA  |
| W-4     | 0.00          | Yes                                 | NA  |
| W-5     | -0.25         | Yes                                 | NA  |
| W-6     | -0.50         | No                                  | Property impacts too severe.  |
| N-1     | -0.25         | Yes                                 | NA  |
| N-2     | 0.00          | Yes                                 | NA  |
| N-3     | -0.50         | No                                  | Bridge structure would have environmental impacts and would provide no significant operational benefit.   |

Based on the initial screening of the concepts, the following concepts were forwarded to be refined and evaluated in greater detail:

*East concepts*

- E-3A
- E-3B/C (Hybrid)
- E-4A (Modified)
- E-8

*West Concepts*

- W-2
- W-3
- W-4
- W-5

*North Concepts*

- N-1
- N-2

The preliminary screening process led to further evaluating local circulation and access designs for four easterly concepts (E-3A, E-3B/C Hybrid renamed as E-3D, a Modified E-4A renamed as E-4C, and E-8), four westerly concepts (W-2, W-3, W-4, and W-5), and two northerly concepts (N-1 and N-2). The two modified concepts are shown in Figure 6-27 and Figure 6-28. Each of the above concepts was evaluated in greater detail.



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**LOCAL CIRCULATION AND ACCESS DESIGN CONCEPTS**  
**CONCEPT E-3D: HOSTETLER STREET EXTENSION**  
**THE DALLES, OREGON** FIGURE 6-27





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## **REFINED CONCEPT EVALUATION**

Given the remaining alternatives, the refined concept evaluation focused on identifying a preferred design concept within each concept area. The selection of a preferred concept in each concept area was impacted by the selected design concepts within the other areas. Therefore, the preferred concept in the area that is least impacted by others was selected first.

The magnitude and cost of potential improvements are greatest within the easterly concept area, while the westerly concepts are most impacted by the other concept areas; therefore, the preferred concept was identified for the northerly area (recognized as the most independent) and then the easterly area prior to identifying the preferred concept for the westerly area. Evaluation and selection of a preferred concept considered: the preferred location of a new east-west crossing of I-84, preliminary project cost estimates, and intersection operations.

### **Northerly Concept Refinement**

Two concepts were qualitatively compared north of River Road and east of I-84: N-1 and N-2. The primary differentiator between the two concepts is a new crossing of I-84 approximately 2,000 feet north of the I-84 Chenoweth Interchange, as shown in Concept N-2. Given that the forecast distribution of trips to/from this portion of the study area (Sub-area "A") is primarily to/from the south of the I-84 Chenoweth Interchange and along the I-84 corridor, it is not expected that much traffic would divert to the north in order to return south on US Highway 30. Ultimately, the new connection would also increase the needs at the Highway 30/River Road/West 6th Street intersection. There would be operational benefits at the River Road/River Trail Way intersection but they are not sufficient enough to outweigh the cost of the potential overpass. **Therefore, the northerly concept without a new crossing of I-84, as shown in Concept N-1, was incorporated into a preferred local circulation and access design concept. Included in this concept is the recommendation that right-of-way be preserved that would provide the option for a future overpass.** This overpass could have significant system benefits if the city were to expand its urban growth boundary in the future in the area northwest of the interchange along US Highway 30.

### **Easterly Concept Refinement**

As discussed previously and as summarized in Table 6-1, providing a new east-west connection across I-84 and the UPRR allows more development to occur consistent with the existing comprehensive plan, while maintaining a feasible cross-section on the River Road overpass of I-84. The evaluated crossing locations are identified from north to south:

- North 2nd Street Overpass (Concept E-3A)
- Chenoweth Loop Underpass (Concept E-8)
- Hostetler Street Underpass (Concept E-3D)
- Snipes Street Overpass (Concept E-4C)

An evaluation of the crossing locations was conducted that considered the preliminary cost, traffic operations, and property impacts.

### Cost Estimates

Cost estimates (excluding right-of-way) were prepared to evaluate the financial impacts of each alternative location. Table 6-6 summarizes the cost estimates for each proposed crossing location. *Technical Memorandum #7 in Appendix "E" of the I-84 Chenoweth IAMP includes the detailed summary of the preliminary cost estimates.*

**TABLE 6-6 PRELIMINARY COST ESTIMATES OF EAST-WEST CROSSING ALTERNATIVES**

| Crossing Location                            | Cost Estimate (millions) <sup>1</sup> |
|--|---------------------------------------|
| North 2 <sup>nd</sup> Street Overpass (E-3A) | \$19.8                                |
| Chenoweth Loop Underpass (E-8)               | \$20 to \$30                          |
| Hostetler Street Underpass (E-3D)            | \$14.1                                |
| Snipes Street Overpass (E-4C)                | \$32.2                                |

<sup>1</sup>Includes 40-percent contingency

The order of magnitude of the preliminary cost estimates shown in Table 6-6 is primarily related to the bridge and retaining wall construction costs. The crossing with the highest estimated cost, at Snipes Street, is greater than two times the cost of the Hostetler Street Extension. This cost differential reflects the length of the bridge structure needed to go over the UP Railroad and I-84 which was estimated to include two bridge structures totaling 220 feet. In comparison, the UP Railroad overcrossing structure at Hostetler Street is estimated at 130 feet.

A specific cost estimate was not prepared for the Chenoweth Loop Underpass, but an estimated cost range was developed based on a relative comparison with other crossing locations. The Chenoweth Loop Underpass is expected to be more expensive than concept E-3A, but less expensive than Concept E-4C. The following assumptions form the basis for this comparison:

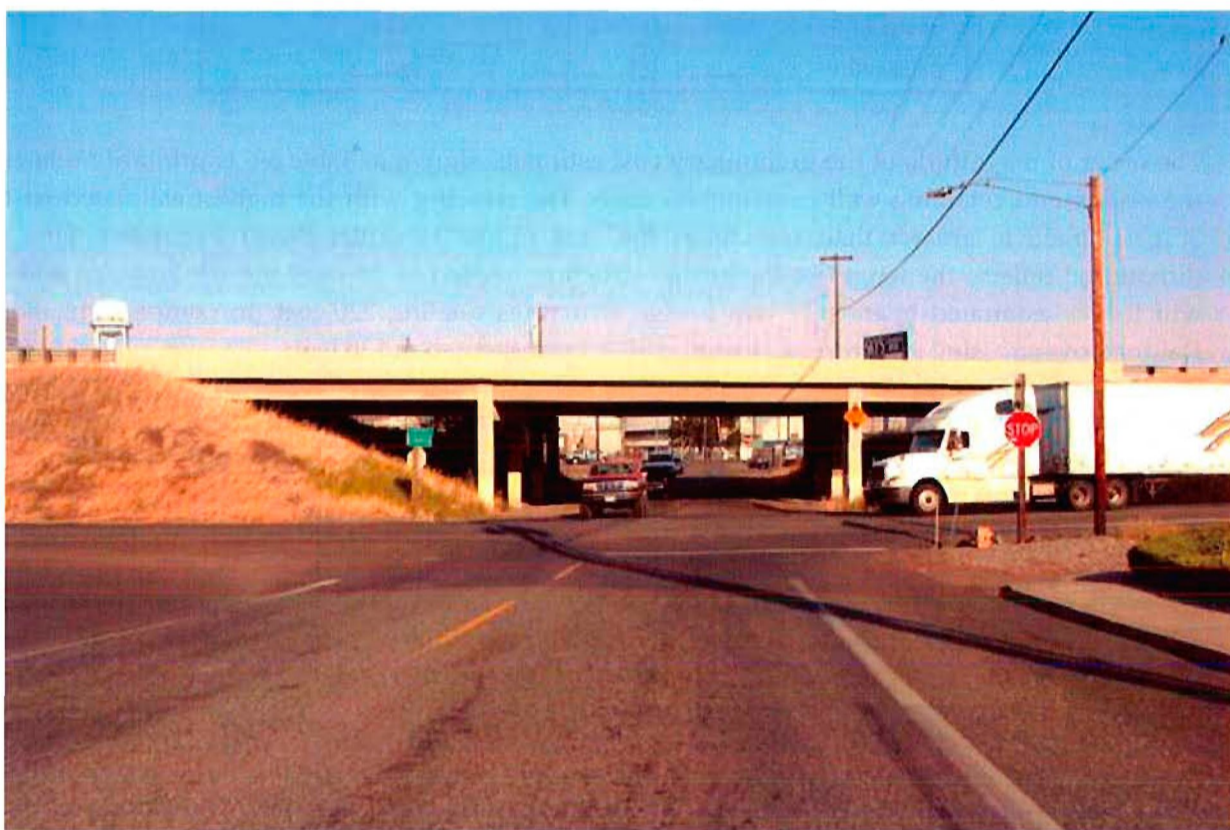
- In the vicinity of Chenoweth Loop the elevation of 6<sup>th</sup> Street is approximately six to eight feet below the elevation of I-84. Therefore, an undercrossing will have less impact to businesses and properties along 6<sup>th</sup> Street and Chenoweth Loop than an overpass.
- New bridge structures would be needed to support I-84 and the UPRR where Chenoweth Loop would pass under each.
- Retaining walls would be needed under both I-84 and the UPRR, and along 6<sup>th</sup> street and Chenoweth Loop to minimize impacts to adjacent properties.
- Given the grade separation between existing roads and I-84, less excavation (total earthwork) would be required at Chenoweth Loop than at Snipes Street.

### Qualitative Assessment of Operations

Each proposed east-west crossing location was evaluated with respect to the benefits or impacts each crossing has on traffic operations. Although operations were evaluated as part of the preliminary assessment, the impacts on operations were considered in more detail under the refinement evaluation.

Additional refinements to this operational analysis included limiting the Hostetler Street undercrossing to three lanes. As shown in Exhibit 6-1, the existing cross-section is two-lanes. A detailed assessment of the I-84 underpass at Hostetler Street showed that a three-lane cross-section is the maximum that can be accommodated under the existing structure, while providing reasonable clearance to the columns. The distance between the existing bridge piers is approximately 50 feet, providing approximately 6 to 7 feet on either side of the travel lanes between the fog line and the piers. Sidewalks and bike lanes would be provided behind the piers. Reconstruction of the underpass to accommodate additional lanes is a possibility but, in order to minimize cost, widening is not proposed at this time.

**Exhibit 6-1 Photo of Hostetler Street Undercrossing of I-84 (Looking East)**



*North 2<sup>nd</sup> Street Overpass (E-3A)*

As shown in Concept E-3A, north of Hostetler Street the proposed crossing of the UP Railroad would connect West 2nd Street to River Road and provide an east-west connection at Hostetler Street. This crossing location is expected to have three shortcomings and no unique benefits compared to Concept E-3D. The shortcomings include:

- Low potential for diversion of traffic from River Road
  - It is expected that a significant proportion of traffic on the River Road using the I-84 Chenoweth Interchange bridge would not divert to the new connection route. This is expected due to the orientation of the overcrossing and resulting location of a

local street connection to River Road within the northern portion of the Easterly Concept Area.

- High proportion of turning movements at West 2nd Street/Hostetler Street
  - Operationally, the majority of traffic that reroutes to use the new east-west connection would be making a southbound right-turn during weekday p.m. peak hour and an eastbound left-turn during the weekday a.m. peak hour at the West 2nd Street/Hostetler Street intersection. The larger proportion of turn movements generated with the new connection is expected to reduce the operational capacity of the West 2nd Street/Hostetler Street intersection compared to the connection to West 2nd Street at Hostetler in Concept E-3D.
- High potential for impacting traffic operations at Webber Street
  - The orientation of the UP Railroad crossing would direct through movements onto West 2nd Street in the southbound direction. Much of this traffic would be expected to continue straight on West 2nd Street and increase traffic volumes at the I-84 Webber Street interchange. Furthermore, the northerly location of the east-west connection under this scenario would not be as likely to attract east-west trips from the Easterly Concept Area that currently utilize the Webber Street interchange to access West 6th Street.

*Chenoweth Loop Underpass (E-8)*

Concept E-8 would create a new undercrossing of I-84 and the UPRR at Chenoweth Loop. In the vicinity of Chenoweth Loop the elevation of 6th Street is approximately six to eight feet below the elevation of I-84, which makes an underpass more feasible than an overpass. Two new bridge structures would be needed to support I-84 and the UPRR where Chenoweth Loop would pass under each. Retaining walls would be needed under both I-84 and UP Railroad, and along 6th street and Chenoweth Loop to minimize impacts to adjacent properties.

Given the location of Chenoweth Loop with respect to the Chenoweth and Webber Interchanges, the Chenoweth Loop Underpass is expected to provide a lesser diversion of traffic than the Hostetler Street and Snipes Street Crossing locations from the Chenoweth Interchange and a greater diversion than the North 2<sup>nd</sup> Street Overpass. Relative to other crossing locations the Chenoweth Loop location is expected to have less impact on the Webber Street interchange than the Hostetler Street Underpass given that drivers may utilize a new intersection on 2<sup>nd</sup> Street to connect to Webber Street and less will do so if the underpass of I-84 is further from Webber Street.

*Hostetler Street Underpass (E-3D)*

As shown in Concept E-3D (a hybrid of E-3B and E-3C), an extension of Hostetler Street could provide access to/from River Road from multiple directions. The concept includes an undercrossing of the UPRR that would be constructed to allow through traffic using the existing undercrossing of I-84 to access West 6th Street. The undercrossing of I-84 at West 6<sup>th</sup> Street includes two bridge structures carrying I-84 eastbound and westbound traffic and lowering of West 6<sup>th</sup> Street and Hostetler Street. Due to the cost and impacts to property access of, constructing bridges on I-84

and lowering West 6<sup>th</sup> Street, such a connection would be very difficult to replicate at another location under existing conditions.

This connection location is expected to provide several benefits and has no negative operational impacts relative to the other Hostetler Street crossing, Concept E-3A. The greatest benefit is moderate to high potential for diversion of future traffic from River Road and potentially the Webber Street interchange. The location of this crossing allows for a connection to River Road approximately midway between the existing I-84 interchanges at a location that is familiar to motorists.

#### *Snipes Street Overcrossing (E-4C)*

Concept E-4C includes a new overcrossing of I-84 and the UP railroad at Snipes Street. This new connection provides an alternative to a crossing of I-84 at Hostetler Street, but the benefits of this location are not expected to outweigh the additional costs of a new grade-separated crossing of I-84. (While there is an existing grade-separation of I-84 and Hostetler Street providing connectivity between West 2<sup>nd</sup> Street and West 6<sup>th</sup> Street, no such connection is currently provided at Snipes Street.)

It is expected that this crossing location will have low potential for diversion of traffic from River Road due to its southerly location. The amount of traffic that is expected to be diverted from the River Road overpass of I-84 to a new Snipes Street crossing is expected to be less than the Hostetler Street location and less than the location north of Hostetler, given that Snipes Street is closer to the Webber Street interchange.

#### **Property Impacts of Grade Changes**

Preliminary estimates of grade changes associated with each crossing were prepared by CH2MHill based on field observations of existing elevations. Given the required clearance for an under or over crossing of the UP Railroad and I-84, the distance required to tie back into existing roadway grade is expected to range from 200 to 1000 feet depending on the existing elevations. Until survey information is obtained, these represent a conservative estimate based on relative differences in elevation. The following sections outline the estimated impacts of grade changes to the roadways based on the proposed crossing form at each location.

#### *North 2<sup>nd</sup> Street Overpass (E-3A)*

As shown in Figure A, the North 2<sup>nd</sup> Street Overpass is expected to impact properties along 2<sup>nd</sup> Street from the proposed overpass location south to Hostetler Street (approximately 1000 feet). Retaining walls would be required to gain elevation prior to the overpass of the UP Railroad and may block access to four to five parcels on the west side of 2<sup>nd</sup> Street. This crossing location does not impact 6<sup>th</sup> Street, however capacity constraints at the 2<sup>nd</sup> Street/Hostetler Street intersection may reduce the potential operational benefit of this location.

Depending on approval of the proposed Wal-Mart in the southwest quadrant of the I-84 Chenoweth Interchange, the alignment shown may need to be modified to avoid impacts to the site plan.

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*Chenoweth Loop Underpass (E-8)*

Given the existing difference in elevation between I-84 and 6<sup>th</sup> Street at Chenoweth Loop, retaining walls are expected to be required up to 800 feet in each direction from the 6<sup>th</sup> Street/Chenoweth Loop intersection and the 2<sup>nd</sup> Street/Chenoweth Loop intersection. Both intersections would be below grade in order to go under I-84 and the UPRR. Within 800 feet of the 6<sup>th</sup> Street/Chenoweth Loop intersection access to commercial and residential properties would be impacted, including access to Home Depot which has primary access on 6<sup>th</sup> Street and secondary access on Chenoweth Loop. On 2<sup>nd</sup> Street three to four parcels would likely be impacted.

*Hostetler Street Underpass (E-3D)*

The Hostetler Street Underpass location is expected to result in the least number of properties impacted by grade changes and associated retaining walls given the existing underpass of I-84 at Hostetler Street. As shown in a photo taken in the southbound direction on 6<sup>th</sup> Street, the existing elevation of 6<sup>th</sup> Street at Hostetler Street is depressed in order to provide the existing undercrossing. Construction of an undercrossing of the UPRR on Hostetler Street would require reduction in elevation of 2<sup>nd</sup> Street, but minimizes impacts to properties on 6<sup>th</sup> Street.

*Snipes Street Overcrossing (E-4C)*

As shown in Figure D, the Snipes Street Overcrossing alternative includes two overpass structures that span I-84 and the UPRR east of 2<sup>nd</sup> Street. In order to provide an overpass of I-84 and the UPRR, while maintaining connections on 6<sup>th</sup> Street and 2<sup>nd</sup> Street, the elevation of each roadway will be increased to match grade with the overpass structure. Retaining walls would be utilized to obtain grade increases which are expected to impact access to residential and commercial properties on 2<sup>nd</sup> Street and 6<sup>th</sup> Street for up to 1,000 feet in each direction from the intersections. Given the density of existing development on 6<sup>th</sup> Street and 2<sup>nd</sup> Street (residential and commercial) within the vicinity of the Snipes Street, this crossing location has the greatest impact on existing property access relative to other crossing locations.

Comparison of East-West Crossing Locations

The crossing locations were ranked relative to one another with respect to preliminary cost estimates, property impacts, and expected operational benefits. Each crossing location was ranked on a scale of one to three. The highest ranking crossing location in each category (1 being the highest, 3 being the lowest) provided the lowest cost estimate, the least impacts to adjacent properties, and the greatest operational benefits. Operational benefits were measured by the potential to divert traffic from the Chenoweth Interchange and not increase traffic impacts to the Webber Street interchange. A summary of the relative ranking of east-west crossing locations is provided in Table 6-7.

**TABLE 6-7 RELATIVE COMPARISON MATRIX OF EAST-WEST CROSSING LOCATIONS**

| <b>Crossing Location</b>                  | <b>Cost Estimate Rank</b> | <b>Property Impact Rank (# of Properties Impacted)</b> | <b>Potential to Divert Traffic from Chenoweth Interchange Rank</b> | <b>Potential to Negatively Impact Webber Interchange Rank</b> | <b>Total Ranking Score</b> |
|---|---------------------------|--|--|---|----------------------------|
| North 2 <sup>nd</sup> Street Overpass (A) | 2                         | 2 (7)  | 3  | 4   | 11                         |
| Chenoweth Loop Underpass (B)              | 3                         | 3 (20)   | 2  | 2   | 10                         |
| Hostetler Street Underpass (C)            | 1                         | 1 (4)  | 1  | 3   | 6                          |
| Snipes Street Overcrossing (D)            | 4                         | 4 (26)   | 4  | 1   | 13                         |

As shown in Table 6-7, the Hostetler Street Underpass is expected to provide the relatively best location for a new east-west crossing when considering the cost, anticipated property impacts, and impacts to adjacent I-84 interchanges. In addition it should be noted that the Hostetler Street Underpass has access impact to four properties while the three remaining alternatives impact seven or more properties. For example, the Chenoweth Loop Road underpass would impact approximately 20 properties.

As shown in Table 6-7, the Hostetler Street crossing alternative scored the best in all four categories. **Therefore, the Hostetler Street crossing alternative, as shown in Concept E-3D, was incorporated into the preferred circulation and access design concept.**

### **Westerly Concept Refinement**

The following refined concept evaluation focuses on identifying the preferred design concept for the west concept area. Four westerly concepts have been included in refined evaluation: W-2, W-3, W-4, and W-5. The critical elements that distinguish westerly concepts from one another include feasibility of roundabout intersection control and the type of access control measures implemented. Both elements are discussed in the following sections.

#### **Roundabout vs. Signalized Operations**

Roundabouts and signal alternatives were considered in order to serve the forecast demand volumes at West 6th Street/River Road, West 6th Street/Chenoweth Loop, and West 6th Street/Hostetler Street. The operational analysis results are summarized below. For this analysis it was assumed that Concept N-1 and E-3D are the preferred concepts for their respective areas (i.e., there will not be a future I-84 overpass north of the Chenoweth Interchange and there will be an I-84 and UP railroad underpass at Hostetler Street).

All traffic volumes were developed based on a conservative estimate of future traffic demand generated by new developments. This was assumed to be achieved by a future volume scenario that includes development of up to 85 percent of full development as allowed under Land Use Scenario #2. This does not represent the maximum development that could occur, but represents a likely development scenario for the purpose of comparison between traffic control types.



West 6th Street/River Road

At the West 6th Street/River Road intersection, Concepts W-2 and W-3 propose a roundabout, Concept W-4 proposes a "T" intersection, and Concept W-5 proposes a signalized intersection.

Given the demand volumes anticipated on West 6th Street the analysis assumed a 5-lane section on West 6th Street south of River Road through Hostetler Street. This cross-section includes two southbound lanes, one center turn lane, and two northbound through lanes. During the weekday p.m. peak hour, the southbound traffic warrants two through lanes. In order to account for weekday a.m. peak hour directional traffic, an equal cross-section was assumed in the northbound direction.

Table 6-8 provides a summary of the roundabout and signal operations at the West 6<sup>th</sup> Street/River Road intersection.

**TABLE 6-8 ROUNDABOUT AND SIGNAL OPERATIONS AT WEST 6TH STREET/RIVER ROAD**

| Geometric Description             | Signalized |           |           | Roundabout |           |           |
|-----------------------------------|------------|-----------|-----------|------------|-----------|-----------|
|                                   | East Leg   | North Leg | South Leg | East Leg   | North Leg | South Leg |
| Entry Lanes                       | 2          | 1         | 2         | 2          | 1         | 2         |
| Right Turn By-Pass?               | N/A        |           |           | NO         | NO        | NO        |
| Circulating Lanes                 | N/A        |           |           | 1          | 2         | 1         |
| Exit Lanes                        | N/A        |           |           | 1          | 1         | 2         |
| <b>Performance Measure</b>        |            |           |           |            |           |           |
| Critical Lane Volume / Capacity   | 0.58       |           |           | 0.50       | 0.20      | 0.28      |
| Critical Lane Average Delay (sec) | 13.9       |           |           | 7.0        | 7.4       | 4.7       |
| 95% Queue Length (ft)             | 200        | 100       | 150       | 75         | 25        | 50        |

As shown in Table 6-8 the operational benefits of a roundabout include reduced delay and queuing. Figure 6-29 conceptually shows the right-of-way impacts expected with a roundabout. As shown, a two-lane roundabout could be constructed at this location without significant impacts to adjacent properties.



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PRELIMINARY ROUNDABOUT DESIGN AT 6TH STREET/RIVER ROAD  
THE DALLES, OREGON

FIGURE  
6-29

West 6th Street/Chenoweth Loop

Concept W-3 proposes a roundabout at the West 6th Street/Chenoweth Loop intersection, while Concepts W-2, W-4, and W-5 propose a signalized intersection. Table 6-9 provides a summary of the signal and roundabout operations at West 6th Street/River Road

**TABLE 6-9 ROUNDABOUT AND SIGNAL OPERATIONS AT 6TH STREET/CHENOWETH LOOP**

| Geometric Description             | Signalized |          |           | Roundabout |          |           |
|-----------------------------------|------------|----------|-----------|------------|----------|-----------|
|                                   | North Leg  | West Leg | South Leg | North Leg  | West Leg | South Leg |
| Entry Lanes                       | 2          | 1        | 2         | 2          | 1        | 2         |
| Right Turn By-Pass?               | N/A        |          |           | NO         | NO       | NO        |
| Circulating Lanes                 | N/A        |          |           | 1          | 2        | 1         |
| Exit Lanes                        | N/A        |          |           | 2          | 1        | 2         |
| <b>Performance Measure</b>        |            |          |           |            |          |           |
| Critical Lane Volume / Capacity   | 0.44       |          |           | 0.52       | 0.37     | 0.35      |
| Critical Lane Average Delay (sec) | 9.4        |          |           | 8.4        | 8.4      | 5.7       |
| 95% Queue Length (ft)             | 250        | 200      | 150       | 50         | 25       | 50        |

As shown in Table 6-9, a roundabout is forecast to operate with less delay and queuing than the signal. However, both a roundabout and signal provide adequate capacity and minimal delay.

Figure 6-30 shows a conceptual design of a two-lane roundabout and illustrates the right-of-way impacts of a roundabout at the West 6th Street/Chenoweth Loop intersection. The sketch shows the additional right-of-way required for sidewalks and utilities as a dashed line. As shown in Figure 6-30, a two-lane roundabout could be constructed at this location, but would impact adjacent property, including recently constructed businesses in front of the Home Depot in the southwest quadrant of the intersection.



PRELIMINARY ROUNDABOUT DESIGN AT 6TH STREET/CHENOWETH LOOP  
THE DALLES, OREGON

FIGURE  
6-30

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West 6th Street/Hostetler Street

Table 6-10 provides a summary of the signal and roundabout operations at West 6th Street/Hostetler Street

**TABLE 6-10 ROUNDABOUT AND SIGNAL OPERATIONS AT 6TH STREET/HOSTETLER STREET**

| Geometric Description            | Signalized |       |      |       | Roundabout |       |      |       |
|----------------------------------|------------|-------|------|-------|------------|-------|------|-------|
|                                  | East       | North | West | South | East       | North | West | South |
| Approach                         |            |       |      |       |            |       |      |       |
| # Entry Lanes                    | 2          | 4     | 3    | 4     | 2          | 2     | 1    | 2     |
| Right Turn By-Pass               | N/A        |       |      |       | NO         | NO    | NO   | NO    |
| Circulating Lanes                | N/A        |       |      |       | 2          | 2     | 2    | 1     |
| Exit Lanes                       | N/A        |       |      |       | 1          | 2     | 1    | 2     |
| <b>Performance Measures</b>      |            |       |      |       |            |       |      |       |
| Critical Lane Volume/Capacity    | 0.91       |       |      |       | 0.58       | 0.73  | 0.59 | 0.44  |
| Critical Lane Average Delay, sec | 35.2       |       |      |       | 12.3       | 19.6  | 18.4 | 7.2   |
| 95% Queue Length, ft             | 250        | 275   | 125  | 150   | 100        | 175   | 100  | 75    |

As shown in Table 6-10, a roundabout is forecast to operate with less delay and queues than the signal. However, a roundabout or a signal provides adequate capacity and minimal delay.

Figure 6-31 shows a conceptual design of a two-lane roundabout and illustrates the right-of-way impacts of a roundabout at the West 6th Street/Hostetler Street intersection. As shown in Figure 7-7, a two-lane roundabout could be constructed at this location, but would significantly impact adjacent property, including businesses in the southwest quadrant and the northwest quadrant of the intersection.

Access Control

In order to provide access control and improve traffic flow along West 6th Street, a median is proposed in Concepts W-5 and W-3. The challenge associated with a continuous center lane median is the ability to provide access to all sites through right-in/right-out movements, which requires u-turns at the intersections. If two roundabouts are provided on West 6th Street at River Road and Chenoweth Loop, u-turns by both passenger cars and large vehicles can be made relatively easily. However, if signals are installed along with a median, as proposed in Concept W-5, u-turns by large vehicles cannot be made in the southbound direction at Chenoweth Loop or in the northbound direction at River Road.



HOSTETLER STREET

SCALE  
0 100 200



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PRELIMINARY ROUNDABOUT DESIGN AT 6TH STREET/HOSTETLER STREET  
THE DALLES, OREGON

FIGURE  
6-31

#### Westerly Concept Comparison

The operational analysis showed that roundabouts will operationally perform better than signals along the West 6th Street corridor. However, due to right-of-way impacts, a roundabout is not recommended at the West 6th Street/Hostetler Street intersection.

Future traffic volume forecasts indicate that 6<sup>th</sup> Street will need to be a 5-lane facility in the future. For safety reasons, a center median is proposed on West 6<sup>th</sup> Street from River Road to Chenoweth Loop to prevent left-out turns at public street intersections and all left-turn movements at driveways, as shown in Concepts W-3 and W-5. Left-in movements would be provided at Division Street and Irvine Street. At the north and south termini of the median either roundabouts or signals are feasible, although it is anticipated that shorter queuing at the roundabout intersections as compared to the signalized intersection treatments will allow for more left-turn access to be provided than if signalized treatments are used.

The roundabout intersections are anticipated to provide greater access to properties impacted by a median because they would provide the ability for vehicles to make u-turns at either end of the median section. U-turns are unlikely to be feasible at a signalized intersection treatment at 6<sup>th</sup> Street/River Road and 6<sup>th</sup> Street/Chenoweth Loop Road because these are three-leg t-intersections without the northbound left and southbound left-turn movements, respectively, that would typically accommodate a u-turn. Furthermore, if a u-turn lane and signal phase were added to the intersections, the geometry would make u-turns difficult for any vehicle larger than a passenger car.

Although access management measures shown in Concepts W-2 and W-4 are expected to improve traffic flow within the vicinity of the interchange, they do not provide as much access control as a median. Additionally, Concepts W-2 and W-4 impose full driveway closures, which may have a significant impact on the viability of local businesses.

In order to effectively serve businesses while maintaining access control through a median, left-in turns would be provided at Division Street and Irvine Street and u-turns would be provided at the Chenoweth Loop and River Road intersections. A fourth signal phase (a u-turn specific phase) would need to be added to the existing 3-phase signalized intersections at River Road and Chenoweth Loop, if a roundabout is not constructed. This would reduce the projected traffic capacity at these intersections and may increase the number of needed lanes at the intersection or reduce the amount of development that could be accommodated by the proposed improvements. **Therefore, a continuous median on West 6th Street from River Road to Chenoweth Loop with openings for left-turns off of West 6th Street at Division Street and Irvine Street, as shown in Concept W-2, is included in the preferred local circulation and access design concept. Roundabouts are preferred at River Road and Chenoweth Loop and a signal is preferred at the Hostetler Street intersection on West 6th Street.**

#### **PREFERRED ALTERNATIVE REFINED CAPACITY ANALYSIS**

The refined concept evaluation resulted in selection of a preferred concept from the easterly, westerly, and northerly local circulation and design concepts. Concepts N-1, E-3D, and W-2 were selected and together form the preferred alternative.

Refined analysis of the preferred alternative was conducted to improve upon the accuracy of the capacity estimates provided by the preliminary evaluation of alternatives. The refined analysis focused on identifying the maximum development that could occur in the study area assuming implementation of the improvements identified in the preferred alternative. Additionally, the analysis helped to identify the timeline in which improvements will need to be made as development occurs over the next 20 or more years.

### **Refined Analysis Assumptions**

All refined analysis was conducted using Synchro software, in accordance with HCM parameters and ODOT APM guidance. SimTraffic simulations were also observed in order to evaluate the queue interactions between closely-spaced intersections. The analysis focused on critical intersections including: I-84 Eastbound Ramp Terminal/River Road, I-84 Westbound Ramp Terminal/River Road, West 6th Street/River Road, and West 6th Street/Hostetler Street. At the ramp terminal intersections forecast queues were maintained within available storage lengths and volume-to-capacity ratios were maintained at or below 0.70. All other study intersections are forecast to operate at or below mobility standards.

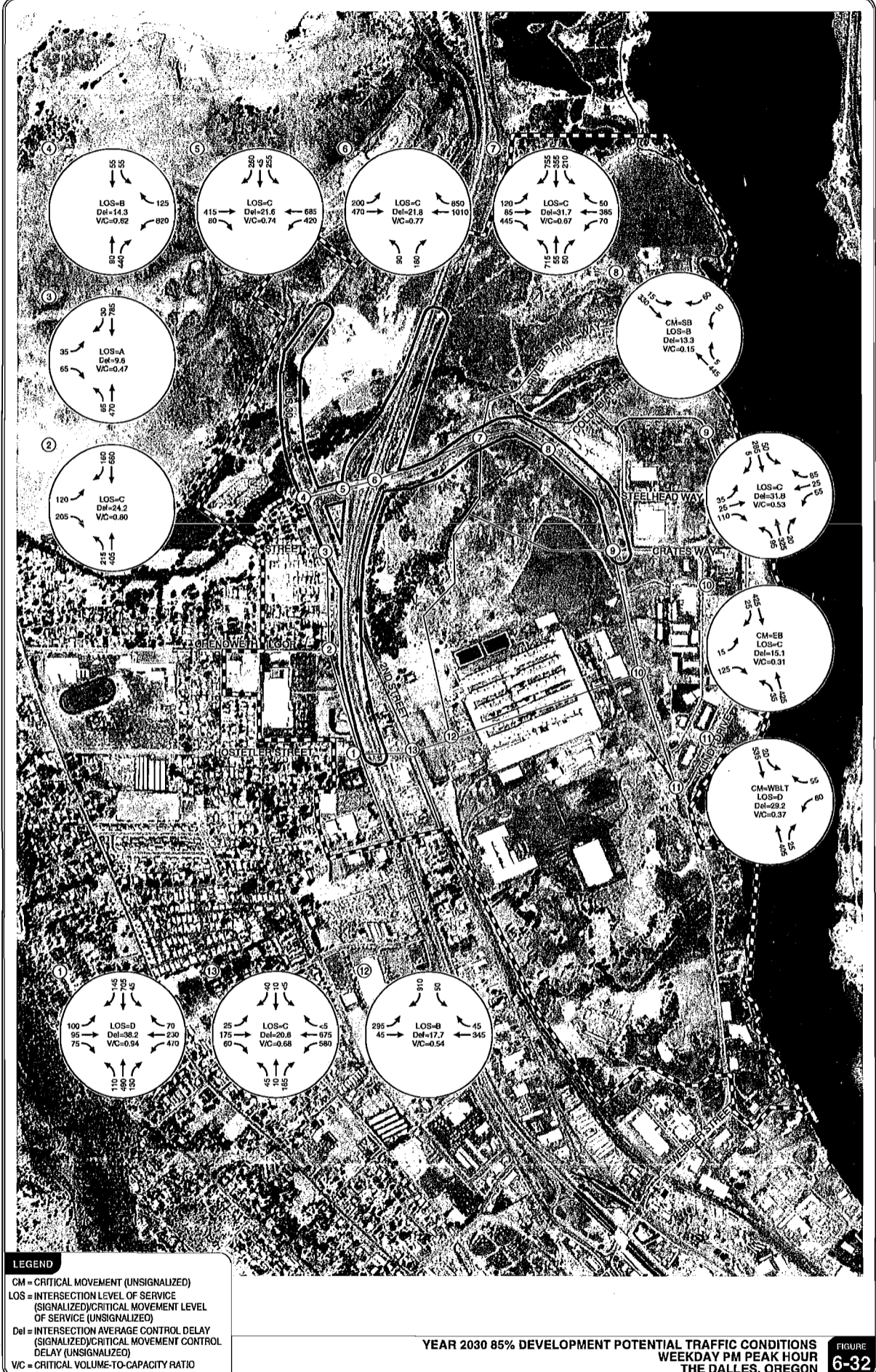
Development potential was measured in terms of the percent of full development that was forecast to occur in the study area under Land Use Scenario #2 (outlined in Section 5). An 85-percent development scenario (estimated to be a FAR of approximately 0.21 for commercial development and 0.34 for industrial development) assumes that the maximum amount of development that is allowed in the study area.

Analysis of development thresholds was conducted assuming a network of signalized intersections and no roundabouts; although roundabouts are identified as preferred at some study intersections (see Figure 7-2). Development capacity is not limited by intersection locations where roundabouts are proposed. Roundabouts were found to operate better than signals (i.e., reduce delay and queuing) at all locations where a roundabout was identified as preferred, therefore the analysis represents a conservative approach.

### **Maximum Development of Preferred Alternative**

The refined capacity analysis found that the preferred alternative was able to accommodate up to 85-percent of full development under Land Use Scenario #2, while still operating below capacity and meeting ODOT mobility standards at the ramp terminals. Additional development beyond 85-percent of build-out is forecast to increase the queuing on River Road at the I-84 Ramp Terminal intersections and at the West 6th Street/Hostetler Street intersection beyond the available storage length. Figure 6-32 summarizes the forecast traffic volumes and operations based on up to 85-percent of full development.



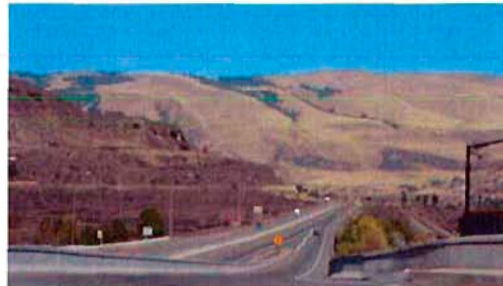


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**Section 7**  
Interchange Area  
Management Plan

## Interchange Area Management Plan

The IAMP provides a local circulation and access plan which includes a Transportation Improvement Plan (described in Figure 7-1 and Table 7-1), street standards, and improvement phasing for implementing the plan in the short-, mid-, and long-term horizon. As described in Section 6, the long-term improvement plan can only accommodate up to 75 percent of the maximum density development; therefore, the IAMP also includes land use management strategies to ensure that the maximum development threshold for the long-term improvement plan is not exceeded without the IAMP and funding mechanisms being updated. The IAMP also includes an Access Management Plan that:



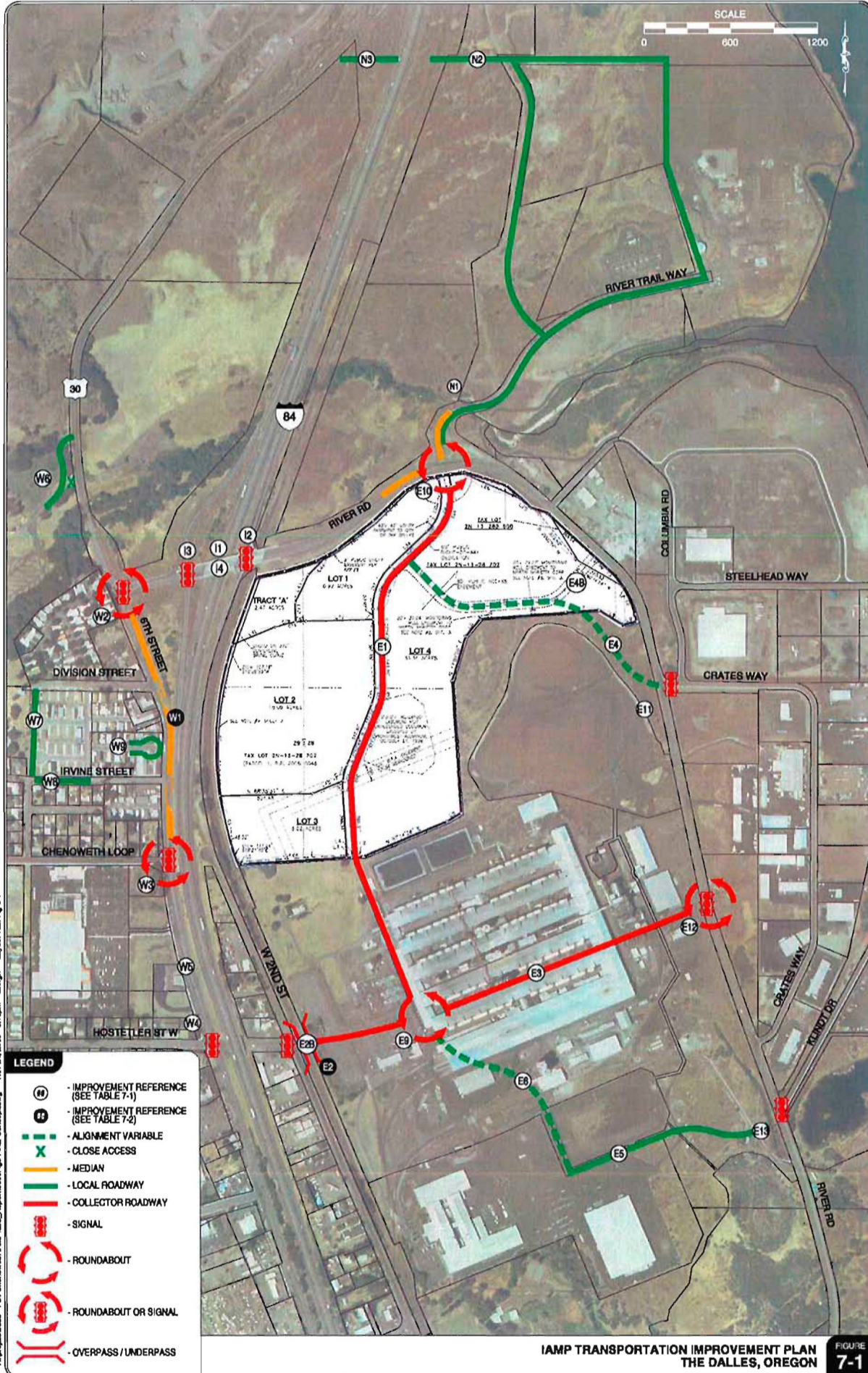
1. identifies future access locations for undeveloped properties in the IMSA;
2. identifies goals and policies that will guide evaluation of existing access for properties in the IMSA that might redevelop; and
3. documents the justification for the necessary deviations to ODOT's access management standards.

Through adoption by the City of The Dalles, Wasco County, and ODOT, future development located within the IMSA will be required to make circulation and access improvements, right-of-way dedications, and pay STSDC fees, as identified in this plan. Implementation of the IAMP is expected to preserve the functional integrity of the interchange over time and ensure viable access to existing and future land uses. Finally, the action items contained within the implementation plan (Section 8) will ensure proper coordination between the various stakeholders and that the IAMP remains a dynamic long-term planning tool.

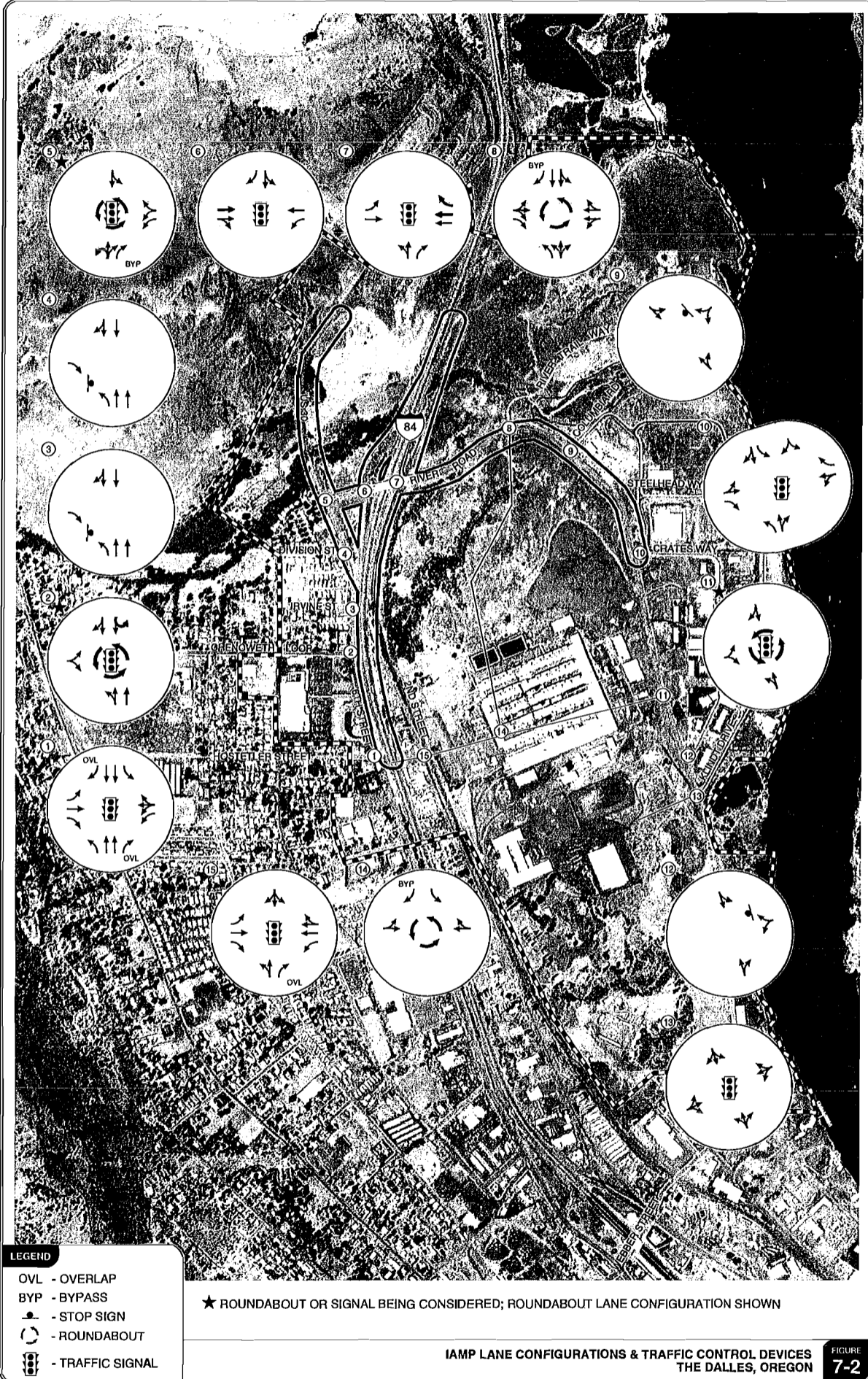
### TRANSPORTATION IMPROVEMENT PLAN OVERVIEW

A comprehensive transportation improvement plan including a local circulation and access plan within the IMSA was developed based on the alternative screening and evaluations outlined in Section 6. Figure 7-1 illustrates the transportation improvement plan including proposed alignments of new roadways and intersections, and locations where existing intersection control will be modified. Each transportation improvement identified in Figure 7-1 is described in Table 7-1 or Table 7-2. Figure 7-2 illustrates the lane configurations and traffic control devices associated with the improvement plan.

As shown in Figure 7-2, roundabouts or signals are identified for potential intersection control at the intersections of River Road/Hostetler Street, West 6<sup>th</sup> Street/Chenoweth Loop, and West 6<sup>th</sup> Street/River Road. Roundabouts are recommended on River Road at River Trail Way and on Hostetler Street at the proposed intersection with River Trail Way in order to provide consistency in the network and to reduce the number of approach lanes necessary when compared to signal alternatives.



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**TABLE 7-1 IAMP TRANSPORTATION IMPROVEMENTS**

| Reference | Improvement Type                                      | Description   |
|-----------|---|---|
| E1        | New Collector Roadway                                 | Extend River Trail Way from River Road to the Hostetler Street Extension  |
| E2B       | UP Railroad At-Grade Crossing and Signal (Short-term) | Provides Hostetler Street connection to River Road and intersection control to accommodate traffic at Hostetler Street and 2 <sup>nd</sup> Street (requires approval by ODOT Rail and UPRR) |
| E3        | New Collector Roadway                                 | Extends Hostetler Street from West 2nd Street to River Road   |
| E4        | New Local Roadway (Long-term)                         | Provides local business access  |
| E4B       | New Local Roadway (Short-term)                        | Provides temporary local business access until environmental concerns can be mitigated and project E4 can be constructed.   |
| E5        | New Local Roadway                                     | Provides local business access  |
| E6        | New Local Roadway                                     | Provides local business access. Alignment is variable depending on parcel access and circulation.   |
| E9        | Intersection Improvement (Roundabout)                 | Intersection control to accommodate future traffic at Hostetler Street/River Trail Way Extension  |
| E10       | Intersection Improvement (Roundabout)                 | Intersection control to accommodate future traffic at reconstructed River Trail Way/River Road  |
| E11       | Intersection Improvement (Signals)                    | Intersection control to accommodate future traffic at River Road/Crates Way (North)/Columbia Road   |
| E12       | Intersection Improvement (Roundabout or Signal)       | Intersection control to accommodate traffic at future connection of River Road and Hostetler Street   |
| E13       | Intersection Improvement (Signal)                     | Intersection control to accommodate future traffic at River Road/Klindt Drive   |
| I1        | Restripe Bridge Lanes (Short-term)                    | Restripe lanes on bridge to accommodate four lanes (two in each direction, including side-by-side left-turn lanes)  |
| I2        | Signalize Intersection                                | Accommodate weekday a.m. and p.m. peak hour travel demand at Westbound I-84 Ramp Terminal   |
| I3        | Signalize Intersection                                | Accommodate weekday a.m. and p.m. peak hour travel demand at Eastbound I-84 Ramp Terminal   |
| I4        | Widen Bridge to 6 Lanes (Long-term)                   | Accommodate weekday peak hour travel demand beyond the 85-percent development threshold (NOT PART OF 20-YEAR PLAN)  |
| N1        | New Local Roadways                                    | Provide a network of local streets  |
| N2        | ROW Preservation                                      | Preserve ROW for a potential future overpass of I-84  |
| N3        | ROW Preservation                                      | Preserve ROW for a potential future overpass of I-84  |
| W2        | Intersection Improvement (Roundabout or Signal)       | Intersection control at West 6th Street (US 30)/River Road to accommodate future traffic and provide for u-turns created by the median  |
| W3        | Intersection Improvement (Roundabout or Signal)       | Intersection control at West 6th Street/Chenoweth Loop to accommodate future traffic and provide for u-turns created by the median  |
| W4        | Intersection Improvement (Signal)                     | Intersection control at West 6th Street/Hostetler Street to accommodate future traffic  |
| W5        | Widen West 6th Street to 5 Lanes                      | Widen West 6th Street from River Road to south of Hostetler Street to accommodate weekday a.m. and p.m. peak hour travel demand   |
| W6        | Relocate Driveway/ New Local Roadway                  | Relocate driveway further from interchange and River Road/West 6th Street intersection to meet access spacing standards   |
| W7        | New Local Roadway                                     | Provides local connection between Division Street and Irvine Street   |

| Reference | Improvement Type  | Description   |
|-----------|-------------------|---|
| W8        | New Local Roadway | Provides paved local connection between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street |
| W9        | Cul-de-sac        | Supports consolidation of accesses on West 6 <sup>th</sup> Street.                        |

The proposed intersection configurations and roadway cross-sections in this IAMP were developed to serve a maximum amount of new development without requiring a greater cross-section on River Road over I-84 (at the Chenoweth Interchange) or on Hostetler Street under I-84 (at the preferred east-west crossing).

Although still a part of the IAMP, several projects were identified for special consideration at the time that the first IAMP review is triggered. These projects are listed in Table 7-2 and noted in Figure 7-1. Each of these projects are long-term needs and although each project provides benefits to the study area as a whole, they have the potential to negatively impact adjacent property and business owners and therefore, should be reconsidered based on updated forecasts during the first IAMP review.

**TABLE 7-2 IAMP TRANSPORTATION IMPROVEMENT PROJECTS TO BE REVIEWED AT FIRST IAMP REVIEW TRIGGER**

| Reference | Improvement Type                                  | Description   |
|-----------|---|---|
| E2        | UP Railroad Under-Crossing and Signal (Long-term) | Provides grade-separated Hostetler Street connection to River Road under the UPRR and intersection control to accommodate future traffic at Hostetler Street and 2 <sup>nd</sup> Street |
| W1        | Install median                                    | Install median on 6 <sup>th</sup> Street from River Road to Hostetler Street that limits all turning movements, except northbound left turns to Division Street and Irvine Street.      |

As shown in Table 7-2, two projects were selected to be reconsidered for implementation within the IAMP study area. These projects may be implemented if operational or safety conditions warrant further measures.

The following sections provide details on the major improvements identified in the Transportation Improvement Plan.

### **Hostetler Crossing Improvements**

Short-term and long-term improvements have been evaluated for providing a crossing of the UPRR at Hostetler Street. The short-term improvement includes an at-grade crossing of the UPRR and the long-term improvement includes a grade-separated crossing. Each improvement is outlined below. The Hostetler Crossing (either grade-separated or at-grade) is expected to be needed in Phase 3, but ultimately will depend on concurrency of local development within the IMSA.

#### **At-Grade Crossing Alternative**

The existing UPRR mainline track maintains a private at-grade crossing at the 2nd Street/Hostetler Street intersection that serves the now vacant 67-acre Northwest Aluminum property. Technical Advisory Committee (TAC) and Steering Committee (SC) members provided direction at the

project outset that any public crossing of the UPRR tracks would require grade separation due to the level of train traffic, past practices of the UPRR and ODOT Rail, and federal and state safety initiatives to reduce the number of at-grade crossings. As a result, the four east-west crossing alternatives developed during the IAMP process, and described in Section 6, include grade-separated alternatives only.

In response to concerns expressed by adjacent property owners and the City Council regarding the impacts of the grade-separated crossing at Hostetler Street, and initial discussions between City staff and UPRR staff, the TAC and SC directed the consultant team to conduct an evaluation to assess the feasibility of developing an at-grade crossing in lieu of a grade-separated crossing at Hostetler Street. As documented in the Volume 2 Technical Appendix K, the analysis found that an at-grade crossing could become a viable short-term alternative if written approval can be obtained from ODOT Rail and the UPRR.

If approval is given by ODOT Rail and UPRR further evaluation will be conducted. The benefits to maintaining an at-grade crossing at the Hostetler Street Crossing location are to be weighted against some equivalent disadvantages. The greatest advantage of an at-grade crossing is the reduction in cost and impacts to adjacent property access when compared to constructing an underpass. However, these benefits must be weighted against potential safety and operational disadvantages.

#### Grade-Separated Crossing Alternative

Figure 7-3 provides a conceptual design layout of the long-term solution for the Hostetler Undercrossing (Projects E2, E3, and W4). The Hostetler Undercrossing conceptual design shown in Figure 7-3 was developed to accommodate traffic volumes assuming that the existing I-84 bridge structure will not be widened to six (6) lanes within the planning horizon.

The future Hostetler Street will include a four-lane cross-section proposed east of the bridge structure. If a design exception is not approved to allow a four-lane cross-section under the I-84 bridge at the intersection of West 6<sup>th</sup> Street and Hostetler Street, the cross-section under I-84 may be limited to three lanes, two westbound and one eastbound. A multi-use path for bicycles and pedestrians will be provided under the structure on both sides outside of the I-84 overpass piers. Refined cost estimates for improvements shown in Figure 7-3 were prepared and are provided in *Appendix "F" of the I-84 Chenoweth IAMP Technical Appendix*.

#### **I-84 Chenoweth Interchange Improvements**

Figure 7-4 shows a maximum six-lane cross-section at the I-84 Chenoweth Interchange (project I4). In order to provide adequate queue storage, this cross-section will include side-by-side left-turn lanes. To minimize queuing between I-84 ramp terminal intersections, coordinated signal timing will be implemented. Retaining walls are proposed to allow widening on the I-84 westbound ramps. Refined cost estimates for improvements shown in Figure 7-4 were prepared and are provided in *Appendix "F" of the I-84 Chenoweth IAMP Technical Appendix*. Construction of this project depends on local development within the IMSA. This project is not included in the 20-year plan, but

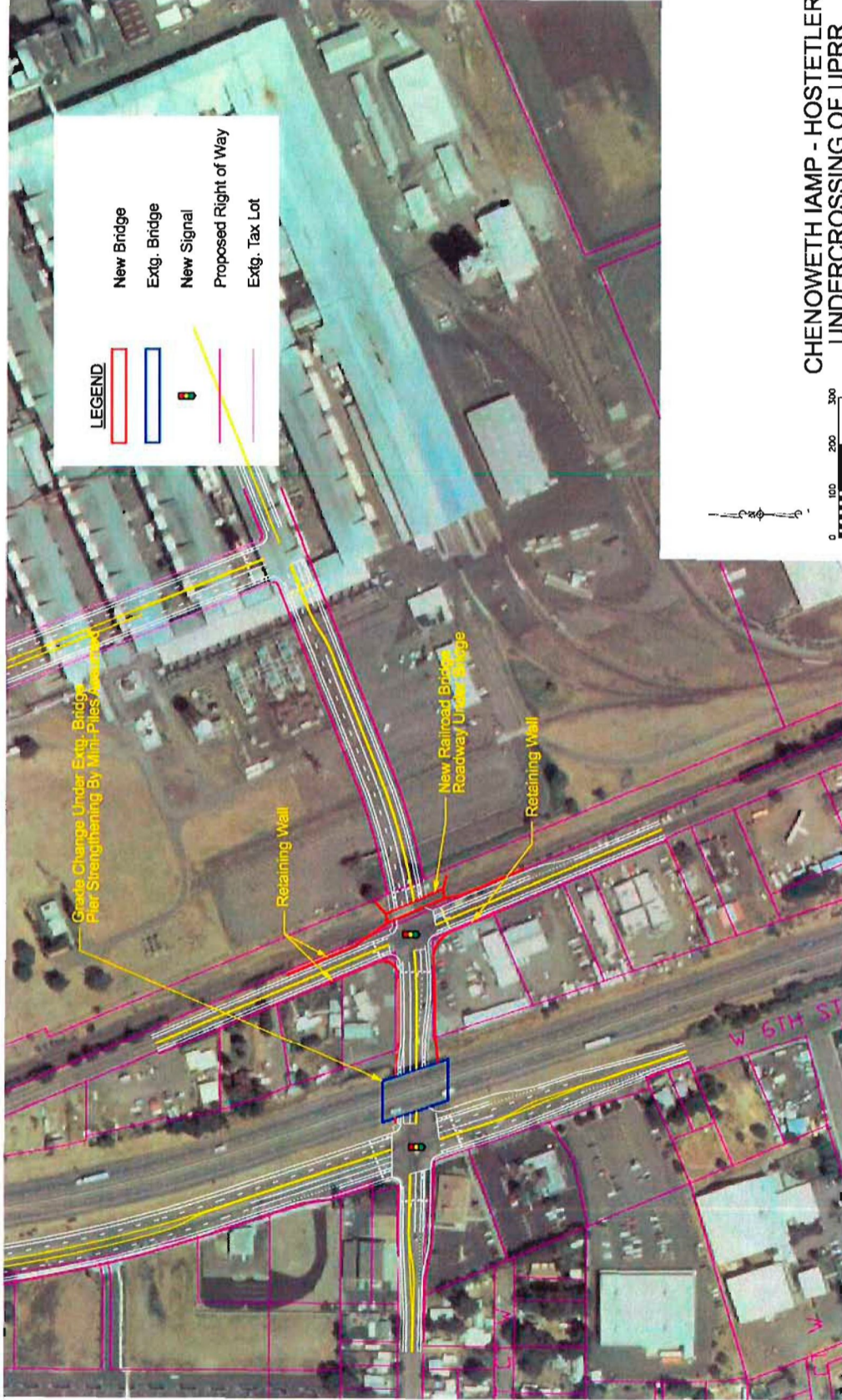


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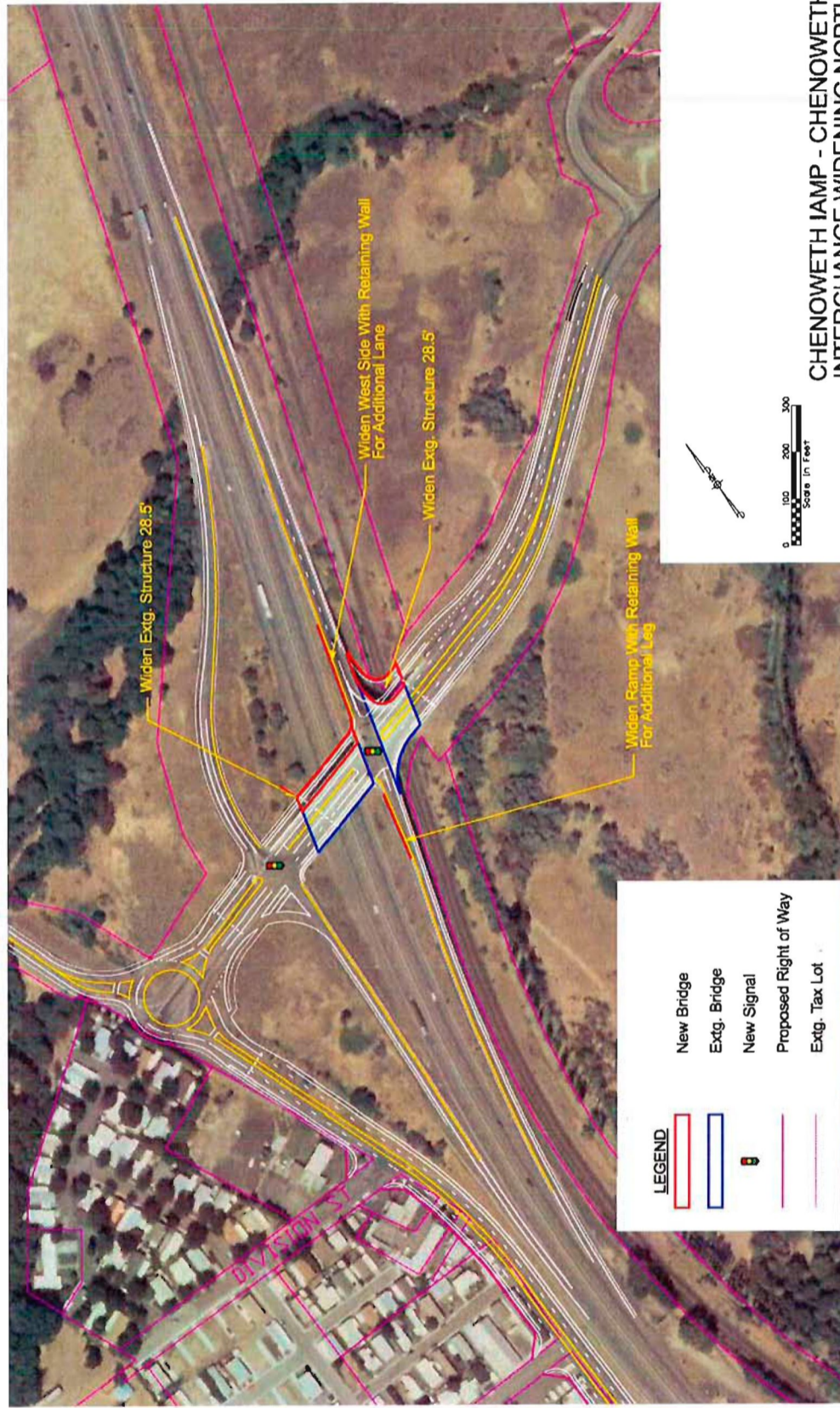
is listed as a potential project that could be completed if additional capacity is required beyond the planning horizon.

**West 6<sup>th</sup> Street Improvements**

Projects identified on West 6<sup>th</sup> Street include a median between Chenoweth Loop and River Road in conjunction with roadway widening from 3-lanes to 5-lanes. As development occurs along West 6<sup>th</sup> Street and traffic growth occurs over the next 20 years the City will begin to implement access management measures identified in the Access Management Plan and the Transportation Improvement Plan. Such improvements may vary from what is currently shown in the plans, depending on evaluations conducted by the City at the time of need. Likely outcomes include: acquire ROW through acquisition/dedication, implement crossover easements, implement access movement restrictions at driveways (to right-in, right-out or right-in/right-out/left-in).



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**CHENOWETH IAMP - CHENOWETH INTERCHANGE WIDENING NORTH**

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**Standard ROW Dedication and Roundabout Needs**

When development occurs adjacent to or along the length of a project identified in the Transportation Improvement Plan, right-of-way (ROW) dedication will be required. Standard ROW dedications are outlined in Table 7-3 and are consistent with Street Design Standards outlined in the City of The Dalles Transportation System Plan (TSP).

**TABLE 7-3 STANDARD ROW DEDICATIONS**

| Street/Intersection                                    | Dimension (feet) | Measure   | Notes   |
|--|------------------|---|---|
| West 6th Street  | 40               | from 5-lane section CL to east  | No pedestrian facilities provided on east side due to ROW limitations   |
|  | 50               | from 5-lane section CL to west  |   |
| River Road   | 16               | from outside edge of travelled way between River Trail Way and I-84 Ramp Terminal |   |
|  | 35               | from 3-lane section CL  | Assumes 50-foot pavement width and 10-foot sidewalk/landscape strip   |
| Hostetler Street Extension                             | 45               | from CL west of River Trail Way   |   |
|  | 35               | from CL east of River Trail Way   | Assumes 50-foot pavement width and 10-foot sidewalk/landscape strip   |
| River Trail Way  | 35               | from 3-lane section CL  | Assumes 50-foot pavement width and 10-foot sidewalk/landscape strip   |
|  | 50               | from 5-lane section CL  | Assumes 74-foot pavement width and 10- to 15-foot sidewalk/landscape strip  |
| 6 <sup>th</sup> Street/Chenoweth Loop                  | 25               | from edge of travel way shown in preliminary design                               | See Figure 6-30   |
| River Road/6 <sup>th</sup> Street                      | 25               | from edge of travel way shown in preliminary design                               | See Figure 6-29   |
| River Road/River Trail Way                             | 25               | from edge of travel way shown in preliminary design                               | See preliminary roundabout design in Appendix "B"   |
| Hostetler Street/ River Trail Way Extension Roundabout | 95               | radius from point of intersection of roadway CL                                   | 25-foot buffer from outside edge of travel way accommodates landscape median strip, multi-use path, and utilities |
| River Road/Klindt Drive Roundabout                     | 95               | radius from point of intersection of roadway CL                                   | 25-foot buffer from outside edge of travel way accommodates landscape median strip, multi-use path, and utilities |

CL – Centerline of roadway alignment



### **Phasing Plan**

Four roadway improvement phases (near-term, mid-term, long-term, and vision beyond planning horizon) were developed in order to estimate the amount of new development that could occur within the IMSA before implementation of various components of the local access and circulation plan are required. These phases were developed as planning milestones, since improvements will likely be needed incrementally as development occurs. The phases are intended to show the increments of development that can occur before major improvements (e.g., new east-west crossing, Chenoweth Interchange Bridge widening, intersection control treatments, etc.) are needed.

The major components of each improvement phase are summarized below. Figure 7-5 through Figure 7-8 illustrates the lane configurations at the study intersections under each of the following improvement phases:

#### *Phase 1 – Near-term Improvements (Figure 7-5)*

- Traffic signal installed at West 6th Street/Hostetler Street intersection (Project #W4)
- Restriping of River Road overpass of I-84 to provide 4-lane cross-section (Project #I1)

#### *Phase 2 – Mid-term Improvements and Actions (Figure 7-6)*

- Roundabout constructed at River Road/River Trail Way (Project #E10)
- Traffic signal installed at River Road/I-84 Westbound Ramp Terminal, westbound and off-ramp approach widening (Project #I2)
- Traffic signal installed at River Road/I-84 Eastbound Ramp Terminal and eastbound approach widening (Project #I3)
- Roundabout or signal constructed at River Road/West 6th Street (US 30) (Project #W2)
- Roundabout or signal installed at West 6th Street/Chenoweth Loop (Project #W3)
- At the first triggered IAMP review, reevaluate improvement projects shown in Table 7-2 (W-1: 6<sup>th</sup> Street Median and E-2: Grade-Separated Crossing of the UP Railroad at Hostetler) based on updated forecasts.
- During the future development of the Webber Street IAMP, reevaluate the need for 6<sup>th</sup> Street widening (Project W-5).

#### *Phase 3 – Long-term Improvements (Figure 7-7)*

- Construct new east-west connection at Hostetler Street, either as an at-grade crossing (pending approval by ODOT Rail and UPRR) or a railroad undercrossing of Hostetler Street (Projects #E2, E2B, E3)
- Construct new collector roadway that extends River Trail Way from River Road to the Hostetler Street Extension (Project #E1)
- Provide dual westbound left-turns at River Road/West 6th Street (US 30) roundabout or signal (Project #W2)

- Construct raised median and provide 5-lane section on West 6th Street from River Road to Chenoweth Loop (Project #W1)
- Provide 5-lane section on West 6th Street from Chenoweth Loop south through the Hostetler Street intersection (Project # W5)
- Provide dual westbound left-turns at West 6th Street/Hostetler Street intersection (Project #W4)
- Traffic signal installed at 2<sup>nd</sup> Street/Hostetler Street (Project #E2)
- Traffic signal installed at River Road/Crates Way (north) and construct exclusive left-turn lanes on River Road approaches (Project #E11)
- Roundabout constructed at River Trail Way/Hostetler Street Extension (Project #E9)
- Roundabout or signal constructed at River Road/Hostetler Street Extension (Project #E12)

*Phase 4 – Long-term Vision (Figure 7-8)*

- Widen Chenoweth bridge structure to accommodate 6-lane cross-section, including side-by-side left-turn lanes (Project #I4)

*Ongoing Phase – Improvements implemented in any phase*

Some of the above improvements as well as additional improvements identified below will be implemented in conjunction with adjacent development, including:

- New local roadways to provide access to individual parcels and to provide connectivity to higher-order facilities (Project # E1, E4, E4B, E5, E6, N1, W7, W8, W9)
- Construct exclusive left-turn lanes on northbound, eastbound, and southbound approaches and an exclusive right-turn lane on the northbound approach to the West 6<sup>th</sup> Street/Hostetler Street intersection (Elements of projects #W4 and #W5)
- ROW preservation for potential long-term crossing of I-84 north of River Road (Project #N2, N3)
- Relocating driveway access on US 30 within 1,320 feet of the interchange ramp terminals to satisfy ODOT access management standard (Project #W6)
- Traffic signal installation at River Road/Klindt Drive (Project #E13)

Figures 7-9 and 7-10 conceptually illustrate the long-term and long-term vision phases, respectively.

Table 7-4 summarizes the percent of development that is expected to be accommodated under each improvement phase. When all improvements identified in each improvement phase are in place, the development potential listed is expected to be attainable while maintaining adequate operational conditions. For example, if all improvements identified in Phase 2 are in operation, between 11 and 55 percent of full build-out under Land Use Scenario #2 could occur before queuing and intersection operations exceed capacity.

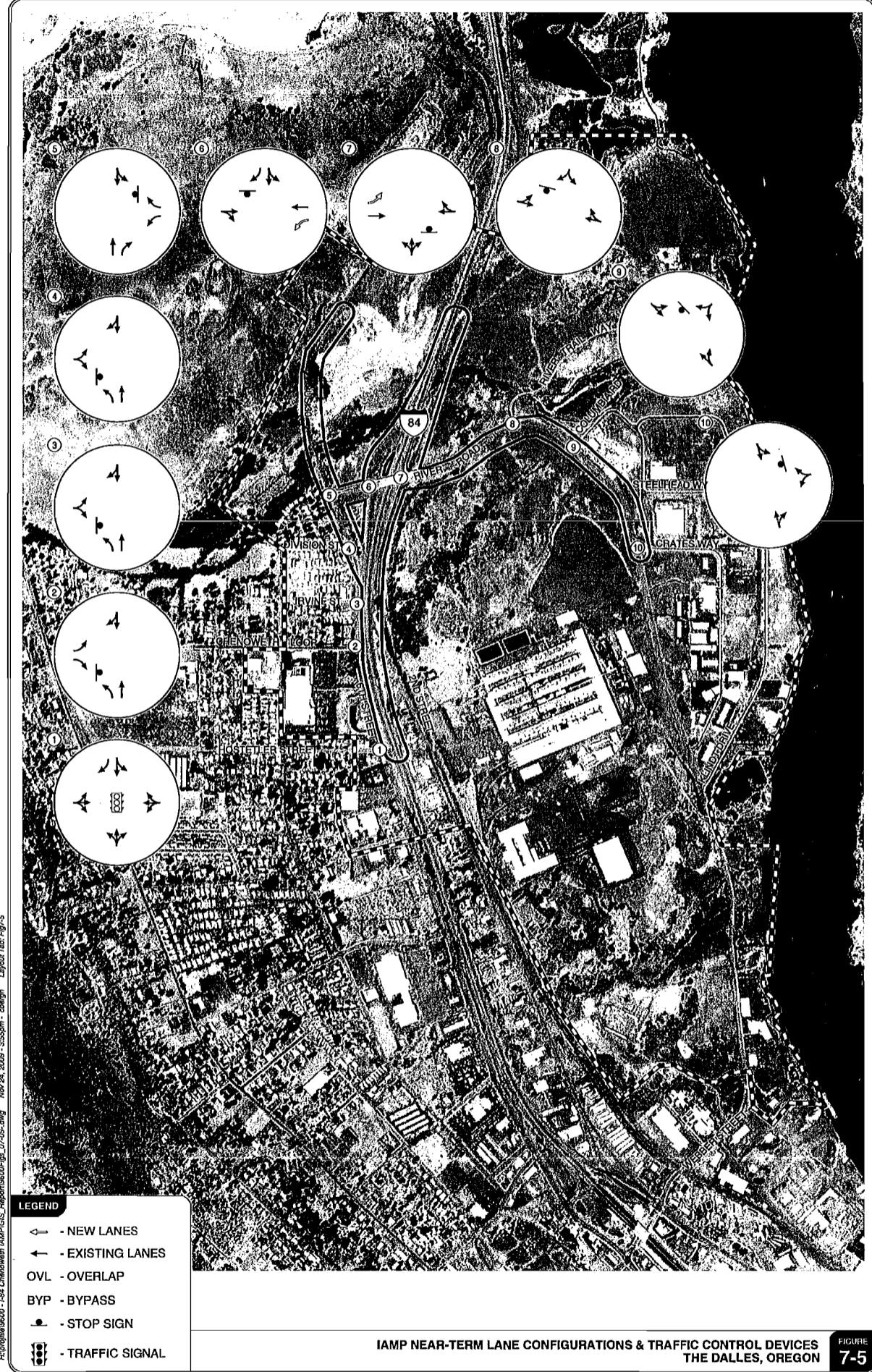
**TABLE 7-4 TRANSPORTATION IMPROVEMENT THRESHOLDS**

| <b>Improvement Phase</b>             | <b>Development Threshold<br/>(Percent of Full Build-Out)</b> |
|--------------------------------------|--|
| 0 - No-Build                         | -  |
| 1 - Near-term Improvements           | <10%   |
| 2 - Mid-term Improvements            | 11-55%   |
| 3 - Long-term Improvements           | 56-75%   |
| 4 - Long-term Vision<br>Improvements | 76-85%   |

As shown in Table 7-4, the Long-Term Improvements are expected to provide capacity for up to 75-percent of full build-out of all vacant and redevelopable land within the IMSA.\* Implementation actions for managing future development in order to allow up to 85-percent (maximum use) of existing land for development purposes are provided in the following sections as part of the Vision Improvements.

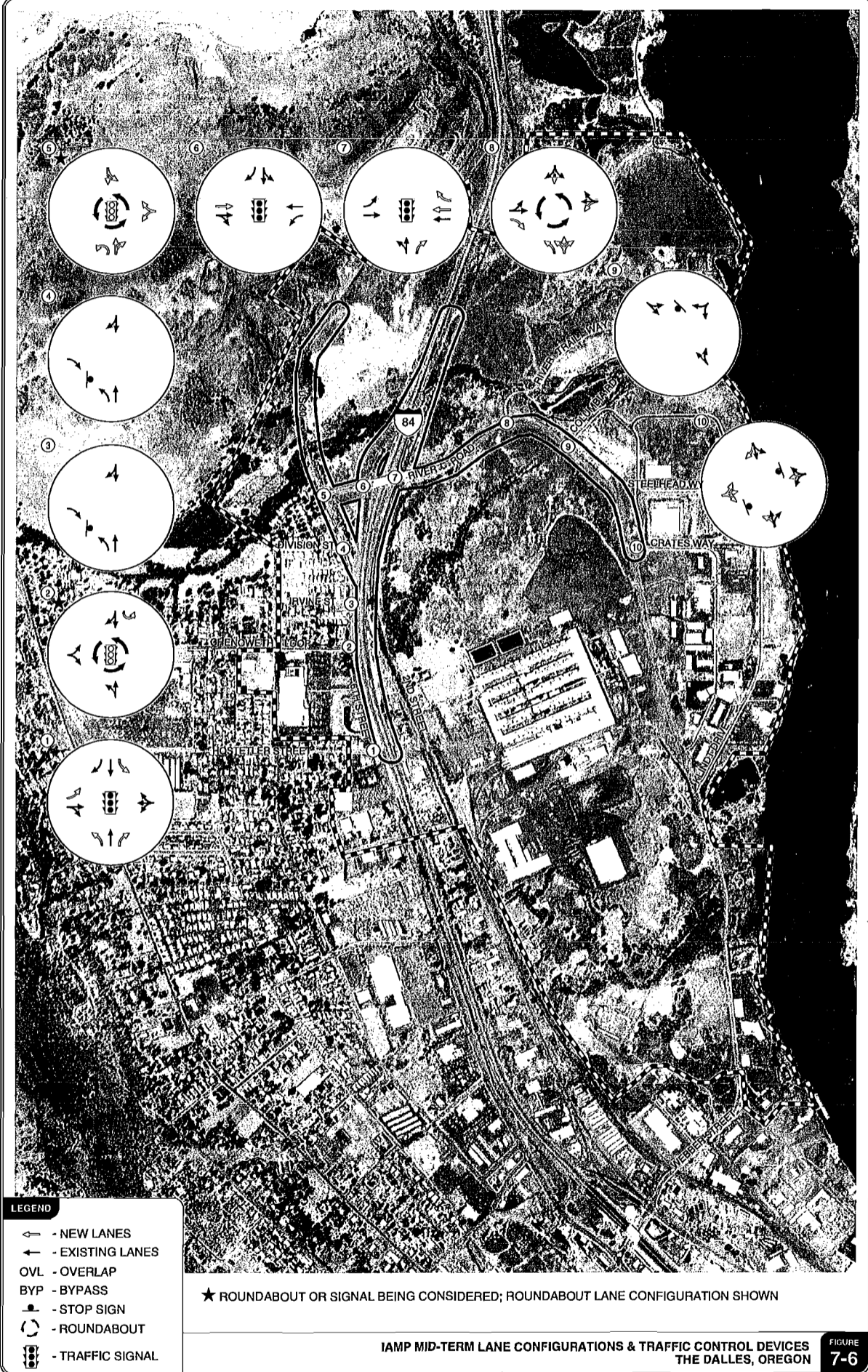
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\* Assuming 0.25 FAR for commercial and 0.40 FAR for industrial development, as outlined in Table 5-2.

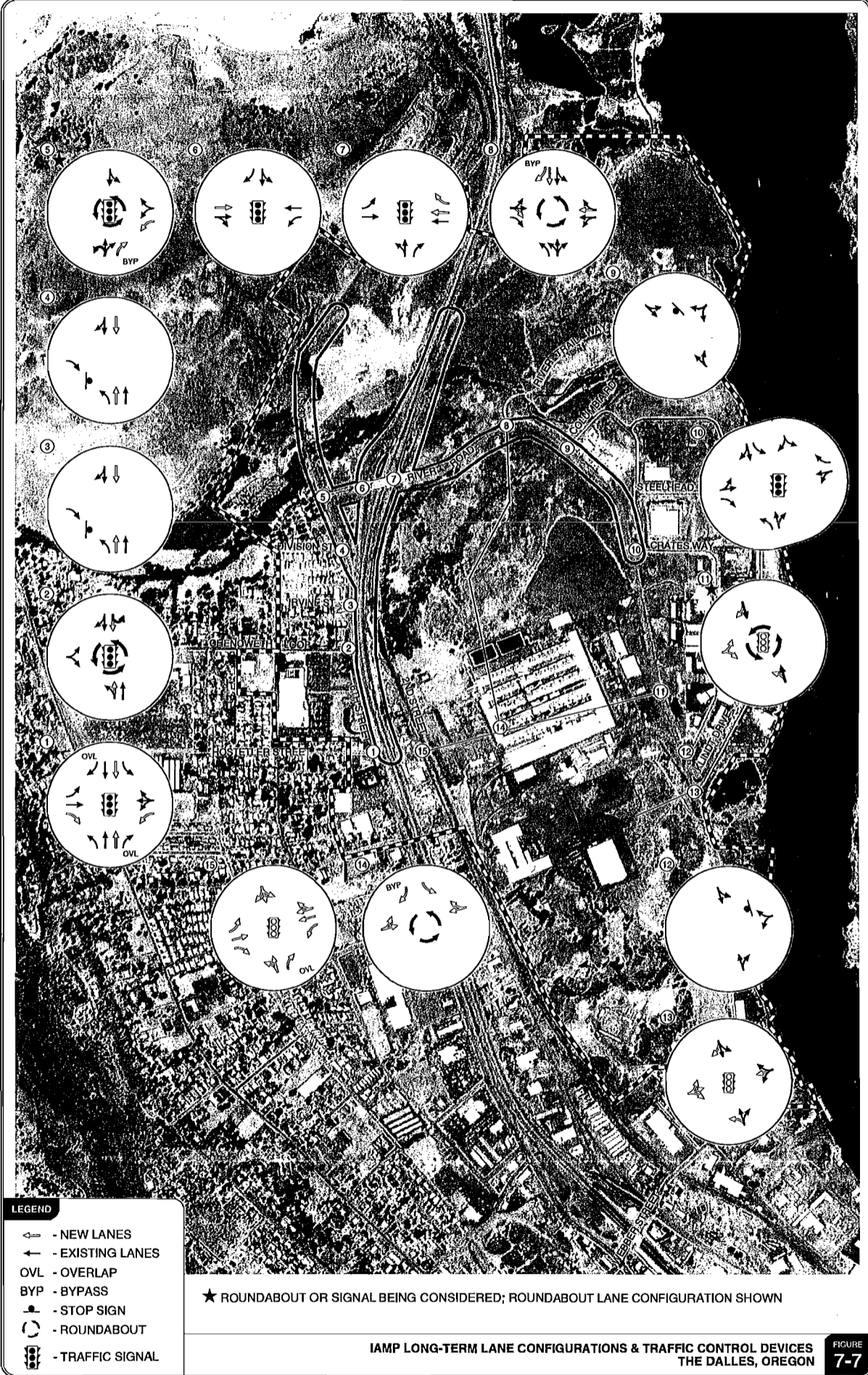


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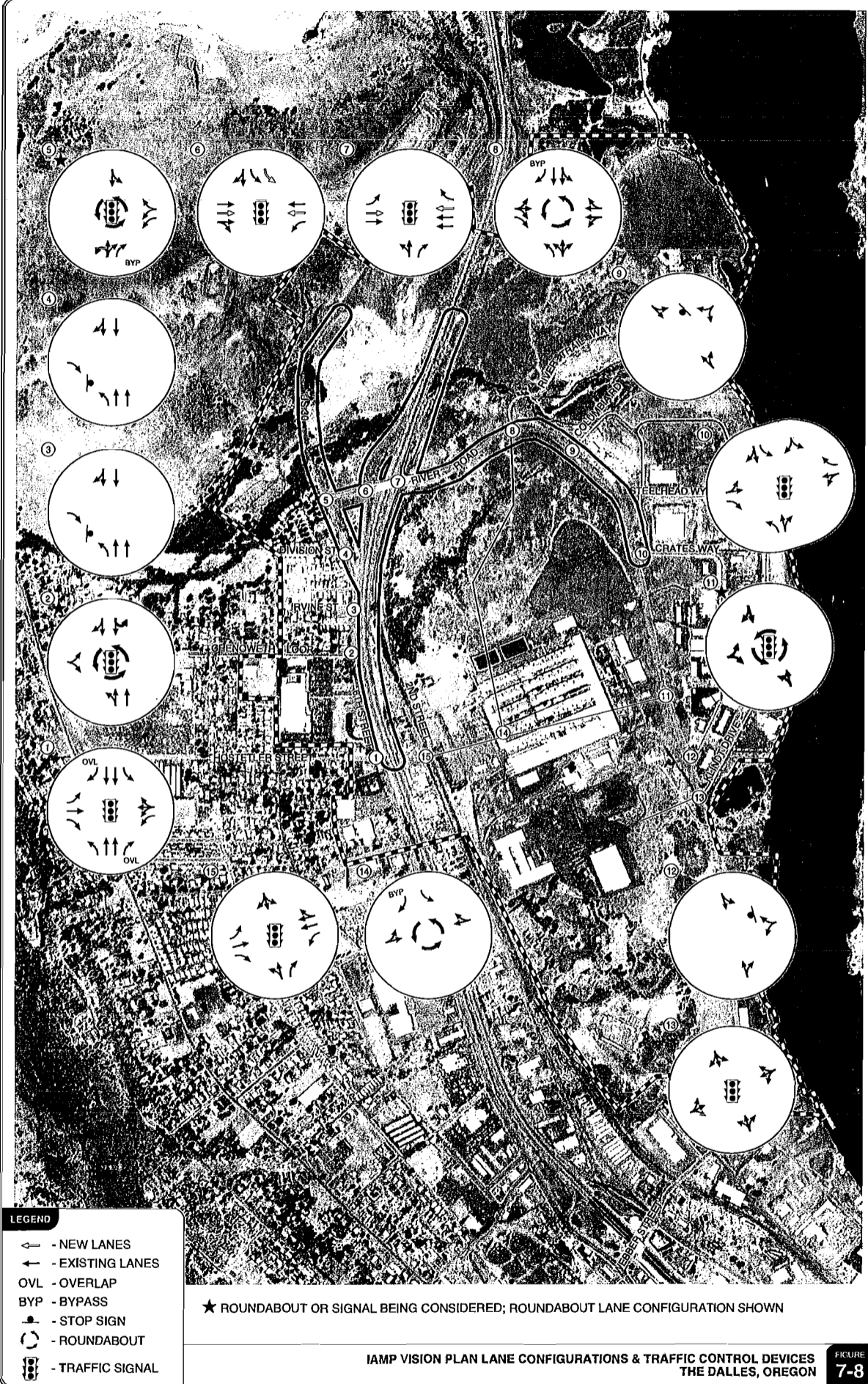




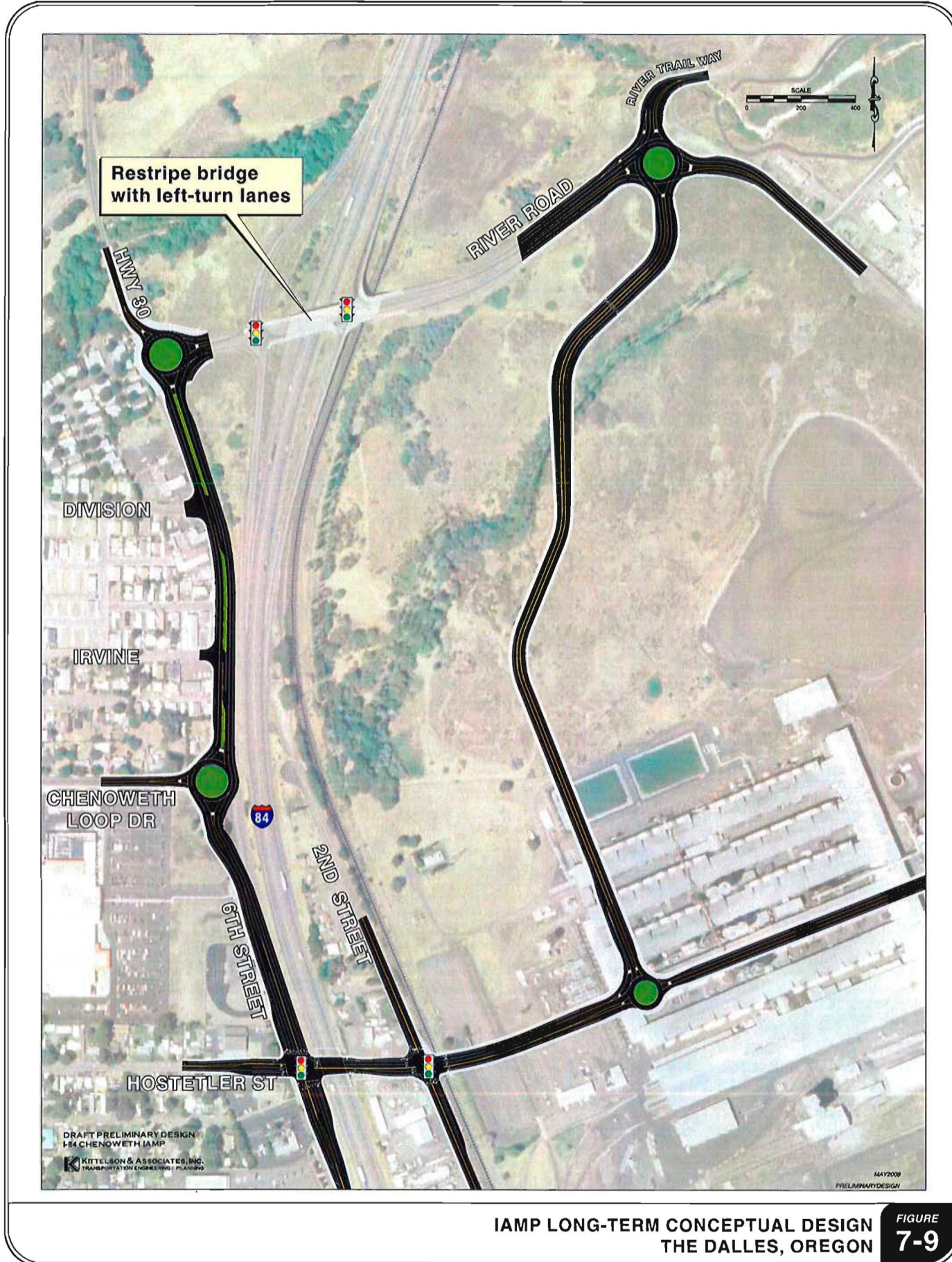
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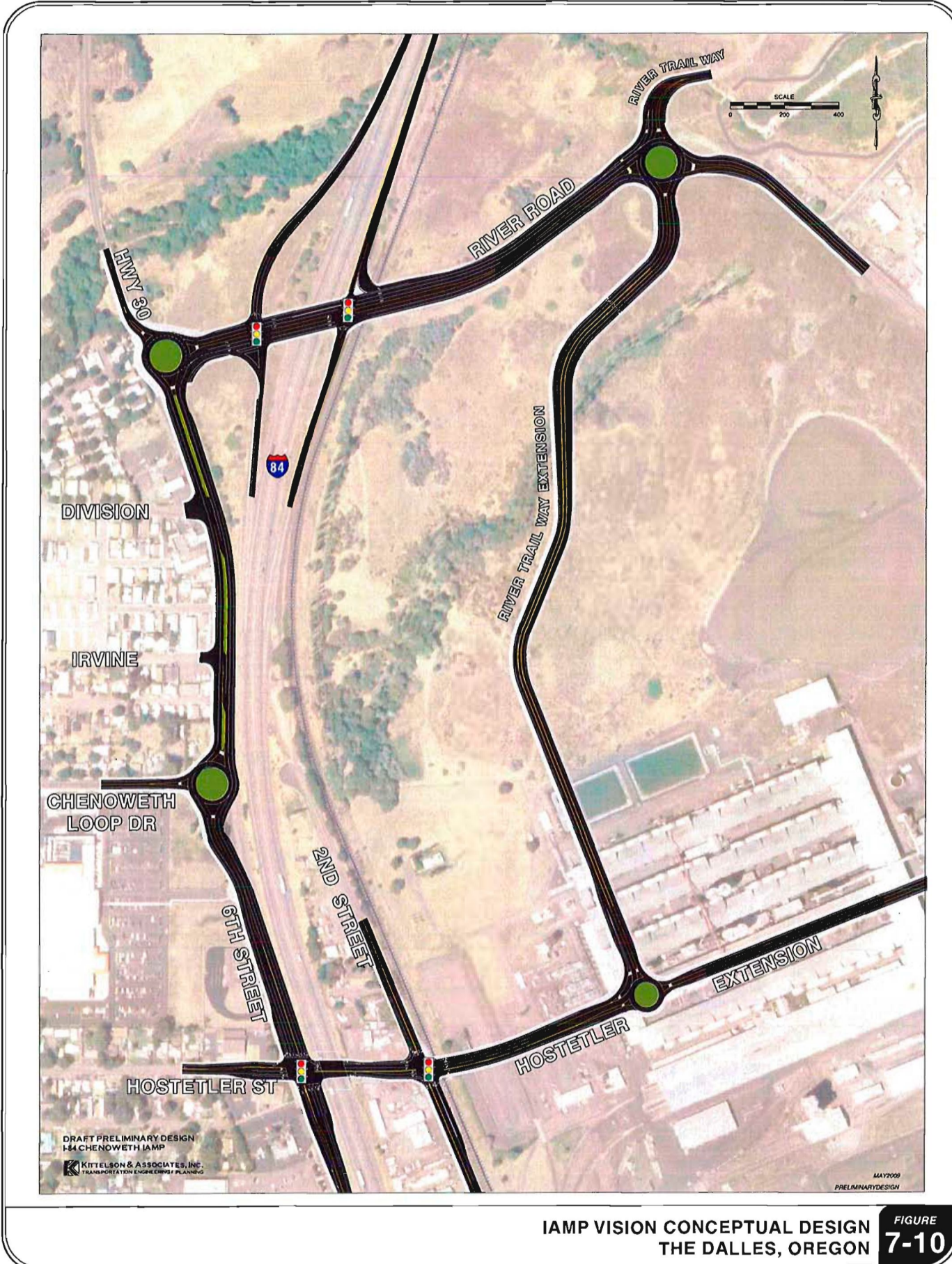
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### **Trip Allocation Budget**

The Long-term Improvement Plan can accommodate a development threshold of up to 75 percent of the maximum development potential of the IMSA. A Trip Allocation Budget, *provided in Appendix "C"*, was developed that identifies the number of net new weekday p.m. peak hour trips allocated to each developable or redevelopable parcel in the interchange area based on a 75-percent threshold of maximum density. As part of the Implementation Plan in Section 8, a monitoring process has been established to ensure that over time the trip budget is not being exceeded within the entire IMSA area (individual parcels could exceed their budget). If the trip budget for the IMSA is exceeded, the IAMP would need to be amended to identify the Vision Plan (Phase 4) as the planning horizon year improvements and the funding agreement and/or Supplemental Transportation System Development Charge (see Plan Elements in Section 8) would need to be updated. The Vision Plan improvements include reconstructing the I-84 Chenoweth Interchange overpass and ramps to accommodate six traffic lanes.

### **ACCESS MANAGEMENT PLAN**

As part of the I-84 Chenoweth Road IAMP, future access locations and public street connections were evaluated for properties and streets located in the IAMP Access Study Area. Access locations were evaluated based on ODOT's Division 51 Access Management standards, the City of The Dalles access spacing standards, and an assessment of traffic operations and safety as described in Action 3C.3 of the 1999 Oregon Highway Plan. The Access Management Plan was developed to minimize impacts and preserve the operational integrity and safety of primary facilities (i.e., River Road, West 6th Street) serving the interchange area, while maintaining viable access to all parcels in the IMSA.

The intent of the Access Management Plan is to identify goals that will guide evaluation of the location of site-access driveways and internal circulation routes for properties located within the IMSA that are likely to develop or redevelop at some point in the future. I-84 Chenoweth IAMP Access Management Plan:

1. identifies future access locations for undeveloped properties in the IMSA
2. identifies goals and policies that will guide evaluation of existing access for properties in the IMSA that might redevelop, and
3. documents the justification for the necessary deviations to ODOT's access management standards.

The plan, as illustrated in Figure 7-11 and described in the following paragraphs, will be implemented as part of future land use changes, or ODOT's project development and delivery processes, involving the properties located within the IMSA and Interchange Overlay District.

### **Near- and Mid-Term Access Management Implementation**

Under ODOT's current access management policy, the 1999 Oregon Highway Plan stipulates that the desired distance between an interchange ramp terminal and the first major approach (public or

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private) on the crossroad should be 1,320 feet (¼ mile). Currently there are four private accesses and three public street connections within 1,320 feet of the interchange ramp terminals, as previously documented in Figure 4-7. Public street connections are located on River Road at River Trail Way, River Road at West 6<sup>th</sup> Street, and West 6<sup>th</sup> Street at Division Street. Existing private accesses are located on West 6<sup>th</sup> Street and US 30. Future private access is proposed on River Road.





In the near- and mid-term no access modifications will be made to the four existing private access approaches located on the west side of West 6th Street unless land use changes occur involving the properties served by these accesses or if increases in traffic volumes on West 6<sup>th</sup> Street warrant a modification for operation and safety reasons. ODOT guarantees Access Permit protection, as allowed within ORS374.305 & 310, to all existing private accesses. Each will remain a valid access as long as the existing uses remain on property/site (per OAR734.051.0045) and there is no capital improvement project that would trigger review of the access (per OAR734.051.0285). An access evaluation will be required, but is not limited to, when any of the following land use actions occur within 1,320 feet of the I-84 ramp terminal intersections:

- Modifications to existing land use or zoning;
- Changes to plan amendment designations;
- Construction of new buildings;
- Increases in floor space of existing buildings;
- Division or consolidation of property boundaries;
- Changes in the character of traffic using the driveway/approach;
- Changes to internal site circulation design or inter-parcel circulation;
- Reestablishment of a property's use (after discontinuance for two years or more that trigger a Traffic Impact Assessment as defined below) that occurs on the parcels served by the approaches; or,
- Capital improvement projects.

#### **Long-Term Access Management Implementation**

As traffic volumes increase with new development, access management can help maintain the operational integrity and safety of the primary roadways. Access management goals for each access identified in Figure 7-11 are outlined in Table 7-5. In general, the types of improvements identified include:

- Modifying, mitigating or removing existing approaches pursuant to an access management strategy as part of the highway project development and delivery process (OAR 734-051). This may include restricting left-turning egress movements along West 6th Street by constructing a raised median;
- Improving traffic safety and operations by improving the local street network to provide alternate access, better local street connections to the highway, and reducing conflict points. This may include consolidating access on West 6th Street from private approaches and minor public streets where traffic can be rerouted to a major public approach; and,
- Restricting highway access but improving arterial access by introducing shared access, cross-over easements, consolidated access when separate parcels are assembled for redevelopment, and access via collector or local streets. This may include providing

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crossover easements between adjacent parcels along West 6<sup>th</sup> Street and near Hostetler/2<sup>nd</sup> Street intersection.

The time period over which the measures outlined in Table 7-5 will be implemented will depend on the rate of development within the IMSA. As each parcel redevelops, or upon capital improvement, their access will be evaluated to determine how access will be modified to move in the direction of meeting the access spacing standards and long-term vision of driveway consolidation while still providing access as defined in OAR 734-051. The following text supports the actions outlined in Table 7-5 and illustrated in Figure 7-12.

#### River Road

Properties located east of the I-84 Chenoweth Interchange access River Road from three public approaches within the IAMP Operations/Access Study Area, illustrated in Figure 7-12. One additional access is proposed to be right-in, right-out only for long-term access to a vacant parcel (tax lot 2N 13E 28 701) in the northwest quadrant of the River Road/River Trail Way intersection. The roundabout proposed at the River Road/River Trail Way intersection would provide indirect left-turn movements to this parcel via River Trail Way and River Road. A combination of two right-in, right-out access points can provide access to site traffic; traffic entering from the west must complete a u-turn at the roundabout and make a right-turn to enter the site.

The public access at River Trail Way (#17) and the proposed right-in, right-out access (#16) do not meet the 1,320-foot access spacing requirement identified in OAR Division 51. Access #16 would need to be constructed at least 750 feet from the interchange ramp terminal and at least 550 feet from the roundabout at the River Road/River Trail Way intersection. A deviation is proposed under the provisions of OAR 734-51-0135(3) and will be reviewed by the ODOT Region Access Management Engineer.

#### West 6th Street

At the time that West 6th Street improvements are made to accommodate future traffic volumes (i.e., widen to five-lane cross-section, intersection control modifications, etc.), and at the first triggered review of the IAMP, ODOT and the City will revisit the need for a raised median to be installed. If appropriate, the raised median will extend from River Road south to Chenoweth Loop Road. The median will restrict left-turn movements to and from private driveways on West 6th Street and left-turn egress movements from public approaches on West 6th Street with Division Street and Irvine Street.

Under the Long-Term Access Management Plan, existing accesses on West 6th Street will be consolidated in order to increase access spacing on West 6th Street. Evaluation of site access and site access modifications that move in the overall direction of the access spacing standards, and long-term vision of driveway consolidation, will be made as development and redevelopment occurs or during a capital improvement project. At each phase of development or redevelopment, access as defined in OAR 734-051 will be provided depending upon the land uses that are being served. Provisions for future compliance with the long-term access management plan, such as site orientation, access modification and mitigation, and crossover easements will be obtained. Figure 7-13 and the supporting text of Table 7-6 illustrates how this process could, in the long run, facilitate compliance with access management goals.

The public access at Highway 30 and West 6<sup>th</sup> Street (#14) and the proposed public left-in, right-in, right-out access (#12) do not meet the 1,320-foot access spacing requirement identified in OAR Division 51. Deviations are proposed under the provisions of OAR 734-51-0135(3) and will be reviewed by the Region Access Management Engineer.

#### Hostetler Street

Existing access to properties that currently access 2<sup>nd</sup> Street or Hostetler Street from the existing at-grade rail crossing at the Hostetler Street/2<sup>nd</sup> Street unsignalized intersection will be maintained until the Hostetler Street Extension is constructed. No other development access will be allowed other than those parcels that utilize the at-grade crossing as their primary site access point. At the time that the Hostetler Street Extension is constructed the parcels will have access provided via a local street extension of River Trail Way south of the River Trail Way/Hostetler Street Extension roundabout. The alignment of this street is variable, as shown in Figure 7-1.

#### 2<sup>nd</sup> Street

In the short-term, if an at-grade crossing of the UPRR is approved, access to the properties located in the northwest and southwest quadrants of the 2<sup>nd</sup> Street/Hostetler intersection would be restricted to right-in/right-out due to the vehicular queues and level of traffic on 2<sup>nd</sup> Street and Hostetler Street. Vehicle queues would block additional property accesses along 2<sup>nd</sup> Street and Hostetler Street during train passage.

At the time that a grade-separated crossing is constructed, access to the properties located in the northwest and southwest quadrants of the 2<sup>nd</sup> Street/Hostetler intersection would be restricted due to the retaining walls on 2<sup>nd</sup> Street and Hostetler Street.



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**TABLE 7-5 ULTIMATE ACCESS MANAGEMENT PLAN SUMMARY**

| Deviation Required? | Access #      | Access Control | Type/Location   | Long-Term Access Management Implementation Plan   |
|---------------------|---------------|----------------|---|---|
|                     | 1             | City           | Public (Hostetler Street) – Signalized intersection   | Full-access allowing for all movements to/from West 6th Street.   |
|                     | 2             |                | Private – Existing access 275 feet north of Hostetler Street.   | Egress (left/right-out) only access to West 6th Street (based on one-way on-site circulation).  |
|                     | 3             |                | Private – Existing access 470 feet north of Hostetler Street.   | Ingress (right/left-in)_only access from West 6th Street (based on one-way on-site circulation).  |
|                     | 4             |                | Private – Existing access 400 feet south of Chenoweth Loop.   | Left-in/Right-in/Right-out access only to/from West 6th Street.   |
|                     | 5             |                | Public (Chenoweth Loop) – Proposed roundabout location  | Full-access allowing for all movements to/from West 6th Street.   |
|                     | 6             |                | Private – Existing access 150 feet north of Chenoweth Loop.   | Consolidate access to West 6th Street, relocate access to Chenoweth Loop.   |
|                     | 7             |                | Private – Existing access 300 feet north of Chenoweth Loop.   | Consolidate access and improve Lee Street to provide connection to 7th Street and construct cul-de-sac to close access to West 6th Street.  |
|                     | 8             |                | Public (Irvine Street) – Existing access 465 feet north of Chenoweth Loop.                                    | Complete Irvine Street connection from 7th Street to West 6th Street and restrict access at West 6th Street to Left-in/Right-in/Right-out.  |
|                     | 9, 10, 11, 13 | ODOT           | Private – Existing access within Interchange Access Study Area (1,320ft boundary from the I-84 ramp terminal) | Consolidate access on West 6th Street and provide access to Division Street, Irving Street, and Chenoweth Loop. Follow IAMP Access Management goals by modifying and mitigating access and establishing crossover easements to adjacent parcels. Access modification will be considered at time of redevelopment or capitol improvement project. <sup>†</sup> |
| Yes                 | 12            |                | Public (Division Street) – Existing access 465 feet north of Chenoweth Loop.                                  | Left-in/Right-in/Right-out access only to/from West 6th Street.   |
| Yes                 | 14            |                | Public (River Road/West 6 <sup>th</sup> Street and US Highway 30) – Existing full access                      | Full-access allowing for all movements to/from River Road,  |

<sup>†</sup> Until then, ODOT guarantees Access Permit protection, as allowed within ORS374.305 & 310, to all existing private accesses. Each will remain a valid access as long as the existing uses remain on property/site (per OAR734.051.0045) and there is no capitol improvement project that would trigger review of the access (per OAR734.051.0285)

| Deviation Required? | Access # | Access Control | Type/Location  | Long-Term Access Management Implementation Plan  |
|---------------------|----------|----------------|--|--|
|                     |          |                | intersection 350 feet from the I-84 eastbound off-ramp terminal.   | West 6 <sup>th</sup> Street, and US Highway 30.  |
|                     | 15       |                | Private – Existing access 525 feet north of River Road.  | Relocate access north, outside of the 1,320 foot boundary from the I-84 eastbound ramp terminal. |
| Yes                 | 16       |                | Private – Future access at least 750 feet from the westbound I-84 ramp terminal and 550 feet from River Trail Way. | Right-in, right-out access only to/from River Road.  |
| Yes                 | 17       |                | Public (River Trail Way) – Existing access 1,300 feet east of I-84 westbound off-ramp terminal.                    | Full-access allowing for all movements to/from River Road.                                       |
|                     | 18       | County         | Public (Columbia Road) – Existing access 650 feet east of River Trail Way.   | Full-access allowing for all movements to/from River Road.                                       |
|                     | 19       |                | Public (Crates Way) – Existing access 1250 feet east of Columbia Road.   | Full-access allowing for all movements to/from River Road.                                       |

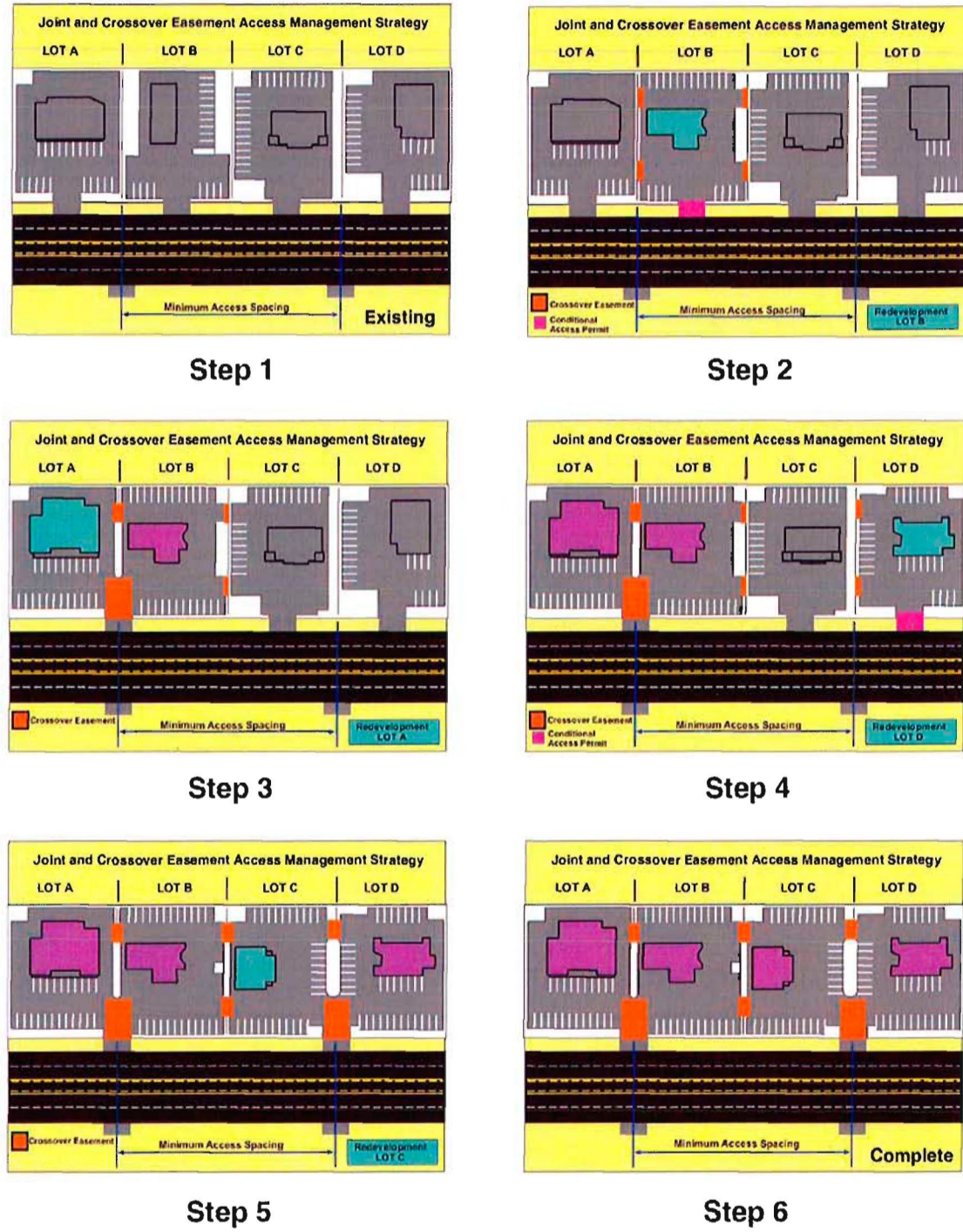


**TABLE 7-6 EXAMPLE OF CROSSOVER EASEMENT / INDENTURE / CONSOLIDATION -  
CONDITIONAL ACCESS PROCESS**

| Step | Process   |
|------|---|
| 1    | EXISTING – Currently Lots A, B, C, and D have site-access driveways that neither meet the access spacing criteria nor align with driveways or access points on the opposite side of the highway. <i>Under these conditions motorists are put into situations of potential conflict (conflicting left turns) with opposing traffic. Additionally, the number of side-street (or site-access driveway) intersections decreases the operation and safety of the highway.</i>   |
| 2    | REDEVELOPMENT OF LOT B – At the time that Lot B redevelops, the local jurisdiction would review the proposed site plan and make recommendations to ensure that the site could promote future crossover or consolidated access. Next, the local jurisdiction would issue conditional permits for the development to provide crossover easements with Lots A and C, and ODOT would grant a conditional access permit to the lot. <i>After evaluating the land use action, ODOT would determine that LOT B does not have either alternative access, nor can an access point be aligned with an opposing access point, nor can the available lot frontage provide an access point that meets the access spacing criteria for this segment of highway.</i>   |
| 3    | REDEVELOPMENT OF LOT A – At the time Lot A redevelops, the local jurisdiction and ODOT would undertake the same review process as with the redevelopment of LOT B (see Step 2); however, under this scenario ODOT and the local jurisdiction would use the previously obtained cross-over easement at Lot B to consolidate the access points of Lots A and B. ODOT would then relocate the conditional access of Lot B to align with the opposing access point and provide safe and efficient access to both Lots A and B. <i>The consolidation of site-access driveways for Lots A and B will not only reduce the number of driveways accessing the highway, but will also eliminate the conflicting left-turn movements on the highway by the alignment with the opposing access point.</i> |
| 4    | REDEVELOPMENT OF LOT D – The redevelopment of Lot D will be handled in the same manner as the redevelopment of Lot B (see Step 2).  |
| 5    | REDEVELOPMENT OF LOT C – The redevelopment of Lot C will be reviewed once again to ensure that the site will accommodate crossover and/or consolidated access. Using the crossover agreements with Lots B and D, Lot C would share a consolidated access point with Lot D and will also have alternative frontage access via the shared site-access driveway of Lots A and B. <i>By using the crossover agreement and conditional access permit process, the local jurisdiction and ODOT will be able to eliminate another access point and provide the alignment with the opposing access points.</i>  |
| 6    | COMPLETE – After Lots A, B, C, and D redevelop over time, the number of access points will be reduced and the remaining access points will either meet or move in the direction of the access spacing plan.   |



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EXAMPLE OF CROSSOVER EASEMENT / INDENTURE / CONSOLIDATION / CONDITIONAL ACCESS PROCESS THE DALLES, OREGON

FIGURE 7-13

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### **Deviations to the Division 51 Access Management Standards**

The public access at River Trail Way (#17) and the proposed private right-in, right-out access (#16) east of I-84 do not meet the 1,320-foot access spacing requirement identified in OAR Division 51. The public access at Highway 30 and West 6<sup>th</sup> Street (#14) and the proposed public left-in, right-in, right-out access at Division Street (#12), west of I-84, also do not meet the 1,320-foot access spacing requirement identified in OAR Division 51. Deviations are required under the provisions of OAR 734-51-0135(3) as described below and will be reviewed by the Region Access Management Engineer.

Deviation for Grant of Access #16 (Right-in, Right-out access to River Road)

Deviations to the 1,320-foot access spacing requirement identified in OAR Division 51 are required at Access # 16, proposed 750 feet east of the I-84 Westbound Ramp Terminal intersection, as shown in Figure 7-12. Under the provisions of OAR 734-51-0135(3), the Region Access Management Engineer may approve a deviation if:

(a) *Adherence to spacing standards creates safety or traffic operation problems;*

**Response:** Access #16 is proposed to be right-in, right-out only for long-term access to a vacant parcel (tax lot 2N 13E 28 701) in the northwest quadrant of the River Road/River Trail Way intersection. A right-in, right-out access is necessary because the parcel can only have right-in, right-out access on River Trail Way due to the limited site frontage that is between the proposed River Road/River Trail Way roundabout and the Chynoweth Creek bridge. A combination of two right-in, right-out access can provide access to site traffic; traffic entering from the west must complete a u-turn at the River Road/River Trail way roundabout and make a right-turn to enter the site.

(b) *The applicant provides a joint approach that serves two or more properties and results in a net reduction of approaches to the highway;*

**Response:** NA

(c) *The applicant demonstrates that existing development patterns or land holdings make joint use approaches impossible;*

**Response:** Based on existing land holdings, no joint access can provide full access to tax lot 2N 13E 28 701 due to the proposed location of the River Road/River Trail Way roundabout approach median. Therefore Access #16 (a private right-in, right-out access) is necessary in conjunction with a right-in, right-out access point on the northeastern-most boundary of the subject parcel that fronts River Trail Way.

(d) *Adherence to spacing standards will cause the approach to conflict with a significant natural or historic feature including trees and unique vegetation, a bridge, waterway, park, archaeological area, or cemetery;*

**Response:** NA

(e) The highway segment functions as a service road;

**Response:** NA

(f) On a couplet with directional traffic separated by a city block or more, the request is for an approach at mid-block with no other existing approaches in the block or the proposal consolidates existing approaches at mid-block; or

**Response:** NA

(g) Based on the Region Access Management Engineer's determination that:

(A) Safety factors and spacing significantly improve as a result of the approach; and

**Response:** NA

(B) Approval does not compromise the intent of these rules as set forth in OAR 734-051-0020 (Which states: The purpose of Division 51 rules is to provide a safe and efficient transportation system through the preservation of public safety, the improvement and development of transportation facilities, the protection of highway traffic from the hazards of unrestricted and unregulated entry from adjacent property, and the elimination of hazards due to highway grade intersections.)

**Response:** The proposed access management plan meets the intent of the Division 51 rules as it reduces vehicle turning conflicts within the interchange access management area, and protects the flow of highway traffic traveling to/from the interchange to the Port of The Dalles by incorporating a right-in, right-out movement and restricting left-turns onto River Road from private property.

Deviation to Access #17 (Public Access to River Trail Way)

Deviations to the 1,320-foot access spacing requirement identified in OAR Division 51 are required at Access #17, located approximately 1,300 feet east of the I-84 Westbound Ramp Terminal intersection. Under the provisions of OAR 734-51-0135(3), the Region Access Management Engineer may approve a deviation if:

(a) Adherence to spacing standards creates safety or traffic operation problems;

**Response:** NA

(b) The applicant provides a joint approach that serves two or more properties and results in a net reduction of approaches to the highway;

**Response:** Although the joint approach does not consolidate existing approaches, it provides a single access point that will serve multiple parcels that might otherwise require individual access points. Public access #17 (River Road/River Trail Way) currently serves an existing public roadway (River Trail Way) that provides access to multiple Industrial properties to the north of River Road. Additionally, with a proposed extension of River Trail

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Way to the south of River Road, Access #17 would allow for future private accesses onto River Trail Way rather than River Road.

*(c) The applicant demonstrates that existing development patterns or land holdings make joint use approaches impossible;*

**Response:** NA

*(d) Adherence to spacing standards will cause the approach to conflict with a significant natural or historic feature including trees and unique vegetation, a bridge, waterway, park, archaeological area, or cemetery;*

**Response:** Adhering or exceeding the 1,320-foot standard would place the access point for River Trail Way in a location that would not allow use of the Chenoweth Creek Bridge, which was constructed in 2009 in place of an existing one-lane bridge. Additional impacts of moving the intersection include environmental impacts to Chenoweth Creek and impacts to the multi-use path that runs parallel to the Columbia River and has a crossing of Chenoweth Creek near the vehicular bridge.

*(e) The highway segment functions as a service road;*

**Response:** NA

*(f) On a couplet with directional traffic separated by a city block or more, the request is for an approach at mid-block with no other existing approaches in the block or the proposal consolidates existing approaches at mid-block; or*

**Response:** NA

*(g) Based on the Region Access Management Engineer's determination that:*

*(A) Safety factors and spacing significantly improve as a result of the approach; and*

**Response:** NA

*(B) Approval does not compromise the intent of these rules as set forth in OAR 734-051-0020 (Which states: The purpose of Division 51 rules is to provide a safe and efficient transportation system through the preservation of public safety, the improvement and development of transportation facilities, the protection of highway traffic from the hazards of unrestricted and unregulated entry from adjacent property, and the elimination of hazards due to highway grade intersections.)*

**Response:** NA

Deviation to Access #12 (Public access to Division Street)

The proposed Access Management Plan for West 6th Street west of I-84 does not meet the 1,320-foot access spacing requirement identified in OAR Division 51 at Access #12 and requires that the Region Access Management Engineer approve a deviation to the standards for the plan. Under the

provisions of OAR 734-51-0135(3), the Region Access Management Engineer may approve a deviation if:

(a) *Adherence to spacing standards creates safety or traffic operation problems;*

**Response:** Access #12 serves as a local street connection to West 6th Street, in accordance with functional classification principles. Closing access to West 6th Street will require that local street traffic (generated by more than 25 homes) will have to reroute to Irvine Street, which is already expected to receive an increase in traffic due to closure of other accesses on West 6th Street (#7 and #9). This is expected to create operational problems as through traffic volumes will increase on a residential street which is not designed to serve that level of demand.

(b) *The applicant provides a joint approach that serves two or more properties and results in a net reduction of approaches to the highway;*

**Response:** Access #12 is a public street that provides joint access to West 6th Street and will serve future traffic from four existing private driveways on West 6th Street (#9, #10, #11, and #13) that currently serve individual properties. Crossover easements will be established as redevelopment occurs that will allow for closure of accesses #9, #10, and #11.

(c) *The applicant demonstrates that existing development patterns or land holdings make joint use approaches impossible;*

**Response:** Existing access #11 serves two developments (motel and muffler shop), of which the motel backs to the westernmost boundary of the parcel and is aligned with the access. The adjacent driveway (#10) can not be joined due to the presence of the motel structure. Upon redevelopment driveways on 6<sup>th</sup> Street will be closed and crossover easements will be sought to provide access to Division Street.

(d) *Adherence to spacing standards will cause the approach to conflict with a significant natural or historic feature including trees and unique vegetation, a bridge, waterway, park, archaeological area, or cemetery;*

**Response:** NA

(e) *The highway segment functions as a service road;*

**Response:** NA

(f) *On a couplet with directional traffic separated by a city block or more, the request is for an approach at mid-block with no other existing approaches in the block or the proposal consolidates existing approaches at mid-block; or*

**Response:** NA

(g) *Based on the Region Access Management Engineer's determination that:*

(A) *Safety factors and spacing significantly improve as a result of the approach; and*

**Response:** The proposed access management plan moves all private accesses and associated vehicle movements to outside of the 1,320 foot interchange access spacing standard. Public Access #12 will serve right-in/right-out/left-in movements within the 1,320 foot interchange access spacing standard and is anticipated to operate safely and represent a reduction in conflicting movements given that no left-turns out of the public approach will be allowed. A median break to accommodate a left-in movement is proposed to reduce the amount of u-turns required at the West 6<sup>th</sup> Street/River Road intersection and associated delays for westbound traffic. Adequate storage is available for queued vehicles waiting to complete a left-turn into Division Street.

(B) *Approval does not compromise the intent of these rules as set forth in OAR 734-051-0020 (Which states: The purpose of division 51 rules is to provide a safe and efficient transportation system through the preservation of public safety, the improvement and development of transportation facilities, the protection of highway traffic from the hazards of unrestricted and unregulated entry from adjacent property, and the elimination of hazards due to highway grade intersections.)*

**Response:** The proposed access management plan meets the intent of the Division 51 rules as it consolidates access points, reduces vehicle turning conflicts within the interchange access management area, and protects the flow of highway traffic and traffic traveling from the interchange to the commercial and residential areas on the west side of West 6<sup>th</sup> Street.

Deviation to Access #14 (Public access to West 6<sup>th</sup> Street)

The proposed Access Management Plan does not meet the 1,320-foot access spacing requirement identified in OAR Division 51 at Access #14 and requires that the Region Access Management Engineer approve a deviation to the standards for the plan. Under the provisions of OAR 734-51-0135(3), the Region Access Management Engineer may approve a deviation if:

(a) *Adherence to spacing standards creates safety or traffic operation problems;*

**Response:** Access # 14 (West 6<sup>th</sup> Street/River Road/Highway 30) is an intersection of three major roadways. Topographic constraints and existing development make relocation of this intersection infeasible. Limiting the access at this intersection would result in operational issues as it is an intersection of three public roadways all of which require full access as there are no alternative routes.

(b) *The applicant provides a joint approach that serves two or more properties and results in a net reduction of approaches to the highway;*

**Response:** NA

(c) *The applicant demonstrates that existing development patterns or land holdings make joint use approaches impossible;*

**Response:** NA

*(d) Adherence to spacing standards will cause the approach to conflict with a significant natural or historic feature including trees and unique vegetation, a bridge, waterway, park, archaeological area, or cemetery;*

**Response:** Chenoweth Creek is located just north of the exiting intersection, which limits any opportunity to relocate the intersection to the north. Also, US 30 is designated an Oregon Scenic Byway, which limits ability to modify alignment.

*(e) The highway segment functions as a service road;*

**Response:** NA

*(f) On a couplet with directional traffic separated by a city block or more, the request is for an approach at mid-block with no other existing approaches in the block or the proposal consolidates existing approaches at mid-block; or*

**Response:** NA

*(g) Based on the Region Access Management Engineer's determination that:*

*(A) Safety factors and spacing significantly improve as a result of the approach; and*

**Response:** NA

*(B) Approval does not compromise the intent of these rules as set forth in OAR 734-051-0020 (Which states: The purpose of division 51 rules is to provide a safe and efficient transportation system through the preservation of public safety, the improvement and development of transportation facilities, the protection of highway traffic from the hazards of unrestricted and unregulated entry from adjacent property, and the elimination of hazards due to highway grade intersections.)*

**Response:** NA

**Section 8**  
Implementation Plan



## Implementation Plan

This section describes the IAMP implementation strategy, which includes an I-84 Chenoweth Interchange Function and Policy Definition, Overlay District, Trip Allocation Budget, and Supplemental Transportation System Development Charge. The Implementation Plan also includes adoption and monitoring procedures that will ensure transportation improvements are constructed and funded as development occurs and that the improvement plan, trip budget, and financing mechanisms are updated as needed over time.



To ensure that the IAMP remains dynamic and responsive to changes to the adopted land use and transportation plans, the City of The Dalles, Wasco County, and ODOT should, at a minimum:

- Amend their respective Transportation System Plans and Comprehensive Plans;
- Codify and map an Interchange Area Overlay District that defines the area wherein regulations and requirements associated with the protecting the interchange for its accepted function apply;
- Adopt a Supplemental Transportation System Development Charge (City only);
- Coordinate planning activities per the Transportation Planning Rule (OAR 660-012);
- Review the IAMP and mobility standards for the interchange prior to adopting local plan amendments;
- Regularly revisit transportation funding strategy (see system development charge methodology, Volume 2 Technical Appendix "I".)

### PLAN ELEMENTS

In addition to adoption of the IAMP described in Section 7, implementation of the I-84 Chenoweth IAMP requires adoption of an "Interchange Function and Policy Definition", Interchange Management Area Plan Overlay District, and Supplemental Transportation System Development Charge (STSDC).

#### ***Interchange Function and Policy Definition***

When it was originally designed in 1996, the I-84 Chenoweth Interchange was intended to function as a service level interchange that would safely and efficiently accommodate the traffic demands associated with The Port, industrial property in the vicinity of the I-84, and the Discovery Center. Visitor traffic to the Discovery Center has been lower than originally projected and the function of the interchange today is principally to provide safe and efficient access to the Port and industrial

land in the western part of The Dalles (the area located east of the interchange). In addition to serving the city's industrial center, the I-84 Chenoweth Interchange remains an important facility for accessing the Discovery Center, existing commercial lands in the vicinity of the industrial area, and existing business and residential areas west of I-84.

The City of The Dalles and Wasco County should adopt a clear definition of the I-84 Chenoweth Interchange function into their respective comprehensive plans and TSPs as a policy to provide direction for management of the interchange area and achieve the objectives and goals of the IAMP. This will help to ensure consistency between future policy decisions with the interchange's intended function.

Following is the function and policy definition for the I-84 Chenoweth Interchange:

*"The transportation function of the I-84 Chenoweth Interchange is principally to provide safe and efficient access to the Port and industrial land in the western part of The Dalles (the area located east of the interchange). In addition to its primary function, the I-84 Chenoweth Interchange remains an important facility for accessing the Discovery Center and existing commercial lands in the vicinity of the city's industrial center. The interchange also serves local residential and commercial traffic circulating from I-84 to Highway 30 and West 6th Street."*

#### **Interchange Area Management Plan Area Overlay District**

To ensure the continued operational and safety integrity of the interchange, the City of The Dalles should adopt an Interchange Area Management Plan Overlay District<sup>3</sup>. Future development and land use actions within the Overlay District will be monitored to ensure that within the Interchange Area Management Plan Overlay District volume-to-capacity ratios do not exceed the adopted Oregon Highway Plan mobility standards at the interchange ramp terminals. This can be accomplished through the Trip Allocation Budget and STSDC, IAMP Monitoring, and Development Review Guidelines for the Overlay District included within the proposed amendments to the City's Land Use and Development Ordinances and described in the following sections (see Appendix "J" of the LAMP Technical Appendix).

##### Trip Allocation Budget

As described in Section 7, the Long-Term Improvement Plan can accommodate a development threshold of up to 75 percent of the maximum development potential of the Interchange Management Study Area (IMSA). A Trip Allocation Budget was developed, provided in Appendix "I" of the LAMP Technical Appendix, that identifies the number of net new weekday p.m. peak hour trips allocated to each developable parcel in the interchange area based on a 75-percent threshold of maximum density. The City shall monitor the Trip Budget to ensure that over time the trips from new development in the IMSA are not exceeding the budget. Individual parcels may exceed their trip allocations; however, they would pay a higher STSDC per trip for each trip exceeding their

<sup>3</sup> The Interchange Area Management Overlay District coincides and is consistent with the Land Use Study Area, which is a part of the Interchange Management Study Area in the IAMP.

allocation to help pay for the Vision Plan Improvements. The Vision Plan Improvements are described in detail in Section 7 and include reconstructing the I-84 Chenoweth Interchange overpass and ramps to accommodate six traffic lanes. The Trip Budget will be reviewed, at a minimum, during each development review that triggers a STSDC (monitored as described in the sections below).

#### Supplemental Transportation System Development Charge (STSDC)

Short-, mid-, and long-term transportation improvement plans were developed in order to estimate the amount of new development that could occur within the I-84 Chenoweth IMSA before various improvements are needed. A fourth phase, the "Long-term Vision" or Vision Plan (see Figure 7-8), includes the widening of the Chenoweth bridge structure to accommodate 6-lane cross-section, including side-by-side left-turn lanes. This fourth phase is anticipated to be outside of the 20-year planning horizon.

To provide the necessary funding to develop and construct the first three phases of the Circulation and Access Plan as illustrated in Figure 7-1 and listed in Table 7-1 and Table 7-2, the City of The Dalles should modify the existing system development charge ordinance to include a STSDC, which is assessed on trips generated by new development or redevelopment on property within the IAMP Overlay District, as shown on the amended Comprehensive Plan Map and Zoning Map and defined through a new Development Code Overlay District chapter.

### **ADOPTION ELEMENTS**

Implementation of the I-84 Chenoweth IAMP will occur at several levels of government. As required by OAR 734-051, both the City of The Dalles and Wasco County will be required to amend their Transportation System Plans and Comprehensive Plans to incorporate elements of the I-84 Chenoweth IAMP. In addition, new ordinances or amendments to existing ordinances, resolutions, and Inter-Governmental Agreements (IGA) will be required to insure that the access management, land use management, and coordination elements of the IAMP are achieved. This adoption process will include Planning Commission/City Council hearings at the city level and Planning Commission/County Court hearings at the county level. Following successful adoption at the city and county levels, the I-84 Chenoweth IAMP will be presented to the Oregon Transportation Commission (OTC) for its review and adoption. This should occur prior to transportation improvements as described in this IAMP are constructed and before the covenant described in the ODOT/City of The Dalles/WM3, Inc. IGA (Misc. Contracts & Agreements No. 23886) prohibiting "non-industrial" development on 42-acres of WM3, Inc. property within the Overlay District is lifted.

To implement the I-84 Chenoweth IAMP, the following actions shall occur:

1. The City of The Dalles shall adopt the I-84 Chenoweth IAMP as part of the City of The Dalles Transportation System Plan and Comprehensive Plan. The IAMP shall serve as the long range comprehensive management plan for providing the transportation facilities that are specifically addressed in this plan, as well as the Access Management Plan and the planned local street network for the area.

2. The Wasco County Court shall amend its Transportation System Plan to incorporate the interchange function policy statement and transportation improvements associated with the Preferred Plan.
3. The City of The Dalles shall amend its Comprehensive Plan Map and Zoning Map to include the Interchange Area Management Plan Overlay District boundary. In addition, the City shall amend the Land Use and Development Ordinance to include an Interchange Area Management Plan Overlay District chapter that contains development and land use application requirements pertaining to transportation impact analysis, access management, and agency coordination (see Appendix "J").
4. Subsequent to the local adoption of the IAMP, the City of The Dalles shall adopt a Supplemental Transportation System Development Charge (STSDC) that will finance transportation improvements in the vicinity of the I-84 Chenoweth Interchange (see proposed methodology in Appendix "I").
5. ODOT Regional Access Management Engineer will review access deviation proposed in the IAMP.
6. The Oregon Transportation Commission shall amend the Oregon Highway Plan to include the I-84 Chenoweth IAMP.
7. The City of The Dalles, Wasco County, and ODOT shall enter into an IGA to assign funding responsibility to the respective transportation improvement plan and to establish agreements on how the IAMP and its triggers will be monitored.
8. ODOT and the City shall work together to identify and pursue funding for the Webber Street IAMP which shall also include consideration of I-84 Exit 83 (entrance and exit). The Webber Street IAMP will provide coordinated land use management and financing for both interchange areas upon final adoption.

### **TSP and Comprehensive Plan Amendments**

The following outline discusses the major Transportation System Plan amendments that will need to occur at the city, county, and state levels to support adoption of the I-84 Chenoweth IAMP.

#### **City of The Dalles**

- The City shall adopt the Chenoweth Interchange Area Management Plan by reference as an element of the City's Transportation System Plan.
- The following interchange policy statement shall be included in the City of The Dalles Transportation System Plan: *The transportation function of the I-84 Chenoweth Interchange is principally to provide safe and efficient access to the Port and industrial land in the western part of The Dalles (the area located east of the interchange). In addition to its primary function, the Chenoweth Interchange remains an important facility for accessing the Discovery Center and existing commercial lands in the vicinity of the city's industrial center. The interchange also*

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*serves local residential and commercial traffic circulating from I-84 to Highway 30 and West 6th Street.*

- The IAMP Transportation Improvement Plan, as illustrated in Figure 7-1 and listed in Table 7-1, shall be included in the recommended transportation improvements project list of the Transportation System Plan.

### **Wasco County**

- The County shall include the I-84 Chenoweth IAMP in its transportation system plan. The IAMP may be adopted by reference into the TSP.
- For areas within the Interchange Management Study Area (IMSA) that are located outside of the City of The Dalles UGB, Wasco County is the land use regulatory authority. Upon the County's adoption of the IAMP, parcels within the IMSA and outside the UGB will be subject to the IAMP's Access Management Plan.
- The following interchange policy statement should be included in the Wasco County Transportation System Plan: *The transportation function of the I-84 Chenoweth Interchange is principally to provide safe and efficient access to the Port and industrial land in the western part of The Dalles (the area located east of the interchange). In addition to its primary function, the Chenoweth Interchange remains an important facility for accessing the Discovery Center and existing commercial lands in the vicinity of the city's industrial center. The interchange also serves local residential and commercial traffic circulating from I-84 to Highway 30 and West 6th Street.*
- The IAMP transportation improvement plan elements located on County facilities, as illustrated in Figure 7-1 and listed in Table 7-1, shall be included in the recommended transportation improvements project list of the Wasco County Transportation System Plan.

### **Oregon Transportation Commission**

- The I-84 Chenoweth IAMP shall be adopted by the Oregon Transportation Commission as part of the Oregon Highway Plan.

### **Other City Amendments**

The following outlines other major amendments that will need to occur at the city level to support adoption of the I-84 Chenoweth IAMP.

- The City shall adopt an Interchange Area Management Plan Overlay District that includes the submittal requirements, review standards, and administration fees for IAMP monitoring and updates for land use amendment and design review applications within the district.
- The City will adopt a Supplemental Transportation System Development Charge (STSDC) that will finance transportation improvements in the vicinity of the I-84 Chenoweth Interchange (*see proposed methodology in Appendix "I"*). This new STSDC will

be administered through the City's existing System Development Charge (SDC) program but will have its own methodology for assessing fees (*See Appendix "I"*). Because the STSDC involves a new fee, state law and City regulation requires that it be adopted through a formal amendment process that includes a public review and comment period and approval of the new methodology by ordinance [ORD 3-8.4(B)]. Pursuant to the existing City ordinance, the procedure to enact an STSDC improvement fee includes adopting a plan that contains the list of projects needed to serve growth in the fee area (in this case, adoption of the IAMP) and providing written notice at least 30 days prior to adoption of the proposed fee to those who have requested notice [ORD 3-8.8].

## MONITORING ELEMENTS

The purpose of the IAMP is to ensure that capacity at the interchange is preserved for its intended function. The IAMP needs to remain dynamic and responsive to development and changes to the adopted land use and transportation plans. To accomplish this goal, monitoring should be agreed upon by the City of The Dalles, Wasco County, and ODOT in an Intergovernmental Agreement (IGA) identifying triggers for reviewing the IAMP and how development within the Overlay District will be reviewed and coordinated with all parties.

### ***Intergovernmental Agreement (IGA)***

To ensure that the Chenoweth IAMP continues to preserve operational integrity and safety of the I-84 Chenoweth Interchange, the City of The Dalles, Wasco County, and ODOT will develop an Intergovernmental Agreement (IGA) stipulating each agency's funding obligations to the transportation improvements in the Plan and to the following monitoring and update program:

- The agencies will review the IAMP pursuant to the "triggers" described below to ensure that the original assumptions and recommendations regarding the interchange, local circulation system, funding obligations, access management, land use management, and coordination efforts are still appropriate and effective given the current and projected future conditions inside the interchange management area. This review should be conducted through a meeting initiated by the City of The Dalles or ODOT and should include all affected agencies.
- In addition to the established triggers for IAMP review, the agencies can request a review of the IAMP at any time if, in their determination, specific land use or transportation changes warrant a review of the underlying assumptions and/or recommendations within the IAMP.
- If the participants in the IAMP review meeting agree that, once the impacts of the "trigger" that necessitated the review are examined, an IAMP amendment is not warranted, a recommendation of "no action" may be documented and submitted in the form of a letter to the City of The Dalles City Council, Wasco County Court, and the Oregon Transportation Commission.
- If the findings and conclusions from the IAMP review meeting demonstrate the need for an update to the plan, review participants will initiate an IAMP update process. Initial steps in

updating the IAMP will include scoping the planning process, identifying funding, and outlining a schedule for plan completion. Once completed, IAMP updates will be required to be legislatively adopted, requiring a City Council public hearing, as an amendment to the City of The Dalles Transportation System Plan and will be adopted by Wasco County Court (if affected) and the Oregon Transportation Commission as an update to the Oregon Highway Plan.

#### IAMP Review Triggers

Periodically, the IAMP implementation program will need to be evaluated to ensure it is accomplishing this goal. Events that will trigger an IAMP review include:

- Every fifth year from the date of IAMP adoption or latest update.
- Every cumulative addition of 250,000 sq. ft. of floor area within the IMSA.
- Cumulative trips from approved development within the IMSA exceed the combined trip budget for the subject parcels by more than 200 trips.
- Plan map and zone changes that have a “significant affect” per the Transportation Planning Rule<sup>4</sup> and impact the I-84 Chenoweth Interchange.<sup>5</sup>
- Mobility measures at the River Road/I-84 Ramp Terminal intersections or River Road/West 6<sup>th</sup> Street/US 30 intersection exceed the forecasted mobility measures presented in Section 7.

It is recommended that the IAMP monitoring program be linked to a review of the system development charge methodology and fees associated with the Overlay District. Examining the STSDC program as part of an IAMP update will ensure that sufficient revenue is being generated to finance necessary improvements. During an IAMP review, trips may be reallocated, provided that the overall area total for the Overlay District is not exceeded.

#### **Development Review within the Overlay District**

The following outlines the transportation requirements for development and zone change applications within the Chenoweth Interchange Overlay District and describes how The City of The

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<sup>4</sup> Plan map or zone changes that result in equal to or less trips than included in the Trip Allocation Budget (see Appendix “C”) would not have a “significant affect”.

<sup>5</sup> A City amendment of the UGB in the vicinity of the interchange would also require an IAMP update, as land would be re-designated to allow urban uses. The Dalles Growth Management Report (2007) documents the City’s intent to amend the Urban Growth Boundary and designate URA areas to the north/northwest of the city, including lands in the vicinity of the interchange. While the City has not adopted the report in its entirety through a legislative process, supportive source reports and analyses, such as the population forecast, have been adopted. Due to uncertainty as to when, or if, the UGB may be expanded within the National Scenic Area, the IAMP assumes that areas outside of the current UGB will not generate new trips within the 20-year planning horizon. The IAMP should be amended to reflect a revised future growth scenario when the UGB is updated.

Dalles and Wasco County should coordinate with ODOT. The intent of the overlay district and associated transportation requirements is to allow the City and development within the District to rely upon the planning work completed for the IAMP that identifies the transportation needs in the area and utilize a streamlined development review process requiring limited additional transportation analysis if the development is consistent with the Plan.

#### Transportation Assessment Report

For all development applications located within the Chenoweth Interchange Overlay District, the applicant shall prepare and submit to the City a Transportation Assessment Report that documents the following:

- a) Expected weekday p.m. peak hour trip generation.
- b) Documents whether or not the expected weekday p.m. peak hour generation is equal to or less than the trip allocation for each parcel documented in the SDC Methodology Memorandum (see Appendix "I" of the I-84 Chenoweth IAMP Technical Appendix).
- c) Calculates the STSDC for the proposed development.
- d) Identifies any SDC Discount Options being requested and documents what actions/activities will be included to achieve such discount.
- e) If applicable, recalculates the weekday p.m. peak hour trip generation and STSDC based on the requested SDC Discount Option.
- f) Identifies how they comply with the IAMP, what off-site improvements will be constructed as part of the development, and which improvements are STSDC creditable.
- g) Reviews proposed site-access driveways and streets to ensure compliance with the IAMP Access Management Plan and that adequate intersection sight distance and traffic control will be provided.
- h) Reviews on-site parking and circulation plan to ensure safe and efficient travel for all modes of travel and includes AutoTurn analyses for anticipated trucks and emergency service vehicles.

#### Traffic Impact Analysis

All development applications located within the Chenoweth Interchange Overlay District that meet the following conditions are required to prepare and submit a Transportation Impact Analysis (TIA) to demonstrate the level of impact of the proposed development on the surrounding street system:

- a) a zone change and/or comprehensive amendment that results in an increase in trips as compared to the Trip Allocation Budget (see Appendix "C"),
- b) proposed use exceeds the Trip Allocation Budget by 25 percent, or
- c) proposed use exceeds the number of allocated weekday p.m. peak hour trips in the Trip Allocation Budget by 25 or more.

The determination of impact or effect, and the scope of the TIA, shall be coordinated with the City of The Dalles, Wasco County, and ODOT. The TIA shall also document all elements required as part



of the Transportation Assessment Report (see above). The developer shall be required to mitigate impacts attributable to the project.

### **Trip Budget and STSDC Monitoring**

- The City shall account for projected weekday p.m. peak hour trips generated by all new development and redevelopment within the I-84 Chenoweth Interchange Area Management Plan Overlay District and track how the projected trips compare with the trip budget included in the STSDC Methodology Memorandum (see Appendix "I" of the IAMP Technical Appendix).
- The City shall document all STSDCs received and credits provided and provide current accounting of all funds.
- The City shall provide an Annual IAMP Report to ODOT documenting the status of the Overlay District Trip Budget and STSDC funds. This could include collecting actual trip generation to compare to projected trip generation from new development.
  - If the report indicates that the Trip Budget is being exceeded and/or there are not enough funds being collected by the STSDC to construct the necessary transportation improvements, the following remedies should be considered:
    - Increase the "threshold" and/or "surcharge" STSDC trip rate;
    - Implement more aggressive TDM measures within the Overlay District; and,
    - Adopt the Vision Plan improvements into the IAMP and incorporate them into the STSDC.

### **ODOT Coordination**

- The City shall not deem the land use application complete unless it includes a Traffic Assessment Report or, if required, a Transportation Impact Study prepared in accordance with the requirements as described above.
- The City shall provide written notification to ODOT when the application is deemed complete. This notice shall include an invitation to ODOT to participate in the City's site team review meeting (Pursuant to the city's Pre-Application Requirements).
- ODOT shall have at least 20 days, measured from the date completion notice was mailed, to provide written comments to the City. If ODOT does not provide written comments during this 20-day period, the City staff report will be issued without consideration of ODOT comments.

### **Administration Fee**

The City of The Dalles should set and require an administration fee for IAMP monitoring and updates for all site plan review applications within the Overlay District.

**Section 9**  
OAR and OHP  
Compliance

## OAR and OHP Compliance

The following section discusses the Oregon Administrative Rule (OAR) and 1999 Oregon Highway Plan (OHP) policy based compliance issues that pertain to the development of the I-84 Chenoweth IAMP.

### OAR COMPLIANCE

The I-84 Chenoweth IAMP was developed in collaboration with the City of The Dalles, Wasco County, and ODOT and was developed in accordance with the guidelines set forth in the State of Oregon's Oregon Administrative Rules for Interchange Access Management Planning and Interchange Area Management Planning. Table 9-1 identifies the required planning elements from OAR 734-051 and documents how the I-84 Chenoweth IAMP satisfies the requirements.

**TABLE 9-1 OAR 734-051 ISSUES ADDRESSED**

| OAR 734-0051-0155 Requirement  | How Addressed   | Report Reference                                 |
|--|---|--|
| Should be developed no later than the time the interchange is being developed or redeveloped<br>-0155(7)(a)  | This plan was developed in order to determine the future impacts of recent land use decisions on the function of the interchange. The plan was completed before any of the identified improvements to the interchange are necessary.  | Section 1  |
| Should identify opportunities to improve operations and safety in conjunction with roadway projects and property development or redevelopment and adopt strategies and development standards to capture those opportunities<br>-0155(7)(b) | The access and land use management elements identified in this plan, as well as incorporated into the proposed land development ordinance amendments and a proposed ordinance for a new Supplemental Transportation System Development Charge, will result in operational and capacity improvements.  | Section 1<br>Section 6<br>Section 7<br>Section 8 |
| Should include short, medium, and long-term actions to improve operations and safety in the interchange area<br>-0155(7)(c)  | The IAMP includes a phasing plan for the transportation system improvements, which includes a threshold analysis for determining how much development can be accommodated by each phase of improvements. Phase 1 (intersection improvements) includes short-term actions necessary to accommodate 10% of full build-out of the area. Phase 2 mid-term improvements include signaling the interchange ramp terminals and a series of roundabouts on the local street system, will accommodate 55% of full build-out of the area. The Hostetler Street Connection is the major component of Phase 3, long-term improvements, which will allow for 75% build-out. The final phase is the long-term "Vision Improvements. This Phase 4 will likely occur beyond the 20-year time horizon and involves bridge widening to accommodate a 6-lane cross-section.<br><br>The proposed Access Management Plan can be developed concurrently with improvements at all locations with the exception of along West 6th Street where it cannot be fully implemented until both proposed roundabouts on West 6th Street are operational (Phase 3). | Section 7<br>Section 8                           |

| OAR 734-0051-0155 Requirement   | How Addressed   | Report Reference                                 |
|---|---|--|
| Should consider current and future traffic volumes and flows, roadway geometry, traffic control devices, current and planned land uses and zoning, and the location of all current and planned approaches<br>-0155(7)(d)  | A full analysis of existing and forecast (2030) operational, geometric, and safety conditions was conducted for this planning effort. All surrounding land use was also identified, as were all affected accesses.  | Section 4<br>Section 5<br>Section 6              |
| Should provide adequate assurance of the safe operation of the facility through the design traffic forecast period, typically 20 years<br>-0155(7)(e)   | The forecast analysis shows that safe operations will be achieved for the interchange through 2030.   | Section 6  |
| Should consider existing and proposed uses of all property in the interchange area consistent with its comprehensive plan designations and zoning<br>-155(7)(f)   | A thorough analysis of surrounding land uses and land use potentials was performed, including modeling of alternate land use scenarios for the 67 acres zoned Commercial/Light Industrial. This analysis resulted in trip assignments for each parcel in the study (overlay) area, based on accommodating 85% of full build-out development and funding the necessary Phase 1, Phase 2, and Phase 3 (near-, mid-, and long-term improvements).  | Section 4<br>Section 5<br>Section 6<br>Section 7 |
| Is consistent with any applicable Access Management Plan, corridor plan or other facility plan adopted by the Oregon Transportation Commission-0155(7)(g)   | The I-84 Chenoweth Interchange Area Management Plan is consistent with the 1999 OHP. (See following table). No other applicable plans adopted by the OTC were identified.   | Section 3<br>Section 8                           |
| Includes polices, provisions and standards from local comprehensive plans, transportation system plans, and land use and subdivision codes that are relied upon for consistency and that are relied upon to implement the Interchange Area Management Plan.<br>-155(7)(h) | Implementation of the IAMP is reliant upon the City of The Dalles and Wasco County amending their respective Transportation System Plans to incorporate the transportation improvements associated with the Preferred Plan. In addition, implementation of the IAMP will occur through the City of The Dalles amending the Land Use and Development Ordinance to include an IAMP overlay district. The Chenoweth Interchange Overlay District (CIOD) contains the submittal requirements and review standards for land use amendment and development proposals within the district; access management standards and local street connectivity requirements will be based on the IAMP.<br><br>The City will also adopt a Supplemental Transportation System Development Charge (STSDC) that will finance transportation improvements in the vicinity of the I-84 Chenoweth Interchange (Appendix I). Amendments will ensure that future development and land use actions within the interchange management area do not degrade the interchange terminal volume to capacity ratios below the adopted Oregon Highway Plan mobility standards. These amendments include coordination between agencies, traffic impact analysis requirements, monitoring of traffic operations, and access management requirements.<br><br>The locally amended TSPs (City of The Dalles and Wasco County) and the two proposed City ordinances (CIOD and STSDC), are the documents that will be relied upon to implement the IAMP. | Section 3<br>Section 7<br>Section 8              |

| <b>THE PLAN WILL DETERMINE</b>   |   |                         |
|--|---|-------------------------|
| <b>OAR 734-051-0155 Requirement</b>  | <b>Determination</b>  | <b>Report Reference</b> |
| Driveway and roadway spacing and connections   | The operational analysis considered all access points and intersections within approximately 1/2 mile from the existing I-84 Chenoweth Interchange, including all key intersections that have potential to affect traffic operations in the interchange area over the planning period. The resulting Access Management Plan implements the 1/4 mile spacing requirements with the exception of public street access points on River Road at River Trail Way and on 6 <sup>th</sup> Street at Division Street and Irvine Street. | Section 7               |
| Local street connections to ensure adequate access to properties and off-highway circulation   | The IAMP includes a proposed local street circulation pattern (Figure 7-1, Transportation Improvement Plan, and Table 7-1).   | Section 7<br>Section 8  |
| Median treatments  | Median treatments are proposed for West 6 <sup>th</sup> Street to meet ODOT access management standards (Figure 7-1, Transportation Improvement Plan).  | Section 7               |
| Location and type of traffic control devices needed to ensure safe and efficient operations in the operational area of the interchange               | Signalizing the ramp terminals is included in Phase 2 improvements. Roundabouts at River Road/River Trail Way, River Road/West 6th Street (US 30), and West 6th Street/Chenoweth Loop are also planned as part of Phase 2. Signals at the Hostetler under-crossing are included in Phase 3 improvements. Figure 7-7 shows all necessary traffic control within the IMSA.  | Section 7               |
| Location of sidewalks and bicycle lanes  | Sidewalks and bicycle lanes will be constructed on the local street system consistent with City standards. Bridge widening in Phase 4 (expected sometime beyond the IAMP planning horizon) will include sidewalks and bicycle lanes.  | Section 7               |
| Sidewalk and bicycle lane crossings (highway and ramp crossings)   | NA – See above.   | NA                      |
| Location of potential transit facilities (turnouts, shelters, park and ride areas)   | Transit facilities were not considered as part of the IAMP because fixed route transit service does not exist nor is planned within the study area.   | NA                      |
| Is new policy language needed in the City of The Dalles and/or Wasco County Comprehensive Plan to support adequate long-term interchange operations? | The City of The Dalles and Wasco County will amend their respective Transportation System Plans to incorporate the interchange policy statement (see Section 8). In addition, the City will amend its zoning ordinance to implement transportation demand management measures and development review standards.   | Section 8               |

| THE PLAN WILL DETERMINE  |  |                        |
|--|--|------------------------|
| OAR 734-051-0155 Requirement   | Determination  | Report Reference       |
| Are any land use changes/comprehensive plan (including TSP) amendments needed to implement the Interchange Area Management Plan? | <p>The City of The Dalles and Wasco County will amend their respective Transportation System Plans to incorporate the transportation improvements associated with the Preferred Plan.</p> <p>The City of The Dalles will amend the Land Use and Development Ordinance to include an Interchange Area Management Plan Overlay District that contains the submittal requirements and review standards for land use amendment and development proposals within the district.</p> <p>The City will also adopt a Supplemental Transportation System Development Charge (STSDC) that will finance transportation improvements in the vicinity of the I-84 Chenoweth Interchange (Appendix I). Amendments will ensure that future development and land use actions within the interchange management area do not degrade the interchange terminal volume to capacity ratios below the adopted Oregon Highway Plan mobility standards. These amendments include coordination between agencies, traffic impact analysis requirements, monitoring of traffic operations, and access management requirements.</p> | Section 8              |
| Are any deviations from OHP and OAR 731-051 standards and requirements needed?   | Deviations to the OHP access spacing standards are required on 6 <sup>th</sup> Street and River Road. The Access Management Plan and the OHP Compliance section describe how each of the necessary deviations meets the requirements of Division 51. The IAMP and Implementation Plan define all the necessary standards and requirements.   | Section 7<br>Section 8 |

## OREGON HIGHWAY PLAN COMPLIANCE

The I-84 Chenoweth IAMP was developed in accordance with the policies set forth in the Oregon Highway Plan (OHP). The following identifies the OHP policies that pertain to the I-84 Chenoweth IAMP and how the IAMP satisfies the requirements.

Policy 1A: State Highway Classification System. The state highway classification system includes five classifications: Interstate, Statewide, Regional, District, and Local Interest Roads. In addition, there are four special purpose categories that overlay the basic classifications: special land use areas, statewide freight route, scenic byways, and lifeline routes. Interstate-84 is an Interstate Highway and is part of the National Highway System (NHS). The Policy 1A definition states: "Interstate Highways provide connections to major cities, regions of the state, and other states. A secondary function in urban areas is to provide connections for regional trips within the metropolitan area. The Interstate Highways are major freight routes and their objective is to provide mobility. The management objective is to provide for safe and efficient high-speed continuous-flow operation in urban and rural areas."

*How Addressed:* The I-84 Chenoweth IAMP recognized I-84 as an Interstate Highway, complies with the mobility standards of the interchange in the 20-year horizon, and along with a transportation improvement plan that provides for new and improved local facilities that will reduce travel on I-84 for local trips.

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Policy 1B: Land Use and Transportation. This policy recognizes the role of both the State and local governments related to the state highway system and calls for a coordinated approach to land use and transportation planning.

*How Addressed:* The IAMP was developed through a cooperative planning effort between the City of The Dalles, Wasco County, and DLCD. The IAMP will be implemented by the City of The Dalles and Wasco County through an Interchange Management Overlay District which will require coordinated agency review on all future development or land use actions within the District.

Policy 1C: State Highway Freight System. This policy recognizes the need for the efficient movement of freight through the state. Interstate-84 is a designated freight route.

*How Addressed:* The transportation improvement plan improves local connectivity to and within an industrial area adjacent to the I-84 Chenoweth Interchange for the purpose of reducing traffic volume demand at the interchange and improving accessibility for heavy vehicles to the area.

Policy 1F: Highway Mobility Standards Access Management Policy. This policy addresses state highway performance expectations, providing guidance for managing access and traffic control systems related to interchanges.

*How Addressed:* The I-84 Chenoweth IAMP demonstrates that the interchange will meet ODOT mobility standards through the 20-year horizon. It also provides an access management plan that improves access management within the study area.

Policy 1G: Major Improvements. This policy requires maintaining performance and improving safety by improving efficiency and management before adding capacity.

*How Addressed:* The I-84 Chenoweth IAMP provides measures to increase efficiency through access management and provides improvements to the local street system that reduces the need to widen the Chenoweth Interchange bridge structure within the planning horizon.

Policy 2B: Off-System Improvements. This policy recognizes that the state may provide financial assistance to local jurisdictions to make improvements to local transportation systems if the improvements would provide a cost-effective means of improving the operations of the state highway system.

*How Addressed:* As part of the I-84 Chenoweth IAMP process, ODOT is providing in kind project management to the City of The Dalles. The transportation improvement funding plan also includes a financial commitment from ODOT to participate in improvements on West 6<sup>th</sup> Street (a city facility) to help achieve ODOT's access spacing requirements.

Policy 2F: Traffic Safety. This policy emphasizes the state's efforts to improve safety of all uses of the highway system. Action 2F.4 addresses the development and implementation of the Safety Management System to target resources to sites with the most significant safety issues.

*How Addressed:* No existing safety deficiencies were identified within the study area, with the exception of limited sight distance at the interchange ramp terminals. However, an Access Management Plan was developed to ensure the long-term safety of the interchange area.

Policy 3A: Classification and Spacing Standards. This policy addresses the location, spacing and type of road and street intersections and approach roads on state highways. The adopted standards can be found in Appendix C of the Oregon Highway Plan. It includes standards for each highway classification; the I-84 Chenoweth Interchange is a urban interchange on an Interstate Highway with an existing two-lane crossroad. There are currently no plans for improvements to the interchange. Generally, the access spacing distance increases as either the highway's importance or posted speed increases. The current adopted spacing standard from the end of the Chenoweth Interchange entrance/exit ramps to the first major intersection is 1,320 feet.

*How Addressed:* See Policy 3C.

Policy 3C: Interchange Access Management Areas. This policy addresses management of grade-separated interchange areas to ensure safe and efficient operation between connecting roadways. Action items include developing interchange area management plans to protect the function of the interchange to provide safe and efficient operations between connecting roadways and to minimize the need for major improvements of existing interchanges. The local jurisdiction's role in access management is stated in Policy 3C as follows: "necessary supporting improvements, such as road networks, channelization, medians and access control in the interchange management area must be identified in the local comprehensive plan and committed with an identified funding source, or must be in place (Action 3C.2)."

Access management standards are detailed in Policy 3C and include the distance required between an interchange and approaches and intersections. The most stringent standards apply in interchange areas. Table 17 of the OHP<sup>6</sup> contains the minimum spacing standards applicable to the I-84 Chenoweth Interchange, a freeway interchange that will have a multi-lane crossroad. The spacing standards in an urban area for this type of interchange are:

- |                    |  |
|--------------------|--|
| 1 miles (3.2 km)   | Distance between the start and end of tapers of adjacent interchanges.                                 |
| 1,320 feet (400 m) | Distance to the first approach on the right (right in/right out only)                                  |
| 1,320 feet (400 m) | Distance to the first major intersection or approach (no left turns allowed).                          |
| 1,320 feet (400 m) | Distance between the last right in/right out approach road and the start of the taper for the on-ramp. |

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<sup>6</sup> Although the IMSA is not fully developed, the IAMP is planning for full development for the IMSA and the existing access locations that do not meet ODOT's standards are along West 6<sup>th</sup> Street which is currently fully developed within 1,320-feet from the interchange.



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*How Addressed:* The I-84 Chenoweth IAMP includes an Access Management Plan that consolidates access points and improves access spacing over the existing conditions. Ultimately, upon land redevelopment, access on the west side of the interchange will provide 350 feet of access spacing from the I-84 eastbound ramp terminal to the first full access to accommodate an existing intersection with Highway 30 and approximately 850 feet to the first right-in/right-out/left-in access point to a local public street approach through a deviation process. The east side of the interchange will require a deviation from the standard to 1,300 feet to the first full access due to topographic constraints and 750 feet to the first right-in/right-out in order to provide reasonable site access to developable parcel.

Policy 4A: Efficiency of Freight Movement. This policy emphasizes the need to maintain and improve the efficiency of freight movement on the state highway system. Interstate-84 is a designated Freight Route.

*How Addressed:* The transportation improvement plan improves local connectivity to and within an industrial area adjacent to the I-84 Chenoweth Interchange for the purpose of reducing traffic volume demand at the interchange while also improving the efficiency of freight movement on the local roadway system.

Policy 5B: Scenic Resources. This policy applies to all state highways and commits the State to using best management practices to protect and enhance scenic resources in all phases of highway project planning, development, construction, and maintenance.

*How Addressed:* This policy was considered as part of the plan development.

**Section 10**  
References

## **References**

1. Oregon Department of Transportation. 1999 Oregon Highway Plan. 1999
2. Oregon Department of Transportation. Analysis Procedures Manual. 2006.
3. Transportation Research Board. Highway Capacity Manual. 2000.
4. Institute of Traffic Engineers. Trip Generation, 7<sup>th</sup> Edition. 2003.

**Appendix A**  
Meeting Summaries

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**SC Meeting #1**  
**I-84 Chenoweth Interchange Area Management Plan (IAMP)**  
**December 3, 2008 at 1 p.m.**  
**City Hall, City of The Dalles, Oregon**

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The following documents the participants and discussion items from the December 3, 2008 Steering Committee Meeting for the I-84/ Chenoweth Road Interchange Area Management Plan (IAMP).

**Participants:**

ODOT: Ana Jovanovic, Brad DeHart, and Sam Wilkins

City of The Dalles: Richard Gassman and Dan Durow

Wasco County: Todd Cornett

Kittelson & Associates: Susan Wright, Casey Bergh

Angelo Planning: Darci Rudzinski

**Absent:**

Kittelson & Associates: Marc Butorac

**Agenda Items:**

1. Meeting Purpose & Introductions

Susan Wright talked through the Meeting Schedule and Deliverables Summary Memo provided at the meeting. The meeting schedule and review of project materials will be consistent throughout project duration.

SC responsibilities are outlined in the Meeting Schedule and Deliverables Summary Memo. SC members agree to meet the identified deadlines for all deliverables.

2. IAMP 101

- a. Susan Wright lead SC through a presentation on IAMPs

3. Technical Memo #1: Definition and Background

- a. Dan Durow asked that IAMP not do anything that could potentially limit options for a new bridge over the Columbia River in/near The Dalles.
- b. The defined Interchange Function in Draft Memo #1 was discussed.

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- i. City's priorities were discussed which include promoting economic development (industrial uses/jobs) as well as providing locations for large-scale retail.
      - ii. SC members to provide written outline of priorities to Ana.
    - c. Discussion of how IAMP will impact WM3's development/zoning.
      - i. WM3's property is currently zoned CLI but development of the full property is conditioned upon completing the IAMP; not necessarily the findings of the IAMP.
      - ii. Two future background scenarios will be developed for the WM3 property in Tech Memo #4: Future Background Conditions. Both scenarios will include 25 acres of WM3's 67-acre property developed with a Wal-Mart. One scenario will include the remaining 42 acres developed with industrial land use and the other with commercial land uses.
    - d. IMSA Map Review
      - i. KAI will update the IMSA map to include additional properties southeast of the interchange, including the environmentally sensitive sites.
      - ii. KAI will create a separate map boundary to be referred to as "Service Area" that will include all properties that utilize the interchange for their primary access to I-84.
      - iii. Study area to include properties on River Rd south to Webber.
  - 4. Technical Memo #2: Adopted Plans and Regulations
    - a. Darci provided a summary of memo. Additional documents/policy was suggested to be added (Wasco County National Scenic Lands Ordinance)
  - 5. Concluding Comments/Next steps
    - a. Agency staff to provide comments on Tech Memos #1 and #2 and IMSA map to Ana by Friday, Dec 5.
    - b. SC agreed that for future TAC and SC meeting they would meet concurrently with the TAC and then follow that meeting with a one-hour SC specific meeting, if necessary.

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**TAC Meeting #1 Minutes**  
**I-84 Chenoweth Interchange Area Management Plan (IAMP)**  
**December 3, 2008, 10 a.m. to Noon**  
**City Hall, City of The Dalles, Oregon**

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The following documents the participants and discussion items from the December 3, 2008 TAC Meeting for the I-84/ Chenoweth Road Interchange Area Management Plan (IAMP).

**Participants:**

ODOT: Ana Jovanovic, David Boyd, Brad DeHart, Rod Cathcart, Tracy White  
DLCD: Mark Radabaugh  
City of The Dalles: Richard Gassman and Dale McCabe  
Wasco County: Marty Matherly and Gary Nychyk  
Kittelson & Associates: Susan Wright, Marc Butorac, and Casey Bergh  
Angelo Planning: Darci Rudzinski

**Absent:**

ODOT: Mark Devoney  
Wasco County: Gary Nychyk

**Agenda Items:**

1. Meeting Purpose & Introductions

Marc Butorac talked through the Meeting Schedule and Deliverables Summary Memo provided at the meeting. The meeting schedule and review of project materials will be consistent throughout project duration.

TAC responsibilities are outlined in the Meeting Schedule and Deliverables Summary Memo. TAC members agree to meet the identified deadlines for all deliverables.

2. IAMP 101

- a. Marc Butorac lead the TAC through a presentation on IAMPs

3. Technical Memo #1: Definition and Background

- a. Significant time spent discussing the Interchange Function as described in Draft Memo #1. Each TAC member agreed to provide comments on the Interchange Function to Ana.

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- b. Discussion of how IAMP impacts WM3's development/zoning.
    - i. WM3's property is currently zoned CLI but development of the full property is conditioned upon completing the IAMP; not necessarily the findings of the IAMP.
    - ii. Two future background scenarios will be developed for the WM3 property in Tech Memo #4: Future Background Conditions. Both scenarios will include 25 acres of WM3's 67-acre property developed with a Wal-Mart. One scenario will include the remaining 42 acres developed with industrial land use and the other with commercial land uses.
  - c. IMSA Map Review
    - i. KAI will update the IMSA map to include additional properties southeast of the interchange, including the environmentally sensitive sites.
    - ii. KAI will create a separate map boundary to be referred to as "Service Area" that will include all properties that utilize the interchange for their primary access to I-84.
    - iii. Study area to include properties on River Rd south to Webber.
4. Technical Memo #2: Adopted Plans and Regulations
- a. Darci provided a summary of memo. Additional documents/policies were suggested to be added. Written comments will be submitted by the TAC.
5. Update on Stakeholder Interviews
- a. Darci noted that interviews are underway and no overwhelmingly negative comments have surfaced.
  - b. No resident of the study area has been included in the interviews. The need to include one was discussed.
  - c. A local cyclist organization was suggested to be added.
6. Concluding Comments/Next steps
- a. Richard and Marty to discuss potential Open House and City Council meeting dates.
  - b. All TAC members asked to provide comments on Tech Memos #1 and #2 to Ana by Friday, Dec 5.
  - c. Rod and David would like memos containing operational analysis at the same time as Ana to provide more review time.



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**TAC/SC Meeting #2 Minutes**  
**I-84 Chenoweth Interchange Area Management Plan (IAMP)**  
**February 11, 2009, 10 a.m. to 1 p.m.**  
**City Hall, City of The Dalles, Oregon**

---

The following documents the participants and discussion items from the February 11, 2009 joint TAC/SC Meeting for the I-84/ Chenoweth Road Interchange Area Management Plan (IAMP).

**Participants:**

ODOT: Ana Jovanovic, David Boyd, Brad DeHart, Rod Cathcart, Tracy White, Mark DeVoney, Sam Wilkins

DLCD: Mark Radabaugh

City of The Dalles: Richard Gassman, Dale McCabe, Dan Durrow

Wasco County: Marty Matherly and Gary Nychyk, Todd Cornett

Kittelson & Associates: Susan Wright and Marc Butorac

Angelo Planning: Darci Rudzinski

**Absent:**

Kittelson & Associates: Casey Bergh

**Agenda Items:**

1. Brief overview of finalized memos

Susie Wright walked the TAC/SC through the finalized documents and meeting minutes available on the ftp site.

2. Review Stakeholder Report

Darci Rudzinski gave a brief presentation on the Stakeholder Interview Report. Specific development plans that were revealed through the interviews were discussed. It was also discussed that each of the stakeholders would be added to the Open House mailing list.

3. Review Draft memos #3/4 and #5/6

Susie Wright provided a brief overview of Draft Tech Memos #3/4 and #5/6. Issues that were raised for discussion included visibility at the ramp terminals (this section of the report will be updated with information ODOT is collecting) and assumptions for development/re-development and assumed FARs. It was agreed that more information

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would be provided in Tech Memo #5/6 on the total acreage of property in each sub-area and the amount being assumed for redevelopment. It was also agreed that the FARs would be approached in two steps. The first step being to remove 20% of the property for roads and utilities and then applying a 25% FAR to commercial and 40% FAR to industrial. The code maximum FARs were also agreed to be investigated.

#### 4. Access Management 101/Local Circulation 101 and Design Workshop

Marc Butorac provided a brief 101 course on Access Management and Local Circulation and then had the TAC and SC participate in a design workshop. Alternatives were created that will be evaluated by the consultant team.

It was agreed that the design worksheet would include a larger area for the Design Workshop at the Public Open House.

#### 5. Public Open House

It was agreed that Local Agency Presentation #1 and Public Open House#1 would be combined and would occur on March 5<sup>th</sup> at 6 p.m. at the Civic Auditorium.

Kittelson agreed to prepare the flyer and provide it to ODOT, City, and County for distribution. The invitation will be posted to the ODOT website and linked to the City and County websites. The flyer will be mailed out to all tax lots within the study area as well as the stakeholders from the stakeholder interviews. The meeting will also be announced at the WM3 public hearing.

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**TAC/SC Meeting #3 Minutes**  
**I-84 Chenoweth Interchange Area Management Plan (IAMP)**

**April 8, 2009, 10 a.m. to 1 p.m.**

**City Hall, City of The Dalles, Oregon**

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The following documents the participants and discussion items from the April 8, 2009 joint TAC/SC Meeting for the I-84/ Chenoweth Road Interchange Area Management Plan (IAMP).

**Participants:**

ODOT: Ana Jovanovic, David Boyd, Brad DeHart, Rod Cathcart, and Tracy White

DLCD: Mark Radabaugh

City of The Dalles: Richard Gassman, Dale McCabe, and Dan Durrow

Wasco County: Marty Matherly and Todd Cornett

Kittelson & Associates: Susan Wright, Marc Butorac, and Casey Bergh

Angelo Planning: Darci Rudzinski

**Absent:**

ODOT: Mark DeVoney and Sam Wilkins

Wasco County: Gary Nychyk

**Agenda Items:**

1. Brief overview of documents on FTP site

Susie Wright walked the TAC/SC through the finalized documents and meeting minutes available on the ftp site.

2. Review Draft Memo #7

Susie Wright provided a brief overview presentation that summarized the concepts developed and the process used to eliminate some design concepts and identify others for more detailed evaluation.

Comments included a suggestion to conduct further analysis that associates a timeline with the capacity improvements based on a 20-year average growth estimate. Additionally it was suggested that roundabouts be evaluated at all intersections, on a comprehensive basis, for the Westerly alternatives.

3. Discuss Screening Process and Obtain Consensus on Feasible Alternatives

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Marc Butorac outlined the measures used to identify and screen out alternatives and asked for input on the process or opinions on which alternatives should be included in a refined analysis.

- Discussion included detailed information about the advantages and disadvantages of the various crossing locations of the UP railroad line.
- David Boyd asked for further consideration of the impacts of an additional crossing location on the operations at the Webber Street interchange. Further discussion ensued that centered on including Webber Street within the study area. It was agreed that this project will do everything to minimize impacts to the Webber Street Interchange, but a separate study is necessary at that interchange.
- Rod Cathcart asked that further explanation be provided in Memo #7
  - Define feasibility as it pertains to Table 7-1 and the cross-section of River Road over I-84.
  - Describe the ability or inability to widen the existing structure or how additional lanes would be constructed.
  - Provide supplemental information explaining the justification for screening out each alternative.

It was agreed that concept W-2 should be included in further analysis. All other alternatives identified in the preliminary screening process are the appropriate alternatives to carry forward for detailed analysis.

#### 4. Discuss Selection of a Preferred Alternative

Marc Butorac outlined the decisions that the TAC needed to make in order for the consultant to narrow the alternatives to one preferred alternative. Discussion focused on the use of land use management tools and the variety of options that could be implemented in conjunction with capacity improvements in order to accommodate future development.

Various TAC members stated that key criteria for identifying a preferred alternative is cost estimations and the impacts the location of the east-west connection has on reducing traffic at the Chenoweth Interchange or negatively impacting the Webber Street Interchange area.

The TAC agreed that KAI should identify a preferred alternative based on the discussions and priorities identified. KAI will present this plan in draft form at the April 30<sup>th</sup> Meeting.

#### 5. Concluding Comments/ Next Meeting

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It was agreed that the next meeting of the TAC will be April 30. Many of the TAC members will be in The Dalles for a meeting on the Wasco TSP project. A time will be determined in coordination with that meeting.

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## TAC/SC Meeting #3B (Extra) Minutes

### I-84 Chenoweth Interchange Area Management Plan (IAMP)

**February 11, 2009, 10 a.m. to 1 p.m.**

**City Hall, City of The Dalles, Oregon**

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The following documents the participants and discussion items from the April 30, 2009 joint TAC/SC Meeting for the I-84/ Chenoweth Road Interchange Area Management Plan (IAMP).

**Participants:**

ODOT: Ana Jovanovic, David Boyd (via phone), Brad DeHart, Rod Cathcart, Tracy White (via phone), and Sam Wilkins

[DLCD: Mark Radabaugh](#)

City of The Dalles: Richard Gassman, Dale McCabe, Dan Durow

Wasco County: Marty Matherly, Gary Nychyk

Kittelson & Associates: Susan Wright, Casey Bergh, and Marc Butorac

Angelo Planning: Darci Rudzinski

**Absent:**

ODOT: Mark Devoney

**Agenda Items:**

1. Review Refined Concept Evaluation and Preferred Alternative

- Brief overview of refined analysis conducted to identify preferred alternative.
- Summary of components of Preferred Alternative

2. Transportation Demand Management Tools Example

- Marc Butorac provided a brief example scenario on methods for managing traffic through use of TDM measures and SDCs.

3. Next Steps

- Next meeting of TAC will be on...

**Appendix B**  
Preliminary Roundabout  
Design Concept at River  
Road/River Trail Way

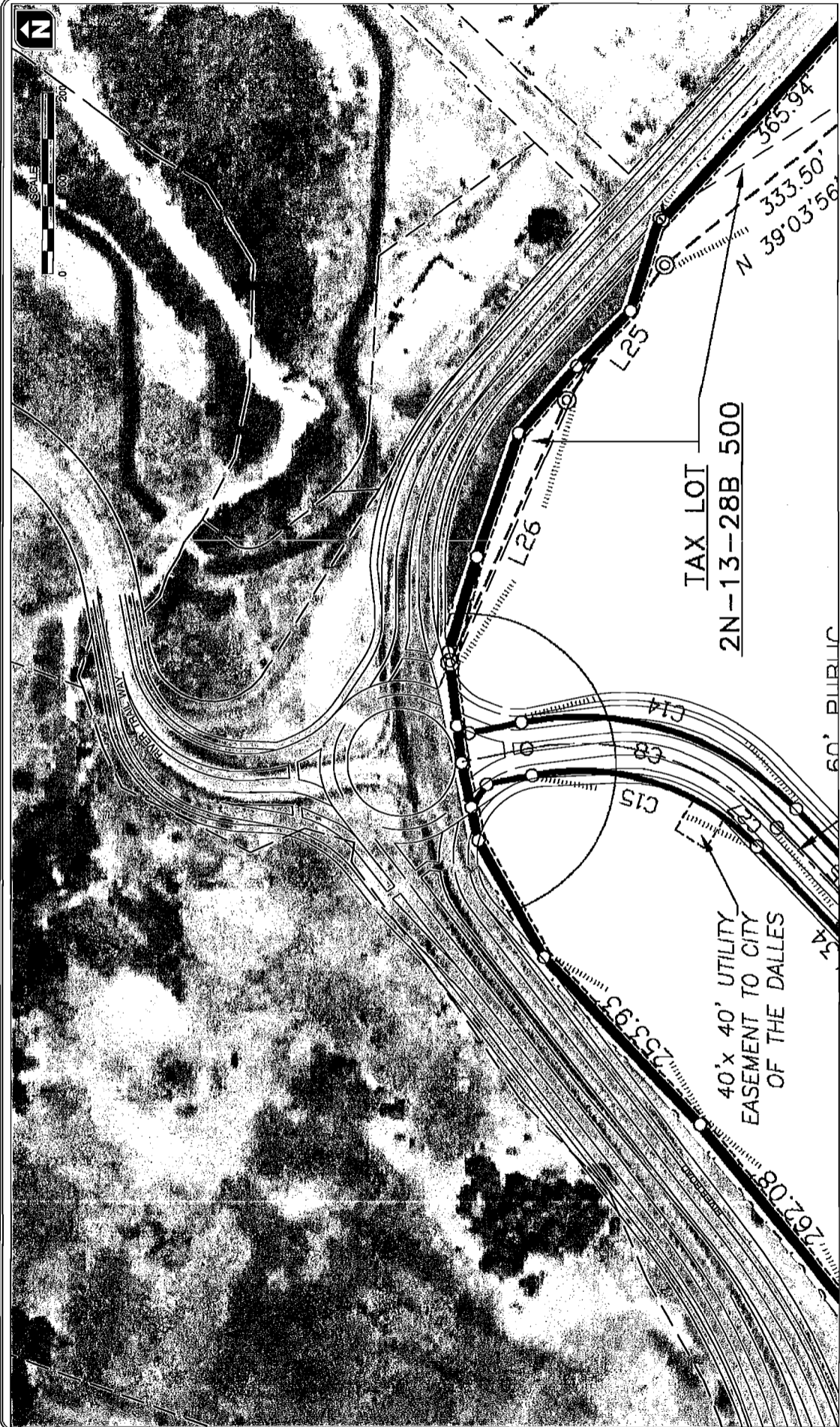


FIGURE B  
PRELIMINARY ROUNDABOUT DESIGN AT RIVER ROAD/RIVER TRAIL WAY  
THE DALLES, OREGON



**Appendix C**  
Trip Allocation Budget

Exhibit C - IAMP Transportation Improvement Plan - Scenario #2

| Improvement Reference | Improvement Type                          | Description   | Assumed ROW Cost | Total Cost (including ROW) | Funding Source |              |        |             |        |             |           |              |    |     |             |
|-----------------------|---|---|------------------|----------------------------|----------------|--------------|--------|-------------|--------|-------------|-----------|--------------|----|-----|-------------|
|                       |   |   |                  |                            | % SDC          | \$ SDC       | % City | \$ City     | % ODOT | \$ ODOT     | % Private | \$ Private   |    |     |             |
| E1                    | New Collector Roadway                     | Extend River Trail Way from 2nd Street to the Hosteller Street Extension  | \$3,012,000      | \$10,899,559               | 10%            | \$1,089,956  | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$9,809,603 |
| E2                    | UP Railroad Under-Crossing                | Provides Hosteller Street connection to River Road  | \$110,000        | \$11,804,175               | 100%           | \$11,804,175 | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| E3                    | New Collector Roadway                     | Extends Hosteller Street from 2nd Street to River Road  | \$374,000        | \$3,691,587                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$3,691,587 |
| E4                    | New Local Roadway (Long-term)             | Provides local business access  | \$934,000        | \$3,640,370                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$3,640,370 |
| E4B                   | New Local Roadway (Short-term)            | Provides local business access until environmental concerns can be mitigated and project E4 can be constructed                    | \$760,000        | \$3,021,618                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$3,021,618 |
| E5                    | New Local Roadway                         | Provides local business access  | \$817,000        | \$3,133,425                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$3,133,425 |
| E6                    | New Local Roadway                         | Provides local business access (variable alignment)   | \$773,000        | \$3,047,202                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$3,047,202 |
| E9                    | Intersection Improvement (Roundabout)     | Intersection control to accommodate future traffic at Hosteller Street/River Trail Way Extension                                  | \$250,000        | \$728,941                  | 100%           | \$728,941    | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| E10                   | Intersection Improvement (Roundabout)     | Intersection control to accommodate future traffic at reconstructed River Trail Way/River Road                                    | \$95,000         | \$619,754                  | 100%           | \$619,754    | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| E11                   | Intersection Improvement (Signal)         | Intersection control to accommodate future traffic at River Road/Crates Way (North)   |                  | \$300,000                  | 100%           | \$300,000    | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| E12                   | Intersection Improvement (Roundabout)     | Intersection control to accommodate future traffic at future connection of River Road and Hosteller Street                        | \$25,000         | \$500,000                  | 100%           | \$500,000    | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| E13                   | Intersection Improvement (Roundabout)     | Intersection control to accommodate future traffic at River Road/Jindt Drive  | \$25,000         | \$500,000                  | 100%           | \$500,000    | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| I1                    | Signalize Intersection                    | Accommodate weekday a.m. and p.m. peak hour travel demand at Eastbound I-84 Ramp Terminal   | \$0              | \$664,812                  | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$664,812   |
| I2                    | Signalize Intersection                    | Accommodate weekday a.m. and p.m. peak hour travel demand at Westbound I-84 Ramp Terminal   | \$0              | \$0                        | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| I3                    | Widen Bridge to 6 Lanes                   | Accommodate weekday peak hour travel demand   | \$0              | \$11,248,965               |                |              |        |             |        |             |           |              |    |     |             |
| N1                    | New Local Roadways                        | Provide a network of local streets  |                  |                            |                |              |        |             |        |             |           |              |    |     |             |
| N2                    | ROW Preservation                          | Preserve ROW for a potential future overpass of I-84  |                  |                            |                |              |        |             |        |             |           |              |    |     |             |
| N3                    | ROW Preservation                          | Preserve ROW for a potential future overpass of I-84  |                  |                            |                |              |        |             |        |             |           |              |    |     |             |
| W1                    | Widen 6th Street Improvements (segment 1) | Widen 6th Street to 5 Lanes and Install Median (River Road to Chenoweth Loop)   | \$360,400        | \$4,100,444                | 0%             | \$0          | 25%    | \$1,025,111 | 75%    | \$3,075,333 | 0%        | \$0          | 0% | \$0 | \$0         |
| W2                    | Intersection Improvement (Roundabout)     | Intersection control at 6th Street (US 30)/River Road to accommodate future traffic and provide for u-turns created by the median | \$25,000         | \$319,363                  | 0%             | \$0          | 25%    | \$79,841    | 75%    | \$239,523   | 0%        | \$0          | 0% | \$0 | \$0         |
| W3                    | Intersection Improvement (Roundabout)     | Intersection control at 6th Street/Chenoweth Loop to accommodate future traffic and provide for u-turns created by the median     | \$883,000        | \$1,377,047                | 0%             | \$0          | 25%    | \$344,262   | 75%    | \$1,032,785 | 0%        | \$0          | 0% | \$0 | \$0         |
| W4                    | Intersection Improvement (Signal)         | Intersection control at 6th Street/Hosteller Street to accommodate future traffic   |                  | \$332,406                  | 0%             | \$0          | 100%   | \$332,406   | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| W5                    | Widen 6th Street Improvements (segment 1) | Widen 6th Street to 5 Lanes from Chenoweth Loop through Hosteller Street Intersection   | \$169,600        | \$1,907,533                | 0%             | \$0          | 100%   | \$1,907,533 | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$0         |
| W6                    | Relocate Driveway/ New Local Roadway      | Relocate driveway further from interchange and River Road/6th Street intersection to meet access spacing standards                |                  |                            |                |              |        |             |        |             |           |              |    |     |             |
| W7                    | New Local Roadway                         | Provides local connection between Division Street and Irvine Street   | \$750,000        | \$1,880,055                | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$1,880,055 |
| W8                    | New Local Roadway                         | Provides paved local connection between 6th Street and 7th Street   | \$0              | \$509,702                  | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$509,702   |
| W9                    | Cul-de-Sac                                | Closes and effectively consolidates access to 6th Street at Division Street or Irvine Street.                                     | \$0              | \$100,000                  | 0%             | \$0          | 0%     | \$0         | 0%     | \$0         | 0%        | \$0          | 0% | \$0 | \$100,000   |
| All Projects          |   |   | \$9,463,000      | \$53,077,991               | 29%            | \$15,542,826 | 7%     | \$3,689,152 | 8%     | \$4,347,641 | 56%       | \$29,498,373 |    |     | \$3,166     |

# Wasco County Comprehensive Plan

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GEOGRAPHICALLY ACKNOWLEDGED  
BY LCDC August 25, 1983

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**\*EFFECTIVE**

9 May 1984  
4 April 1984  
6 November 1985  
9 July 1986  
11 September 1986  
7 January 1987  
15 April 1987  
11 January 1989  
12 April 1989  
3 May 1989  
4 October 1989  
7 March 1990  
20 June 1990  
15 May 1991  
2 June 1993  
7 June 1993  
4 October 1993  
15 December 1993  
28 February 1995  
17 June 1996  
13 November 1996  
20 December 1996  
10 October 1997  
17 November 1997  
16 June 1998  
26 August 1998  
7 October 1998  
27 April 1999  
3 June 1999  
30 June 1999  
7 July 1999  
24 November 1999  
9 February 2000  
28 May 2003

\*Some early effective dates may be missing

25 February 2004  
5 January 2005  
9 June 2005  
22 November 2006  
27 December 2006  
28 February 2007  
27 March 2008  
25 June 2008  
16 December 2009

**PREPARED BY THE**  
Wasco County Planning and Development Office

**STAFF**

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| Keith Cleveland  | Code Compliance Officer |

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## CHAPTER 6 TRANSPORTATION

This chapter briefly summarizes the County's rural transportation system, including conditions, issues, proposed system improvements, financing, goals and policies. The County's adopted Transportation System Plan (TSP) prepared in 2009 provides more detailed information about the transportation system and also serves as a supporting transportation element of the Comprehensive Plan. The TSP addresses all modes of transportation pursuant to the requirements of the Oregon Transportation Planning Rule.

### A. Road Systems

Roadways serve the largest share of trips and support many of the other modes of travel used in Wasco County. Automobiles/trucks, pedestrians, bicyclists, transit users, marine vessels, and freight transportation all rely on roadways to some degree for mobility and access to various land uses, including rail, marine, air, and pipeline/transmission facilities.

A number of jurisdictions own and manage the public roadway system within Wasco County, including the following.

- Wasco County owns and maintains approximately 697 miles of roadway, which includes 300 miles of paved roadway.
- The Oregon Department of Transportation (ODOT) owns upwards of 270 miles of state highways within the County, including some of the most heavily traveled roadways.
- The United States Forest Services (USFS) owns and maintains the roadways within the Mt. Hood National Forest, located in the western area of the County. These roadways have been used historically to access logging areas and provide emergency fire access; however they are now seeing more recreational use.
- The Confederated Tribes of Warm Springs own and maintain the roadways within the Warm Springs Indian Reservation area. The reservation is located in the southwest area of the county.
- The Incorporated Cities of The Dalles, Dufur, Maupin, Mosier, Shaniko, and Antelope own and maintain the roadways within their city limits that are not owned or maintained by ODOT or the County. These roadways provide local access and primarily serve local trips.

Roads in the County are generally classified as arterial, collectors and local roads. Currently, all arterial roads are state highways and under the jurisdiction of ODOT. Arterials roads are intended to provide mobility by serving high volumes of traffic, particularly through traffic, at higher speeds. They also serve truck movements and should emphasize through their design traffic movement over local access. Collector roads collect traffic from the local street system and distribute it to the arterial street system. These roadways provide a balance between traffic movement and land access and should provide extended continuous stretches of roadway to facilitate traffic circulation through the county. Local roads provide local land access

and carry locally generated traffic at relatively low speeds to the collector street system. They should provide connectivity through neighborhoods, but should be designed to discourage cut through vehicular traffic.

As part of the 2009 TSP process, roads were evaluated for performance using a volume to capacity ratio (v/c) measure. Projected future (2030) performance also was evaluated. The following two tables summarize current (2009) and projected 2030 performance for ODOT and major County roads. This analysis indicates that state highways and collector roads in the county current operate at well below their capacity in all cases and are expected to continue to do so through 2030. It also indicates that all major county roads have very good or excellent pavement conditions.

**TABLE 1 - CURRENT AND PROJECTED FUTURE PERFORMANCE OF STATE FACILITIES**

| Roadway                      | Current (2009) Average Daily Traffic | Mobility Standard (V/C Ratio) | Current (2009) V/C Ratio | Future (2030) Average Daily Traffic | Future (2030) V/C Ratio |
|------------------------------|--------------------------------------|-------------------------------|--------------------------|-------------------------------------|-------------------------|
| US 26                        | 4,515                                | 0.70                          | 0.15                     | 7,095                               | 0.24                    |
| US 30                        | 1,325                                | 0.70                          | 0.07                     | 1,880                               | 0.10                    |
| US 97 (South of US 197)      | 3,170                                | 0.70                          | 0.09                     | 4,565                               | 0.13                    |
| US 97 (East of US 197)       | 2,245                                | 0.70                          | 0.13                     | 3,230                               | 0.18                    |
| US 197 (at Boyd Market Road) | 3,250                                | 0.70                          | 0.11                     | 4,610                               | 0.15                    |
| US 197 (at Fifteenmile Road) | 1,735                                | 0.70                          | 0.06                     | 2,465                               | 0.08                    |
| OR 206 (East of I-84)        | 830                                  | 0.70                          | 0.05                     | 705                                 | 0.04                    |
| OR 216 (East of US 26)       | 235                                  | 0.70                          | 0.01                     | 350                                 | 0.02                    |
| OR 216 (West of US 197)      | 620                                  | 0.70                          | 0.03                     | 1,280                               | 0.07                    |
| OR 216 (East of US 197)      | 255                                  | 0.70                          | 0.01                     | 525                                 | 0.03                    |
| OR 218 (South of US 97)      | 100                                  | 0.70                          | 0.01                     | 180                                 | 0.01                    |
| OR 293 (East of US 97)       | 185                                  | 0.70                          | 0.01                     | 295                                 | 0.02                    |

**TABLE 2 - CURRENT AND PROJECTED FUTURE PERFORMANCE OF COUNTY FACILITIES**

| Roadway   | Current (2009) Average Daily Traffic | Mobility Standard (V/C Ratio) | Current (2009) V/C Ratio | Future (2030) Average Daily Traffic | Future (2030) V/C Ratio | Pavement Condition |
|---|--------------------------------------|-------------------------------|--------------------------|-------------------------------------|-------------------------|--------------------|
| Boyd Loop Road (East of US 197)                   | 175                                  | 0.70                          | 0.01                     | 215                                 | 0.01                    | Very good          |
| Browns Creek Road (South of Chenoweth Creek Road) | 265                                  | 0.70                          | 0.06                     | 330                                 | 0.02                    | Very good          |
| Cherry Heights Road (Northeast of Wells Road)     | 375                                  | 0.70                          | 0.02                     | 465                                 | 0.03                    | Very good          |
| Dufur Valley Road (West of Rail Hollow Road)      | 265                                  | 0.70                          | 0.01                     | 325                                 | 0.02                    | Very good          |
| Dufur Valley Road (West of South Valley Road)     | 210                                  | 0.70                          | 0.01                     | 260                                 | 0.02                    | Very good          |
| Emerson Loop Road (East of Lower Eight Mile)      | 145                                  | 0.70                          | 0.01                     | 180                                 | 0.01                    | Very good          |
| Fifteenmile Road (East of                         | 290                                  | 0.70                          | 0.02                     | 355                                 | 0.02                    | Very good          |



|  |       |      |      |       |      |           |
|--|-------|------|------|-------|------|-----------|
| Moody Road)  |       |      |      |       |      |           |
| Fivemile Road (West of OR 197)                     | 415   | 0.70 | 0.02 | 515   | 0.03 | Excellent |
| Friend Road (West of Dufur Gap Road)               | 100   | 0.70 | 0.01 | 125   | 0.01 | Very good |
| Juniper Flat Road (West of OR 216)                 | 30    | 0.70 | 0.01 | 35    | 0.01 | Very good |
| Lower Tub Springs (South of OR 218)                | 40    | 0.70 | 0.01 | 50    | 0.01 | Very good |
| Mill Creek Market Road (Northeast of Orchard Road) | 1,630 | 0.70 | 0.09 | 2,020 | 0.12 | Very good |
| Reservation Road (South of OR 216)                 | 180   | 0.70 | 0.02 | 225   | 0.01 | Excellent |
| State Road (at Sevenmile Hill Road)                | 480   | 0.70 | 0.01 | 600   | 0.03 | Very good |
| Threemile Road (Southeast of Steele Road)          | 1,625 | 0.70 | 0.09 | 2,020 | 0.12 | Very good |
| Upper Tub Springs (South of Hwy 218)               | 20    | 0.70 | 0.01 | 25    | 0.01 | Very good |

While most of the primary roads in the County have adequate existing and future capacity, a variety of projects are recommended in the future to improve intersection operations, address safety issues, and reconstruct roads as they age and require repairs or rebuilding. These projects are described in the TSP, which identifies approximately \$80 million worth of capital improvement projects through 2030. A significant portion of these funds would be dedicated to improving state or federal facilities (i.e., Interstate 84).

As of 2009, funding for the County's operation program for 700+ miles of paved and gravel roads comes almost entirely from sources outside the County in the form of transfer payments from the federal government and the State of Oregon. This revenue is used to pay salaries of County employees and for materials and services, road maintenance, and minor improvements. The federal payments once were related to the harvest of trees on federal forest land in the County; the payments were a means of compensating the county for wear and tear on public roads used to haul logs to mills and finished products to market. As logging declined, the federal government passed a five year Safety Net law in 2000 guaranteeing that counties would continue to receive annual funding at historic harvest levels. However, congressional support for continuing those temporary payments is waning and payments are expected to be phased out by 2013.

Transfer payments from the State of Oregon are the second largest source of revenue the County relies on to maintain its road network. The Oregon Department of Transportation redistributes revenue that it collects from fuel sales, weight mile taxes, driver and vehicle fees, and other sources to local governments across the state. The formula used to distribute funds differs for cities and counties.

For Wasco County and virtually all cities and counties in Oregon, gas tax revenue has not been keeping pace with costs. A combination of factors is weakening this

revenue source's purchasing power. The biggest problem is that the fuel tax rate is not indexed, so inflation is eroding its purchasing power. In addition, the combination of improved vehicle fleet mileage and the use of non taxed alternative fuel vehicles is affecting the amount of fuel sold disproportionately to vehicle miles traveled. Consequently, wear and tear on the road system is outstripping available revenues to accomplish needed maintenance and capital improvement projects. Recent forecasts by ODOT predict that without significant increases in the tax rate, fuel tax revenue will continue lagging inflation and decline in value to local road authorities.

As noted above, special federal forest payments are expected to be phased out by 2013, which would eliminate the Road Fund's primary revenue source. This would leave very limited available money for road maintenance and virtually no funds for capital improvements. The County will need to consider and implement a variety of potential approaches to address this shortfall, including the following:

- Make better use of existing resources
- Alter road network design and operating standards
- Secure more external funding
- Adopt additional local taxes and user fees

The County's TSP describes these actions and recommendations in more detail.

## **B. Other Modes of Transportation**

A variety of non-auto modes of transportation are important for county residents to meet their mobility and recreation needs. They are described briefly here and in more detail in the County's TSP.

1. Pedestrian and Bicycle Travel: The pedestrian and bicycle modes serve a variety of needs including relatively short trips to major attractors, recreational trips, circulation within parklands, and access to transit (generally for trips under ¼ mile to bus stops). In rural areas of the County, walking and bicycling mainly serve as a form of recreation or exercise, rather than for commuting or shopping, due to the relatively long distances between originations and destinations. As a result, the majority of pedestrian and bicycle trips are short trips, including trips to the school, recreational areas, etc. While there are safety concerns associated with bicycle and pedestrian travel on high-speed, highly traveled roads, roadways with a low volume of traffic are preferred routes for pedestrian and bicycle use.

Existing pedestrian and bicycle facilities in Wasco County include a multi use trail along the Columbia River and several bike routes that are commonly traveled. These routes include the Mosier Loop, Dalles-to-Hood River connection, Cherry Heights, and Eightmile and Fifteenmile loops.

All State and County roadways in rural parts of Wasco County, except State Highways 26, 97 and 197, have an average daily traffic count of less than 3,000 vehicles, which is consistent with ODOT guidelines for shared bicycle use. However, most of the roadways are not signed to warn motorists of the potential

for encountering bicyclists on the roadways. In addition, County roadways with low traffic volumes tend to have high speed motorists and poor sight distance, making it potentially unsafe for bicyclists.

No specific proposed future bicycle and pedestrian improvement projects are identified in the TSP. However, given increasing recreational bicycle use in the County, a formal identification and recognition of cycling routes within the County was identified as a need and was formally recommended as part of the TSP process.

2. Transit Facilities and Service: Existing public transportation service in Wasco County is provided by the Transportation Network. The Transportation Network, a member of the Gorge TransLink, provides dial-a-ride service for The Dalles and selected portions of Wasco County. The Hood River County Transportation District offers public transportation services through Columbia Area Transit (CAT). CAT provides fixed-route service between Hood River, Mosier, and The Dalles on a daily basis and between Portland and The Dalles on a weekly basis.

The Mid-Columbia Economic Development District, under contract with the Association of Oregon Counties, prepared the Wasco County Coordinated Transportation Plan (CTP) update to address area needs from 2009 to 2012. The plan provides a framework to guide investments in public transportation. As such, improvements and future funding of public transportation in Wasco County should be implemented in accordance with the CTP.

3. Marine Transport: The Port of The Dalles is located on the Columbia River although it is primarily a marketing entity for industrial land in the region. In general, the Port owns industrial and commercial sites, some with riverfront barge access. Currently no known marine freight is loaded from sites within the Port of The Dalles, but the potential for such facilities exists. The Port also owns and operates a 120-slip marina facility with moorage for all types of boats with drafts up to 14 feet. A public boat launch ramp is also available at the marina. Adjacent to the Port of The Dalles is a private facility that currently provides storage and transport of wheat via the Columbia River.

No specific marine transportation facility improvement projects are identified in the County's TSP.

4. Air Transport: One public air transportation facility, The Columbia Gorge Regional/The Dalles Municipal Airport, serves Wasco County. The Airport is not located within the County, but is directly across the Columbia River from The Dalles, in the State of Washington. The Airport is jointly owned by the City of The Dalles and Klickitat County in Washington State. Despite the location, the Columbia Gorge Regional/The Dalles Municipal Airport is included in the statewide air transportation study, and serves many large local commercial companies, heavy industrial firms, and the United States Forest Service.

Two private air facilities are located in Wasco County. The Chenoweth Airpark is a private airport established in 1959 and located three miles west of The Dalles. Permission to use the airport is required in advance. The runway has an asphalt surface and is approximately 2,450 feet by 75 feet. Pine Hollow Airport is located 2 miles northwest of Wamic, Oregon. It is a private air strip and permission to use the air strip is required in advance. The airstrip is turf, with a 25-foot wide gravel center. The total dimension of the airstrip is 2,400 feet by 130 feet wide.

Future growth and development is a top priority of the Columbia Gorge Regional/The Dalles Municipal (CGRDM) Airport. However, there are currently no projects scheduled that are expected to increase the volume of air travel. No other long-term plans have been identified that suggest future air travel needs will increase at the CGRDM or private airports within the County over the next 20 years.

#### **C. Freight, Pipeline and Transmission Facilities and Needs**

Wasco County contains part of the Union Pacific (UP) Railroad's east-west main line. The UP main line provides the most direct connection from the Pacific Northwest to the Overland Route via Pocatello, Idaho, and Cheyenne, Wyoming. The Burlington Northern Santa Fe Railway (BNSF) is Oregon's second largest transcontinental railroad. A north-south BNSF line runs roughly along the county line between Wasco County and Sherman County before diverging into the south central part of Wasco County and points south.

BNSF and the Oregon Rail Plan identified needed improvements to five tunnels on the BNSF north-south line through central Oregon, located along an 88-mile stretch in Wasco and Jefferson Counties. Improvements were deemed necessary to provide clearances sufficient for "high-cube," 9-foot 6-inch containers stacked one on top of another in a double-stack configuration. When the ORP was published in November 2001, the State did not have funding in place to support these improvements.

Wasco County contains one major interstate transmission pipeline. The facility is a 36-inch diameter natural gas pipeline operated by Gas Transmission Northwest Corporation. This line runs through the southeast portion of the County enroute from Canada to California. The line transmits between 800 million and 1 billion cubic-feet of Canadian natural gas to California each day.

Wasco County recognizes the potential for future lines to bisect the County as future demand for natural gas increases. One proposal by Palomar Gas Transmission, a partnership between NW Natural and TransCanada, would provide additional capacity and reliability to the natural gas transmission system.

The proposed 36-inch-diameter underground pipeline will be approximately 217 miles long and connect to an existing gas pipeline located northeast of Shaniko. As proposed the route would run east-west through Wasco County adjacent to Maupin and Pine Grove. The project is anticipated to be completed in late 2011.

Additional pipeline transportation in and through Wasco County includes transport of water and sewer within incorporated cities, and transmission lines for electricity and telephone service throughout the County.

## CHAPTER 10 SUMMARY AND ANALYSIS

### INTRODUCTION

#### **Citizen Involvement**

The four former planning units (Western, Eastern, Central and Southern), will each be represented by a citizen involvement group and will have opportunities to give their input into future plan updating procedures.

### **A. HISTORY**

Lewis and Clark first came to the area known as Wasco County in 1805 on their way west along the Oregon Trail. The County was established in 1854 by the territorial legislature.

The building of The Dalles Dam on the Columbia in the early 1950's provided thousands of new jobs and gave easier river access to barge transport of goods up and down river. Since the dam's completion in 1958, economic growth has been based on cherry and wheat production.

### **B. PHYSICAL CHARACTERISTICS**

#### **1. General Location**

The County is bounded on the north by the Columbia River, on the east by the Deschutes and John Day Rivers, and on the west by the Cascades. Much of the southern half of the County lies within the Warm Springs Indian Reservation.

#### **2. Topography**

Steep rolling hills and sharp cliffs are characteristic land-forms in the County. Elevations range from 5,700 feet in the west to 150 feet on the Columbia River.

#### **3. Climate**

The climate is temperate to semi-arid. Low annual precipitation, low winter temperatures, high summer temperatures and high winds along the Columbia River Gorge are typical.

#### **4. Water Resources**

##### **a. Surface Water**

The County lies within three major drainage basins: the Hood, Deschutes River and John Day River basins. Stream flows are generally rapid during early winter rain-storms, before heavy snowfall and freezing conditions prevail. Many streams are perennial; drying up during the summer months.

**b. Ground Water**

Ground water supplies are generally adequate in all parts of the County. The Dalles Ground Water Reservoir has been declared a Critical Ground Water Area by the State Engineer, due to declining water levels. Stream diversion into the reservoir is helping to ease the pre-sure on it.

**c. Water Rights and Usage**

Estimated surface water rights in the Hood and Lower Deschutes River Basin in 1967 totaled over 2,000 cubic feet per second (cfs). This information was not available for the John Day River Basin. Ground water rights for the Hood Basin totaled 102.78 cfs in 1964. Again, this information was unattainable for the John Day and Deschutes River Basins.

**d. Municipal Watersheds**

Two municipal watersheds provide water for the cities of The Dalles and Dufur. They lie within the western forests of the County.

**5. Geology**

Generally, the County is underlain with expansive flows of Columbia River Basalt. Layers of ash, tuff and other volcanic material have been deposited in many areas as have Erosion materials from the Cascades, such as sand and silt. The flows of Columbia River Basalt are very obvious in the cliffs along the Columbia River Gorge.

**6. Natural Hazards**

A variety of geologic and flood hazard areas have been identified. On-site investigations should be made before development occurs in these hazard areas.

**7. Mineral Resources**

**a. Metallic Mineral Resources**

There are no economically important metallic mineral deposits in the County.

**b. Non-Metallic Mineral Resources**

Non-metallic mineral resources found in Wasco County include: semi-precious gem stones (agate, chalcedony, jasper, opal); fossils; agatized fruits, seeds and nuts; perlite; decorative volcanic tuff and rhyolite; and widely dispersed minor deposits of peat.

**c. Aggregate Resources**

Wasco County has approximately 73 aggregate pits with a total production capacity of 6.3 million tons.

**8. Soils**

Soils are generally formed from loess and volcanic basalt and ash, as well as sediment and other erosional materials. Soils Capability Classes II-VIII is found, with Classes III, VI and VII being the most widespread.

**9. Vegetation**

The plant associations from east to west are as follows: grass-land communities, chapparral-oak, ponderosa pine-white oak, douglas fir-ponderosa pine and high elevation forest.

**10. Natural Areas**

Areas of ecological and scientific value have been inventoried by the Oregon Natural Heritage Program, Nature Conservancy. Thirty-seven areas have been identified in Wasco County. The location descriptions are much generalized and include vast acreages.

Wasco County has also identified five natural areas in addition to those named by the Nature Conservancy. The natural areas will be protected and preserved by the placement of the Environmental Protection District over-lay zone.

**11. Forest Resources**

The U.S. Forest Service and other public agencies administer about 95 percent of the commercial timber volume. There are a total of 550,000 acres of forest land and a timber volume of 6,720 million cubic feet.

Timber has been classified into seven productivity ratings, based on the yield in cubic feet per acre. Classes II-VII exist in Wasco County; Class VII being considered non-commercial timber. Most of the timber is classes III-VI.

**12. Land Use and Ownership**

Most of the land is in either agricultural or forestry uses. Population is concentrated in the urban area of the City of The Dalles. The Warm Springs Indian Reservation covers a large portion of the southern part of the County.

Over eighty-four percent of the Counties are in private ownership. This includes Railroad Company, Indian reservation and private timber company lands. Public and semi-public lands, which total 15.6 percent of all lands, include Federal, State, County and City lands, as well as those owned by utilities, school districts and others.



### **13. Fish and Wildlife Resources**

#### Wildlife Resources

An estimated 230 species of animals are found in the ten various habitat types which exist in Wasco County. Much of this habitat is considered sensitive to destruction by either natural and/or man-made forces. Conflicts of use arise between human activities and those of animals who must use these areas for food and cover. In an effort to correct these problems and avoid future conflicts, the sensitive wildlife habitat areas are being protected by the placement of large minimum lot size zoning classifications and the Environmental Protection District Over-lay zone. This will both reduce population densities in these areas and will allow proposed developments to be examined by the local governing bodies and any conflicts of use to be resolved.

Several means by which landowners can protect their lands from damage done by big game are offered by the Department of Fish and Wildlife. They include: damage control hunts, kill permits, hazing permits, use of repellents and fencing. The Department will work with landowners to devise a means by which damage from big game animals may be greatly reduced.

#### Fisheries Resources

Fisheries habitats include the Columbia River, back-water ponds of the Columbia River, Fifteenmile Creek Drainage, the Deschutes River, Deschutes River Tributaries and lakes and reservoirs. The Columbia River is considered to be the single greatest fisheries resource in the Pacific Northwest. The high quality water and stable flows provide optimum conditions for good fish populations.

### **14. Environmental Considerations**

#### **a. Air Quality**

Air quality in Wasco County is considered to be good according to the Department of Environmental Quality (DEQ). The highest potential for air pollution problems exists within The Dalles airshed, which is centered at The Dalles and bounded by the surrounding high topography. This area is monitored by the D.E.Q. and measures may have to be taken if air pollution standards are being exceeded.

#### **b. Water Quality**

The Columbia, Deschutes and John Day Rivers are the only streams that are monitored regularly for water quality. Generally, all state and federal standards for water quality are met. Sewer and water systems appear to be satisfactory, as do ground water supplies and quality.

c. Land Resources Quality

Solid waste disposal presents no problems at the pre-sent time. Burning is allowed twice a year at the only sanitary landfill in the County and is closely monitored by the Department of Environmental Quality.

d. Noise Pollution

Due to Wasco County's rural nature, noise pollution is not a serious problem. Because the agriculture and timber industries are common livelihoods in the County, the noise which accompanies them is generally accepted. There is currently no noise ordinance in effect outside city limit boundaries.

## 15 Energy

a. Sources

The following is a list of developed and potential energy sources of energy in Wasco County:

|                  |  |
|------------------|--|
| Hydroelectric -  | this will continue as a major source of energy for the area.   |
| Pumped Storage - | five potential sites for this type of production are being investigated.   |
| Thermal -        | it is estimated that by the year 1995, thermal plants will operate as the main source of electrical energy, supplemented by hydro power for peak demands.                                  |
| Geothermal -     | there is little potential for this energy source in the County.  |
| Oil and Gas -    | Although there are no natural gas or oil supplies in the County, this will continue as a major energy source for the area.   |
| Wind -           | the utilization of wind as an energy source in Wasco County appears to be very feasible, particularly in the Columbia Gorge area.  |
| Solar -          | use of this feasible energy alternative has not had widespread application in the County.  |
| Waste Products - | timber production wastes are currently being utilized to produce heat in at least one mill in the County. Use of organic agricultural wastes to produce alcohol has been studied and found |

to be too unstable a resource at present to be useful on a large scale. The methane gas produced at The Dalles Sewage Treatment Plant is used to run part of the equipment at the plant.

**b. Consumption**

The transportation sector is the largest user of energy. Petroleum products account for almost all of the energy consumed. Space and water heating dominate energy use in the residential sector.

Energy conservation and recycling are encouraged as ways of preserving existing non-renewable energy supplies. These conservation methods include recycling glass, aluminum and paper, using bicycles and mopeds, pedestrian walk-ways and carpools. Local governments need to be responsive to programs which suggest these practices.

**C. POPULATION**

Population in Wasco County is projected to increase at a higher rate than in the past based on recent economic trends with much of the growth occurring in The Dalles Urban area and surrounding rural residential lands. In 2005, the population totaled 23,935 people. Forecasts for the year 2026 show the population will increase to 33,780, a 41 percent increase.

**D. POLITICAL STRUCTURE**

The County Governing Body, consisting of three Commissioners, is the main administrative body in the County. These are elected positions as are the positions of Clerk, Assessor, District Attorney, Sheriff and Treasurer.

**E. COMMUNITY FACILITIES AND SERVICES**

**1. Police Protection**

The County is served by the State Police, County Sheriff's Office, The Dalles City Police, the Dufur City Marshal and the Antelope City Marshal.

**2. Fire Protection**

The several fire departments and districts that service the County include the City fire departments for the cities of The Dalles, Mosier, Dufur and Maupin and the Wasco Rural Fire Protection District, Columbia Rural, Mosier Rural, and Juniper Flats Rural Fire Districts. Wildland or non-structural fires on public lands are manned by the U.S. Forest Service, Bureau of Land Management or Oregon State Forestry Department.

**3. Medical Services**

Most medical facilities in the county are located in The Dalles. They include the Mid-Columbia Medical Center, the Mid-Columbia Clinic, The Dalles Clinic, The Dalles Family Practice Group, the county-operated Columbia Basin

Nursing Home and the Valle Vista Nursing Home. The Columbia Gorge Rehabilitation Center located in Hood River also provides service to Wasco County.

Emergency medical services are provided by six ambulances. Two are operated by the Wasco Rural Fire Protection District, one by the Dufur City Fire Department, one in Maupin and two in Rajneeshpuram. Emergency services to other parts of the county are inadequate.

**4. Schools**

The County is served by ten school districts. Student-teacher ratios are presently adequate and no new facilities are proposed.

**5. Postal Services**

The cities of The Dalles, Dufur, Maupin, Mosier, Antelope, and Shaniko all have city post offices, as does the community of Tygh Valley.

**6. Television and Radio**

Television service is provided by cooperatives that receive signals from the major antenna located near The Dalles. Stations in many parts of Washington and Oregon can be received.

Three radio stations serve the County. KODL and KACI are located in The Dalles and KCIV-FM is located across the Columbia on the Klickitat Hills.

**7. Telephone**

Several telephone companies service the County. Pacific Northwest Bell covers The Dalles, Dufur, and Seven-mile Hill areas. Other areas are served by United Telephone Company of the Northwest, North State Telephone Company, Deschutes Telephone Company and the Trans-Cascade Telephone Company.

**8. Newspapers**

Five newspapers serve the county they are: The Dalles "Chronicle", The Dalles "Reminder", and the "Oregonian".

**9. Libraries**

The Dalles-Wasco County Library is the main facility in the County. Maupin, Mosier and Dufur each have small public libraries.

**10. Parks and Recreation**

**a. Current Supply of Recreational Facilities**

Most of the 42 parks and recreation sites in the County are in public ownership (75%) and are in or near the Mt. Hood National Forest and the Deschutes, White and Columbia Rivers. The Deschutes River is a

particularly popular steelhead fishing stream. This river and the John Day River have both been designated as Oregon Scenic Waterways.

There are no designated wilderness areas in the County. There are also no winter skiing facilities, Oregon recreational trails or bicycle trails. Several scenic areas have been designated by the State and these include portions of I-84 which pass through the Columbia Gorge, the old Gorge highway (U.S. 30) and several others.

**b. Future Recreational Needs**

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) shows a need for additional campsites and picnic facilities, especially along I-84, swimming beaches, walking and hiking trails, biking and bridle trails, ball fields, tennis and all-purpose courts, golf courses, and additional neighborhood, community, district and regional park lands. Demand for these resources will generate their development on either public or private lands.

**c. Outstanding Scenic and Recreational Areas**

Outstanding scenic and recreational areas have exceptional qualities which attract local and outside visitors. These areas include: Columbia River Gorge, Deschutes, John Day and White Rivers, Rock Creek Reservoir and Pine Hollow Lake.

**11. Cultural Resources**

**1. Historic Areas**

Historic sites in Wasco County include: the Oregon Trail, Barlow Road and Barlow Cut-off Road, The Dalles Military Wagon Road, Town of Ortley, many old school sites and others.

**2. Archeological Areas**

Many archeological sites exist in Wasco County, particularly along the Columbia, Deschutes and John Day Rivers. Fivemile Rapids and Fort Rock Campsite are on the National Historic Register. Memaloose Island and Abbott Site near Wapinitia are eligible for placement on the Register.

**12. Social Services**

There are nineteen active service agencies in the County. These include both private and public service agencies. There are also at least sixteen active service clubs, including Chamber of Commerce, Jaycees, Kiwanis, Boy and Girl Scouts, to name a few.

### 13. Utilities

#### a. Natural Gas

The Dalles and Chenoweth are the only areas serviced by natural gas in the County. It is furnished by the Northwest Natural Gas Company in The Dalles.

#### b. Electricity

Three electric companies provide service to the County. They are the Northern Wasco County People's Utility District (P.U.D.), Pacific Power and Light (P.P.&L.), and Wasco Electric Co-op, Inc. Generally, the Northern Wasco County P.U.D. serves The Dalles, Chenoweth, Dufur, Tygh Valley and Wamic; P.P. & L. services Mosier and Wasco Electric services the remainder of the County.

#### b. Public Water and Sewer Systems

There are 36 water systems in the County. Many provide water for both domestic use and irrigation and some are for agricultural and irrigation use only.

There are two community sewer systems in the County. One services the City of The Dalles and Urban area and has a maximum capacity of seven million gallons per day. The other system is in the Sportsmen's Park subdivision and is a community drainfields which services up to 180 lots.

#### d. Solid Waste Disposal Facilities

The Northern Wasco County Sanitary Landfill is a privately owned facility. Various garbage collection services dump at the landfill. It has an estimated life-span of between 15 to 25 years at current use rates. The additional 17.5 acres which have been purchased adjacent to the landfill and the addition of Hood River County to the use rate will increase the life-span to 30 years. Consequently, no additional landfill sites are currently being sought.

## F. TRANSPORTATION

### 1. Road Systems

Roadways serve the largest share of trips and support many of the other modes of travel used in Wasco County. Automobiles/trucks, pedestrians, bicyclists, transit users, marine vessels, and freight transportation all rely on roadways to some degree for mobility and access to various land uses, including rail, marine, air, and pipeline/transmission facilities.

Detailed information on County roads, their current condition, their priority for improvements, their length and designation and other information is contained in the Wasco County Transportation Improvement Program.

**2. Other Modes of Transportation**

A variety of non-auto modes of transportation are important for county residents to meet their mobility and recreation needs. These include pedestrian, bicycle, dial-a-ride public transit, marine transport and air transport. Detailed information on other modes of transportation is contained in the Wasco County Transportation System Plan.

**3. Freight, Pipeline and Transmission Facilities and Needs**

Wasco County is an important location for existing and future freight, pipeline and transmission facilities. Detailed information on these is contained in the Wasco County Transportation System Plan.

**G. HOUSING**

**1. Existing Housing**

A windshield survey of existing housing classified housing as either standard, marginal or substandard. A total of 1,295 housing units were inventoried outside the city limits and urban growth boundaries of the six incorporated cities, the Celilo Village and the Warm Springs Indian Reservation. Of these units, 256 or 20 percent are mobile homes. About 85 percent of both conventional homes and mobile homes were classed as standard.

Building permit counts from 1975 to 1979 show that from 58 to 81 percent of permits is for mobile home placements. This indicates their importance as an economic and popular form of housing.

**2. Housing Needs**

Build able lands (land with excessive slopes of 20% or greater have not been excluded), were inventoried. Soils classes, ownerships, timber site productivity classifications, hazard areas, sensitive wildlife habitats, aggregate sites and natural areas were taken into consideration. There does not appear to be an abundance of adequate build-able lands in the County.

The Dalles Urban Comprehensive Plan shows that there is 1,455 acres of build able land within the established Urban Growth Boundary, 1,160 acres or 80% with at least one development restriction. Development restrictions may include a lack of sewer or water lines, excessive slope, lack of access or odd lot sizes. Using population and per-sons per household estimates, it appears that the build able lands in The Dalles Urban Area will be at or near capacity by the year 1995.

It is not known how much of the build able land in the Urban Area is actually available. Increasing pressure on vacant lands to be developed into home sites will force prices up. Alternative housing sites, especially those of a rural nature will satisfy the need for low cost housing and will allow for the alternate lifestyles called for in Goal # 10, Housing. These alternative housing sites

should be as near the urban area as possible, to conserve energy and limit encroachment on viable farm and forest lands, and should be located on lands that have been committed to small (ten acres or less) average lot sizes.

### **3. Financing Housing**

In 1970, about 27% of all households in the County spent over the acceptable level of 25% of their income on housing. This indicates that housing costs are not meeting the needs of the County's citizens. It is important that both housing costs and building site costs be kept within an acceptable range. The increase in demand for small acreage (ten acres or less) rural home sites which allow mobile homes reflects the discrepancy between housing costs and incomes in the County.

## **H. ECONOMICS**

The County's economic activity is primarily basic production: the production of goods and services for export. This type of production brings outside money into the area. The non-basic sector, which produces goods and services for local production is not as developed, especially outside The Dalles Urban area. This means that people in the rural areas of the County will generally purchase their goods and services in The Dalles or outside the County.

The basic sector of the County's economy is based on agriculture, forestry, processing of agricultural and forest products and aluminum production and a growing tourist industry in the county.

### **1. Agriculture**

The Census of Agriculture shows that the total number of farms between 1959 and 1974 has decreased by 25 percent. The number of acres in farms has decreased by almost 13 percent, although there has been a slight increase in average farm size. This shows that smaller farms are becoming less economical to operate, probably due to the cost of mechanization. The census also shows that the number of small farms (less than 10 acres) and very large farms (2,000 or more acres) have increased, while everything in between (10 to 1,999 acres) has decreased.

Three types of agricultural commodities generally are produced in Wasco County. They are: tree fruits, small grains and livestock. Tree fruits, primarily cherries are mainly grown in and around The Dalles and Mosier. Their value has increased steadily, while the number of acres in production has remained fairly stable.

Small grains, primarily wheat, are grown in many of the non-forest portions of the County to the east and south of The Dalles. Acres in small grain production continue to stay at the same high levels of 20 years ago, although fewer farms exist.



Much of the livestock production, all but about 5%, depends on small grain operations. In most cases, grain farmers graze cattle on their marginal, non-crop lands or on public range lands. High feed prices and/or shortages of feed may force some farmers to reduce their supplemental livestock operations in the future.

**2. Forestry**

The U.S. Forest Service and other public agencies administer about 95 percent of the commercial timber volume in Wasco County. According to the Forest Service, the permitted annual cut in the Mt. Hood National Forest is currently 40-45 million board feet per year. About 80 percent of the allowable cut is purchased by Mt. Fir Lumber Company.

**3. Manufacturing**

Manufacturing firms outside the Urban Growth Boundaries of The Dalles and Maupin is primarily logging, food packaging, and aggregate mining. Martin-Marietta Aluminum, located within the urban growth boundary of The Dalles, is a major employer in the area.

**4. Tourism and Education**

**5. Non-Basic**

Rural economies, such as rural Wasco County, typically have not achieved a size and diversification needed to support a large non-basic sector. Local non-basic demands are satisfied in available markets such as Bend, The Dalles and Portland.

**6. Labor Force Statistics**

Unemployment has been a problem in Wasco County. It is found here at a rate consistently higher than the State average. This has been the case since the completion of the government dam projects in the 1960's. Seasonal employment in agriculture, food processing, construction, forestry, and lumber processing have also contributed to the high unemployment rate.

**7. Future Economic Outlook**

The Bonneville Power Administration has compiled employment projections that show that total employment in Wasco County will increase by 24.3 percent by the year 2000. Agricultural employment will decrease by 16.1 percent during this period while non-agricultural employment will increase by almost 30 percent. Wholesale and retail trade, as well as finance, insurance and real estate are all projected to increase by 40 percent and services by 55 percent, indicating that this area will become a regional service and trade center.

## CHAPTER 11 REVISIONS PROCESS

### A. Intent and Purpose

The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.

### B. A Comprehensive Plan Amendment May Take the Following Forms:

1. Amendment of one or more policies of the plan.(Legislative)
2. Amendment to the text, inventories, maps or figures of the plan. (Legislative or Quasi-Judicial)
3. Amendment of a portion of the Comprehensive Plan Land Use Designation map. (Legislative or Quasi-Judicial)
4. Amendment to the urban growth boundary. (Legislative or Quasi-Judicial)
5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)

### C. Who May Apply For a Plan Revision:

Comprehensive Plan Revision may be initiated by:

1. Wasco County Governing Body. (Legislative)
2. Planning Commission by majority vote confirmed by the Wasco County Governing Body. (Legislative)
3. Property owner or his authorized representative. (Quasi-Judicial)

### D. Legislative Revisions

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership. The Planning Commission and County Governing Body shall evaluate the plan as often as necessary to meet changes in the social, economic, or environmental character of Wasco County.

**E. Quasi-Judicial Revisions**

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".

**F. Urban Growth Boundary Revisions**

Individuals, agencies, or local governments requesting proposed revisions within or to, an urban growth "boundary outside a city limit shall apply to the Wasco County Planning Office. The Wasco County Planning Office will then submit a copy of this application to the city involved. The city involved shall submit to the Wasco County Planning Office a staff report including findings, recommendations, or decisions that the County Planning Commission and County Governing Body can use in making its decision. These reports should be submitted to the County Planning Office at least fourteen(14) days before the County Planning Commission holds its public hearing. The second alternative would be for the city to be represented at the public hearing, to express their views or rebut testimony.

**G. Urban Growth Area Management**

In the event that any city within Wasco County adopts an urban growth boundary which includes lands beyond their corporate limits, the city and the county shall agree upon a program for the joint management of such lands. The management program shall include provision for the interim management of these lands as well as a coordinated system for open communication between the two bodies. The agreement shall also include a joint system outlining procedures for plan amendments or changes to the Urban Growth Boundary.

**H. General Criteria**

The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goal as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.

5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.

#### **I. Transportation Planning Rule Compliance**

1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:
  - a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);
  - b. Change standards implementing a functional classification system; or
  - c. As measured at the end of the planning period identified in the adopted transportation system plan:
    - (1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
    - (2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or
    - (3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.
2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:
  - a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.
  - b. Amending the TSP or comprehensive plan to provide transportation facilities,

improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

- c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.
  - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.
3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.

#### **J. Procedure for the Amendment Process**

1. A petition must be filed with the Planning Offices on forms prescribed by the Director of Planning.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - (2) Notice of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission present cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.

(5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.

**K. Appeals**

The decision of the County Governing Body will be final unless appealed to a higher court.

**L. Review**

In any event, the Comprehensive Plan and implementing Ordinances shall be reviewed as often as necessary if the Planning Commission and County Governing Body finds that there are compelling reasons to justify such change, i.e., criteria listed in Section H. A public statement will be issued by the Planning Commission and/or County Governing Body on whether any revision is needed.

## **CHAPTER 15 GOALS & POLICIES**

### **GOAL # 1 - CITIZEN INVOLVEMENT**

To develop and maintain a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

#### **Policy 1**

Improve the availability of planning information to all of the residents in the County

##### Implementation

- A. Hold at least one Citizen Advisory Group meeting per year. Other meetings shall be held as needed to inform the group of proposed changes in the Comprehensive Plan or other land use actions.
- B. The Chairmen of the planning areas shall be advised on all agency meetings or hearings on actions affecting land use.
- C. Make all pertinent land use information from all agencies available to the Citizen Advisory Group chairmen,

#### **Policy 2**

A Citizen Involvement Program shall encourage the participation of citizens representing a broad cross-section of the population.

##### Implementation

- A. A diversified geographic and vocational cross-section of citizens will be encouraged to participate in Citizen Advisory Groups.
- B. The Wasco County Planning Office shall provide clear and concise notice of the opportunities for citizen involvement.
- C. Encourage open attendance and participation by all people at Citizen Advisory Group meetings.

#### **Policy 3**

Encourage involvement of citizens and property owners in the land use planning process.

##### Implementation

- A. Notices of all Citizen Advisory Group meetings should be given at least ten (10) days prior to the meetings.

- B.** Notices of all Citizen Advisory Group meetings should be posted by the Wasco County Planning Office in the Wasco County Courthouse, at least two public places in each planning area, and shall be advertised in the newspaper of general circulation throughout the County.
- C.** When revising or adopting the Comprehensive Plan there shall be a public hearing held with each Citizen Advisory Group that is affected by the proposed action.



**GOAL # 2 - LAND USE PLANNING**

To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

**Policy 1**

Citizen Involvement shall be an integral part of the planning process and shall be accomplished through the County's Citizen Involvement Program.

Implementation

- A. The Citizen Involvement Program shall be maintained and updated periodically by the Wasco County Planning Office.
- B. The Citizen Involvement Program shall abide by the policies as set forth in Goal # 1, "Citizen Involvement".

**Policy 2**

Comprehensive plans and implementing ordinances shall be consistent with the statewide goals and guidelines as well as the needs and desires of citizens in the County.

Implementation

- A. The Comprehensive Plan shall include all elements identified by the Land Conservation and Development Commission which are applicable to the County.
- B. Inventories and other forms of data used in the development of the Comprehensive Plan shall be the most factual and current data available.
- C. The Comprehensive Plan shall be coordinated with all other plans and programs affected by, or having effect on, land use within the County.
- D. All implementing ordinances applicable to the County shall be consistent with the Comprehensive Plan.

**Policy 3**

The Comprehensive Plan shall be reviewed periodically for necessary revisions to keep pace with changes in the physical, environmental, social and economic character of the County.

Implementation

- A. The Citizen Advisory Groups, in conjunction with the County Planning staff, shall conduct annual Comprehensive Plan review and evaluation.

- B. Plan review and amendment shall take place every two years or whenever significant changes in the social, economic, physical, or environmental character of the County are evident.
- C. Plan review, evaluation, and amendment shall be carried out utilizing the revisions process as set forth in the Comprehensive Plan. (This process is identical to the planning process employed for the initial development of the Comprehensive Plan.)

**Policy 4**

Increase public awareness of the planning process and plan implementation.

Implementation

- A. Signs should be posted throughout the County to indicate permits are required.
- B. Federal, State, County and City agencies should cooperate to simplify, combine and expedite permit application.
- C. Allow for local public input into the process of locating electrical corridors.
- D. Hearing notice procedures shall be included in the Wasco County Zoning Ordinance.

**GOAL # 3 - AGRICULTURAL LANDS**

To preserve and maintain agricultural lands.

**Policy 1**

Maintain Exclusive Farm Use zoning.

Implementation

- A. Maintain Exclusive Farm Use zone consistent with O.R.S. 215.203 to 215.273 to qualify for special farm use assessment as set forth in O.R.S. 308.370 to 308.406.
- B. Minimum lot sizes in agricultural zones shall be appropriate for the preservation of ground water resources, continued agricultural use and aesthetic qualities.
  - 1. On all lands designated as Exclusive Farm Use on the Comprehensive Plan may, if determined to be non-productive, using the Soil Conservation Service soils maps (soils classes VII or VIII) the minimum lot size may be reduced to twenty (20) acres, in accordance with Chapter 3.210(2)(o) of the Wasco County Zoning Ordinance and the applicable regulations of the Wasco County Subdivision and Land Development Ordinance.
  - 2. Commercial activities in conjunction with farm use shall be allowed as conditional uses in the Exclusive Farm Use zone.
  - 3. Non-farm uses permitted within farm use zones adopted pursuant to O.R.S. 215.213 should be minimized to allow for maximum agricultural productivity.
  - 4. Non-farm dwellings within the Exclusive Farm Use zone may be permitted with a conditional use permit in accordance with the provisions of O.R.S. 215.213.
  - 5. Subdivisions and Planned Unit Developments will not be permitted in the Exclusive Farm Use zone.

**Policy 2**

Where rural agricultural land is to be converted to urbanizable land, the conversion shall be completed in an orderly and efficient manner.

Implementation

- A. Conversion of rural agricultural land to urbanizable land shall be in accordance with Goal # 14, Policy 1, A-E.

- B. Extension of services, such as water supplies, shall be appropriate for proposed urban use.
- C. Minimize an adverse impact which electrical systems may have on the productivity of agricultural lands by reviewing future plans of the Bonneville Power Administration for major power line corridors. Review and comment should be made by each of the affected planning areas.
- D. Pre-existing farm dwellings occupied on a rental or lease basis shall not justify the partitioning of good agricultural land or smaller acreage tracts in farm use zones.
- E. Encourage the development of conservation plans utilizing Best Management Practices (BMP's) as developed by Wasco County Soil and Water Conservation Districts as defined by its standards and specifications.
- F. The opportunity for review and comment shall be provided for citizen groups in the development of plans for the location of utilities such as power-line and highways which may adversely impact agricultural lands.

**Policy 3**

Land division criteria and minimum lot sizes used in areas designated as agricultural by this Plan shall be appropriate for the continuation of existing commercial agricultural enterprise in the area.

Implementation

- A. In order to promote the continuation of existing commercial agricultural enterprise in Wasco County, the zoning regulations shall provide for two classifications of Exclusive Farm Use. The "A-1 (80)" Exclusive Farm Use zone shall have a minimum property size of eighty (80) acres. The "A-1 (20)" Exclusive Farm Use zone shall have a minimum property size of twenty (20) acres. Land designated by the Comprehensive Plan as agricultural and containing acreages greater than or equal to the minimum property size of the appropriate zone classification shall be presumed to be commercial agricultural entities.
- B. Revise the zoning regulations [A-1 (80) and A-1 (20) zones and appropriate procedural sections] to provide for the governing body or its designee to review all divisions of agricultural lands creating parcels for non-farm uses.
  - 1. Divisions of agricultural lands for non-farm uses shall be consistent with all existing ordinances and the following criteria:

- (a) Any residential use which might occur on a proposed parcel will not seriously interfere with usual farm practices on adjacent agricultural lands.
- (b) The creation of any new parcels and subsequent development of any residential use upon them will not materially alter the stability of the area's land use pattern.
- (c) The proposed division or use of the proposed parcels will not eliminate or substantially reduce the commercial agricultural potential of the area nor be inconsistent with the Goals and Policies of this Plan.
- (d) Such divisions are consistent with the provisions of O.R.S. 215.213(2) and (3), O.R.S. 215.243 and O.R.S. 215.263 as applicable.

Or one or more of the following conditions apply

- (e) The parcel to be created will be sold to an adjoining farm operator, and such transaction does not result in the creation of an additional parcel or home site.
- (f) The proposed division will create a separate parcel for a second dwelling which exists on the property, and creation of the parcel is consistent with criteria (a) through (d) listed above.
- (g) The division clearly follows a physical feature which functionally divides and thus hinders normal farming activities, and creation of the parcel is consistent with criteria (a) through (d) listed above.

**Policy 4**

Where rural agricultural land is to be converted to urbanizable land, the conversion shall be completed in an orderly and efficient manner.

Implementation

- A. Conversion of rural agricultural land to urbanizable land shall be in accordance with Goal #14, Policy 1, A-E.
- B. Extension of services, such as water supplies, shall be appropriate for proposed urban use.
- C. Minimize an adverse impact which electrical systems may have on the productivity of agricultural lands by reviewing future plans of the Bonneville Power Administration for major power-line corridors. Review and comment should be made by each of the affected planning areas.

- D. Pre-existing farm dwellings occupied on a rental or lease basis shall not justify the partitioning of good agricultural land or smaller acreage tracts in farm use zones.
- E. Normal agricultural practices (aerial pesticide applications, burning of pruning, dust and noise by machinery) shall not be restricted by non-agricultural interests within agricultural areas.
- F. The opportunity for review and comment shall be provided for citizen groups in the development of plans for the location of utilities such as power-lines and highways which may adversely impact agricultural lands.

**Policy 5**

Encourage multiple purpose storage reservoirs and land and water reclamation projects which enhance and benefit agricultural land.

Implementation

- A. Encourage individual farmers to develop soil conservation plans for each farming unit by coordinating land use planning with the United States Department of Agriculture and Wasco County Soil and Water Conservation Districts.
- B. Allow agriculture-related uses such as multiple purpose storage reservoirs and water reclamation projects in the "A-1" Exclusive Farm Use zone.

#### **GOAL # 4 - FOREST LANDS**

To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water and fish and wildlife resources and to provide for recreational opportunities and agriculture.

##### **Policy 1**

Land use regulations and tax incentives should be designed to safeguard forest management operations on both private and public lands.

##### Implementation

- A. Encourage resource management on those lands which meet the stocking and survival requirements of the Forest Practices Rules for Eastern Oregon.
- B. Only allow residential development, (i.e. in conjunction with forest use and not in conjunction with forest use), as conditional uses in the "F-2" Forest zone.
- C. Prohibit residential development, (i.e. in conjunction with forest use and not in conjunction with forest use), in the "F-1" Forest zones (i.e. City of the Dalles Watershed and City of Dufur Watershed).
- D. The minimum lot size of lands designated on the Comprehensive Plan map as "Forest" shall be eighty (80) acres.
- E. Approval of a conditional use permit for a dwelling not in conjunction with a forest use shall be preceded by the parcels disqualification from receiving a farm or forest tax deferral.

##### **Policy 2**

Lands within the "F-1" Forest designation shall be managed for maintenance of water quality and quantity, in addition to timber protection, fish and wildlife, soil conservation and air quality.

##### Implementation

- A. Land use actions within the "F-1" Forest zones shall be consistent with "The Dalles Municipal Watershed-Comprehensive Management Plan" and the City of Dufur Watershed Management Plan.
- B. A limited number of uses are allowed within the "F-1" Forest zone, of these uses residential development is not one. As a result of negative impacts, which are unable to be mitigated, on the water supply to the City of The Dalles and Dufur, residential development is prohibited.

**Policy 3**

All physical development should be located such that it minimizes the risk of wildfire and allows for assistance in the control of wildfire.

Implementation

- A. All physical developments shall implement the applicable "Fire Safety Standards" of the zone in a timely manner.
- B. A functioning on-site water supply shall be implemented prior to issuance of any zoning approval/building permit within the "F-1" and "F-2" Forest zones. The aforementioned water supply shall be connected to all applicable "Fire Safety Standards" of the zone.
- C. Coordination with the appropriate fire protection agency shall occur prior to issuance of any zoning approval for any dwelling, temporary or permanent, in the "F-2" Forest zone.
- D. Requests for dwellings not in conjunction with forest use, on property which is located outside of a rural fire protection district, shall not be accepted by the Approving Authority unless a contract for services has been reached with a rural fire protection district.

**Policy 4**

Coordination with the Oregon Department of Forestry and Oregon Department of Fish and Wildlife should occur whenever possible during the land use review process.

Implementation

- A. Notice of all action on all conditional use permits shall be forwarded to these departments for their comments and analysis. Lack of concurrence from either department shall be considered by the Approving Authority in the decision making process.

**Policy 5**

Dwellings should be permitted on lands owned prior to extensive implementation of Goal 4 protection (Jan. 1985) where consistent with the Transition Lands Study Area study dated September 17, 1997.

Implementation

- A. Adopt the Transition Lands Study document (September 17, 1997), and comprehensive plan map (ATTACHMENT A) by reference, as background information for planning purposes within Transition Lands Study Area.



- B.** Implement the “lot of record” provision in the TLSA, for parcels within a fire protection district (OAR 660-006-0027 adopted June 1, 1998).
- C.** Do not implement the OAR provision for the “template test” in the TLSA based on the available area wide information regarding overall land use patterns, land values, and lack of infrastructure in the forest zone, based on the Transition Lands Study Area study dated September 17, 1997.

**GOAL # 5 - OPEN SPACES, SCENIC AND HISTORIC AREAS AND NATURAL RESOURCES**

To conserve open space and protect natural and scenic resources.

**Policy 1 – Mineral Resources**

Protect and utilize appropriately the mineral and aggregate resources of Wasco County, and minimize conflict between surface mining and surrounding land uses.

Implementation

- A. The development of new rock and aggregate resource sites shall be consistent with the State Planning Goal 5 and Oregon Administrative Rules Chapter 660, Division 16 process to balance conflicts between mining operations and new and existing surrounding conflicting uses.
- B. Sites identified as significant aggregate resource sites shall not support interim or permanent uses which may jeopardize the future availability of the resource.
- C. Mining and processing of gravel and mineral materials may only be allowed at sites included on the "Other Site" inventory or "Significant Sites" inventory.
  - 1. Mining at sites on the "Other Sites" inventory may be allowed by a conditional use permit.
  - 2. Mining at sites on the "Significant Sites" inventory may only be permitted in accordance with the Mineral Resources Overlay.
- D. For each site determined to be significant, the County shall complete the remainder of the County Goal 5 process identifying conflicting uses, analyzing the ESEE consequences of the conflicting use(s), and designating a level of protection from conflicting uses. If the final decision concerning the site is to preserve fully or partially protect the resource from conflicting uses, the County shall zone the site with the Mineral Resources Overlay.

**Policy 2 – Mineral Resources**

The County shall maintain an inventory of mineral and aggregate resource sites. The comprehensive plan inventory shall consist of three parts:

-An inventory of "Significant Sites" identified through the Goal 5 process as important resources that will be protected from conflicting uses;

An inventory of "Potential Sites" for which sufficient information concerning the location, quality, and quantity of a resource site is not adequate to allow the County to make a determination of significance;

An inventory of "Other Sites" for which available information demonstrates that the site

is not a significant resource to be protected.

Implementation

- A. The significance of non-aggregate mineral resources shall be judged on a case-by-case basis, taking into account information concerning the commercial or industrial use of the resource, as well as the relative quality and relative abundance of the resource within at least the County.
- B. The scope of an existing or "grandfathered" aggregate operation shall be established by:
  - 1. authorization by a County land use approval; or
  - 2. the extent of the area disturbed by mining on the date that the mining operation became a non-conforming use.
- C. Sites on the "Other Sites" inventory shall not be protected from conflicting uses.
- D. For sites on the "Potential Sites" inventory, the County shall review available information about mineral and aggregate resources, and if the information is sufficient, determine the site to be significant when one of the following conditions exist:
  - 1. As part of the next scheduled Periodic Review;
  - 2. When a landowner or operator submits information concerning the potential significance of a resource site and requests a Comprehensive Plan amendment;
  - 3. When resolution of the status of a potential resource site is necessary to advance another planning objective.
- E. In order to approve surface mining at a site zoned for exclusive farm or forestry use, the County shall find, as part of the ESEE analysis, that the proposed activity will not: 1) force a significant change in, or significantly increase the cost of, accepted farming or forestry practices on surrounding lands, and 2) will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.
- F. The County may establish and impose conditions on operation of a surface mine when deemed necessary as a result of a site-specific Goal 5 analysis. Where such conditions conflict with criteria and standards in the Mineral and Aggregate Resources Overlay, the conditions developed through the Goal 5 analysis shall control.

G. No surface mining or processing activity, as defined by the zoning ordinance, shall commence without land use approval from the County, and approval of a reclamation plan and issuance of an operating permit by DOGAMI.

H. Aggregate sites shall be subordinate to the landscape setting as seen from travel corridors when such travel corridors have been determined to be significant by the ESEE analysis.

**Policy 3 – Mineral Resources**

New mineral and aggregate sites shall not be allowed within the quarter mile boundary of either the John Day or Deschutes Rivers.

**Policy 4 – Mineral Resources**

All aggregate operations within the Columbia River Gorge National Scenic Area shall be operated in compliance with the Management Plan for the National Scenic Area and its implementing ordinance.

**Policy 5 – Wild & Scenic Rivers**

The Deschutes and John Day River Scenic Waterways shall be maintained and protected as natural and open space areas with consideration for agriculture and recreation.

Implementation

A. Coordinate all land use planning activities with the Bureau of Land Management, Oregon State Department of Transportation and the Warm Springs Indian Reservation. These three parties shall be notified of all proposed land actions within the Deschutes River and John Day River Scenic Waterways for their review and comment.

B. Allow agricultural operations within the Deschutes and John Day Scenic Waterways.

C. Allow only buildings customarily provided in conjunction with farm use within the visual corridors of the Deschutes and John Day Scenic Waterways.

D. Encourage the preservation of landscape features of the John Day and Deschutes Rivers.

**Policy 6 - Wild & Scenic Rivers**

Cooperate with managing agencies to solve recreation use management on the John Day and Deschutes River Scenic Waterways.

Implementation

- A. Coordinate with and support the managing agencies recreation use management issues and facilities necessary for recreation and resource protection.

**Policy 7 – Columbia River Gorge**

Maintain the existing aesthetic quality of the Columbia River Gorge.

Implementation

- A. Scenic and Open Space areas in the Columbia River Gorge will be preserved by placement of the Environmental Protection District, Division 4, and overlay zone.
- B. The Oregon State Highway Division should employ plantings to provide buffers between residential areas and Interstate 84 when feasible.
- C. Forestry uses shall be in accordance with the Oregon Forest Practices Act.
- D. Clear-cutting within the legal boundaries of the Columbia River Gorge is discouraged.

**Policy 8 - Water**

Encourage the construction of ponds for livestock, fire protection and water reclamation.

Implementation

- A. Allow such uses in the "A-1" (Exclusive Farm Use) zone.
- B. The County Water master and Sanitarian shall continue to regulate appropriations, diversions and sewage waste disposals to ensure quality water resources.

**Policy 9 - Fish and Wildlife**

-Encourage land use and land management practices which contribute to the preservation and enhancement of fish and wildlife resources, with consideration for private agricultural practices.

-To conserve and protect existing fish and wildlife areas.

-To maintain wildlife diversity and habitat so that it will support optimum numbers of game and nongame wildlife for recreation and aesthetic opportunities.

Implementation

- A.** Identify and maintain all wildlife habitats by:
  - 1. Implementation of an Environmental Protection District overlay zone for significant fish and wildlife habitats and for the big game winter range.
  - 2. Designation of the Big Game Winter Range and Area of Voluntary Siting Standards (low elevation winter range) on the map contained in this plans Resource Element.
- B.** The winter range identified on the Big Game Habitat Map included in the Resource Element of this plan shall be protected by an overlay zone. The Rural Service Centers identified in the Comprehensive Plan which lie within the overlay zone shall be exempt from the provisions of the overlay zone.
- C.** Consistent with the development standards of the land use ordinance, sensitive riparian areas of perennial and intermittent streams identified in the Resource Element, as well as to protect people and property from flood damage, the zoning ordinance shall prohibit development within 100 feet of the mean high water mark of perennial or intermittent stream or lake in a resource zone, and 50 feet of the mean high water mark of a perennial or intermittent stream or lake in residential zones.
- D.** Sensitive bird habitat sites (bald eagle, golden eagle, osprey, great grey owl, great blue heron) and mammal habitat sites (Western pond turtle nesting sites) identified in the Resource Element of the plan shall be protected by a Sensitive Bird and Mammal Overlay Zone during periodic review pursuant to the current County approved work program.
- E.** When site specific information is available to the County on the location, quality and quantity of threatened and endangered fish and wildlife species listed by State or Federal Wildlife agencies and the Oregon Department of Fish and Wildlife develops protection criteria for the species, the county shall proceed with a Goal 5 ESEE analysis in compliance with OAR 660 Div. 16.
- F.** The county shall review the Transition Land Study Area (TULSA) big game habitat areas and designated as "1-B" Goal 5 resources, during the next periodic review or as additional information on the location, quality and quantity of the habitat areas becomes available. (ORD. 3.180 )
- G.** County-owned land shall be managed to protect and enhance fish and wildlife habitat except where a conflicting public use outweighs the loss of habitat.

- H. The county shall notify the Oregon Division of State Lands and the Oregon Department of Fish and Wildlife of any development application for land within a wetland identified on the National Wetlands Inventory maps. (ORD. 3.180).
- I. An application for a destination resort, or any portion thereof, in a recognized big game habitat overlay zone shall not be accepted pending completion of the County's Goal 8 destination resort mapping process. (ORD 3.180)
- J. The county shall provide ODFW an annual record of development approvals within the areas designated as Area of Voluntary Siting Standards' on the plan map to allow ODFW to monitor and evaluate if there is a significant detrimental effect on habitat.

**Policy 10 - Historic, Cultural, And Archeological Resources**

Preserve the historical, archaeological, and cultural resources of the County.

Implementation

- A. The Wasco County Historical Landmarks Commission shall maintain a current inventory of significant archaeological, and cultural resources in the county.
- B. Encourage preservation of resources identified as significantly historically, culturally, or archaeologically.
- C. Develop and implement a program to review and regulate activities which may impact historic, archaeological and cultural resources per statewide Goal 5 and OAR 660-16 (Amended by Historic Preservation Overlay Ord. adopted Dec. 7, 1994).
- D. Location of archaeological sites shall not be disclosed, (this information is exempt from the Freedom of Information Act), unless development is proposed which would threaten these resources. When any development is proposed which may affect an identified archaeological site, the site will be protected by the Wasco County Land Use and Development Ordinance, Chapter 3, Historic Preservation Overlay zone.
- E. Resources listed as Wasco County Historic Landmarks will be protected by the Wasco County Land Use and Development Ordinance Chapter 3 Historic Preservation Overlay zone.
- F. When adequate information becomes available, Wasco County shall evaluate its Goal 5 1-B historic resources for inclusion on the inventory or designation as a significant (1-C) resource and, where appropriate, provide protection under the County's Historic Preservation Overlay Chapter of the Wasco County Land Use and Development Ordinance.

- G. Pursue private and public sources of funding for use by property owners in renovation and maintenance of historic properties.
- H. Pursue options and incentives to allow productive, reasonable use, and adaptive reuse of historic properties.
- I. The County shall designate a Landmarks Commission to advise the County Governing Body about the county's historic landmarks according to the Historic Preservation Overlay ordinance.
- J. Appoint a Historic Review Board whose role is to protect and preserve historic Landmarks, Districts and Corridors and who individually have demonstrated interest and expertise in the field of Historic Preservation. This board shall be empowered to:
  - 1. Maintain and update the Wasco County Cultural Resource Inventory.
  - 2. Recommend to the County Governing Body the designation of historic landmarks or districts that meet the criteria for designation as contained in Section 3.772 of the Land Use and Development Ordinance.
  - 3. Protect historic landmarks or districts through the review, in accordance with the review criteria established for alterations, demolition and new construction.
  - 4. Provide a forum for public participation in matters and issues related to historic preservation in the community.
  - 5. Review proposed activities by the County or other agencies, businesses, or developers that may detrimentally affect historic landmarks and advise the Planning and Economic Development Staff, Planning Commission, and County Governing Body regarding these matters.
- K. All resources listed on the National Register or determined eligible for the National Register of Historic Places shall be designated a Wasco County landmark subject to the Historic Preservation Overlay.



**GOAL # 6 - AIR, WATER AND LAND RESOURCES QUALITY**

To maintain and improve the quality of the air, water and land resources of the County.

**Policy 1**

Encourage land uses and land management practices which preserve both the quantity and quality of air, water and land resources.

Implementation

- A. Recognizing that the soil resource base is vital to maintaining productivity, encourage agricultural conservation and management practices which minimize the adverse effects of wind and water erosion.
- B. The adopted solid waste collection and disposal ordinance shall be enforced.
- C. Riparian vegetation on natural stream banks shall be preserved by the placement of an Environmental Protection District overlay zone or by regulation of setback requirements.

**Policy 2**

Maintain air quality in compliance with state and federal standards.

Implementation

- A. Encourage a more detailed study of air quality in Wasco County by the Department of Environmental Quality.
- B. New industries must comply with the air quality standards set forth by the Department of Environmental Quality.
- C. Support efforts to complete an air shed study in The Dalles and Dallesport area.

**Policy 3**

Maintain quantity and quality of water in compliance with state and federal standards.

Implementation

- A. Support best management practices for identified problems to maintain and improve land and water resourced qualities as adopted in "Sediment Reduction Project - 208 Non-Point Source Pollution Control Program", prepared by the State Soil and Water Conservation Commission, August, 1978.
- B. Incorporate all future water quality information into the Wasco County Comprehensive Plan.

- C. Continue regulation of subsurface sewage disposal systems and other point source water pollution emissions.
- D. Evaporation ponds containing toxic chemicals should be sealed or lined, and monitored by the Department of Environmental Quality.
- E. The adequacy of the Ground water supplies and their quality shall be a major consideration in all development.
- F. The Dalles Watershed shall be managed by the "Comprehensive Management Plan for The Dalles Municipal Watershed," 1972.
- G. The Dalles, Dufur and Antelope Watersheds shall be primarily managed for their domestic water supplies.
- H. Encourage the reduction of siltation in the Columbia River drainage by whatever means are found to be reasonable and effective.

**Policy 4**

Noise levels should be maintained in compliance with state and federal standards.

Implementation

- A. Noise levels for all new industries must be kept within standards set by state and federal agencies.
- B. Consideration for the effects of noise on the surrounding environment will be given when a new development of any kind is proposed.
- C. Noise sensitive areas should be identified and only compatible uses permitted in their vicinity.
- D. When building new highways or making major improvements on existing highways, consideration shall be given to reducing the noise impact on surrounding land uses.

**GOAL # 7 - AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS**

To protect life and property from natural disasters and hazards.

**Policy 1**

Control flood hazards through active management of water resources, soil conservation techniques and flood plain identification.

Implementation

- A. The County shall continue to meet participation requirements for the national flood insurance program in identified flood hazard areas.
- B. Lands within identified flood plains should be excluded from intensive development.
- C. Flood plains have been identified by use of the Housing and Urban Development Flood Plain maps and will be protected by placement of the Environmental Protection District zone, Division 1.
- D. Coordinate the flood plain ordinance provisions with the Soil Conservation Service.
- E. Open space and agricultural uses are preferred in identified flood plain areas.
- F. Projects for channelization, diversion and other flood control measures designed to reduce flood hazards should be supported.

**Policy 2**

Intensive developments should not be allowed in an identified Natural Hazard Area.

Implementation

- A. Active natural hazard areas will be identified by the placement of an Environmental Protection District overlay zone.
- B. Only those activities which are associated with non-intensive recreational or agricultural pursuits should be allowed upon lands inventoried as active natural hazard areas.
- C. Pre-existing uses, not in accordance with Goal # 7, Policy 2 B., should be phased-out in active natural hazard areas.
- D. Development restrictions on active geologic hazard areas shall be specified in the Zoning Ordinance Chapter 3.700.

- E. Areas subject to active natural hazards should be evaluated as to the degree of hazard present, and appropriate limitations on use be imposed.
- F. An on-site investigation and written report by a certified geologist shall be required before development will be allowed in an active geologic hazard area.
- G. Applicants proposing development in an inactive geologic hazard area will be notified of that fact.

**Policy 3**

Wasco County shall maintain siting regulations for mobile homes to reduce safety and fire hazards.

Implementation

- A. When securing a mobile home placement permit, siting regulations will be provided to the homeowners.
- B. Due to potential wind hazards, tie-downs are required on all mobile homes located within thirty (30) miles of the Columbia River.

## **GOAL # 8 - RECREATIONAL NEEDS**

To satisfy the recreational needs of the citizens of Wasco County and visitors.

### **Policy 1**

Manage the Deschutes and John Day Scenic Waterways to minimize recreational over-use, accumulation of solid waste and conflicts with agricultural use, while maximizing their scenic and recreational values.

#### Implementation

- A. Encourage governmental agencies to restrict open camp fires on the Deschutes and John Day Rivers.
- B. Encourage the development of a cooperative management plan between private landowners and government agencies.
- C. Prohibit recreational subdivisions within the Deschutes and John Day Scenic Waterways.
- D. Encourage governmental agencies, (including the Marine Board, Bureau of Land Management, Department of Transportation and Wasco County), to limit the use of recreational power boats on the Deschutes and John Day Rivers.

### **Policy 2**

Develop and maintain a variety of recreational sites and open spaces adjacent to population concentrations to adequately meet the County's recreational needs.

#### Implementation

- A. The County may establish public park lands adjacent to future multiple-purpose reservoirs. This may include the dedication of park land to the County from a federal agency or private land developer at future reservoir sites.
- B. Encourage a system of safe and convenient trails for non-motorized recreation and transportation. Adequate right-of-way should be acquired on public roads to provide bicycle, pedestrian and equestrian paths where feasible.
- C. Large planned developments shall include the reservation of a suitable area of park land or open space.
- D. Aesthetic values in existing and future re-creational sites should be preserved and enhanced.

**Policy 3**

Discourage illegal recreational access through private agricultural lands.

Implementation

- A. Encourage governmental agencies to develop a public information program concerning recreational access through private lands.
- B. Condemnation of private land for recreational use will be strongly opposed.
- C. Easements for recreational use at well-established access points should be acquired. Possible funding sources such as the National Park Service and Oregon State Parks should be investigated.

**GOAL # 9 - ECONOMY OF THE STATE**

To diversify and improve the economy of Wasco County.

**Policy 1**

Maintain agriculture and forestry as a basis of the County's rural economy.

Implementation

- A. Subdividing and partitioning of productive agricultural and forest lands shall be discouraged.
- B. Exclusive Farm Use zoning shall be maintained to allow special farm use assessment as an incentive for continued agricultural use.
- C. Orchards, wheat, other small grain farms, and grazing lands shall be continued as a major portion of the economy.
- D. Wasco County will encourage secondary wood processing plants in Maupin and Tygh Valley in order to provide more local basic employment.
- E. Industries which process agricultural and forest products will be allowed, as a conditional use in the Exclusive Farm Use zone.

**Policy 2**

Commercial and industrial development compatible with the County's agricultural and forestry based economy will be encouraged.

Implementation

- A. Wasco County will support commercial and industrial development within the Urban Growth Boundaries of incorporated cities, which will help to discourage conversion of productive orchard and other agricultural lands and provide more year-round employment opportunities.
- B. Commercial activities in conjunction with farm use, including storage of agricultural goods, are allowed as conditional uses in agricultural areas of the County, to diversify the economy.
- C. Because The Dalles Auction Yard provides a unique general service that is economically beneficial to the entire County; its present location shall be protected from incompatible land use intrusion.
- D. Encourage increased commercial activity in the communities of Pine Grove and Tygh Valley rural service centers.

- E. Allow limited industrial growth in areas designated near Pine Grove and Tygh Valley.
- F. Protection and utilization of valuable rock and aggregate sources should be carried out as specified in Goal #5, Policies # 1, A-E; and # 2, A-F.

**Policy 3**

Wasco County will support the expansion and increased productivity of existing industries and firms as a means to strengthen local and regional economic development.

**Policy 4**

Wasco County will support the Mid-Columbia Economic Development District, the Wasco County Over-all Economic Development Plan (OEDP), and the Warm Springs Over-all Economic Development Plan (OEDP).

**Policy 5**

Tourism in Wasco County will be supported and encouraged.

Implementation

- A. Wildlife habitat and scenic waterways should be maintained for their scenic value to residents and tourists in Wasco County.
- B. Historic sites should be preserved and maintained to promote tourism in Wasco County.
- C. Additional parks, overnight camping areas, and other recreational areas should be provided when needed to encourage tourism in the County.



**GOAL #10 - HOUSING**

To provide for the housing needs of the citizens of Wasco County.

**Policy 1**

The development of adequate housing for all Wasco County citizens will be encouraged.

Implementation

- A. Mobile homes shall be allowed as a permitted or conditional use on agricultural land for landowners and employees.
- B. Mobile homes are a type of housing that may be allowed as a conditional use on certain forest lands.

**Policy 2**

A variety of housing types, locations and densities shall be encouraged.

Implementation

- A. Residential developments should be related to physical site characteristics.
- B. Residential developments shall be protected from encroachment of incompatible land uses.
- C. Multiple family dwellings should be allowed only within the Urban Growth boundaries of the incorporated cities and within excepted areas, unless connected with farm labor.

**GOAL #11 - PUBLIC FACILITIES AND SERVICES**

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

**Policy 1**

Provide an appropriate level of fire protection, both structural and wildfire, for rural areas.

Implementation

- A. The Bureau of Land Management, private landowners and railroad companies should be encouraged to develop a cooperative fire management program for the Deschutes River Area.
- B. Adequate fire protection should be a factor in locating and planning rural subdivisions or Planned Unit Developments.
- C. The County will assist Rural Fire Protection Districts in the acquisition of equipment and development of facilities.
- D. All community water systems shall provide minimum fire flow capacities and have a fire hydrant system.
- E. Adequate access shall be provided to any available water sources within development areas.
- F. Road design for rural subdivisions and planned unit developments should incorporate appropriate requirements with respect to mobility and access by fire suppression equipment.

**Policy 2**

Provide an appropriate level of police protection for rural areas.

Implementation

- A. Wasco County should continue to provide police protection, in conjunction with the Oregon State Police, commensurate with the needs of the rural community.

**Policy 3**

Minimize adverse impacts resulting from power line corridor and utility development.

Implementation

- A. The Bonneville Power Administration should compensate for damage resulting from power-line corridor development at levels based on the loss of agricultural and residential values and productivity.
- B. When economically and physically feasible, transmission lines should be laid underground.
- C. The Planning Commission and Citizen Advisory Groups should review all future Bonneville Power Administration power line corridor developments which may be routed through Wasco County, as well as all electrical substation and power plant development proposals.
- D. Public utility easements and transmission line corridors should be designed to provide for multiple land use.
- E. Maximum utilization of existing utility right-of-way should be encouraged to minimize the need for additional rights-of-way.
- F. Public utilities shall be responsible for appropriate maintenance including noxious weed control on all existing and future rights-of-way.

**Policy 4**

Encourage adequate and convenient school facilities for the citizens of Wasco County.

Implementation

- A. The County will continue to cooperate with school district(s) in the planning and placement of future educational facilities.
- B. The County will coordinate with the affected school district(s) when new subdivisions or Planned Unit Developments are proposed.

**Policy 5**

Future provision of public facilities and services shall be adequate to meet the needs of Wasco County citizens and be provided efficiently and economically.

Implementation

- A. The Dalles Sanitary Landfill shall be maintained as the solid waste disposal site in Wasco County until such time as additional sites become necessary.
- B. Improved public library and bookmobile service should be provided to all County residents.

- C. Increased and more efficient emergency medical service shall be encouraged, especially to those rural areas which must travel long distances for such service.
- D. The development of sanitary sewage disposal facilities for Wamic, Tygh Valley, Pine Grove, and Pine Hollow should be encouraged.
- E. Water systems developed on individual lots should provide a standpipe capable of handling the full capacity of the pumping system.
- F. The placement of nuclear facilities for the generation of nuclear energy shall be emphatically discouraged, especially in the more populous areas of the County where the obvious potential hazards would affect larger numbers of people.
- G. The availability of necessary utilities and public services shall be made known at the time of the development of subdivisions, Planned Unit Development and major partitions.
- H. The facilities and services provided shall be appropriate for, but limited to, the needs and requirements of the areas to be served.
- I. Facilities and services provided to areas designated Rural Residential and Rural Service Center shall be at levels appropriate to and necessary for rural uses only and shall not support urban uses.
- J. The County will coordinate its public facilities and services planning with the plans of affected special service districts and other governmental units.
- K. The County will develop a detailed drinking water service plan which will comply with O.R.S. 448.165 at the next update of the plan. A water system inventory will be the initial step and other factors such as groundwater resources, population growth, system aging, water quality and quantity will be considered in the detailed plan.

#### **Policy 6**

The larger lot sizes (5 acres in Wamic and 4- acres in Tygh Valley) will continue to apply until approved facility plans are acknowledged even though water systems currently exist in both communities.

#### Implementation

- A. Established minimum lot size in Wamic and Tygh Valley may be reduced to two (2) acre minimum property size standard when a community, municipal or public water and/or sewer public facility plan is "approved" by the county and

acknowledged by the state pursuant to the post acknowledgement plan amendment (PAPA) requirements (ORS 197.610 through 197.650) and the requirements for facility plans under OAR 660, Division 22.

- B.** Upon the "acknowledgement" of an existing or new community, municipal or public water and/or sewer system facility plan, the minimum property size standard may be amended from the current five (5) acre standard to two (2) acres in Wamic, and from the current four (4) acre standard to two (2) acres in Tygh Valley.

**GOAL #12 - TRANSPORTATION**

To provide and encourage a safe, convenient and economic transportation system.

**Policy 1**

Plan for and maintain an interconnected system of roads that will link communities for all users and that will provide for the existing and future needs for transportation of goods and people in the region.

Implementation

- A. Promote and maintain an integrated and linked network of collector and local streets that minimizes travel distances.
- B. When traffic levels warrant it, develop a County arterial system that facilitates efficient and safe transportation of goods and people in the region.
- C. Maintain roadway performance standards for the efficient movement of people and goods.
- D. Coordinate with ODOT in identifying improvement and maintenance needs for the existing rural arterial system (i.e., state highways).

**Policy 2**

Provide a transportation system that promotes the safety of current and future travel modes for all users.

Implementation

- A. Continue to work with ODOT to identify and implement measures that will reduce the incidence and severity of motor vehicle crashes on roadway segments that exceeded the average statewide crash rate and/or other safety performance measures used by the county.
- B. Provide a transportation system that allows for adequate emergency vehicle access to all land uses.
- C. Promote railroad at grade crossing elimination, consolidation whenever possible.
- D. Develop access management standards for all county road facilities and implement these standards through the development approval process and as part of public improvement projects.

**Policy 3**

Provide a multimodal transportation system that permits the safe and efficient transport of goods and people.

Implementation

- A. Continue to support the development of public transit opportunities through coordination and collaboration with the Transportation Network, Gorge TransLink and the Hood River County Transportation District.
- B. Promote an interconnected network of bicycle and pedestrian facilities throughout the County, including parallel routes to Interstate 84.
- C. Consider bicycle and pedestrian facilities needed during construction of new roads and during upgrades of existing roads.
- D. Support the development of recreational bicycling and hiking facilities.

**Policy 4**

Provide a transportation system that balances transportation services with the need to protect the environment.

Implementation

- A. Develop and support a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
- B. Encourage development patterns that decrease reliance on motor vehicles.
- C. Design new and improved transportation facilities to minimize impacts on the natural environment.

**Policy 5**

Maintain the safety, physical integrity, and function of the County transportation network.

Implementation

- A. Continue and enhance the partnering relationships with local jurisdictions, the Confederated Tribes of Warm Springs, and the Oregon Department of Transportation to provide a comprehensive, safe, and efficient transportation system throughout the County.
- B. Maintain long-term County Road Fund stability.

- C. Evaluate new innovative funding sources for transportation improvements, such as a road fund serial levy, road utility fee, and/or a county gas tax.
- D. Explore the potential cost savings of revising operational or maintenance standards.
- E. Advocate for flexibility in the use of federal timber receipts so that the county is not exposed to dramatic declines in this funding source.
- F. Ensure that the existing transportation network is conserved through maintenance and preservation.



**GOAL #13 - ENERGY CONSERVATION**

To conserve energy.

**Policy 1**

The County will work with appropriate State and Federal agencies to identify and protect, and if feasible, develop potential energy resources, especially renewable energy resources.

**Policy 2**

Reduce the consumption of non-renewable sources of energy whenever possible.

Implementation

- A. Conversion of energy sources from non-renewable sources to renewable sources shall be encouraged.
- B. The allocation of land and uses permitted on the land should seek to minimize the depletion of non-renewable sources of energy.

**Policy 3**

Minimize energy consumption through the use of zoning and subdivision standards.

Implementation

- A. Zoning controls and subdivision design standards shall be developed and administered with consideration for the conservation of energy sources and the reduction of energy consumption.
- B. In the review of subdivision plans, consideration shall be made of the following in relation to energy consumption:
  - 1. Lot size, dimension and siting controls;
  - 2. Building height, bulk and surface area;
  - 3. Density of uses, particularly those which relate to housing densities;
  - 4. Availability of light, wind and air.
- C. Uses developed on the land shall be managed and controlled so as to maximize the conservation of energy.

**Policy 4**

Considerations should be given to systems and incentives for the collection, re-use and recycling of solid waste and other waste products.

Implementation

- A. Recycling centers for the collection of glass bottles, newspapers, tin cans, etc., should be encouraged.
- B. Public awareness and education concerning the use of recycling centers and methods shall be encouraged.
- C. Encourage the utilization of sewage treatment wastes for fertilizer, methane gas production or other feasible products.

**Policy 5**

The transportation system shall be diversified with emphasis on energy conservation.

Implementation

- A. Bicycle paths and pedestrian walkways should be placed whenever and wherever feasible.

**Policy 6**

Use of renewable energy shall be encouraged.

Implementation

- A. Wind generators will be permitted in the forestry, agricultural and rural zones.
- B. The County should develop a solar access ordinance.
- C. Facilities to manufacture alcohol from farm or timber waste products will be permitted as conditional uses in the forestry and agricultural zones.

**GOAL #14 - URBANIZATION**

To provide for an orderly and efficient transition from rural to urban use.

**Policy 1**

Conversion of rural agricultural land to urbanizable land shall be based upon consideration of each of the following factors:

- A. environmental, energy, social and economic consequences;
- B. demonstrated need consistent with other goals;
- C. availability of alternative suitable locations for the requested use;
- D. compatibility of the proposed use with related agricultural land; and
- E. the retention of Class I, II, III, IV, V, and VI soils in farm use.

**Policy 2**

Preserve community identity by encouraging concentration of residential development in and near existing communities.

Implementation

- A. Restrict the subdivision of lands in areas with difficult access, topography or drainage; in areas lacking adequate domestic water supplies; or in areas having severe soil limitations for individual subsurface sewage disposal.
- B. Population growth will be encouraged within the Urban Growth Boundaries of incorporated cities and unincorporated areas designated for residential uses within the comprehensive plan.
- C. Industrial, commercial and dense residential development should be restricted to areas within the urban growth boundaries of incorporated cities as well as rural service centers and planned unit developments.

**Policy 3**

Encourage subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts.

**Policy 4**

Availability of public services shall be made known at the time of the development of subdivisions, Planned Unit Developments, and major partitions.

**Policy 5**

Subdivision and partitioning activities shall be designed to reduce the County's financial participation in road construction within development areas.