

A G E N D A
UMATILLA COUNTY BOARD OF COMMISSIONERS

Meeting of Wednesday September 17, 2014, 9:00 a.m.

Umatilla County Courthouse, 216 SE 4th St. Room 130, Pendleton, OR

A. CALL TO ORDER

B. NEW HEARING:

TEXT AMENDMENT, #T-14-054, PLAN AMENDMENT #P-109-14, and ZONE MAP AMENDMENT, #Z-301-14 application submitted by the OREGON DEPARTMENT OF TRANSPORTATION. The applicant requests to add an existing quarry to the Umatilla County Comprehensive Plan list of Goal 5 protected Significant Sites and apply the Aggregate Resource (AR) Overlay Zone to the quarry site. The subject quarry is three Tax Lots totaling 9.71 acres in size. The property is located adjacent to and east of the Havana - Helix Highway #335, north of Highway 11, described as Township 3 North, Range 33 East, Section 23, Tax Lots 100, 600, and 700. The property is zoned EFU (Exclusive Farm Use Zone).

C. NEW HEARING:

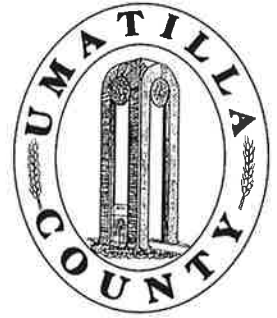
Adopt the I-84/Depot Access Road Interchange Area Management Plan and amend the Umatilla County Transportation System Plan, #P-110-14; T-14-055; Z-302-14. The IAMP is a transportation improvement plan and an access management plan for an area in the vicinity of the interchange of Interstate 84 and Depot Access Road. The amendment also includes updates to the Development Code to include transportation impact study and access management requirements. The interchange plan is necessary in order to plan for impacts to the intersection from future development at the Umatilla Army Depot. Criteria of approval are Umatilla County Development Code 152.750 – 755, Goal 12 Transportation Planning and Oregon Administrative Rule 734-051-0155.

Adopt the I-82/Lamb Road Interchange Area Management Plan and amend the Umatilla County Transportation System Plan, #P-111-14; T-14-056; Z-303-14. The IAMP is a transportation improvement plan and an access management plan for an area in the vicinity of the interchange of Interstate 84 and Lamb Road. The amendment also includes updates to the Development Code to include transportation impact study and access management requirements. The interchange plan is necessary in order to plan for impacts to the intersection from development at the Umatilla Army Depot. Criteria of approval are Umatilla County Development Code 152.750 – 755, Goal 12 Transportation Planning and Oregon Administrative Rule 734-051-0155.

D. ADJOURN

Umatilla County

Department of Land Use Planning



DIRECTOR
TAMRA MABBOTT

LAND USE
PLANNING,
ZONING AND
PERMITTING

CODE
ENFORCEMENT

SOLID WASTE
COMMITTEE

SMOKE
MANAGEMENT

GIS AND
MAPPING

RURAL
ADDRESSING

LIAISON, NATURAL
RESOURCES &
ENVIRONMENT

MEMO

To: Umatilla County Board of Commissioners

From: Shane Finck, Planner

cc: Doug Olsen, County Council
Tama Mabbott, Planning Director

Date: September 5, 2014

Re: September 17, 2014 Board of Commissioners Hearing,
Oregon Department of Transportation, Applicant.
Wildhorse Creek Quarry Comprehensive Plan Map Amendment,
#P-109-14, Comprehensive Plan Text Amendment, #T-14-054, and
Zoning Map Amendment, #Z-301-14

Request:

The Oregon Department of Transportation is seeking to acquire Goal 5 protection for the Wildhorse Creek Quarry which will encompass Tax Lots 100, 600, and 700. The current 9.71 acre quarry site is listed on the Inventory of Significant Aggregate Sites as a 3C site which requires the County to specifically limit conflicting uses. The applicant is requesting to include the site in the Umatilla County Comprehensive Plan as a significant aggregate site and protect the existing aggregate quarry and planned expansion areas implementing the Umatilla County Aggregate Resource (AR) Overlay Zone to continue to allow mining of the current and expanded aggregate site

Location:

The property is located on the easterly side of the Havana-Helix Highway (OR 355) at mile point 6.42, situated approximately one half of a mile north of Oregon-Washington Highway 11.

Standards:

The Standards of Approval are found in the Oregon Administrative Rules and in the Umatilla County Development Code. Standards of the Oregon Administrative Rules Division 23 for Goal 5 Large Significant Sites are found in OAR 660-023-0180 (3), (5), & (7), OAR 660-023-040, and OAR 660-023-050. Standards of the Umatilla County Development Code for establishing an AR Overlay Zone and Mining Requirements are found in Sections 152.487 and 152.488.

The OAR Standards generally consist of ensuring that aggregate supplies are adequate enough to warrant protection and evaluation of conflicts with surrounding

land uses and imposing conditions to prevent or minimize conflicts.

The Umatilla County Development Code Standards generally consist of protecting the aggregate resource and instituting measures that would be protective of neighboring properties.

Conditions:

The conditions of approval are considerate of operations at the quarry. These proposed conditions of approval are recommendations from Planning Staff and take into account recent discussions regarding active mining sites currently operating in Umatilla County. The proposed conditions of approval are consistent with conditions that were recently imposed on other operating quarries and would be protective of the mining operation and neighboring uses. These conditions also include recommendations made by the Umatilla County Planning Commission at the August 28th Planning Commission Hearing. These recommendations and Staff response are in **bold underline** text.

Decision:

The decision by the Umatilla County Board of Commissioners will be final approval to amend the Comprehensive Plan and Zoning Map.

**UMATILLA COUNTY BOARD OF COMMISSIONERS
FINDINGS AND CONCLUSIONS
WILDHORSE CREEK QUARY
COMPREHENSIVE PLAN MAP AMENDMENT, #P-109-14,
COMPREHENSIVE PLAN TEXT AMMENDMENT #T-14-054
ZONING MAP AMENDMENT #Z-301-14
MAP #3N 33 23, TAX LOT #100, 600, 700, Account # 140259, 137007, 140258**

1. APPLICANT: Patrick Knight, ODOT Region 5 Senior Planner, 3012 Island Ave, La Grande, OR 97850
2. OWNERS: Oregon Department of Transportation, 3012 Island Ave, La Grande, OR 97850
3. REQUEST: The Oregon Department of Transportation is seeking to acquire Goal 5 protection for the Wildhorse Creek Quarry which is to include Tax Lots 100, 600, and 700. The current 9.71 acre quarry is listed on the Inventory of Significant Aggregate Sites as a 3C site which requires the County to specifically limit conflicting uses. The applicant is requesting to include the site in the Umatilla County Comprehensive Plan as a significant aggregate site and protect the existing aggregate site by implementing the Umatilla County Aggregate Resource (AR) Overlay Zone to continue to allow mining of the current expanded aggregate site.
4. LOCATION: The property is located on the easterly side of the Havana-Helix Highway (OR 355) at mile point 6.42, situated approximately one half of a mile north of Oregon-Washington Highway 11.
5. SITUS: No site address is assigned to this property.
6. ACREAGE: The ODOT quarry site totals 9.71 Acres. Tax Lot 100 is 4.77 acres, 600 is 1.00 acre, and 700 is 3.74 acres.
7. PROP CLASS: Property Codes are assigned by the County Assessor as to what type of use that is present on the property. The Property Code 960 is assigned to this property, which means "Exempt, State Owned and Vacant."
8. TAX CODE: The Tax Code is assigned by the County Assessor. Each Code Area has various taxing rates depending upon the services provided. The property has Tax Code of 16-02, which has the following taxing definition: General County, Umatilla Co Bond, School Dist #16 Pendleton, School Dist #16 Bond, Education Service District (ESD), BMCC, BMCC Bond, Port of Umatilla, County Radio District, Umatilla Special Library District, Pendleton School Spec Levy.
9. PERMITS: Permits have been issued on this property.
C-1202-12 Mining on EFU Property-Havana Quarry.

ZP-81-257; Approved by #C-201-81 Aggregate Mining

- 10. COMP PLAN: North/South Agriculture Region Designation
- 11. ZONING: Exclusive Farm Use Zone (EFU, 160 acre minimum)
- 12. ACCESS: The property has access from the Havana-Helix Highway, State Highway #335.
- 13. ROAD TYPE: State Highway #335 is a paved, county maintained roadway.
- 14. EASEMENTS: There are no access easements on these parcels.
- 15. LAND USE: The property has been used as a quarry site for several years.
- 16. ADJACENT USE: Property around this parcel is used for farming and grazing.
- 17. LAND FORM: Columbia River Plateau
- 18. SOIL TYPES: The subject property contains predominately Non-High Value soil types. High Value Soils are defined in UCDC 152.003 as Land Capability Class I and II. The soils on the subject property are predominately Class VI.

Soil Name, Unit Number, Description	Land Capability Class	
	Dry	Irrigated
115E: Walla Walla Silt Loam 25% to 40% north slopes	VIe	---
39A: Hermiston silt loam, 0 to 3 percent slopes	IIc	I

Soil Survey of Umatilla County Area, 1989, NRCS. The suffix on the Land Capability Class designations are defined as "e" – erosion prone, "c" – climate limitations, "s" soil limitations and "w" – water (Survey, page. 172).

- 19. BUILDINGS: There are no buildings on this property.
- 20. UTILITIES: The parcel is not served by utilities.
- 21. WATER/SEWER: There are no ground water rights on this property.
- 22. FIRE SERVICE: The subject property is not served by a rural fire district.
- 23. IRRIGATION: The subject property is not served by an irrigation district
- 24. FLOODPLAIN: This property is NOT in a floodplain. The Community Number for Umatilla County is #41059C and the Panel Number that covers this area is #1035-G with an effective date of September 3, 2010. This panel is not printed.
- 25. NOTICES SENT: Notices were sent on Thursday, August 7, 2014.

26. HEARING DATE: A public hearing will be held before the Umatilla County Board of Commissioners on Thursday, August 28, 2014 at 6:30 PM at the Justice Center, 4700 Pioneer Place, Pendleton, OR 97801.
27. AGENCIES: City of Pendleton, Umatilla County Assessor, Umatilla County Public Works, Department of Transportation Region 5-Highways Division, Department of Land Conservation and Development, Department of Environmental Quality, Department of Geology and Mineral Industries, Department of Water Resources
28. COMMENTS: Calvin Spratling commented that there are noxious weeds growing around the quarry site and would like ODOT to address the problem. Tom Lapp from ODEQ provided comment on requirements when an Air Contaminant Discharge Permit was required for an aggregate site.

NOTE: The Umatilla County Development Code has not been updated with the Division 23 Rules for Aggregate. The Oregon Administrative Rules 660-023-0180 to establish a Goal 5 Large Significant Site will be directly applied per OAR 660-023-180 (9).

29. GOAL 5 ISSUES: Scenic, Open Space, Historic, Wildlife, and other resources. In order to mine aggregate in Umatilla County, a site must either be an active insignificant site, or be listed on the Goal 5 Inventory of the Umatilla County Comprehensive Plan as a significant site. This site is not currently on the Goal 5 Inventory as a significant site. The applicant proposes to utilize quality/quantity information to obtain approval of the plan amendment to add the site to the Umatilla County inventory of significant aggregate sites and obtain Goal 5 protection of the resource. Part of this Goal 5 protection is to include the sight under the Aggregate Resource (AR) overlay zone. The Umatilla County Comprehensive Plan requires that “[a]ny proposed modification to the text or areas of application (maps) of the AR, HAC, CWR or NA overlay zones shall be processed as an amendment to this plan.” Therefore, this application constitutes a Post-Acknowledgement Plan Amendment (PAPA), and is subject to the criteria listed in Oregon Administrative Rules (OAR) 660-023-0030 through 660-023-0050, and OAR 660-023-0180. The DOGAMI reclamation plan (on file with DOGAMI) informs ODOT to replace overburden and seed the site with native grasses for grazing once the quarry is exhausted. As a condition of approval for operation, the applicant must acquire a DOGAMI permit.

30. STANDARDS OF THE OREGON ADMINISTRATIVE RULES, DIVISION 23 FOR GOAL 5 LARGE SIGNIFICANT SITES are found in OAR 660-023-0180 (3), (5), & (7), OAR 660-023-040, and OAR 660-023-050. The standards for approval are provided in underlined text and the responses are indicated in standard text.

OAR 660-023-0180 Mineral and Aggregate Resources

(3) [Large Significant Sites] An aggregate resource site shall be considered significant if adequate information regarding the quantity, quality, and location of the resource demonstrates

that the site meets any one of the criteria in subsections (a) through (c) of this section, except as provided in subsection (d) of this section:

(a) A representative set of samples of aggregate material in the deposit on the site meets applicable Oregon Department of Transportation (ODOT) specifications for base rock for air degradation, abrasion, and soundness, and the estimated amount of material is more than 2,000,000 tons in the Willamette Valley, or more than 500,000 tons outside the Willamette Valley; **Applicant Response:** The applicant has submitted information that the proposed aggregate site contains material that would meet state specifications. According to the applicant, the proposed 9.71 acre aggregate site would produce approximately 257,000 cubic yards (514,000 tons) of aggregate material. The aggregate site does not contain any high value soils.

County Response: The Umatilla County Board of Commissioners finds that the proposed site is listed in the Umatilla County Comprehensive Plan Technical Report of Goal 5 Resource in the Inventory of Rock Material Sources as a 3C Significant Site. The County finds that the site is a large significant site because the rock sampling meets the standard of ODOT rock specifications and more than 500,000 tons of rock is present to be extracted.

(5) [Large Significant Sites] For significant mineral and aggregate sites, local governments shall decide whether mining is permitted. For a PAPA application involving an aggregate site determined to be significant under section (3) of this rule, the process for this decision is set out in subsections (a) through (g) of this section. A local government must complete the process within 180 days after receipt of a complete application that is consistent with section (8) of this rule, or by the earliest date after 180 days allowed by local charter.

(a) [Impact Area] The local government shall determine an impact area for the purpose of identifying conflicts with proposed mining and processing activities. The impact area shall be large enough to include uses listed in subsection (b) of this section and shall be limited to 1,500 feet from the boundaries of the mining area, except where factual information indicates significant potential conflicts beyond this distance. For a proposed expansion of an existing aggregate site, the impact area shall be measured from the perimeter of the proposed expansion area rather than the boundaries of the existing aggregate site and shall not include the existing aggregate site. **Applicant Response:** See attached vicinity map indicating the 1,500' impact area around the boundary of the entire tax lot. No factual information currently exists regarding potential conflicts outside the 1,500' impact area that would warrant further notice or ESEE determinations.

County Response: The Umatilla County Board of Commissioners finds that no factual information exists to indicate that there would be significant potential conflicts beyond an Impact Area of 1,500 feet from the boundaries of tax lots 100, 600, and 700. A 1500 foot Impact Area is sufficient to include uses listed in (b) below. A map of the Impact Area is part of the record. This criterion is met.

(b) [Conflicts created by the site] The local government shall determine existing or approved land uses within the impact area that will be adversely affected by proposed mining operations and shall specify the predicted conflicts. For purposes of this section, "approved

land uses" are dwellings allowed by a residential zone on existing platted lots and other uses for which conditional or final approvals have been granted by the local government. For determination of conflicts from proposed mining of a significant aggregate site, the local government shall limit its consideration to the following:

(A) Conflicts due to noise, dust, or other discharges with regard to those existing and approved uses and associated activities (e.g., houses and schools) that are sensitive to such discharges: **Applicant Response:** The applicant has indicated that no dwellings currently exist within the impact area of the proposed aggregate site. Any new dwellings would be required to meet a 500' setback from the permit boundaries of the proposed aggregate site.

County Response: The Umatilla County Board of Commissioners finds that there are no schools within the Impact Area but has identified one home site. The home is located outside of the 500 foot buffer area and within the 1500 foot Impact Area. The home is northeast of the quarry and from all indications the prevailing winds¹ travel from the west and south pushing dust or other discharge materials in the direction of the home. However, little dust should be generated since the operation will be required to employ dust suppression measures. Haul roads and the extraction area will be watered regularly through the use of water trucks as detailed by the applicant.

The impact of noise on adjacent property is unknown at this time. There was no noise data provided in terms of ambient noise levels and possible noise levels during the extraction process. Certainly an increased level of noise will be experienced during extraction, possible blasting, and processing (crushing, batching, screening) operations on this site. There will be some time when extraction will be at the surface while topsoil is moved around and the extraction process begins on currently undisturbed land. A front-end loader will be used to move material into the hopper, trucks will be used to move topsoil and other material and noise will be generated by the conveyor/hopper equipment. Thus, noise will be increased in relation to this proposal. The applicant must adhere to the DEQ Noise Standard as found in OAR 340-035-0035 *Noise Control Regulations for Industry and Commerce*. The mitigation measures specified by the applicant to decrease the impacts of noise on adjacent property are impose restrictions on the hours of operation for the aggregate site and notify surrounding property owners within the 1,500' impact area 24 hours prior to any blasting that would occur on the subject property.

There is only one "noise sensitive property"² in the Impact Area, the home northeast of the subject mining operation, an increase in noise is not allowed to adversely impact the

¹ Data retrieved from the Western Regional Climate Center, Historical Climate Information at <http://www.wrcc.dri.edu/htmlfiles/westwinddir.html>

The explanation on the web page states: "Prevailing wind direction is based on the hourly data from 1992-2002 and is defined as the direction with the highest percent of frequency. Many of these locations have very close secondary maximum which can lead to noticeable differences month to month."

² OAR 340-035-0015 Definitions: (38) "Noise Sensitive Property" means real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.

residents of this home. Conditions of approval will be imposed to mitigate noise impacts. Conditions would include limiting the hours of operation at the quarry, constructing earthen berms around the site periphery using removed overburden material, and the applicant will be required to provide 24 hour notification to property owners within the Impact Area prior to blasting. If there are complaints about noise then a Noise Study could be required to verify what noise levels are being experienced and whether or not the noise levels exceed the DEQ Noise Standard for industrial development. The cost of the Noise Study would be the responsibility of the mine operator.

If mining operations occur during hours of low light or darkness, the applicant may use temporary lighting to provide illumination for mining operations. Glare from temporary lighting could be considered "other discharges" from the site with regard to existing and approved uses and associated activities. It is not known if such temporary lighting could impact the residence that is located to the northeast within the Impact Area, but the lighting would likely have an impact on vehicle travel along State Highway #335, adjacent to the quarry. A condition of approval will be imposed to require that lighting be shielded to prevent glare on the adjacent highway and residences.

The site is adjacent to Wildhorse Creek. Wildhorse Creek is listed on the Clean Water Act 303(d) list of impaired waters for not meeting water quality standards. The Umatilla Basin TMDL was completed in 2001. This document classifies Wildhorse Creek, along with all of the Umatilla River main stream and tributaries as not meeting the TMDL for water quality for temperature. Most elevated stream temperatures result from riparian vegetation disturbance, loss of stream surface shade, along with diminished water flows during summertime. Sediment entering streams from runoff is also a contributing factor. The boundaries of the quarry are greater than 100 feet from Wildhorse Creek and aggregate extraction and processing will not cause disturbances to vegetation along the banks of the creek. There is a possibility that materials from aggregate production carried by surface water runoff could enter the creek. However, this can be mitigated through the use of berms to prevent runoff from the site. A condition of approval will be imposed to require that berms are maintained around areas of the mining site that are engaged in mining activities to mitigate the possibility of runoff.

A perennial spring occurs on the west side of Hwy 335 that flows in a northerly direction towards Wildhorse Creek across a portion of Tax Lot 100. A review of the National Wetlands Inventory Documentation does not identify this spring or downstream flow area as a wetland. This portion of Tax Lot 100 is small and irregular shaped and the location of an access road. It is not likely that mining or material stockpiling would occur at the location of the spring. The condition requiring berms around the areas engaged in mining activities will mitigate runoff from the site.

(B) Potential conflicts to local roads used for access and egress to the mining site within one mile of the entrance to the mining site unless a greater distance is necessary in order to include the intersection with the nearest arterial identified in the local transportation plan. Conflicts shall be determined based on clear and objective standards regarding sight distances, road capacity, cross section elements, horizontal and vertical alignment, and similar items in the transportation plan and implementing ordinances. Such standards for trucks associated with the mining operation shall be equivalent to standards for other trucks of equivalent size, weight, and capacity that haul other materials; **Applicant**

Response: According to site plans submitted by the applicant, access to this site is at a curve and adjacent to - and mostly east of - the paved Havana-Helix highway, situated approx. 0.5 mile north of Pendleton-Milton Freewater Highway or Hwy 008 at MP 6.42. State Highway 335 is the nearest arterial identified in the Umatilla County Comprehensive Plan.

Goal 1 of the Umatilla County Transportation System Plan (TSP) is to “[p]reserve the function, capacity, level of service, and safety of the local streets, county roads, and state highways”. The TSP requires Umatilla County to “include a consideration of a proposal’s impact on existing or planned transportation facilities in all land use decisions”. Section 152.017 of the Umatilla County Development Code, allows the County to require the applicant to provide a traffic impact study to demonstrate the level of impact to surrounding area, but only if the proposed development meets the definition of significant change in trip generation. This proposed use does not appear to meet the definition of significant change in trip generation.

According to Section 152.017(B-C) of the Umatilla County Development Code, the applicant shall be required to provide adequate information regarding a traffic impact study or traffic counts to demonstrate the level of impact to the surrounding system. The applicant will not be required to conduct a traffic impact analysis, or engage in mitigation to use the current access of the quarry site.

County Response: The Umatilla County Board of Commissioners finds that the roads within a one mile area are either State Highways or County Roads. The Havana-Helix Highway, (Hwy #335) and Oregon-Washington Highway (Hwy #11) are paved state highways. Adams Road, County Road #973, is a paved county road. Hwy 11 connects I-84 to the Washington State line at Milton-Freewater, Hwy 335 connects Hwy 11 with Helix, and Adams road connects Pendleton to Adams and crosses Hwy 335 just north of the quarry site. All roads are paved and have the capacity to handle heavy truck traffic and additional trips each day. The applicant stated in the application materials that this quarry site will only be used to support public road projects (transportation system improvements), so the traffic generated from operations at this site will be temporary and sporadic. It is not anticipated that the continued use of this quarry would create or increase conflicts to the transportation system within one (1) mile of the site beyond current levels already associated with the quarry operations.

(C) Safety conflicts with existing public airports due to bird attractants, i.e., open water impoundments as specified under OAR chapter 660, division 013; Applicant Response:

Not applicable. No public airports are in the vicinity of the proposed site.

County Response: The Umatilla County Board of Commissioners finds that there are no public airports within the Impact Area. The closest public airport is located some 10 miles westerly of the mine operation. Thus, no conflicts are recognized in terms of public airports and the proposed mining operation.

(D) Conflicts with other Goal 5 resource sites within the impact area that are shown on an acknowledged list of significant resources and for which the requirements of Goal 5 have been completed at the time the PAPA is initiated; Applicant Response: There are no

Goal 5 sites within the impact area.

County Response: The Umatilla County Board of Commissioners finds that there are no other acknowledged Goal 5 resources within the Impact Area. Thus, no conflicts exist between the proposed aggregate site and other Goal 5 resources.

(E) Conflicts with agricultural practices; and

Applicant Response: There are agricultural operations within the impact area of the aggregate site. The subject property already operates as a quarry. None of the operations conflicts with agricultural practices.

County Response: The Umatilla County Board of Commissioners finds that the agricultural practices within the 1500 foot impact zone of the quarry site are dry land wheat and range land. The potential conflicts to agricultural practices stems from the possibility of dust movement onto adjacent cropland. Aggregate extraction from this quarry supports road construction and maintenance activities on public roads and the quarry is used on an as needed basis. Haul roads and heavy trucks will not be continuously used which potentially could cause large amounts of dust. There will be some truck movement, when the quarry is in use, but not as would typically be experienced in a commercial mining operation. Additionally, the applicant will be required to mitigate dust movement through regular watering of the haul roads and the extraction area during mining activities. The agricultural practices and crops in the Impact Area are those that would not be adversely impacted by the mining operation.

(F) Other conflicts for which consideration is necessary in order to carry out ordinances that supersede Oregon Department of Geology and Mineral Industries (DOGAMI)

regulations pursuant to ORS 517.780; Applicant Response: There are no other conflicts to be considered. As a condition of approval of the Conditional Use Permit, the applicant is required to comply with all DOGAMI requirements.

County Response: The Umatilla County Board of Commissioners finds there are no other conflicts identified to be considered at this time.

(c) [If conflicts exist, measures to minimize] The local government shall determine reasonable and practicable measures that would minimize the conflicts identified under subsection (b) of this section. To determine whether proposed measures would minimize conflicts to agricultural practices, the requirements of ORS 215.296 shall be followed rather than the requirements of this section. If reasonable and practicable measures are identified to

minimize all identified conflicts, mining shall be allowed at the site and subsection (d) of this section is not applicable. If identified conflicts cannot be minimized, subsection (d) of this section applies. **Applicant Response:** Conflicts between the mining operation and uses/services located within the impact area, as well as other dwellings and land uses in the surrounding area, could be mitigated by the following:

- **Dust Control:** The contractors that work within the quarry are required to provide proof of a current Air Contaminant Discharge Permit from the Oregon Department of Environmental Quality upon request for the on-site processing operation, and require the applicant to utilize water trucks to abate dust from the leaving the subject property State Highway 335.
- **Water Discharge:** According to DOGAMI, the applicant is required to retain all water generated by storm water run-off, as well as the aggregate operation, on site. Water is managed through the use of berms.
- **Noise:** Impose restrictions on the hours of operation for the aggregate site. The hour restrictions could be placed on the entire operation, or on certain activities associated with the operation. The applicant could be required to notify surrounding property owners within the 1,500' impact area 24 hours prior to any blasting that would occur on the subject property. The Board of Commissioners or Board of Commissioners could place additional restrictions on blasting to better safeguard surrounding property owners.

County Response: The Umatilla County Board of Commissioners finds that conflicts from dust and noise will be present from this mining operation. Mitigation measures are outlined below to minimize conflicts due to dust and noise:

1. Haul Roads will be watered regularly with the use of water trucks.
2. Extraction areas will be watered regularly to minimize dust.
3. Noise will be minimized through the construction of earthen berms, using overburden material, along the property lines adjacent to Highway 335 and the northeastern property line in the direction of Adams Road.

The use of these mitigation measures should resolve the conflicts from dust and noise.

(d) [If conflict can't be minimized then conduct ESEE] The local government shall determine any significant conflicts identified under the requirements of subsection (c) of this section that cannot be minimized. Based on these conflicts only, local government shall determine the ESEE consequences of either allowing, limiting, or not allowing mining at the site. Local governments shall reach this decision by weighing these ESEE consequences, with consideration of the following:

- (A) The degree of adverse effect on existing land uses within the impact area;
- (B) Reasonable and practicable measures that could be taken to reduce the identified adverse effects; and
- (C) The probable duration of the mining operation and the proposed post-mining use of the site.

Applicant Response: Based on comments from surrounding landowners, and the County Public Works Director, it would appear that all the conflicts identified under subsection (c) could be minimized by conditions of approval imposed through the conditional use process, as well as this PAPA process.

County Response: The Umatilla County Board of Commissioners finds that the recognized conflicts determined in paragraph (c) of this section can be mitigated. This criterion is not applicable.

(e) [Amend Plan] Where mining is allowed, the plan and implementing ordinances shall be amended to allow such mining. Any required measures to minimize conflicts, including special conditions and procedures regulating mining, shall be clear and objective. Additional land use review (e.g., site plan review), if required by the local government, shall not exceed the minimum review necessary to assure compliance with these requirements and shall not provide opportunities to deny mining for reasons unrelated to these requirements, or to attach additional approval requirements, except with regard to mining or processing activities:

(A) For which the PAPA application does not provide information sufficient to determine clear and objective measures to resolve identified conflicts;

(B) Not requested in the PAPA application; or

(C) For which a significant change to the type, location, or duration of the activity shown on the PAPA application is proposed by the operator.

Applicant Response: Conditions of approval associated with the PAPA, as well as the Conditional Use permit shall be clear and objective, and shall be required to mitigate conflicts identified by the PAPA process.

County Response: The Umatilla County Board of Commissioners finds that the applicant has submitted a Post Acknowledgement Plan Amendment (PAPA) Application to amend the Comprehensive Plan and add this quarry on the list of Goal 5 protected aggregate sites. This site is already listed as a significant site where conflicts with the site area are to be specifically limited through the PAPA process. Identified conflicts are to be mitigated through clear and objective conditions of approval.

(f) [Post mining uses] Where mining is allowed, the local government shall determine the post-mining use and provide for this use in the comprehensive plan and land use regulations. For significant aggregate sites on Class I, II and Unique farmland, local governments shall adopt plan and land use regulations to limit post-mining use to farm uses under ORS 215.203, uses listed under ORS 215.213(1) or 215.283(1), and fish and wildlife habitat uses, including wetland mitigation banking. Local governments shall coordinate with DOGAMI regarding the regulation and reclamation of mineral and aggregate sites, except where exempt under ORS 517.780.

Applicant Response: This is applicable. However, the site does not include high value farmland. Post mining reclamation will include re-grading and seeding the subject property with native vegetation for resource uses and open space. The DOGAMI reclamation plan is on file with DOGAMI

County Response: The Umatilla County Board of Commissioners finds that the post mining uses must comply with the EFU Zone and the DOGAMI Reclamation Plan requirements.

The applicants post mining reclamation plan to re-grade and re-seed the subject property would be in compliance with these requirements.

(g) [Issuing a zoning permit] Local governments shall allow a currently approved aggregate processing operation at an existing site to process material from a new or expansion site without requiring a reauthorization of the existing processing operation unless limits on such processing were established at the time it was approved by the local government. **Applicant Response:** This section does not apply. The application would approve a processing operation on the site included in the Goal 5 inventory of the Umatilla County Comprehensive Plan.

County Response: The Umatilla County Board of Commissioners finds that the mining operation is limited to the boundaries of the three parcels that make up the quarry site lying mostly east of Highway 335. An Aggregate Resource (AR) Overlay Zone will be applied to the quarry to provide protection for the aggregate site. Once the aggregate site is exhausted no further mining can occur without further authorizations. The future extraction of aggregate from the site can occur through the issuance of a zoning permit without any further permitting.

(7) [Protecting the site from other uses/conflicts] Except for aggregate resource sites determined to be significant under section (4) of this rule, local governments shall follow the standard ESEE process in OAR 660-023-0040 and 660-023-0050 to determine whether to allow, limit, or prevent new conflicting uses within the impact area of a significant mineral and aggregate site. (This requirement does not apply if, under section (5) of this rule, the local government decides that mining will not be authorized at the site.)

Applicant Response See responses to OAR 660-023-0040 and 660-023-0050 [below]. With the establishment of an AR overlay zone over the expansion area, dwellings would not be allowed within 500-feet of boundaries of the overlay.

County Response: The process to determine how to protect the site from other uses/conflicts is to conduct an ESEE Analysis. OAR 660-023-0040 & 0050 will be addressed below.

660-023-0040 ESEE Decision Process

(1) Local governments shall develop a program to achieve Goal 5 for all significant resource sites based on an analysis of the economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit a conflicting use. This rule describes four steps to be followed in conducting an ESEE analysis, as set out in detail in sections (2) through (5) of this rule. Local governments are not required to follow these steps sequentially, and some steps anticipate a return to a previous step. However, findings shall demonstrate that requirements under each of the steps have been met, regardless of the sequence followed by the local government. The ESEE analysis need not be lengthy or complex, but should enable reviewers to gain a clear understanding of the conflicts and the consequences to be expected. The steps in the standard ESEE process are as follows:

(a) Identify conflicting uses;

- (b) Determine the impact area;
- (c) Analyze the ESEE consequences; and
- (d) Develop a program to achieve Goal 5.

The items (a) through (d) will be addressed below.

(2) Identify conflicting uses. Local governments shall identify conflicting uses that exist, or could occur, with regard to significant Goal 5 resource sites. To identify these uses, local governments shall examine land uses allowed outright or conditionally within the zones applied to the resource site and in its impact area. Local governments are not required to consider allowed uses that would be unlikely to occur in the impact area because existing permanent uses occupy the site. The following shall also apply in the identification of conflicting uses:

The subject parcel is surrounded on all sides by Exclusive Farm Use zoning. The permitted and conditional uses available in the Exclusive Farm Use Zone are found in Umatilla County Development Code Chapter 152.056, 058, 059 and 152.060. A listing is shown below of uses that may be possible within the Impact Area (possible conflicting uses are shown in bold)

UCDC 152.056 - EFU Permitted Uses –
Outright

- (A) Farm Use
- (B) Harvesting of a forest product.
- (C) On-site filing
- (D) Temporary public roads
- (E) Projects specifically identified in the TSP
- (F) Landscaping
- (G) Emergency measures
- (H) Construction of a road
- (I) Utility facility service lines
- (J) Maintenance or minor betterment of existing Transmission lines
- (K) The transport of biosolids
- (L) Reconstruction of roads
- (M) Irrigation canals
- (N) Minor betterment of roads

UCDC 152.058 - EFU Permitted Uses –
Zoning Permit

- (A) Activities within parks
- (B) Operation for the exploration of

- geothermal
- (C) Operations for the exploration for minerals
- (D) Winery
- (E) Farm stands
- (F) Replacement Dwellings**
- (G) Signs
- (H) Accessory buildings
- (I) On-site filming
- (J) Takeoff and landing of model aircraft
- (K) Fire Service facilities
- (L) Gathering of fewer than 3,000 persons
- (M) Wetlands
- (N) Climbing and passing lanes
- (O) Accessory structures to a farm use
- (P) Met towers
- (Q) Home Occupations
- (R) Agri-Tourism

UCDC 152.059 - EFU Permitted Uses –
Land Use Decisions

- (A) (Item Deleted)
- (B) Churches and Cemeteries
- (C) Utility Facilities Necessary for Public Service

- (D) A facility for the processing of forest products
- (E) Continuation of fire arms training
- (F) A facility for the processing of farm crops
- (G) The land application of reclaimed water
- (H) (Item Deleted)
- (I) (Item Deleted)
- (J) (Item Deleted)
- (K) Dwellings – Farm, Non-Farm and Lot of Record Dwellings**

UCDC 152.060 - EFU Conditional Uses

- (A) Commercial activities in conjunction with farm use
- (B) Mining
- (C) Private Parks, private playgrounds, private hunting and fishing preserves and private campgrounds**
- (D) Public parks
- (E) Golf Courses
- (F) Commercial utility facilities for the purpose of generating power for public use
- (G) Personal Use Airports
- (H) Home occupations
- (I) Community centers

- (J) Hardship Dwellings**
- (K) Dog kennels
- (L) A site for the disposal of solid waste
- (M) The propagation, cultivation, maintenance and harvesting of aquatic species.
- (N) Construction of additional passing lanes
- (O) Reconstruction of additional passing lanes
- (P) Improvement of public roads
- (Q) Destination Resorts
- (R) Living History Museum
- (S) Bottling of water
- (T) On-Site filming
- (U) Construction of highways
- (V) Residential houses
- (W) Transmission or communication towers
- (X) Expansion of existing county fairgrounds
- (Y) Room and board**
- (Z) Wildlife habitat
- (AA) Aerial fireworks display
- (BB) Composting facilities
- (CC) Uses compatible with the TSP
- (DD) Public or private schools
- (EE) Agri-Tourism

The uses in the EFU Zone that if located within the Impact Area may conflict with the aggregate site are as follows:

- Private Parks, private playgrounds, private hunting and fishing preserves and private campgrounds.
- Dwelling uses – farm and non-farm dwellings, hardship dwelling, room and board

(a) If no uses conflict with a significant resource site, acknowledged policies and land use regulations may be considered sufficient to protect the resource site. The determination that there are no conflicting uses must be based on the applicable zoning rather than ownership of the site. (Therefore, public ownership of a site does not by itself support a conclusion that there are no conflicting uses.)

(b) A local government may determine that one or more significant Goal 5 resource sites

are conflicting uses with another significant resource site. The local government shall determine the level of protection for each significant site using the ESEE process and/or the requirements in OAR 660-023-0090 through 660-023-0230 (see OAR 660-023-0020(1)).

The Umatilla County Board of Commissioners finds that there are uses that have the potential of conflicting with the aggregate site if located within the Impact Area as detailed above. There are no significant Goal 5 resource sites within the Impact Area.

(3) Determine the impact area. Local governments shall determine an impact area for each significant resource site. The impact area shall be drawn to include only the area in which allowed uses could adversely affect the identified resource. The impact area defines the geographic limits within which to conduct an ESEE analysis for the identified significant resource site.

The Umatilla County Board of Commissioners finds that an Impact Area was defined as 1,500 feet from the boundaries of Tax Lots 100, 600, and 700.

(4) Analyze the ESEE consequences. Local governments shall analyze the ESEE consequences that could result from decisions to allow, limit, or prohibit a conflicting use. The analysis may address each of the identified conflicting uses, or it may address a group of similar conflicting uses. A local government may conduct a single analysis for two or more resource sites that are within the same area or that are similarly situated and subject to the same zoning. The local government may establish a matrix of commonly occurring conflicting uses and apply the matrix to particular resource sites in order to facilitate the analysis. A local government may conduct a single analysis for a site containing more than one significant Goal 5 resource. The ESEE analysis must consider any applicable statewide goal or acknowledged plan requirements, including the requirements of Goal 5. The analyses of the ESEE consequences shall be adopted either as part of the plan or as a land use regulation. There are ten (10) properties in the Impact Area zoned Exclusive Farm use (EFU). Within the ordinance for the EFU Zone, there are over 40 permitted uses and some 31 conditional uses listed above. In the past, the quarry has been mined intermittently to support road construction and maintenance activities on nearby roadways with the latest operations permitted in 2012. Most EFU uses are compatible with the mining operation. Uses that might be considered incompatible are potential dwellings and certain uses allowed either through a land use decision or conditional use process, including churches, schools, community centers and home occupations. Parks, playgrounds, hunting and fishing preserves, and campgrounds could be considered incompatible with mining.

Thus, two categories of possible conflicting future uses in the Impact Area are identified as:

- Dwelling uses (which include churches, schools, community centers, and home occupations)
- Parks (which include campgrounds, playgrounds, private hunting and fishing preserves and recreational areas)

The ESSE Analysis follows:

(a) Economic Consequences of Future Uses

Dwelling Uses

Prohibiting future dwellings in the Impact Area may decrease the value of land in the EFU Zone. Those property owners in the Impact Area could locate the dwelling to be outside of the Impact Area, thus, resulting in no change of the overall value. There is one (1) dwelling that is located within the 1500 foot Impact area but outside of the 500 foot buffer area. There are two very small parcels that are completely contained within the Impact Area and are also within the 500 foot buffer area. The size of these two parcels does not allow for the establishment of a dwelling in the current underlying EFU Zone. Prohibiting dwellings may have some impact on future County revenue because development increases the amount of money available to the County. Prohibiting dwellings could have some beneficial impact on the mining operation in that there would be less money spent in the event there are conflicts arising out of future dwellings occupying areas adjacent to the aggregate operation. However, the mitigation measures placed for the resource use (namely dust control and noise mitigation) will be required in any case.

Allowing future dwellings could cause an impact on the aggregate operation by increasing operating expenses to the aggregate operation due to conflicts that might arise with neighboring property owners. This could be mitigated through the use of a Covenant Not to Sue for future dwellings.

Limiting dwellings on adjacent parcels could have some beneficial impact for the mining operation in that there would be less money spent in the event there are conflicts arising out of future dwellings. Dwellings, as allowed by the underlying zoning, could be limited to being located outside of the Impact Area.

Parks Uses

Prohibiting future parks uses within the Impact Area may reduce the variety of uses available to the area, but has no significant economic impact on or to the mining operation. Allowing the future parks does not infringe on the mining operation, maintains the opportunity for further development on the existing adjacent lands and enables the best use of the land as based on future determinations of owners.

Limiting future parks uses is likely a landowner decision because a park in close proximity to the quarry site is likely undesirable. Limiting parks in the Impact Area might avoid some conflicts, but because of the low density (one existing house and limited future development) and the large nearby parcels of non-irrigated cropland and range land, there is little likelihood that limiting parks will have economic consequences on the mining site. Allowing park uses provided under existing zoning has the least

economic consequences to all involved.

(b) Social Consequences

Dwelling Uses

Whether dwellings, churches, community centers or schools are allowed, prohibited, or limited will have no social consequences, except that if dwellings are allowed, there may be impacts on schools, but the number of future dwellings that can be allowed is so minimal that it is unlikely to make a statistical difference.

Parks Uses

Likewise, there are no identified social consequences of allowing, prohibiting or limiting the use of parks, campgrounds, golf courses, or private hunting and fishing preserves and private campgrounds, or other similar uses within the Impact Area.

(c) Environmental Consequences

Dwelling Uses

The environmental consequences of allowing future dwelling uses in the Impact Area would be that these uses are receptors for noise, generated by the mining operation, for dust generated by the mining operation, these uses would generate additional traffic, which could conflict with truck usage in the area. However, since the site will only be operated on an as needed basis there should be a minimal noise concern. There will be some dust because of the method of extraction and conveying the material to the road construction or maintenance site. There will be truck movement but as haul roads will be watered regularly, there is likely to be little dust impacting on the allowed potential dwellings.

There would be little impact from prohibiting future dwelling uses because mitigation measures for noise and dust will be implemented. It is conceivable that some dwellings might be constructed at a location that would view the site. Prohibiting a future dwelling for this reason seems excessive where reorientation of the future dwelling would eliminate or minimize unwanted views.

Parks Uses

The environmental consequences of prohibiting parks uses are to lessen the human impact on the surrounding land. Prohibiting the mining operation could create less disturbance to serene parks uses expansions, however, due to the existing land use patterns in the Impact Area; it is unlikely that such parks uses would be located in the area.

(d) Energy Consequences

Dwelling Uses

Prohibiting future dwellings uses in the Impact Area would limit consumption of gasoline, natural gas, or electricity in the immediate area, but such limitation is meaningless because people who might otherwise occupy any future dwelling uses would locate elsewhere. Allowing or limiting dwelling uses likewise has no negative energy effects.

Parks Uses

Prohibiting parks, recreational uses, campgrounds and golf course, or private hunting and fishing preserves and private campgrounds, would not impact gasoline, natural gas, or electrical consumption because such uses would be located elsewhere and any uses would not be in a high enough volume to affect energy resources.

(5) Develop a program to achieve Goal 5. Local governments shall determine whether to allow, limit, or prohibit identified conflicting uses for significant resource sites. This decision shall be based upon and supported by the ESEE analysis. A decision to prohibit or limit conflicting uses protects a resource site. A decision to allow some or all conflicting uses for a particular site may also be consistent with Goal 5, provided it is supported by the ESEE analysis. One of the following determinations shall be reached with regard to conflicting uses for a significant resource site:

- (a) A local government may decide that a significant resource site is of such importance compared to the conflicting uses, and the ESEE consequences of allowing the conflicting uses are so detrimental to the resource, that the conflicting uses should be prohibited.
- (b) A local government may decide that both the resource site and the conflicting uses are important compared to each other, and, based on the ESEE analysis, the conflicting uses should be allowed in a limited way that protects the resource site to a desired extent.
- (c) A local government may decide that the conflicting use should be allowed fully, notwithstanding the possible impacts on the resource site. The ESEE analysis must demonstrate that the conflicting use is of sufficient importance relative to the resource site, and must indicate why measures to protect the resource to some extent should not be provided, as per subsection (b) of this section.

Applicant Response: According to the setback requirements of the Umatilla County Development Code, dwellings are allowed to exist around an aggregate site as long as they are set back from the aggregate site a minimum of 500 feet. Any new dwellings would be required to be set back a minimum of 500 feet from the nearest boundary of the Aggregate Resource Overlay Zone. Therefore, the Aggregate Resource Overlay Zone allows conflicting uses while protecting the significant aggregate resource site. There are no dwellings located within 500'

County Response: These categories of conflicting future uses have been identified: dwelling uses and parks uses. The ESEE Analysis shows that owners of future uses may

seek to restrict operations on the mining operation because of noise and dust impacts on them from the site. Noise from the aggregate operation should be lessened due to topographical features and the earthen berms required to be constructed along the exterior of the site. Dust will be required to be controlled by regular watering of the haul roads and at the extraction site. Thus, paragraph 5 (b) will be applied to this future uses in the Impact Area.

Because parks are unlikely in the area due to the historic and continued farming practices, no limitation on park uses are necessary within the Impact Area.

660-023-0050 Programs to Achieve Goal 5

(1) For each resource site, local governments shall adopt comprehensive plan provisions and land use regulations to implement the decisions made pursuant to OAR 660-023-0040(5). The plan shall describe the degree of protection intended for each significant resource site. The plan and implementing ordinances shall clearly identify those conflicting uses that are allowed and the specific standards or limitations that apply to the allowed uses. A program to achieve Goal 5 may include zoning measures that partially or fully allow conflicting uses (see OAR 660-023-0040(5) (b) and (c)). **Applicant Response** As part of this application, the proposed aggregate site will be included under the Aggregate Resource Overlay Zone and protected under Goal 5. This overlay zone is adopted in the Umatilla County Comprehensive Plan and implemented in the Umatilla County Development Code.

County Response: The Umatilla County Board of Commissioners finds the resource site will be protected under the AR Overlay Zone.

(2) When a local government has decided to protect a resource site under OAR 660-023-0040(5)(b), implementing measures applied to conflicting uses on the resource site and within its impact area shall contain clear and objective standards. For purposes of this division, a standard shall be considered clear and objective if it meets any one of the following criteria:

(a) It is a fixed numerical standard, such as a height limitation of 35 feet or a setback of 50 feet;

(b) It is a nondiscretionary requirement, such as a requirement that grading not occur beneath the dripline of a protected tree; or

(c) It is a performance standard that describes the outcome to be achieved by the design, siting, construction, or operation of the conflicting use, and specifies the objective criteria to be used in evaluating outcome or performance. Different performance standards may be needed for different resource sites. If performance standards are adopted, the local government shall at the same time adopt a process for their application (such as a conditional use, or design review ordinance provision).

Applicant Response: The Umatilla County Development Code meets the criteria in (a) of this provision to protect aggregate resource sites listed in the inventory of the Umatilla County Comprehensive Plan. Setbacks for dwellings shall be no less than 500 feet from an existing aggregate site unless the applicant for the dwelling obtains a written release from the adjacent mining operation or waives the right to remonstrate against normal

aggregate mining activities. This setback shall apply around all areas sited under the AR overlay zone. There are no dwellings within 500' of the quarry.

County Response: The Umatilla County Board of Commissioners finds that the current Umatilla County Development Code provides a setback for dwellings of 500 feet from processing equipment in an AR overlay zone. At the time of this application, no dwellings exist within 500 feet of the boundaries of the proposed AR Overlay Zone.

(3) In addition to the clear and objective regulations required by section (2) of this rule, except for aggregate resources, local governments may adopt an alternative approval process that includes land use regulations that are not clear and objective (such as a planned unit development ordinance with discretionary performance standards), provided such regulations:

(a) Specify that landowners have the choice of proceeding under either the clear and objective approval process or the alternative regulations; and

(b) Require a level of protection for the resource that meets or exceeds the intended level determined under OAR 660-023-0040(5) and 660-023-0050(1).

Applicant Response: This section does not apply. The application pertains to an aggregate resource.

County Response: The Umatilla County Board of Commissioners finds that there are no alternative regulations specified to protect the mining operation.

31. STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE FOR ESTABLISHING AN AR OVERLAY ZONE are found in Sections 152.487 and 152.488.

The following standards of approval are underlined and the findings are in normal text.

152.487 CRITERIA FOR ESTABLISHING AN AR OVERLAY ZONE: Section 152.487 of the Umatilla County Development Code lists required criteria the Board of Commissioners must consider for establishing an AR (Aggregate Resource) Overlay Zone. Criteria are listed and underlined. Evaluation responses are provided in normal text.

(A) At the public hearing the Board of Commissioners shall determine if the following criteria can be met:

(1) The proposed overlay would be compatible with the Comprehensive Plan:

Applicant Response: A Plan change application to include the proposed site under the Goal 5 significant aggregate site inventory is in conjunction with this AR Overlay Zone application. Approval of the Comprehensive Plan Text Amendment to establish significance would meet this requirement.

County Response: The Umatilla County Board of Commissioners finds the proposal complies with the Comprehensive Plan, Chapter 8, and Policy 38:

Policy 38. (a) The County shall encourage mapping of future agencies sites, ensure their protection from conflicting adjacent land uses, and required reclamation plans.

(b) Aggregate and mineral exploration, extraction, and reclamation shall be conducted in conformance with the regulations of the Department of Geology and Mineral Industries.

(c) The County Development Ordinance shall include conditional use standards and other provisions to limit or mitigate conflicting uses between aggregate sites and surrounding land uses

Policy 38 (a) is met through the Goal 5 process. It was found that the future conflicting uses of the mining operation can be fully allowed. The mining operation will mitigate dust and noise which should alleviate any negative impacts. The mining operation will adhere to DOGAMI rules for operation and reclamation of the site as required by (b). Conditions of approval will be imposed on the applicant as required by (c), below, that will place operational restrictions on mining operations to mitigate conflicts.

(2) There is sufficient information supplied by the applicant to show that there exists quantities of aggregate material that would warrant the overlay;

Applicant Response: the proposed aggregate site contains material that would meet state specifications. According to the applicant, the proposed 9.71 acre aggregate site would produce approximately 257,000 cubic yards (514,000 tons) of aggregate material. The aggregate site does not contain high value soils.

County Response: The Umatilla County Board of Commissioners finds that the current mining operation is listed as a medium quantity site in the Technical Report and the applicant has provided that there is enough remaining aggregate resources to meet the OAR-660-023-180(3) and (4) standards. This criteria is discussed in the findings under OAR 660-023-0180(3) above regarding quantity/quality.

(3) The proposed overlay is located at least 1,000 feet from properties zoned for residential use or designated on the Comprehensive Plan for residential;

Applicant Response: the proposed site is surrounded by lands zoned for Exclusive Farm Use.

County Response: The Umatilla County Board of Commissioners finds that surrounding properties are zoned as EFU and designated as North/South Agriculture in the Umatilla County Comprehensive Plan.

(4) Adequate screening, either natural or man-made, is available for protecting the site from surrounding land uses.

Applicant Response: DOGAMI regulates storm water run-off if it is found that water running off the aggregate site. The applicant proposes to berm the perimeter with overburden obtained from inside the permit boundary. The Board of Commissioners or Board of Commissioners could require additional screening, either natural or man-made, to protect surrounding properties from impacts.

County Response: The Umatilla County Board of Commissioners finds that the natural topography provides some screening along the eastern boundary and the applicant will be required to use overburden material to create berms along the specified boundaries of the quarry to contain runoff.

(5) The site complies with Oregon Administrative Rules (OAR) 660-023-0180. The criteria for this rule is discussed in number 30 above.

152.488 MINING REQUIREMENTS: Section 152.488 of the Umatilla County Development Code lists mining requirements for aggregate sites under the AR overlay zone. Criteria are listed and underlined. Evaluation responses are provided in standard text.

(A) All work done in an AR Overlay Zone shall conform to the requirements of the Department of Geology and Mineral Industries or its successor, or the applicable state statutes.

Applicant Response: The applicant understands that the proposed aggregate site will be subject to the requirements of the Department of Geology and Mineral Industries. As a subsequent condition of approval, the applicant shall provide the Umatilla County Planning Office with an approved reclamation plan from DOGAMI prior to use of quarry under Goal 5 protection.

County Response: The Umatilla County Board of Commissioners finds that the applicant will be required to obtain all necessary State and Federal Permits as a precedent condition of approval.

(B) In addition to those requirements, an aggregate operation shall comply with the following standards:

- (1) For each operation conducted in an AR Overlay Zone the applicant shall provide the Planning Department with a copy of the reclamation plan that is to be submitted under the county's reclamation ordinance;

Applicant Response: This criteria does not apply. The county surface mining land reclamation ordinance has been repealed. The Oregon Department of Geology & Mineral Industries (DOGAMI) regulates mining and reclamation. DOGAMI will not authorize activity until the county provides land use approval. A copy of the DOGAMI Operating Permit as a subsequent condition of approval prior to use of quarry under Goal 5 protection.

County Response: The Umatilla County Board of Commissioners finds that the county surface mining land reclamation ordinance has been repealed as stated by the applicant. The applicant has provided that a post mining reclamation plan to re-grade and re-seed the subject property was submitted as part of their DOGAMI application as discussed above under 660-023-180(5)(f) above. OAR 660-023-180 (8)(b) requires the applicant to include a conceptual site reclamation plan in the Post Acknowledgement Plan Amendment (PAPA) application. The applicant will be required to submit a conceptual reclamation plan to the Planning Department as an addendum to the PAPA application as a condition of approval.

- (2) Extraction and sedimentation ponds shall not be allowed within 25 feet of a public road or within 100 feet from a dwelling, unless the extraction is into an area that is above the grade of the road, then extraction may occur to the property line;

Applicant Response: There are no ponds within 25' of a public road, or within 100' of a dwelling.

County Response: The Umatilla Board of Commissioners finds that there are no dwellings within 100 feet of the quarry. The applicant has provided that there is no extraction or sedimentation ponds within 25 feet of a public road. A condition of approval will require future sedimentation ponds to maintain a 25 foot setback to a public road is imposed.

- (3) Processing equipment shall not be operated within 500 feet of an existing dwelling at the time of the application of the overlay zone. Dwellings built after an AR Overlay Zone is

applied shall not be used when computing this setback.

Applicant Response: No dwellings currently exist within 500' of the proposed permit boundary.

County Response: The Umatilla County Board of Commissioners finds that aerial images show that there are no current or proposed dwellings within 500 feet of the proposed overlay zone at the time of this application.

(4) All access roads shall be arranged in such a manner as to minimize traffic danger and nuisance to surrounding properties and eliminate dust.

Applicant Response: The applicant has demonstrated that the access road will minimize traffic danger and nuisance.

County Response: The Umatilla County Board of Commissioners finds that an approved access road is currently in use for quarry ingress and egress. The applicant has provided that that road is arranged in a manner that has and will continue to minimize traffic danger and nuisance to surrounding properties throughout the existence of the quarry.

32. DECISION: THIS REQUEST TO AMEND THE COMPREHENSIVE PLAN TO ADD THIS LARGE SIGNIFICANT SITE TO THE COUNTY'S INVENTORY OF SIGNIFICANT SITES AND ESTABLISH AN AGGREGATE RESOURCE OVERLAY ON THE THREE TAX LOTS COMPLIES WITH THE STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE, SUBJECT TO THE FOLLOWING CONDITIONS:

Precedent Conditions: The following precedent conditions must be fulfilled prior to final approval of this request:

1. Obtain all other federal and state permits necessary for development. Provide copies of these permit approvals to the County Planning Department.
 - a. Obtain all applicable permits for the mining operations from DOGAMI before these activities begin. Applicant will obtain approval from DOGAMI for the reclamation plan and submit a copy of the reclamation plan to the Planning Department.
 - b. Obtain all applicable permits for the mining operation from DEQ (air, noise, and water quality issues) before these activities begin.
2. The County Planning Department will prepare an Ordinance to amend the County Comprehensive Plan to add this aggregate site known as the Wildhorse Creek Quarry to the County's Inventory of Significant Sites as a Large Significant Site. Afterward the County will submit the Notice of Adoption to DLCD for final approval.
3. Pay notice costs as invoiced by the County Planning Department.

Subsequent Conditions: The following subsequent conditions must be fulfilled following

final approval of this request Umatilla County:

4. Obtain a Zoning Permit from the Umatilla County Planning Department for the Mining Operation. The zoning permit should include an approved site plan showing existing structures, setbacks, etc. A new zoning permit must be obtained following periods of inactivity greater than one (1) year.
5. Hours of operation for mining operations shall be limited to 7:00 AM to 7:00 PM.
6. Any lighting used for the mining operation must be shielded to prevent glare onto adjacent roadways and residences.
7. The aggregate extraction areas and sedimentation ponds cannot be any closer than 25 feet from a public road or 100 feet from a dwelling. Any equipment must be set back 50 feet from a public road, county roadway or utility right of way.
8. If cultural artifacts are observed during ground-disturbing work, that work must cease in the development area until the find is assessed by qualified cultural resource personnel from the State Historic Preservation Office and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). Once qualified cultural resource personnel from SHPO and CTUIR are satisfied, then the ground-disturbing work may continue.
9. It is assumed that a water truck will be utilized to regularly water down the extraction area and haul roads during activity. The applicant shall be required to provide dust control on the project site and on all staging areas.
10. Maintain berms along westerly and northerly property boundaries to reduce visual and noise impacts with the adjoining public highway and dwelling.
11. All equipment, refuse, and temporary structures shall be removed from the processing site and the site left free of debris at such time that the aggregate site is left dormant for one year, and leave the extraction area in a safe and useable condition. Provide verification to the County Planning Department that the site is clean and safe.
12. When blasting operations are necessary, the applicant must provide no less than 24 hour notice of the impending blasting to all neighboring property owners within the 1500 feet Impact Area.
13. **Implement and maintain a Noxious Weed Control program to prevent the growth and spread of noxious weeds in and around the quarry property.**
14. **Protect adjacent wetland areas from offsite discharges caused by runoff through the use of berms around areas engaged in mining activities.**

Dated this the 17th day of September, 2014

UMATILLA COUNTY BOARD OF COMMISSIONERS

William J. Bill Elfering, Chair

George L. Murdock, Commissioner

W. Lawrence Givens, Commissioner

ATTEST:
OFFICE OF COUNTY RECORDS

RECORDS OFFICER

Umatilla County Comprehensive Plan Text Amendment

Wildhorse Creek Quarry

Comprehensive Plan Map Amendment, #P-109-14,

Comprehensive Plan Text Amendment T-14-054

Zoning Map Amendment #Z-301-14

Township 3N Range 33 Section 23, Tax Lots 100, 600, 700

This notice proposes to amend the Umatilla County Comprehensive Plan text by adding the Wildhorse Creek quarry to the list of Goal 5 protected, significant resource aggregate sites. The following proposed changes will be made in Chapter 8, Open Space, Scenic and Historic Areas, and Natural Resources.

Proposed changes are in highlighted text

41. Several aggregate sites were determined to be significant enough to warrant protection from surrounding land uses in order to preserve the resource (see Technical Report).

41. In order to protect the aggregate resource, the County shall apply an aggregate resource overlay zone to the following existing sites:

(1) ODOT quarry, T5N, R35E, Section 35, TL 6200, 5900.

(2) ODOT quarry, T5N, R29E, Section 22, TL 800 (“Sharp’s Corner”)>

(3) Private, commercial pit, T4N, R38E, Section 27, TL 1100.

(4) Upper Pit, T4N, R28E, Sections 28, 29, TL 4000.

(5) ODOT quarry, T3N, R33E, Section 23, TL 100, 600, 700

(6) Several quarries, T2N, R31E, Section 15, 16, 17, TL 400, 800, 3100. (See Technical report for specific site information).



NOTICE OF A PROPOSED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE

File No.:

Received:

Local governments are required to send notice of a proposed change to a comprehensive plan or land use regulation **at least 35 days before the first evidentiary hearing.** (See [OAR 660-018-0020](#) for a post-acknowledgment plan amendment and [OAR 660-025-0080](#) for a periodic review task). The rules require that the notice include a completed copy of this form.

Jurisdiction: **Umatilla County**Local file no.: **P-109-14, T-14-054, Z-301-14**

Please check the type of change that best describes the proposal:

- Urban growth boundary (UGB) amendment** including more than 50 acres, by a city with a population greater than 2,500 within the UGB
- UGB amendment** over 100 acres by a metropolitan service district
- Urban reserve designation**, or amendment including over 50 acres, by a city with a population greater than 2,500 within the UGB
- Periodic review task** – Task no.:
- Any other change** to a comp plan or land use regulation (*e.g.*, a post-acknowledgement plan amendment)

Local contact person (name and title): Shane Finck - Planner

Phone: 541-278-6251 E-mail: shane.finck@umatillacounty.netStreet address: 216 SE 4th Street City: Pendleton Zip: 97801-

Briefly summarize the proposal in plain language. Please identify all chapters of the plan or code proposed for amendment (maximum 500 characters):

The applicant is requesting to include the existing aggregate quarry site in the Umatilla County Comprehensive Plan as a Goal 5 significant resource aggregate site and apply the Umatilla County Aggregate Resource (AR) Overlay Zone to protect the site and to allow mining of the expanded aggregate site

Date of first evidentiary hearing: 08/28/2014

Date of final hearing: 09/17/2014

- This is a revision to a previously submitted notice. Date of previous submittal:

Check all that apply:

- Comprehensive Plan text amendment(s)
- Comprehensive Plan map amendment(s) – Change from N/S Agriculture to N/S Ag / AR Overlay
Change from _____ to _____
- New or amended land use regulation
- Zoning map amendment(s) – Change from EFU to EFU/AR Overlay
Change from _____ to _____
- An exception to a statewide planning goal is proposed – goal(s) subject to exception:
- Acres affected by map amendment: 9.71

Location of property, if applicable (site address and T, R, Sec., TL): T 3N, R 33, Sect 23, TL 100,600,700

List affected state or federal agencies, local governments and special districts: City of Pendleton, Umatilla County Assessor, Umatilla County Public Works, Dept of Transportation Region 5-Highways Division, Dept of Land Conservation and Development, Dept of Environmental Quality, Dept of Geology and Mineral Industries

NOTICE OF A PROPOSED CHANGE – SUBMITTAL INSTRUCTIONS

Except under certain circumstances,¹ proposed amendments must be submitted to DLCD's Salem office at least 35 days before the first evidentiary hearing on the proposal. The 35 days begins the day of the postmark if mailed, or, if submitted by means other than US Postal Service, on the day DLCD receives the proposal in its Salem office. **DLCD will not confirm receipt of a Notice of a Proposed Change unless requested.**

2. A Notice of a Proposed Change must be submitted by a local government (city, county, or metropolitan service district). DLCD will not accept a Notice of a Proposed Change submitted by an individual or private firm or organization.

3. **Hard-copy submittal:** When submitting a Notice of a Proposed Change on paper, via the US Postal Service or hand-delivery, print a completed copy of this Form 1 on light green paper if available. Submit **one copy** of the proposed change, including this form and other required materials to:

Attention: Plan Amendment Specialist
Dept. of Land Conservation and Development
635 Capitol Street NE, Suite 150
Salem, OR 97301-2540

This form is available here:

<http://www.oregon.gov/LCD/forms.shtml>

4. **Electronic submittals** of up to 20MB may be sent via e-mail. Address e-mails to plan.amendments@state.or.us with the subject line "Notice of Proposed Amendment."

Submittals may also be uploaded to DLCD's FTP site at http://www.oregon.gov/LCD/Pages/papa_submittal.aspx.

E-mails with attachments that exceed 20MB will not be received, and therefore FTP must be used for these electronic submittals. **The FTP site must be used for all .zip files** regardless of size. The maximum file size for uploading via FTP is 150MB.

¹ 660-018-0022 provides:

(1) When a local government determines that no goals, commission rules, or land use statutes apply to a particular proposed change, the notice of a proposed change is not required [a notice of adoption is still required, however]; and

If a local government determines that emergency circumstances beyond the control of the local government require expedited review such that the local government cannot submit the proposed change consistent with the 35-day deadline, the local government may submit the proposed change to the department as soon as practicable. The submittal must include a description of the emergency circumstances.

<http://www.oregon.gov/LCD/Pages/forms.aspx>

Include this Form 1 as the first pages of a combined file or as a separate file.

5. **File format:** When submitting a Notice of a Proposed Change via e-mail or FTP, or on a digital disc, attach all materials in one of the following formats: Adobe .pdf (preferred); Microsoft Office (for example, Word .doc or docx or Excel .xls or xlsx); or ESRI .mxd, .gdb, or .mpk. For other file formats, please contact the plan amendment specialist at 503-934-0017 or plan.amendments@state.or.us.

6. **Text:** Submittal of a Notice of a Proposed Change for a comprehensive plan or land use regulation text amendment must include the text of the amendment and any other information necessary to advise DLCD of the effect of the proposal. "Text" means the specific language proposed to be amended, added to, or deleted from the currently acknowledged plan or land use regulation. A general description of the proposal is not adequate. The notice may be deemed incomplete without this documentation.

7. **Staff report:** Attach any staff report on the proposed change or information that describes when the staff report will be available and how a copy may be obtained.

8. **Local hearing notice:** Attach the notice or a draft of the notice required under ORS 197.763 regarding a quasi-judicial land use hearing, if applicable.

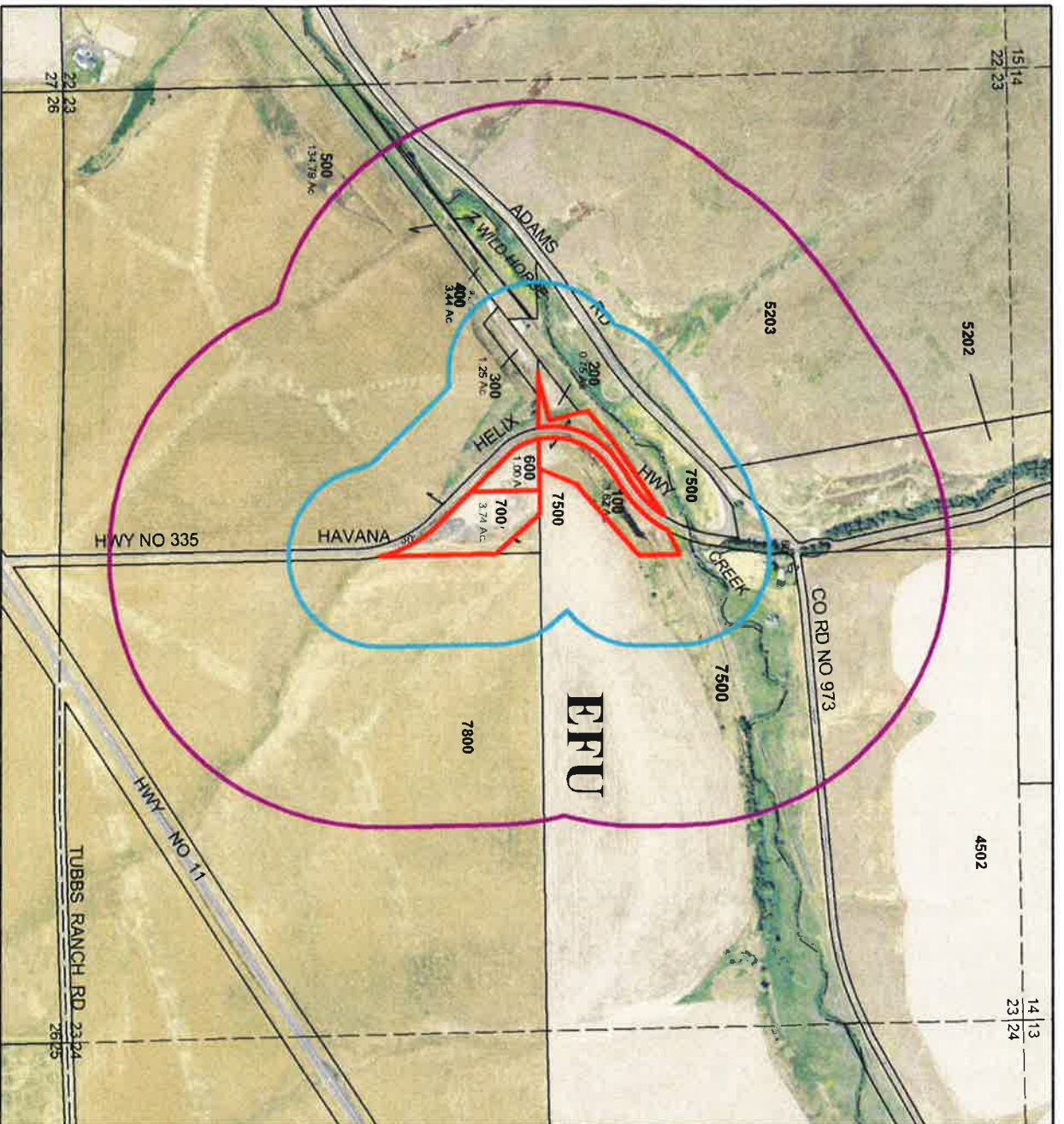
9. **Maps:** Submittal of a proposed map amendment must include a map of the affected area showing existing and proposed plan and zone designations. A paper map must be legible if printed on 8½" x 11" paper. Include text regarding background, justification for the change, and the application if there was one accepted by the local government. A map by itself is not a complete notice.

10. **Goal exceptions:** Submittal of proposed amendments that involve a goal exception must include the proposed language of the exception.

If you have any questions or would like assistance, please contact your DLCDC regional representative or the DLCDC Salem office at 503-934-0017 or e-mail plan.amendments@state.or.us.

Notice checklist. Include all that apply:

- Completed Form 1
- The text of the amendment (e.g., plan or code text changes, exception findings, justification for change)
- Any staff report on the proposed change or information that describes when the staff report will be available and how a copy may be obtained
- A map of the affected area showing existing and proposed plan and zone designations
- A copy of the notice or a draft of the notice regarding a quasi-judicial land use hearing, if applicable
- Any other information necessary to advise DLCDC of the effect of the proposal



PLAN AMENDMENT #P-109-14, TEXT AMENDMENT #T-14-054,
 ZONING MAP AMENDMENT #Z-301-14
 OREGON DEPT OF TRANSPORTATION, APPLICANT/OWNER
 MAP 3N3323, TAX LOTS 100, 600 & 700



Subject Parcels



500 ft Buffer



1500 ft Buffer

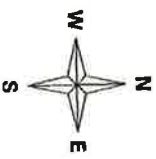
PROPERTY OWNERS WITHIN 750'
 NOTICE OF SUBJECT PARCELS

MAP 3N333

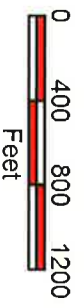
- 4502 SPRATLING LAND LLC
- 5202 PUGH JESSE & AMANDA
- 5203 MAC-5 INC
- 7500 PAYNE S J & V & STEELE JD (TRS)
- 7500P1 SCOFIELD JULIUS A
- 7800 BAFUS FREDA M
- C/O LHT FARMING CO (AGT)

MAP 3N3323

- 100 STATE OF OREGON, ODOT
- 200 SEVERE CASEY L
- 300 SEVERE CASEY L
- 400 UNION PACIFIC RAILROAD CO
- 500 PAYNE S J & V & STEELE JD (TRS)
- 600 STATE OF OREGON, ODOT
- 700 STATE OF OREGON, ODOT

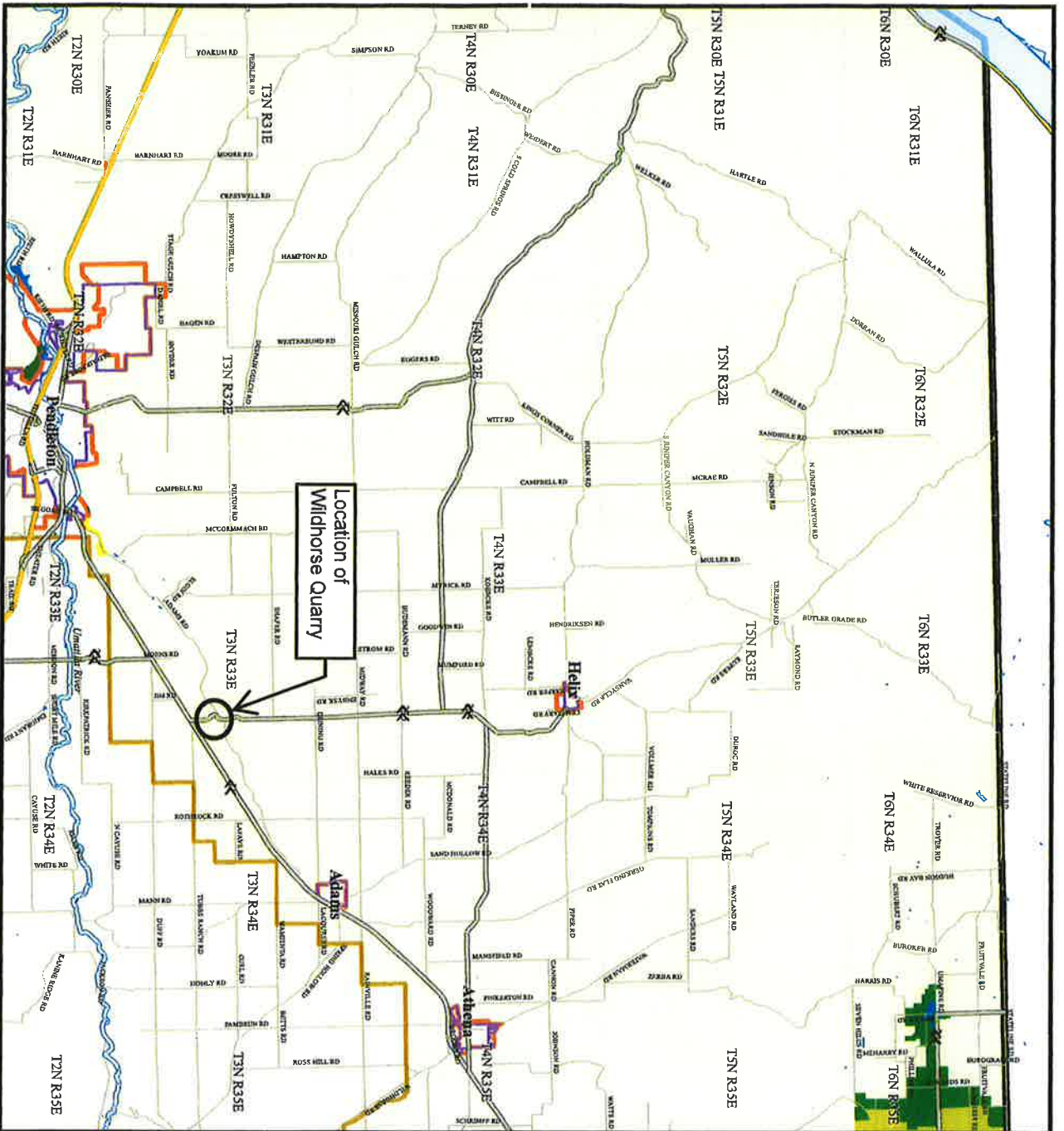


2012 AERIAL PHOTO



DATE: 7/8/14

MAP DISCLAIMER: No warranty is made by Umatilla County as to the accuracy, reliability or completeness of this data. Parcel data should be used for reference purposes only. Not for legal use. Created by J.Allford, Umatilla County Planning Department, 7/8/14



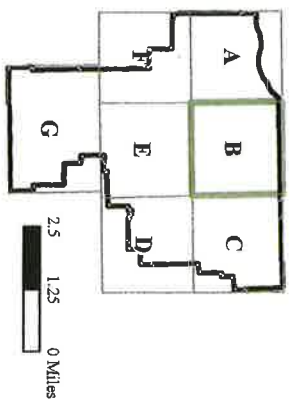
Legend

Comp. Plan Designations

- Agri-Business
- Commercial
- Federal Land
- Grazing Forest
- Industrial
- Multi-Use
- North/South Ag Region
- Orchards District
- Rural Residential
- Special Ag
- Unincorporated Community
- West County Irrigation District

These maps are for illustrative purposes only. For more detailed information please contact the Umatilla County Department of Land Use Planning at 216 SE 4th ST, Pendleton, OR 97801; by calling 541-278-6252; or by visiting the County's website at www.umatillacounty.net.

Map Version Date: April 2009



COMPREHENSIVE PLAN MAP

UMATILLA COUNTY, MAP B

as prepared
ent purposes

SEC 23 T3N R33E WM UMATILLA COUNTY

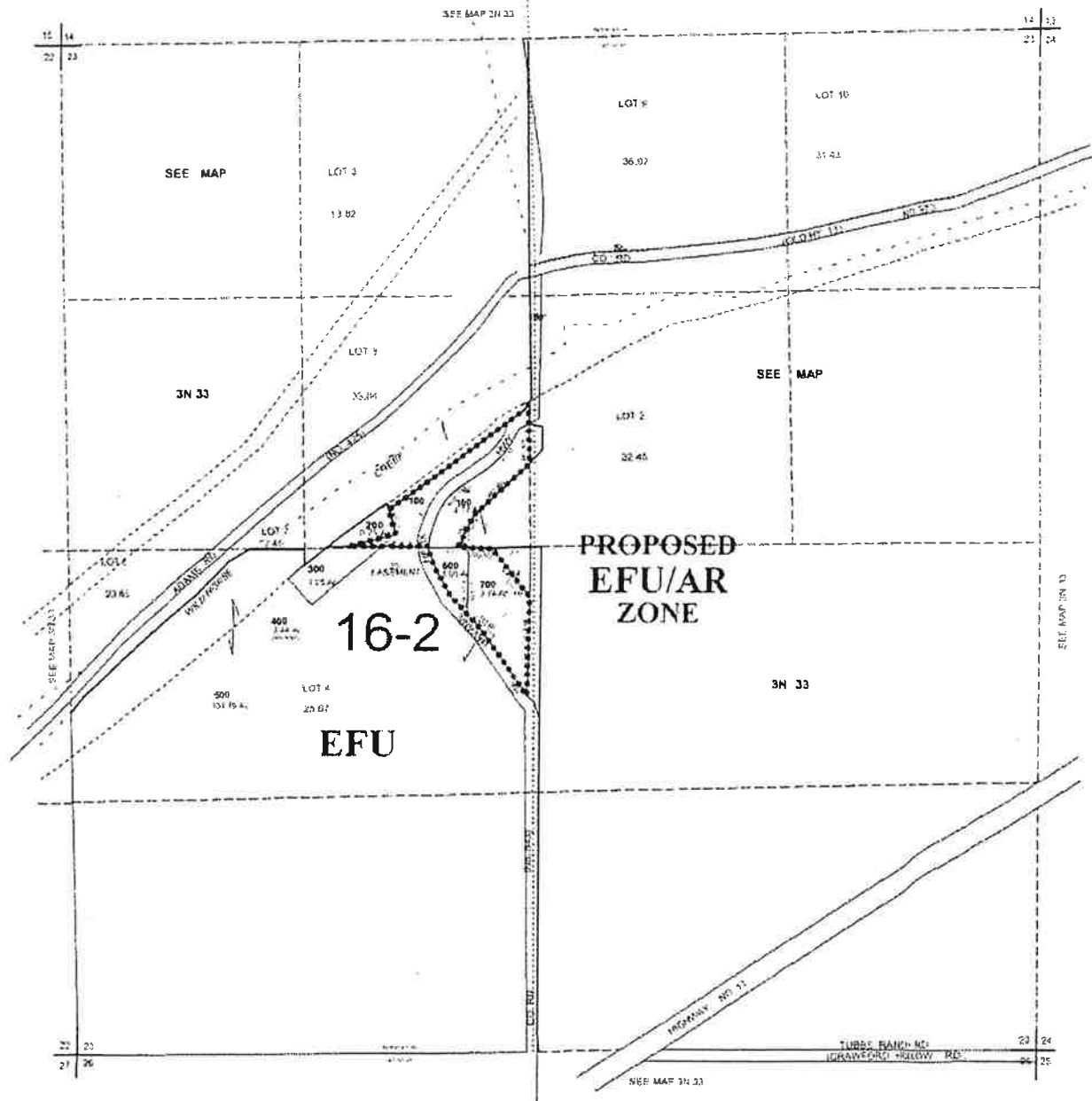
4/21/05

3N 33 23

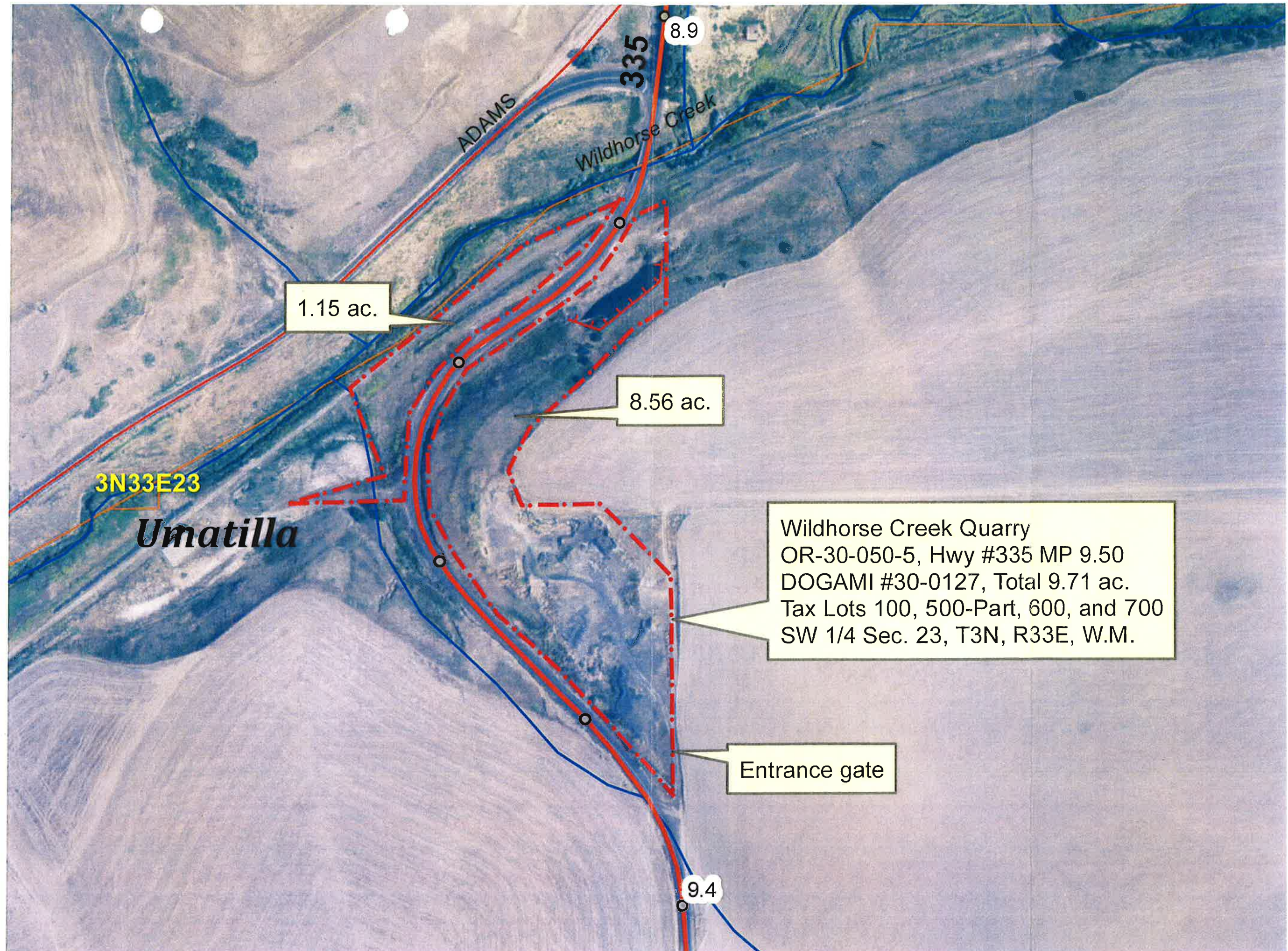
AERIAL PHOTO NO NZ 5P 173-176, 4P 159-167 & 114-121

1"=400'

Proposed Designation



3N 33 23



1.15 ac.

8.56 ac.

Wildhorse Creek Quarry
OR-30-050-5, Hwy #335 MP 9.50
DOGAMI #30-0127, Total 9.71 ac.
Tax Lots 100, 500-Part, 600, and 700
SW 1/4 Sec. 23, T3N, R33E, W.M.

Entrance gate

3N33E23

Umatilla

ADAMS

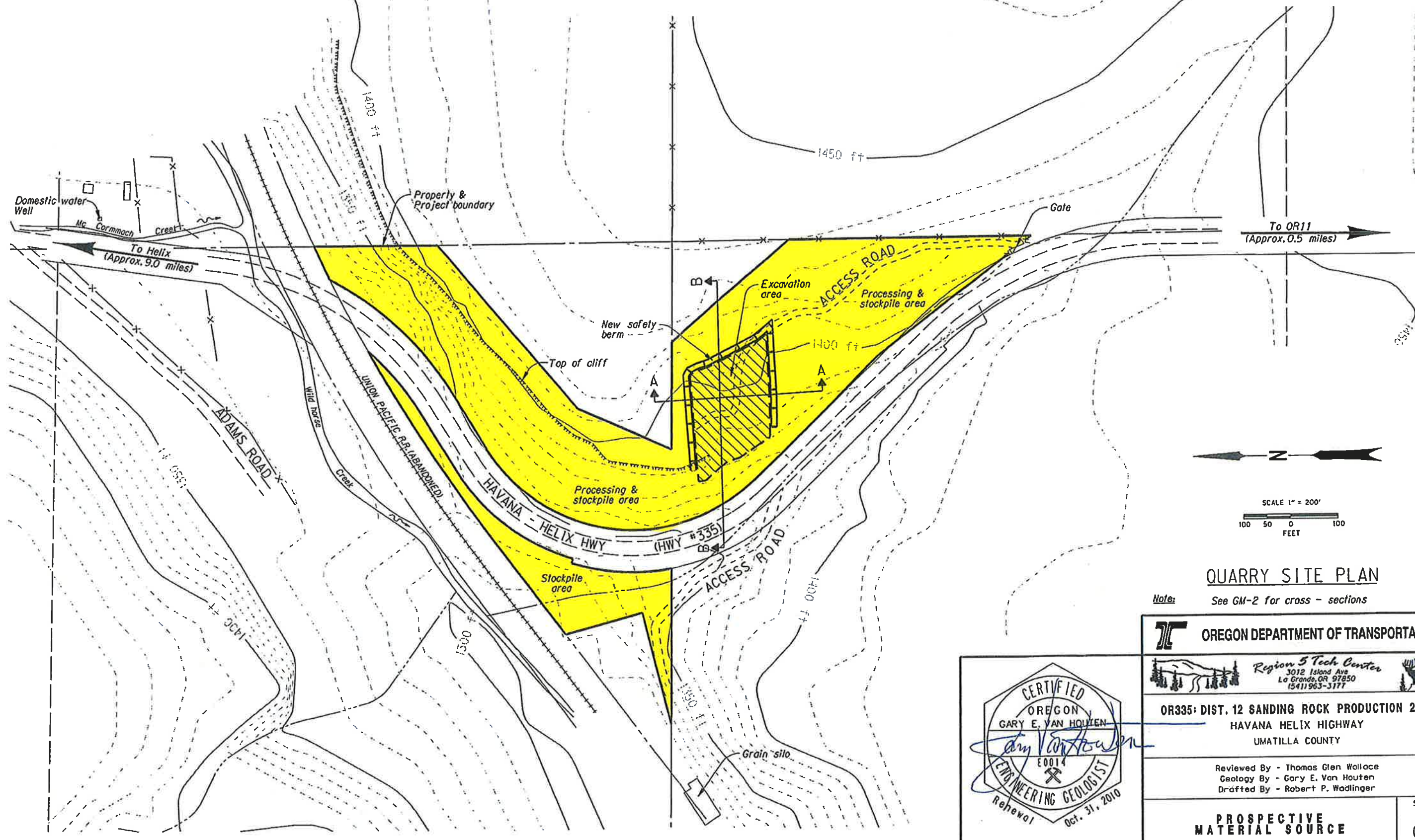
Wildhorse Creek

335

8.9

9.4

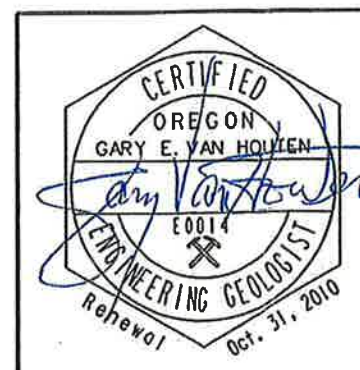
PROSPECTIVE MATERIAL SOURCE
 WILD HORSE CREEK QUARRY
 SOURCE # OR-30-050-5 DOGAMI # None
 HWY. 335, M.P. 9.50
 SW¼ Sec. 23, T.3 N., R.33 E. W.M.



QUARRY SITE PLAN

Note: See GM-2 for cross-sections

OREGON DEPARTMENT OF TRANSPORTATION	
Region 5 Tech Center 3012 Island Ave La Grande, OR 97850 541-963-3177	
OR335: DIST. 12 SANDING ROCK PRODUCTION 2009 HAVANA HELIX HIGHWAY UMATILLA COUNTY	
Reviewed By - Thomas Glen Wallace Geology By - Gary E. Van Houten Drafted By - Robert P. Wadlinger	
PROSPECTIVE MATERIAL SOURCE	SHEET NO. GM



Umatilla County

Department of Land Use Planning



September 12, 2014

**DIRECTOR
TAMRA MABBOTT**

MEMO

**LAND USE
PLANNING,
ZONING AND
PERMITTING**

TO: Board of Commissioners

**CODE
ENFORCEMENT**

FROM: Tamra Mabbott

**SOLID WASTE
COMMITTEE**

RE: Interchange Area Management Plans

**SMOKE
MANAGEMENT**

The Planning Commission reviewed the two Interchange Area Management Plans at their August 28, 2014 Hearing. By unanimous vote, the commission recommended the Board approve the plans.

**GIS AND
MAPPING**

**RURAL
ADDRESSING**

The transportation consultant, Matt Hughart of Kittelson & Associates, will make a presentation about the IAMPS at your September 17th hearing. Mr. Hughart can answer questions about the design of the intersection, projected traffic volumes, etc. Frank Angelo, planning consultant and project manager will also be at your hearing.

**LIAISON, NATURAL
RESOURCES &
ENVIRONMENT**

Background

This is the last phase of land use planning for the Army Depot. Typically, an IAMP is required to be adopted prior to or at the time of rezoning. However, ODOT supported the zoning with the understanding that the IAMPs would be adopted at a later date.

The IAMP's were developed for the Umatilla Army Depot, the plan and zoning of which you approved earlier this year. Adoption of the IAMP's result in a plan amendment, a text amendment and a zoning amendment. The plan amendment is to add the IAMP to our existing Transportation Plan. The text amendment includes language and regulations unique to the interchange areas. The zoning amendment is an overlay zone that will show the interchange study areas.

Interchange Area Management Plan

I-82/LAMB ROAD

Umatilla County, Oregon

August 2014



Prepared for:



Prepared by:



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Angelo
planning group

ap anderson
perry
& associates, inc.

MB&G

I-82/Lamb Road Interchange Area Management Plan

Umatilla County, Oregon

Draft

August 2014

I-82/Lamb Road Interchange Area Management Plan

Umatilla County, Oregon

Prepared For:

UMADRA

Dr. Donald Chance
P.O. Box 200
Boardman, OR 97818
(541) 481-3693

Umatilla County

Tamra Mabbott
216 SE 4th St
Pendleton, OR 97801
(541) 278-6246

Prepared By:

Kittelson & Associates, Inc.

610 SW Alder, Suite 700
Portland, OR 97205
(503) 228-5230

Angelo Planning Group

921 SW Washington Street, Suite 468
Portland, OR 97205
(503) 227-3664

In association with:

Anderson Perry & Associates, Inc.

1901 N Fir / P.O. Box 1107
La Grande, Oregon 97850
(541) 963-8309

Mason, Bruce, & Girard, Inc.

707 SW Washington Street, Suite 1300
Portland, OR 97205
(503) 224-3445

Project No. 13848.00

August 2014



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PREFACE

The development of this plan was guided by the Steering Committee and Technical / Public Advisory Committee (TPAC). The members of these groups are identified below, along with members of the consultant team. The Steering Committee members were also members of the TPAC, who collectively 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-82/Lamb Road IAMP and their participation was instrumental in the final recommendations that are presented herein.

Steering Committee

Dr. Donald Chance <i>UMADRA</i>	Tamra Mabbott <i>Umatilla County</i>	Carla McLane <i>Morrow County</i>	Teresa Penninger <i>ODOT</i>
Stephanie Seamans <i>CTUIR</i>			

Technical Advisory Committee (TAC)

Bob Nairns <i>Morrow County</i>	Tom Fellows <i>Umatilla County</i>	Aaron Palmquist <i>City of Irrigon</i>
Debbie Pedro <i>Hermiston Chamber</i>	Todd Longgood <i>Hale Farms/Riverpoint Farms</i>	Stan Hutchison <i>Oregon National Guard</i>
Herb Stahl <i>Stanfield HB Farm</i>	Lisa Mittelsdorf <i>Port of Morrow</i>	Kim Puzey <i>Port of Umatilla</i>
Joanne Manson <i>Oregon Military Department</i>	Bruce Bearchum II <i>CTUIR</i>	Patty Perry <i>CTUIR</i>

Consultant Team

<i>Kittelson & Associates, Inc.</i>	<i>Angelo Planning Group</i>	<i>Anderson Perry & Associates, Inc.</i>
Matt Hughart, AICP	Frank Angelo	Andy Lindsey, P.E.
Marc Butorac, P.E., P.T.O.E.	Darci Rudzinski, AICP	Rod McKee, P.E.
Pat Marnell		
<i>Mason, Bruce, & Girard</i>		
Stuart Meyers		
Kate Parker		

Section 1
Executive Summary

EXECUTIVE SUMMARY

The I-82/Lamb Road Interchange Area Management Plan (IAMP) was prepared to identify and address infrastructure, access, and land use regulations associated with the transition of the Umatilla Army Chemical Depot (UMCD) from a facility that has historically stored/shipped military supplies and disposed of chemical weapons to a facility that will accommodate Oregon National Guard operations, environmental preservation, and new economic development.

The executive summary provides an overview of the project elements that were developed through a collaborative effort of the Project Team, Umatilla Army Depot Reuse Authority, Technical/Public Advisory Committee, Umatilla County, Oregon Department of Transportation (ODOT), and local stakeholders. The following table and figures summarize the identified improvement projects. Additional details are provided herein.

With the identification of near- and long-term infrastructure improvements, a number of policies, ordinances, and other provisions have been developed for adoption into the Umatilla County Transportation System Plan, Comprehensive Plan, and development review ordinances to support and implement the IAMP. The IAMP will also be adopted by the Oregon Transportation Commission as an amendment to the Oregon Highway Plan.

I-82/Lamb Road Interchange (Exit 10)



Executive Summary - I-82/Lamb Road Interchange Area Improvement Summary

Fig E1, Project Label	Near-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost ¹	Potential Funding Sources
A	Construct a new interchange access road that connects the interchange to future UMCD site uses.	<ul style="list-style-type: none"> Safety: Accommodate large trucks Operations: Improve access efficiency to the interchange, meeting ODOT interchange access spacing standards. Trigger: When determined by future traffic studies that the existing interchange access road can no longer operationally or geometrically support the development's anticipated vehicular/truck profile. 	\$0.5M	SDC, PDF, GF
B	Remove the existing interchange access road.	<ul style="list-style-type: none"> Trigger: Following construction of the new interchange access road (Project A). 	<\$50k	SDC, PDF, GF
Fig. E1 Project Label	Longer-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost	Potential Funding Sources
C	Lengthen, realign, and widen the I-82 northbound off-ramp, providing two approach lanes at the interchange ramp terminal with Lamb Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle, increase long-term ramp terminal capacity. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.6M	SDC, STIP, PDF, GF
D	Lengthen, realign, and widen the I-82 southbound off-ramp, providing two approach lanes at the interchange ramp terminal with Lamb Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle, increase long-term ramp terminal capacity, position ramp for potential long-term inclusion of a looping on-ramp. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$2.5M	SDC, STIP, PDF, GF
E	Signalize the I-82/Lamb Road Southbound Ramp Terminal.	<ul style="list-style-type: none"> Safety: Eliminate the need for motorists to take unacceptable gaps. Operations: Signalization is required to accommodate additional long-term traffic volume increases. Trigger: When signal warrants are met through future traffic studies. 	\$0.4M	SDC, STIP, PDF, GF
F	Improve/Realign the I-82 northbound on-ramp.	<ul style="list-style-type: none"> Safety: Upgrade ramp to current design standards Operations: Eliminate ramp skew angle Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.4M	SDC, STIP, PDF, GF
G	Realign the I-82 southbound on-ramp.	<ul style="list-style-type: none"> Trigger: In conjunction with Project D. 	\$0.3M	SDC, STIP, PDF, GF
Fig. E2 Project Label	Vision Project Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost	Potential Funding Sources
H	Construct a new southbound looping PARCLO A on-ramp.	<ul style="list-style-type: none"> Safety: Improve on-ramp merge/acceleration distance. Operations: Increase long-term ramp terminal capacity. Trigger: When determined by future traffic studies or as part of future capital improvements, but not before construction of Project D. 	\$3.3M	SDC, STIP, PDF, GF
I	Remove existing southbound on-ramp.	<ul style="list-style-type: none"> Trigger: Following construction of the looping PARCLO A on-ramp (Project H). 	<\$50k	SDC, STIP, PDF, GF

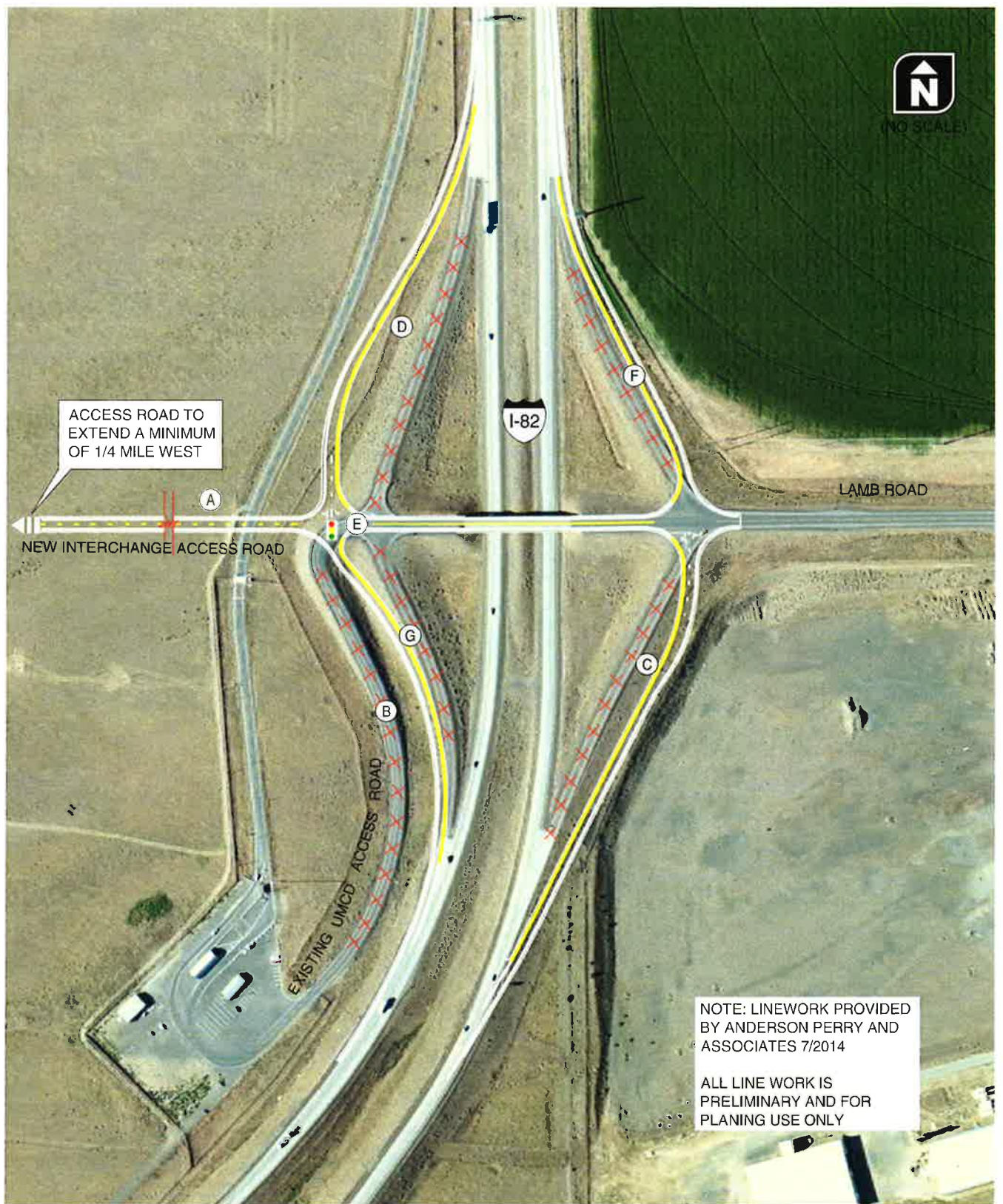
SDC – Transportation System Development Charge




STIP – State Transportation Improvement Project

PDF – Private Development Funds

GF – Other Grant Funds

¹ – Planning level costs are in 2014 dollars. Construction costs only, does not include right-of-way costs.



-  PRELIMINARY ROADWAY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

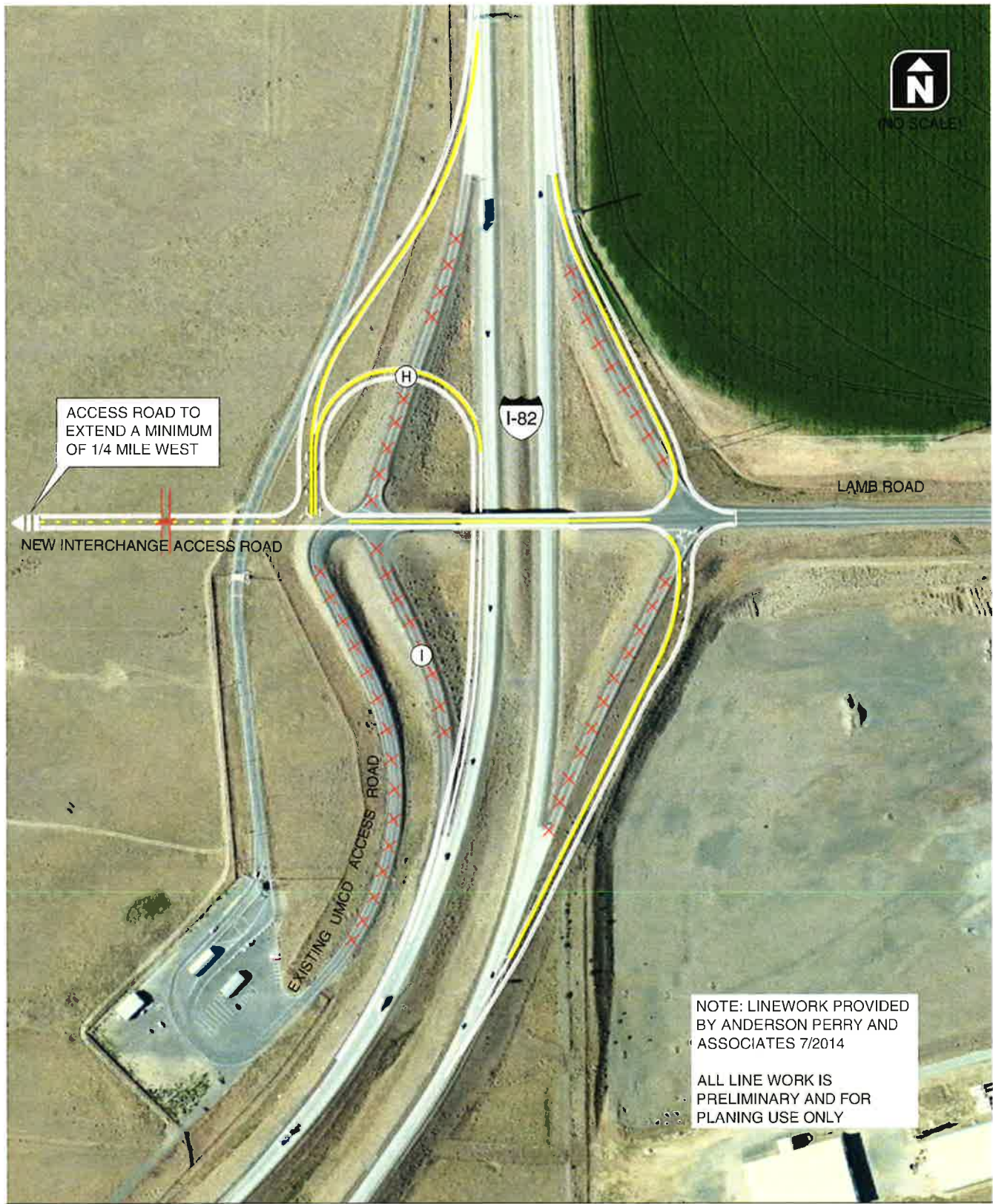
I-82/Lamb Road IAMP
Improvement Plan
Umatilla County, Oregon

Figure
E1

H:\projects\Umatilla Subarea Plan and Combined IAMP\dwg\figs\13848_Fig003_1.dwg Jul 14, 2014 - 10:19am - pmarmell Layout Tab: Lamb



(NO SCALE)



ACCESS ROAD TO EXTEND A MINIMUM OF 1/4 MILE WEST

NEW INTERCHANGE ACCESS ROAD




EXISTING UMCD ACCESS ROAD

LAMB ROAD



NOTE: LINEWORK PROVIDED BY ANDERSON PERRY AND ASSOCIATES 7/2014

ALL LINE WORK IS PRELIMINARY AND FOR PLANING USE ONLY

-  PRELIMINARY ROADWAY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

I-82/Lamb Road Future Development Options Umatilla County, Oregon

Figure E2

H:\proj\13848 - Umatilla Subarea Plan and Combined AMP\Drawings\Figs\13848_Fig003_1.dwg Jul 14, 2014 - 10:20am - pmarrcl Layout Tab: Lamb Fig 3

Section 2 Interchange Improvement and Access Management Plan

INTERCHANGE IMPROVEMENT AND ACCESS MANAGEMENT PLAN

INTRODUCTION / BACKGROUND

The Umatilla Army Chemical Depot (UMCD) is formally being decommissioned and prepared for reuse/redevelopment. The Umatilla Chemical Depot Reuse Authority (UMADRA - sometimes referred to as the "LRA" and undergoing a name change to the "Columbia Development Authority") is chartered with administering the transition of the UMCD and is leading the planning process. Following the completion of a Redevelopment Plan in 2010, reuse/redevelopment of the UMCD has been targeted to accommodate a new 7,500 acre Oregon National Guard training base, a 5,678 acre habitat refuge, and approximately 3,000 acres of industrial/warehouse development.

With the transition and reconfiguration of land uses on the UMCD site, it is recognized that transportation patterns and traffic demands will change. Some of these changes will impact the existing I-82/Lamb Road interchange. In accordance with Oregon Administrative Rule 734-051, an Interchange Area Management Plan (IAMP) has been prepared to identify and address future transportation infrastructure needs, access, and land use regulations at this interchange. The remainder of this section contains the planning context, specific interchange infrastructure projects, and access management plan for the IAMP.

Conditions Statement

The I-82/Lamb Road interchange was constructed in 1986 for several reasons, one of which was to provide a secondary point of access to the UMCD site. This secondary point of access became the primary construction and workforce access to the industrial chemical weapons incineration facility that was constructed and recently decommissioned on the site. Outside of these historical UMCD functions, the I-82/Lamb Road interchange has also served adjacent and regional land uses including the Westland Road Exception Area and the City of Hermiston via the Lamb Road/Westland Road corridor.

From the perspective of the UMCD site, the I-82/Lamb Road interchange was designed and constructed at a time in which the primary use of the UMCD was to store/ship military supplies and

Exhibit 1 - I-82/Lamb Road Interchange



in more recent years, dispose of chemical weapons. During this later period, the interchange was utilized by upwards of 1,400 employees and significant heavy truck traffic associated with construction and operation of the Demil Incinerator Complex utilized to dispose of chemical weapons. With these UMCD uses no longer in operation and a future vision that includes a change in military uses (Oregon National Guard), environmental preservation, and economic development, the I-82/Lamb Road interchange infrastructure will be utilized over time in a manner that is substantially different from historical patterns and as a result, will require phased modification.

Purpose and Intent Statement

The purpose of the I-82/Lamb Road IAMP is to develop a plan that focuses on the interchange and the access road that currently serves the UMCD site. The intent of the plan is to develop land use management strategies for the reuse/redevelopment of the UMCD, identify interchange infrastructure improvements needed to support future reuse/redevelopment, create an access management plan for the interchange access road/crossroad, and develop funding mechanisms to construct the necessary infrastructure improvements.

Goals / Objectives

The IAMP is intended to protect the function of the I-82/Lamb Road interchange for the next 20 years while accounting for changes in land use and traffic patterns brought about by reuse/redevelopment of the UMCD and continued growth in the regional study area. As stated in Policy 3C of the *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." To this end, working collaboratively with the Technical/Public Advisory Committee (TPAC) and public, the Goals/Objectives of the IAMP are to:

1. Protect the long-term function, operation, and safety of the I-82/Lamb Road interchange.
2. Identify opportunities for enhanced roadway connectivity within the UMCD site that would provide public roadway connections between the I-84/Army Depot Access Road and I-82/Lamb Road interchanges.
3. Manage the allowed land uses within the vicinity of the interchanges to provide for future economic growth over the next 20 years.
4. Identify current accesses along the interchange crossroads and develop a phased access management plan for the crossroads based on a detailed and collaborative process involving Umatilla County and local property owners. The access management plan will be based on key principles that balance highway mobility and safety against:
 - a. The findings of County TSPs and land use plans; and
 - b. Local economic development objectives for properties that require access to the state highway.
5. Identify opportunities for freight-based multi-modal accessibility to/from future redevelopment of the UMCD site.

6. Collaborate throughout the planning process with design professionals, jurisdictional representatives, developers, local property owners, and the general public, including protected populations as established by federal and state regulations and policies.
7. Comply with the intent of Statewide Planning Goals, including Goal 1: Public Involvement, Goal 2: Land Use Planning, Goal 5: Natural Resources, Goal 6: Air, Water and Land Resources Quality, Goal 7: Areas Subject to Natural hazards, Goal 8: Recreation Needs, Goal 9: Economic Development, Goal 12: Transportation, and Goal 14: Urban Growth Boundaries.
8. Identify phased implementation strategies for identified near- and long-term interchange infrastructure and interchange crossroad improvements.
9. Identify interchange infrastructure funding mechanisms that could be applied to future reuse/redevelopment of the UMCD and other land uses within the Interchange Management Study Area.
10. Develop implementation policies and regulations to be adopted into the Umatilla County Comprehensive Plan, Transportation System Plan, and zoning ordinances, as appropriate.

Interchange Management Study Area (IMSA)

The I-82/Lamb Road IAMP was prepared in conjunction with IAMPs for two other interchanges: I-84/Army Depot Access Road and I-84/Paterson Ferry Road. All three interchanges will be affected to some degree by future redevelopment of the UMCD site. Within the context of the IAMP planning process, the Interchange Management Study Area (IMSA) defines the extent of the detailed land use and infrastructure study area. The IAMPs will focus specifically on the freeway interchanges that serve the UMCD and surrounding land uses. At a minimum, the IMSA includes properties, as well as all access points located within ½ mile of the freeway interchange as defined by the State of Oregon's IAMP Guidelines. In order to capture the overarching land use related impacts of the reuse/redevelopment of the UMCD as well as growth potential of immediately surrounding uses, the IMSA includes the following areas:

- The entire UMCD site
- Westland Road Exception Area – area east of I-82 and north of I-84
- Industrial zoned land located north of the Paterson Ferry Road interchange

The Interchange Management Study Area (IMSA) map is shown in Figure 1.



Interchange Management Study Area
Morrow / Umatilla Counties

Figure 1

I-82/LAMB ROAD INTERCHANGE IMPROVEMENT PLAN

A comprehensive transportation improvement plan for the I-82/Lamb Road interchange was developed based on concept screening and evaluations outlined in the Technical Appendix to the IAMP. This plan includes the development of a new interchange access road to serve future reuse of the UMCD site, modifications to the interchange on- and off-ramps, and modifications to the interchange ramp terminals. Each transportation improvement project is described in detail below, illustrated in Figures 2 and 3, and summarized in Table 1.

Near-Term Improvements

Constructed in 1986, the I-82/Lamb Road interchange is structurally sound and adequately supports existing traffic conditions. However, the current configuration includes an existing UMCD interchange access road that is inadequate to safely accommodate intensified levels of development-driven vehicular and heavy truck traffic. Therefore, the following near-term improvements have been identified to address this existing deficiency.

Project A. New Interchange Access Road (Near-Term)

The existing UMCD interchange access road is geometrically limited in its ability to safely and efficiently support future anticipated traffic conditions and vehicle truck types anticipated by reuse of the UMCD site beyond some minor early-phase development. In recognition of this limiting feature of the interchange, Project A includes the construction of a new interchange access road serving the west side of the I-82/Lamb Road interchange. The new access road will connect to the interchange at a more traditional 90 degree angle, include two 12 foot travel lanes, and be to the maximum extent practical, a ¼-mile in length¹ before connecting to a future reuse-oriented internal circulation network. *This improvement would need to be constructed when it is determined (through the local Umatilla County development review process) that the existing interchange access road cannot operationally or geometrically support future vehicular/truck profiles associated with new reuse development.*

Project B. Remove Existing Interchange Access Road (Near-Term)

Project B includes the removal of the existing UMCD access road. *Removal would occur following construction of Project A.*

¹ The minimum ¼-mile roadway length meets the ODOT interchange access management standards.

Table 1 - I-82/Lamb Road Interchange Transportation Improvement Plan

Fig. 2. Project Label	Near-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning- Level Cost ¹	Potential Funding Sources
A	Construct a new interchange access road that connects the interchange to future UMCD site uses.	<ul style="list-style-type: none"> Safety: Accommodate large trucks Operations: Improve access efficiency to the interchange, meeting ODOT interchange access spacing standards. Trigger: When determined by future traffic studies that the existing interchange access road can no longer operationally or geometrically support the development's anticipated vehicular/truck profile. 	\$0.5M	SDC, PDF, GF
B	Remove the existing interchange access road.	<ul style="list-style-type: none"> Trigger: Following construction of the new interchange access road (Project A). 	\$<50K	SDC, PDF, GF
Fig. 2 Project Label	Longer-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning- Level Cost	Potential Funding Sources
C	Lengthen, realign, and widen the I-82 northbound off-ramp, providing two approach lanes at the interchange ramp terminal with Lamb Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle, increase long-term ramp terminal capacity. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.6M	SDC, STIP, PDF, GF
D	Lengthen, realign, and widen the I-82 southbound off-ramp, providing two approach lanes at the interchange ramp terminal with Lamb Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle, increase long-term ramp terminal capacity, position ramp for potential long-term inclusion of a looping on-ramp. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$2.5M	SDC, STIP, PDF, GF
E	Signalize the I-82/Lamb Road Southbound Ramp Terminal.	<ul style="list-style-type: none"> Safety: Eliminate the need for motorists to take unacceptable gaps. Operations: Signalization is required to accommodate additional long-term traffic volume increases. Trigger: When signal warrants are met through future traffic studies. 	\$0.4M	SDC, STIP, PDF, GF
F	Improve/Realign the I-82 northbound on-ramp.	<ul style="list-style-type: none"> Safety: Upgrade ramp to current design standards Operations: Eliminate ramp skew angle Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.4M	SDC, STIP, PDF, GF
G	Realign the I-82 southbound on-ramp.	<ul style="list-style-type: none"> Trigger: In conjunction with Project D. 	\$0.3M	SDC, STIP, PDF, GF
Fig. 3 Project Label	Vision Project Description	Implementation Need/Trigger for Improvement	Estimated Planning- Level Cost	Potential Funding Sources
H	Construct a new southbound looping PARCLO A on-ramp.	<ul style="list-style-type: none"> Safety: Improve on-ramp merge/acceleration distance. Operations: Increase long-term ramp terminal capacity. Trigger: When determined by future traffic studies or as part of future capital improvements, but not before construction of Project D. 	\$3.3M	SDC, STIP, PDF, GF
I	Remove existing southbound on-ramp.	<ul style="list-style-type: none"> Trigger: Following construction of the looping PARCLO A on-ramp (Project H). 	\$<50k	SDC, STIP, PDF, GF

SDC – Transportation System Development Charge

STIP – State Transportation Improvement Project

PDF – Private Development Funds

GF – Other Grant Funds

¹ – Planning level costs are in 2014 dollars. Construction costs only, does not include right-of-way costs.

Longer-Term Improvements

Beyond the construction of the new interchange access road (Project A), the existing I-82/Lamb Road interchange ramps and supporting infrastructure can continue to serve existing and future regional traffic growth. However, it is recognized that this growth coupled with the potential future traffic growth generated by the reuse development on the UMCD site larger IMSA will necessitate the following longer-term interchange improvements.

Project C. Improve I-82 Northbound Off-Ramp (Longer-Term)

The I-82/Lamb Road interchange was designed and constructed under older design standards for rural applications. As a result, the I-82 northbound off-ramp has characteristics such as a large skew angle at the ramp terminal and limited geometrics that cannot safely and efficiently support the intensified vehicular/truck volumes envisioned to be generated by reuse of the UMCD site. In addition, the single-lane ramp terminal approach lacks adequate long-term capacity and queue storage length to accommodate changing traffic profiles. Project C would lengthen and realign the off-ramp to better accommodate projected long-term demand and widen the approach to Lamb Road to provide a separate through/left-turn lane. In addition, the project sets the stage for a potential long-term construction of a PARCLO A looping on-ramp (see Vision Project H). *These improvements would be constructed when future development-driven traffic studies determine that they are needed for safety and/or operations reasons.*

Project D. Improve I-82 Southbound Off-Ramp (Longer-Term)

The I-82/Lamb Road interchange was designed and constructed under older design standards for rural applications. As a result, the I-82 southbound off-ramp has characteristics such as a large skew angle at the ramp terminal that cannot safely and efficiently support the intensified vehicular/truck volumes envisioned to be generated by reuse of the UMCD site. Project D would lengthen and realign the off-ramp to better accommodate projected long-term demand and widen the approach to Lamb Road to provide a separate left-turn lane. The ultimate alignment of this off-ramp would be positioned to accommodate the potential construction of a looping southbound on-ramp at some point in the longer-term future (see Project H). *These improvements would be constructed when future development-driven traffic studies determine that they are needed for safety and/or operations reasons.*

Project E. Signalize the I-82/Lamb Road Southbound Ramp Terminal (Longer-Term)

Signalization is anticipated to be needed to accommodate anticipated traffic growth at the interchange ramp terminal. *Signalization would be needed when signal warrants are met, but not before Project D is constructed.*

Project F. Improve/Realign the I-82 Northbound On-Ramp (Longer-Term)

The existing I-82 northbound on-ramp has a large skew angle that cannot safely and efficiently accommodate the intensified vehicular/truck volumes envisioned to be generated by reuse of the UMCD site. Project F would realign the on-ramp to eliminate the skew angle. *This improvement would be constructed in conjunction with Project C or when determined to be needed for safety or operations reasons.*

Project G. Realign the I-82 Southbound On-Ramp (Longer-Term)

Project G would involve the realignment of the existing southbound on-ramp to accommodate a realigned southbound off-ramp (Project D). *This improvement would be constructed in conjunction with Project D.*

Vision Projects

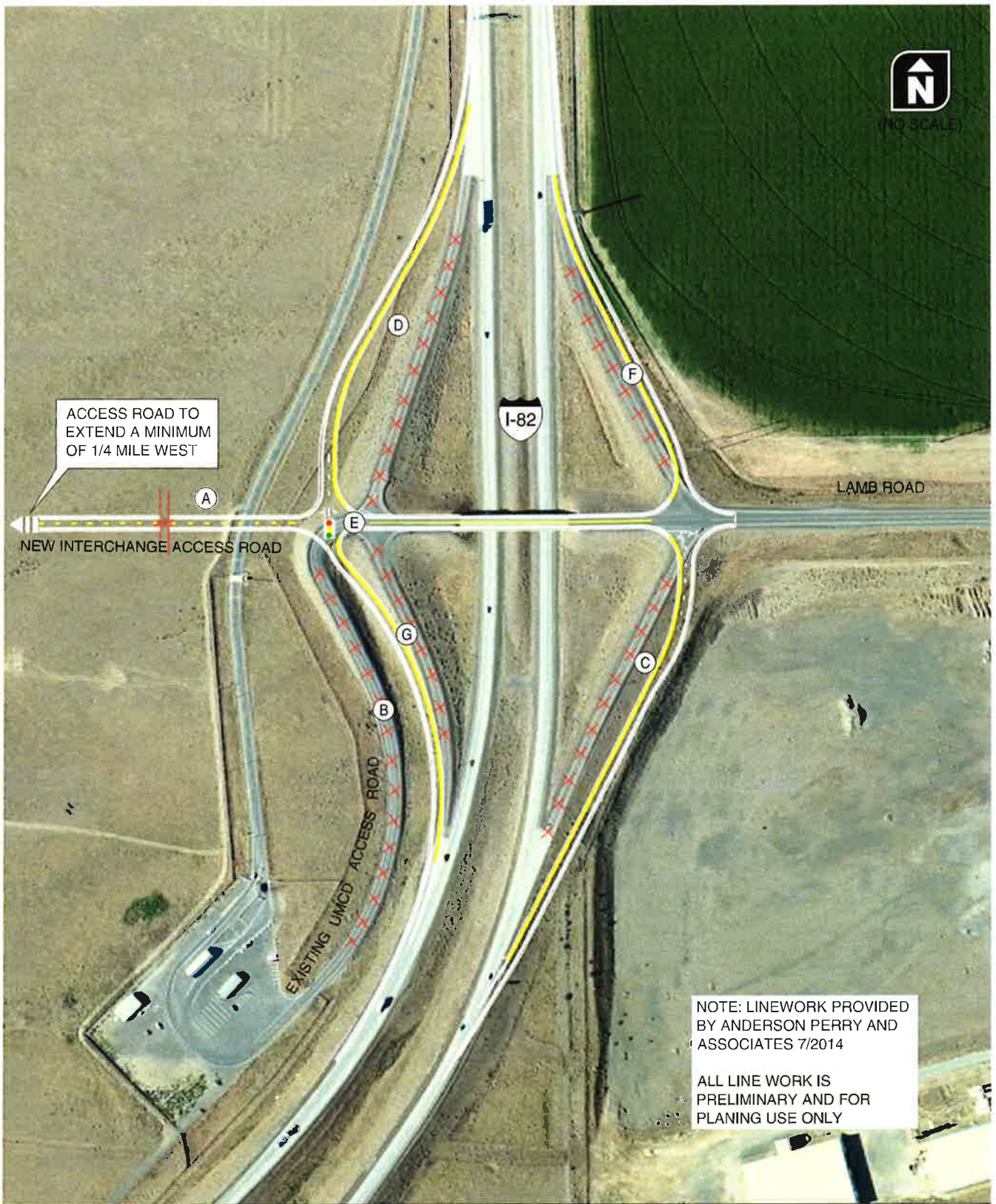
The traffic forecasting and operations analysis has determined that the existing diamond interchange form (with improvements A-G noted above) is sufficient for accommodating the 20-year travel forecast estimates. However, it is recognized that the potential exists for unanticipated levels of future growth (additional economic redevelopment on the UMCD site, expanded Oregon National Guard operations beyond existing long-term plans, etc.) that could necessitate improvements beyond the 20-year planning horizon of the IAMP. As such, several “vision projects” have been identified so that they can be memorialized and their potential need can be monitored over the life of the IAMP.




Project H. Looping PARCLO A Southbound On-Ramp Alternative (Vision Project)

The operations analysis has determined that the existing diamond interchange form (with improvements A-G noted above) is sufficient for accommodating the 20-year travel forecast estimates. However, in the event of unanticipated growth scenarios, Project H would include the construction of a southbound PARCLO A looping on-ramp to provide additional longer-term capacity for the interchange ramp terminal. With the realignment of the southbound off-ramp (Project D), the construction of this looping on-ramp could occur with minimal impacts to other identified interchange improvements. *This improvement would be constructed when determined to be needed for safety or operations reasons, but must be either associated with or following the construction of Project D.*

Project I. Remove Existing Southbound On-Ramp (Vision Project)

Project I includes the removal of the existing/modified southbound on-ramp. *Removal would occur following construction of Project H.*

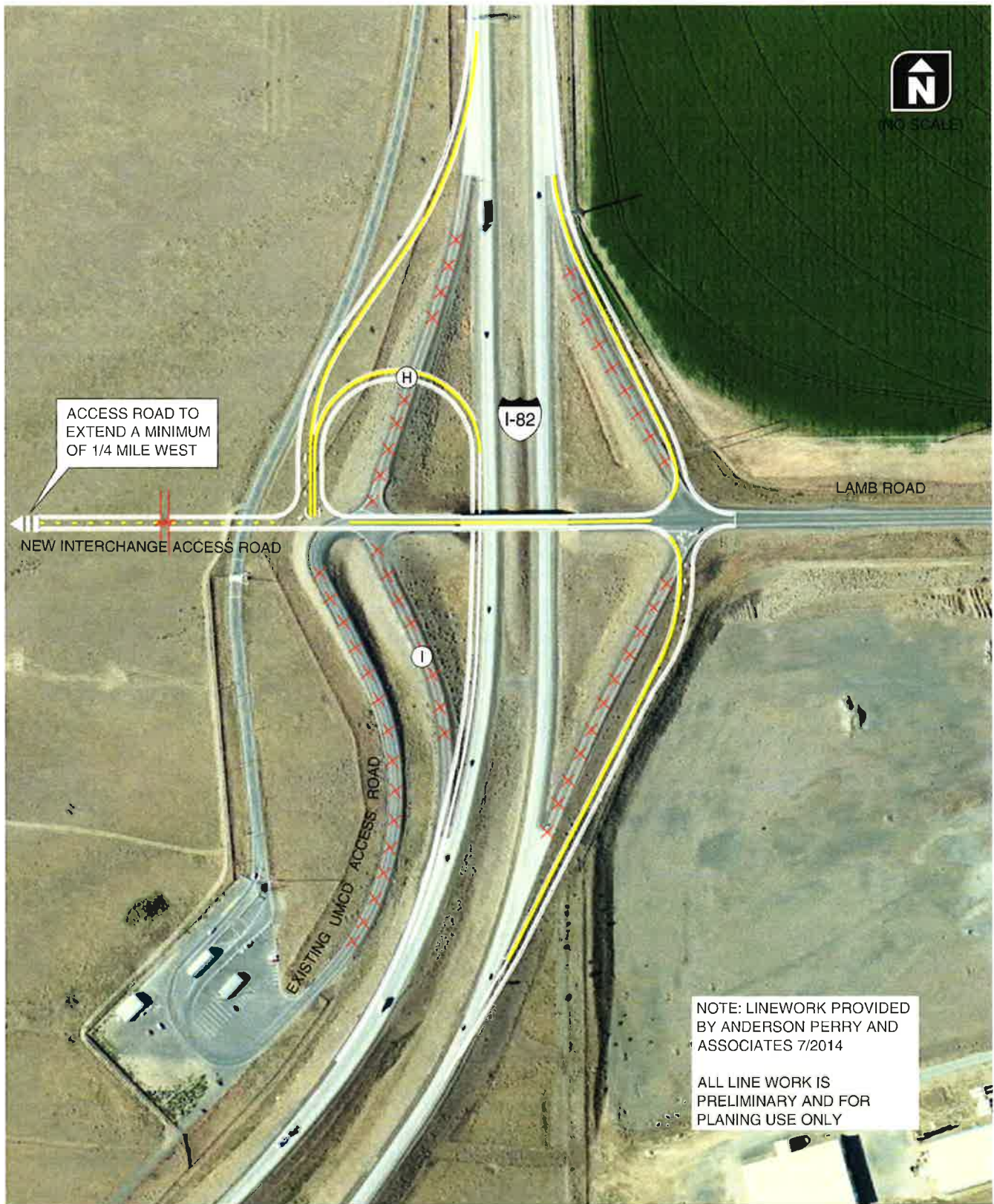


-  PRELIMINARY ROADWAY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

I-82/Lamb Road IAMP Improvement Plan
Umatilla County, Oregon




Figure 2

Umatilla Subarea Plan and Combined IAMP.dwg; 13848_Fig003.1.dwg Jul 14, 2014 - 10:19am - pmamell Layout Tab: Lamb



NOTE: LINEWORK PROVIDED BY ANDERSON PERRY AND ASSOCIATES 7/2014

ALL LINE WORK IS PRELIMINARY AND FOR PLANING USE ONLY

-  PRELIMINARY ROADWAY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

I-82/Lamb Road Future Development Options
Umatilla County, Oregon

Figure 3

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INTERCHANGE ACCESS MANAGEMENT PLAN

Access locations within the I-82/Lamb Road interchange area were evaluated based on ODOT's Division 51 Access Management standards and an assessment of traffic operations and safety as described in Action 3C.3 of the Oregon Highway Plan. Accordingly, the Access Management Plan (AMP) will preserve the operational integrity and safety of the interchange and primary roadways serving it, while maintaining viable access to all parcels in the IMSA. The AMP contains a plan for actions to be taken on the new interchange access roadway. An AMP is identified for near- and long-term timeframes. The overall AMP is illustrated in Figure 4.

Interchange Access Spacing

Under ODOT's current access management policy, the Oregon Highway Plan stipulates that the desired distance between an interchange ramp terminal and the first full approach (public or private) on the crossroad should be a minimum of 1,320 feet (¼-mile). The first right-in/right-out access should be a minimum of 750 feet from the ramp terminal. Given that the new interchange access road (Project A) will likely be constructed to a minimum length of ¼-mile after ODOT review, the I-82/Lamb Road access management plan identifies this roadway as an access controlled facility. Specifically, the plan calls for ODOT to secure access control along both sides of this new roadway between the southbound ramp terminal and the first point of public/private access (likely to be constructed a minimum length of ¼ mile from the terminal).

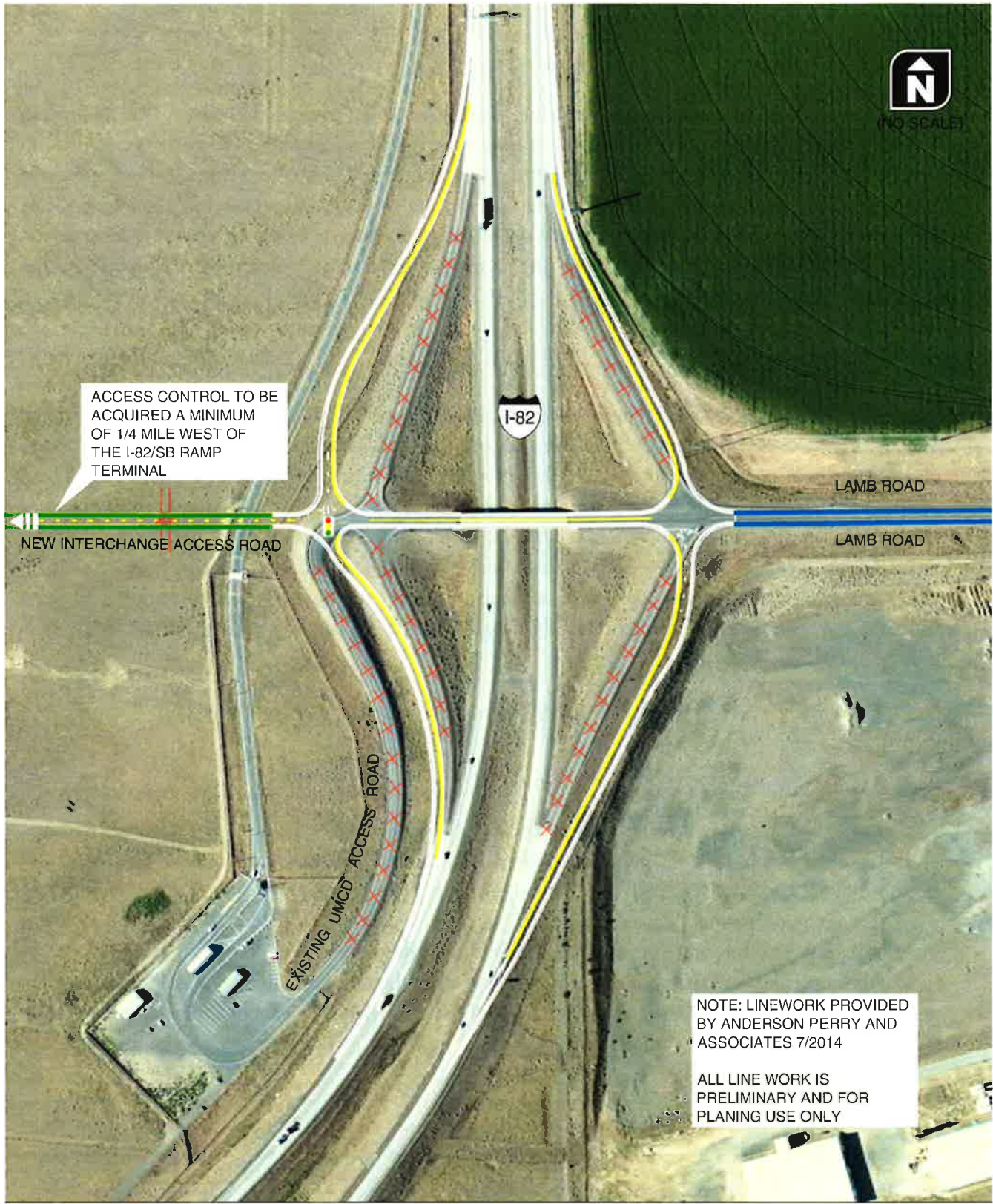
ODOT has already secured access control along Lamb Road east of the interchange.





UMCD Local Circulation

As part of a separate planning effort, a local circulation network will be planned to accommodate reuse and new development on the UMCD site in the vicinity of the I-82/Lamb Road interchange. The extent of this network will be planned and developed at a later date and in conjunction with future development opportunities. As such, specific roadway alignments and locations of local roadway intersections will be subject to future land use decisions. However, for the purposes of the IAMP, the local circulation plan will recognize the new I-82/Lamb Road interchange access road (Project A) as an access controlled roadway with the first full point of access likely to be located a minimum length of ¼ from the southbound ramp terminal.



(NO SCALE)



-  PRELIMINARY ROADWAY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  EXISTING ACCESS CONTROL (TO REMAIN)
-  ACQUIRE ACCESS CONTROL

I-82/Lamb Road
Interchange Access Plan
Umatilla County, Oregon

Figure
4

H:\proj\13549 - Umatilla Subarea Plan and Combined IAMP\Drawings\13549_Fig003_1.dwg Jul 14, 2014 - 9:18am - pmanell Layout Tab: Lamb Fig 4

Section 3 Implementation Plan

IMPLEMENTATION PLAN

INTRODUCTION

ODOT and Umatilla County will need to adopt elements of the I-82/Lamb Road IAMP specific to the individual jurisdiction/agency. Since the IAMP involves both State and local government authority, some policies will guide ODOT actions and others will guide Umatilla County decisions. The Oregon Administrative Rule [(OAR 734-051-0155(2))] states that ODOT will work with local governments on any amendments to local comprehensive plans and transportation system plans and local land use and subdivision codes to ensure the proposed IAMP is consistent with the local plan and codes, prior to adoption by the Oregon Transportation Commission (OTC).

It is expected that the IAMP will be made part of the Umatilla County Comprehensive Plan by including it as an amendment to its Transportation System Plans (TSP). This amendment process will require notification and public hearings pursuant to the local legislative process. Umatilla County can adopt the I-82/Lamb Road IAMP document in its entirety or by reference to the existing TSP, can prepare an ordinance that more specifically identifies what parts of the IAMPs are being adopted locally and how local plans and ordinances are being modified, and/or can issue a statement that local plans and ordinances are consistent with the recommendations of the IAMP.

ODOT Region 5 will prepare findings to support adoption of the I-82/Lamb Road IAMP on the State's behalf, and the Oregon Transportation Commission (OTC) will deliberate and adopt the final documents as a facility plan and amendments to the Oregon Highway Plan (OHP). The following is a summary of the proposed actions to implement the IAMP.

PLAN ELEMENTS

Interchange Function and Policy Definition

Umatilla County should adopt a clear definition of the I-82/Lamb Road Interchange function into its comprehensive plan and TSP to provide policy direction for management of the interchange area and achieve the objectives and goals of this IAMP. This will help to ensure consistency between future policy decisions and the interchange's intended function.

The following function and policy definition was developed for the I-82/Lamb Road Interchange:

"The function of the I-82/Lamb Road interchange is to provide primary access for future reuse/development on the UMCD site and continue to accommodate traffic growth within the larger IMSA and region. As the internal road system develops to serve UMCD reuse/development, this interchange will also provide secondary access to training and operational activities performed by the Oregon National Guard on the former Umatilla Army

Chemical Depot site. Traffic operations at the interchange will need to accommodate both large and small military vehicles.”

Interchange Area Management Plan (IAMP) Management Area

Umatilla County is the land use regulatory authority for the Interchange Management Study Area (IMSA). To ensure the continued operation and safety integrity of the interchange, Umatilla County should adopt an I-82/Lamb Road IAMP Management Area. Future development and land use actions within the IAMP Management Area will be monitored to ensure that volume-to-capacity ratios do not exceed the adopted Oregon Highway Plan mobility standards at the ramp terminals. This can be accomplished through Development Review guidelines included within the proposed amendments to the County’s Zoning and Subdivision Ordinances as described in the following sections.

ADOPTION ELEMENTS

Implementation of the I-82/Lamb Road IAMP will occur at several levels of government. Consistent with OAR 734- 051, Umatilla County will adopt legislative amendments to its transportation system plan and comprehensive plan to incorporate elements of the I-82/Lamb Road IAMP. In addition, new land use ordinances or amendments to existing ordinances or resolutions may be required to ensure that the access management, land use management, and coordination elements of the IAMP are achieved. This adoption process will include Planning Commission/County Commission hearings at the County level.

Following successful adoption at the County level, the 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 being constructed.

To implement the I-82/Lamb Road IAMP, the following actions shall occur:

ODOT:

- The IAMP shall be adopted by the Oregon Transportation Commission as part of the Oregon Highway Plan.

Umatilla County:

- Will amend the Transportation System Plan to incorporate the I-82 / Lamb Road interchange function and policy definition and recommended transportation improvements. 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.

- Will amend the Comprehensive Plan Map and Zoning Map to include an Interchange Management Area to identify where compliance with the I-82 / Lamb Road IAMP will be a condition of future development approval.
- Will amend the Development Code to require that development and redevelopment proposals within the Interchange Management Area show consistency with the IAMP and to allow the County to require improvements as a condition of approval. Amendments will ensure that proposals for new development within the UMCD and larger IMSA will be reviewed to determine if a need for different interchange improvement phases is triggered. Amendments to the following sections are recommended:
 - Section 152.018 Access Management and Street Connectivity
 - Section 152.019 Traffic Impact Analysis
- Consider adoption of a Supplemental Transportation System Development Charge (SDC) to finance specific improvements to the I-82 / Lamb Road interchange;
- Work with ODOT to identify and pursue funding for all I-82/Lamb Road interchange projects identified in this IAMP.

MONITORING ELEMENTS

The purpose of the IAMP is to ensure that capacity at the interchange is preserved for its intended function. While a long-range plan, the IAMP needs to remain dynamic and responsive to development and changes to the adopted land use and transportation plans and may need to be periodically reviewed and updated. To accomplish this goal, a monitoring program is included that identifies triggers for reviewing the IAMP and assessing how development approval within the IAMP Management Area will be reviewed and coordinated.

IAMP Review Triggers

Periodically, the implementation program shall be evaluated by ODOT and Umatilla County to ensure it is accomplishing the goals and objectives of the IAMP. Events that may trigger an IAMP review include:

- Plan map and zone changes that have a “significant affect” pursuant to the Transportation Planning Rule (OAR 660-012-0060) and impact the I-82/Lamb Road Interchange, or that are located within the IAMP Management Area.
- Proposed development that generates expected traffic volume at the I-82/Lamb Road ramp terminals that exceed the adopted mobility targets.

In addition to the established triggers for IAMP review, either agency may request a formal 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 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 Umatilla County Commission and the Oregon Transportation Commission.

If the findings and conclusions from the IAMP review 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 as an amendment to the Umatilla County Transportation System Plan, requiring a Umatilla County public hearing, as an amendment to the Umatilla County Transportation System Plan and adoption by the Oregon Transportation Commission as an update to the Oregon Highway Plan.

DEVELOPMENT REVIEW

The following outlines the transportation requirements for development and zone change applications within the I-82/Lamb Road Interchange Management Area and describes how Umatilla County will coordinate with ODOT.

Local Requirements

Umatilla County currently requires that proposed development comply with access management and traffic impact analysis requirements pursuant to the adopted Development Code. Umatilla County will amend the Development Code to require that development and redevelopment proposals within the Interchange Management Area show consistency with the IAMP Access Management Plan (AMP) and allow the County to recommend improvements as a condition of approval. Code amendments will ensure that all proposals for new development within the Umatilla County Depot Industrial Zone-portion of the Depot site area will be reviewed to determine if a need for different interchange improvement phasing is triggered or additional improvements are needed to support the proposal. Amendments to the following sections are recommended:

- Section 152.018 Access Management and Street Connectivity
- Section 152.019 Traffic Impact Analysis

Section 152.018 will include the following provision:

Proposed access within an Interchange Area Management Plan (IAMP) will be consistent with this section and the Access Management Plan of the applicable IAMP. Where conflicts between code requirements and the applicable IAMP Access Management Plan exist, the IAMP Access Management Plan will govern.

In recognition that the I-82/Lamb Road interchange may have the ability to accommodate some level of development within the UMCD boundary prior to full implementation of the identified near-term interchange improvement projects (Projects A and B in the IAMP), special Traffic Impact Analysis (TIA)

provisions will be amended in the County's TIA requirements (§152.019.B.2). These requirements will be specific to all future development located within the UMCD boundary of the larger IMSA. The entire TIA requirements with these new special provisions are included below with the new language underlined.

§ 152.019 TRAFFIC IMPACT STUDY.

(A) Purpose: The purpose of this section of the code is to implement Section 660-012-0045 (2) (e) of the State Transportation Planning Rule that requires the County to adopt a process to apply conditions to specified land use proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with an application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Analysis; and who is qualified to prepare the analysis.

(B) Applicability: A Traffic Impact Analysis shall be required to be submitted to the County with a land use application, apply:

(1) A change in plan amendment designation; or

(2) The proposal is projected to cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT:

(a) An increase in site traffic volume generation by 250 Average Daily Trips (ADT) or more (or as required by the County Engineer). The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips; or

(b) An increase in use of adjacent streets by vehicles exceeding the 10,000 pound gross vehicle weights by 20 vehicles or more per day; or

(c) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or vehicles queue or hesitate, creating a safety hazard; or

(d) A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area; or

(e) Any development proposed within the UMCD boundary of the I-84/Lamb Road or I-84/Army Depot Access Road Interchange Area Management Plan (IAMP) Management Area prior to the completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP; or

~~(e)~~ (f) For development within the I-82/US 730 Interchange Area Management Plan (IAMP) Management Area, the location of the access driveway is inconsistent with the Access Management Plan in Section 7 of the IAMP.

(C) Traffic Impact Analysis Requirements

(1) Preparation. A Traffic Impact Analysis shall be prepared by a professional engineer. The Traffic Impact Analysis will be paid for by the applicant.

(2) Transportation Planning Rule Compliance as provided in § 152.751.

(3) Pre-filing Conference. The applicant will meet with the Umatilla County Public Works Director and Planning Director prior to submitting an application that requires a Traffic Impact Analysis. The County has the discretion to determine the required elements of the TIA and the level of analysis expected. The County shall also consult the Oregon Department of Transportation (ODOT) on analysis requirements when the site of the proposal is adjacent to or otherwise affects a State roadway.

(4) For development proposed within the UMCD boundary of the I-84/Lamb Road or I-84/Army Depot Access Road Interchange Area Management Plan (IAMP) Management Area prior to the construction and completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP, the following additional submittal requirements may be required:

(a) An analysis of typical average daily vehicle trips using the latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE) or other data source deemed acceptable by the County Engineer.

(b) A truck and personal passenger vehicle mode split analysis.

(c) An analysis that shows the traffic conditions of the project at full buildout and occupancy, assuming the background traffic conditions at the year of expected project completion.

(d) Findings related to the impacts of the proposed development and the need for Projects A and B to mitigate those impacts.

Once Projects A and B have been completed, section (4) will no longer apply to new development.

(D) Approval Criteria: When a Traffic Impact Analysis is required; approval of the proposal requires satisfaction of the following criteria:

(1) Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis;

(2) If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact

Analysis shall include mitigation measures that meet the County's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the County Engineer, and ODOT when applicable; and

(3) The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:

- (a) Have the least negative impact on all applicable transportation facilities;
- (b) Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;
- (c) Make the most efficient use of land and public facilities as practicable;
- (d) Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and
- (e) Otherwise comply with applicable requirements of the Umatilla County Code.

(E) Conditions of Approval: The County may deny, approve, or approve a proposal with appropriate conditions.

(1) Where the existing transportation system is shown to be impacted by the proposed action, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed action.

(2) Where the existing transportation system is shown to be impacted by the proposed action, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed action may be required.

OREGON DEPARTMENT OF TRANSPORTATION / UMATILLA COUNTY COORDINATION

Following adoption of the I-82/Lamb Road IAMP, ODOT and Umatilla County will need to coordinate future development activities on the UMCD site. The following describes steps both ODOT and Umatilla County will take when reviewing development proposals that may impact the I-82/Lamb Road interchange. Umatilla County shall provide notice to the Oregon Department of Transportation (ODOT) on TIA studies when the site of the proposal is adjacent to or otherwise affects a State highway.

- Umatilla County shall consult the Oregon Department of Transportation (ODOT) on TIA requirements when the site of the proposal is adjacent to or otherwise affects a State highway.
- Umatilla County shall provide written notification to ODOT once a quasi-judicial or legislative land use application within the IAMP Management Area is deemed complete.
- ODOT shall have at least 20 days, measured from the date notice to agencies was mailed, to provide written comments to the County. If ODOT does not provide written comments during this 20-day period, the County staff report will be issued without consideration of ODOT comments.
- The County shall invite ODOT to participate in a pre-filing conference for applications within an Interchange Management Area Plan Management Area or within a ¼ mile of any ODOT facility. Notice of actions requiring a public hearing shall be provided to ODOT at least twenty days prior to the date of the hearing.

Section 4 OAR & OHP Compliance

OAR AND OHP COMPLIANCE

The following section discusses the Oregon Administrative Rule (OAR) and Oregon Highway Plan (OHP) policy-based compliance issues that pertain to the development of the I-82/Lamb Road IAMP.

OAR COMPLIANCE

The I-82/Lamb Road IAMP was developed in collaboration with UMADRA, Umatilla County, and ODOT and was developed in accordance with the guidelines set forth in the State of Oregon's Administrative Rules for Interchange Access Management Planning and Interchange Area Management Planning. Table 6 identifies the required planning elements from OAR 734-051 and documents how the IAMP satisfies the requirements.

Table 2 – I-82/Lamb Road IAMP OAR Compliance

OAR 734-0051-0155 Requirement	How OAR is Addressed	Document Reference
Should be developed no later than the time the interchange is being developed or redeveloped -7010(7)(a)	This plan was developed to effectively plan for future development and traffic growth that could occur within the interchange area. Future improvements will be needed to safely accommodate forecast increases in vehicular and truck demand.	IAMP Technical Appendix "G"
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 -7010(7)(b)	The access management, transportation improvement plan, and Interchange Management Area elements identified in this plan will result in operational, safety, and capacity improvements.	IAMP Section 2
Should include short, medium, and long-term actions to improve operations and safety in the interchange area -7010(7)(c)	The IAMP includes a phasing plan for the transportation system improvements presented within the plan. These improvements address the near term needs identified by the existing conditions analysis as well as long-term demand needs that are expected to occur beyond the 20-year horizon period. In addition, near-term improvement projects are included in the plan to address access road deficiencies to the interchange.	IAMP Section 2
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 -7010(7)(d)	A full analysis of existing and forecast operational and geometric conditions was conducted for this planning effort. The future volumes were developed based on approved zoning and comprehensive plan designations.	IAMP Technical Appendices "D", "E", & "G"
Should provide adequate assurance of the safe operation of the facility through the design traffic forecast period, typically 20 years -7010(7)(e)	Specific improvements are included in the plan to address safety concerns through improved geometric alignment and access spacing.	IAMP Section 2
Should consider existing and proposed uses of all property in the interchange area consistent with its comprehensive plan designations and zoning	A thorough analysis of surrounding land uses and land use potential was performed based on the current and approved comprehensive plan designations and zoning.	IAMP Technical Appendices "D", "E", & "G"

OAR 734-0051-0155 Requirement	How OAR is Addressed	Document Reference
-7010(7)(f)		
Is consistent with any applicable Access Management Plan, corridor plan or other facility plan adopted by the Oregon Transportation Commission	The access management plan included in the IAMP is consistent with the OHP.	IAMP Section 2
-7010(7)(g)		
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.	The implementation plan included in this IAMP documents the required amendments to local plans needed to adopt the IAMP. In addition, the implementation section outlines monitoring elements for the purpose of directing future land use action within the IAMP study area.	IAMP Section 3
-7010(7)(h)		

OREGON HIGHWAY PLAN COMPLIANCE

The I-82/Lamb Road IAMP was developed in accordance with the policies set forth in the OHP. The following identifies the OHP Policies that pertain to the I-82/Lamb Road 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.

Within the Interchange Management Study Area (IMSA), there are two ODOT highways. I-84 is an Interstate Highway designated as an Expressway. I-82 is an Interstate Highway also designated as an Expressway.

How Addressed: The I-82/Lamb Road IAMP recognized the respective functions of each highway. Access standards, traffic control, and geometric considerations were informed by the applicable highway designation. The preferred concept includes modification to the interstate ramps to better accommodate future traffic volumes and truck types.

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 UMADRA, Umatilla County, and ODOT. The IAMP will be implemented by Umatilla County through the IAMP Management Area that will require coordinated agency review on all future development or land use actions within the Area.

Policy 1C: State Highway Freight System. This policy recognizes the need for the efficient movement of freight through the state. I-84 and I-82 are designated Freight Routes.

How Addressed: The transportation projects included in the plan were developed considering freight mobility needs, particularly at the NB and SB ramp terminals and new interchange access road.

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-82/Lamb Road IAMP demonstrates that the interchange and surrounding transportation system will be able to meet ODOT mobility targets through the 20-year horizon.

Policy 1G: Major Improvements. This policy requires maintaining performance and improving safety by improving efficiency and management before adding capacity.

How Addressed: The I-82/Lamb Road IAMP focuses on improving the geometry of the existing interchange to improve efficiency and safety, adding capacity only where needed.

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: The transportation system was considered as a whole with improvements to the state and local system equally considered.

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: The new interchange access road will be reconstructed to eliminate existing geometric deficiencies. In addition, the 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.

How Addressed: See Policy 3C below.

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.

How Addressed: The I-82/Lamb Road IAMP includes an access management plan that improves access spacing over existing conditions.

Policy 3D: Deviations. This policy establishes general policies and procedures for deviations from adopted access management standards and policies.

How Addressed: Deviations to the OHP access spacing standards are required, as described in Section 2 of the OR 66 Green Springs Highway IAMP. The access management element describes the need for future deviations at the time of construction.

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. All highways within the study area are designated truck routes.

How Addressed: The transportation improvements included in the IAMP plan improves traffic operations and safety for all vehicles, including freight vehicles.

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.

Interchange Area Management Plan

I-84/ARMY DEPOT ACCESS ROAD

Umatilla County, Oregon

August 2014



Prepared for:



Prepared by:



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

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& associates, inc.

MB&G

I-84/Army Depot Access Road Interchange Area Management Plan

Umatilla County, Oregon

Draft

August 2014

I-84/Army Depot Access Road Interchange Area Management Plan

Umatilla County, Oregon

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August 2014



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PREFACE

The development of this plan was guided by the Steering Committee and Technical / Public Advisory Committee (TPAC). The members of these groups are identified below, along with members of the consultant team. The Steering Committee members were also members of the TPAC, who collectively 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/Army Depot Access Road IAMP and their participation was instrumental in the final recommendations that are presented herein.

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Section 1
Executive Summary

EXECUTIVE SUMMARY

The I-84/Army Depot Access Road Interchange Area Management Plan (IAMP) was prepared to identify and address infrastructure, access, and land use regulations associated with the transition of the Umatilla Army Chemical Depot (UMCD) from a facility that has historically stored/shipped military supplies and disposed of chemical weapons to a facility that will accommodate Oregon National Guard operations, environmental preservation, and new economic development.

The executive summary provides an overview of the project elements that were developed through a collaborative effort of the Project Team, Umatilla Army Depot Reuse Authority, Technical/Public Advisory Committee, Umatilla County, Morrow County, Oregon Department of Transportation (ODOT), and local stakeholders. The following table and figures summarize the identified improvement projects. Additional details are provided herein.

With the identification of near- and long-term infrastructure improvements, a number of policies, ordinances, and other provisions have been developed for adoption into the Umatilla and Morrow County Transportation System Plans, Comprehensive Plans, and development review ordinances to support and implement the IAMP. The IAMP will also be adopted by the Oregon Transportation Commission as an amendment to the Oregon Highway Plan.

I-84/Army Depot Access Interchange (Exit 177)



Executive Summary - I-84/Army Depot Access Road Interchange Area Improvement Summary

Fig. 1. Project Label	Near-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost ¹	Potential Funding Sources
A	Construct a more formal Gun Club Lane and farm access intersection with the Army Depot Access Road	<ul style="list-style-type: none"> Safety: Create a more fully defined intersection that is squared up to the Army Depot Access Road Operations: Improve local roadway access efficiency. Trigger: When determined by future traffic studies that the existing Gun Club lane intersection can no longer safely support existing and future development-driven traffic volumes. 	\$42K	PDF
Fig. 1. Project Label	Long-Term/Vision Project Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost	Potential Funding Sources
B	Lengthen and realign the I-84 westbound off-ramp.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.54M	STIP, PDF, GF
C	Lengthen and realign the I-84 eastbound off-ramp and reconstruct Frontage/Ordinance Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$1.06M	STIP, PDF, GF
D	Lengthen and realign the I-84 westbound on-ramp.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.79M	STIP, PDF, GF
E	Lengthen and realign the I-84 eastbound on-ramp.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.53M	STIP, PDF, GF

STIP – State Transportation Improvement Project

PDF – Private Development Funds

GF – Other Grant Funds

¹ – Planning level costs are in 2014 dollars. Construction costs only, does not include right-of-way costs.

NOTE: LINEWORK PROVIDED BY ANDERSON PERRY AND ASSOCIATES 7/2014
ALL LINE WORK IS PRELIMINARY AND FOR PLANNING USE ONLY



-  PRELIMINARY ALIGNMENT
-  REMOVE STRUCTURE / ROADWAY
-  IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

I-84/ARMY DEPOT ACCESS ROAD IAMP IMPROVEMENT PLAN UMATILLA COUNTY, OREGON

Figure E1

Section 2 Interchange Improvement and Access Management Plan

INTERCHANGE IMPROVEMENT AND ACCESS MANAGEMENT PLAN

INTRODUCTION / BACKGROUND

The Umatilla Army Chemical Depot (UMCD) is formally being decommissioned and prepared for reuse/redevelopment. The Umatilla Chemical Depot Reuse Authority (UMADRA - sometimes referred to as the "LRA" and currently undergoing a name change to the "Columbia Development Authority") is chartered with administering the transition of the UMCD and is leading the planning process. Following the completion of a Redevelopment Plan in 2010, reuse/redevelopment of the UMCD has been targeted to accommodate a new 7,500 acre Oregon National Guard training base, a 5,678 acre habitat refuge, and approximately 3,000 acres of industrial/warehouse development.

With the transition and reconfiguration of land uses on the UMCD site, it is recognized that transportation patterns and traffic demands will change. Some of these changes will impact the existing I-84/Army Depot Access Road interchange. In accordance with Oregon Administrative Rule 734-051, an Interchange Area Management Plan (IAMP) has been prepared to identify and address future transportation infrastructure needs, access, and land use regulations at this interchange. The remainder of this section contains the planning context, specific interchange infrastructure projects, and access management plan for the IAMP.

Conditions Statement

Exhibit 1 - I-84/Army Depot Access Road Interchange



The I-84/Army Depot Access Road interchange is located at Exit 177 in Umatilla County. The interchange is a traditional diamond-style interchange. The eastbound ramp terminal intersects Frontage Road/Ordnance Road while the westbound ramp terminal intersects the Umatilla Army Depot Access Road.

The interchange has served two primary purposes since its construction in 1967. From a regional perspective, the interchange provides access between I-84 and the expansive rural farming/agricultural uses that exist along the south side of I-84. From a local perspective, the interchange has served as the main access to the UMCD site which exists north of I-84 and the adjacent UP Mainline railroad tracks. When originally built, the I-84/Army Depot Access Road

interchange was constructed at a time in which the primary use of the UMCD was to store and ship military supplies. With these UMCD uses no longer in operation and a future vision that includes a change in military uses (Oregon National Guard), environmental preservation, and economic development, the I-84/Army Depot Access Road interchange infrastructure will be utilized over time in a manner that is different from historical patterns.

Purpose and Intent Statement

The purpose of the I-84/Army Depot Access Road IAMP is to develop a plan that focuses on the interchange and existing Army Depot Access Road that serves the UMCD site. The intent of the plan is to develop land use management strategies for the reuse/redevelopment of the UMCD, create an access management plan for the Army Depot Access Road and Frontage Road, and develop funding mechanisms to construct the necessary infrastructure improvements.

Goals and Objectives

The IAMP is intended to protect the function of the I-84/Army Depot Access Road interchange for the next 20 years while accounting for changes in land use and traffic patterns brought about by reuse/redevelopment of the UMCD and continued growth in the regional study area. As stated in Policy 3C of the *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." To this end, working collaboratively with the Technical/Public Advisory Committee (TPAC) and public, the Goals/Objectives of the IAMP are to:

1. Protect the long-term function, operation, and safety of the I-84/Army Depot Access Road interchange.
2. Identify opportunities for enhanced roadway connectivity within the UMCD site that would provide public roadway connections between the I-84/Army Depot Access Road and I-82/Lamb Road interchanges.
3. Manage the allowed land uses within the vicinity of the interchanges to provide for future economic growth over the next 20 years.
4. Identify current accesses along the interchange crossroads and develop a phased access management plan for the crossroads based on a detailed and collaborative process involving Umatilla County and local property owners. The access management plan will be based on key principles that balance highway mobility and safety against:
 - a. The findings of County TSPs and land use plans; and
 - b. Local economic development objectives for properties that require access to the state highway.
5. Identify opportunities for freight-based multi-modal accessibility to/from future redevelopment of the UMCD site.

6. Collaborate throughout the planning process with design professionals, jurisdictional representatives, developers, local property owners, and the general public, including protected populations as established by federal and state regulations and policies.
7. Comply with the intent of Statewide Planning Goals, including Goal 1: Public Involvement, Goal 2: Land Use Planning, Goal 5: Natural Resources, Goal 6: Air, Water and Land Resources Quality, Goal 7: Areas Subject to Natural hazards, Goal 8: Recreation Needs, Goal 9: Economic Development, Goal 12: Transportation, and Goal 14: Urban Growth Boundaries.
8. Identify phased implementation strategies for identified near- and long-term interchange infrastructure and interchange crossroad improvements.
9. Identify interchange infrastructure funding mechanisms that could be applied to future reuse/redevelopment of the UMCD and other land uses within the Interchange Management Study Area.
10. Develop implementation policies and regulations to be adopted into the Umatilla County Comprehensive Plan, Transportation System Plan, and zoning ordinances, as appropriate.

Interchange Management Study Area (IMSA)

The I-84/Army Depot Access Road IAMP was prepared in conjunction with IAMPs for two other interchanges: I-82/Lamb Road and I-84/Paterson Ferry Road. All three interchanges will be affected to some degree by future reuse of the UMCD site. Within the context of the IAMP planning process, the Interchange Management Study Area (IMSA) defines the extent of the detailed land use and infrastructure study area. The IAMPs will focus specifically on the freeway interchanges that serve the UMCD and surrounding land uses. At a minimum, the IMSA includes properties, as well as all access points located within ½ mile from the freeway interchange as defined by the State of Oregon's IAMP Guidelines. In order to capture the overarching land use related impacts of the reuse/redevelopment of the UMCD as well as growth potential of immediately surrounding uses, the IMSA includes the following areas:

- The entire UMCD site
- Westland Road Exception Area – area east of I-82 and north of I-84
- Industrial zoned land located north of the Paterson Ferry Road interchange

The Interchange Management Study Area (IMSA) map is shown in Figure 1.



Land Use Study Area
 Operations/Access Study Area
 Umatilla Army Depot
 County Boundary

Interchange Management Study Area
Morrow / Umatilla Counties

Figure
1

Coordinate System: NAD 83, NAD 83 HARN, StatePlane, Oregon North FIPS 1010, Feet per Unit: 0.3048, Datum: Everest, Contour Interval: 100.00

I-84/ARMY DEPOT ACCESS ROAD INTERCHANGE IMPROVEMENT PLANS

A comprehensive transportation improvement plan for the I-84/Army Depot Access Road interchange was developed based on concept screening and evaluations outlined in the Technical Appendix to the IAMP. Depending upon future development and internal UMCD access scenarios, this plan identifies two sets of improvement scenarios that range from minor access management/local roadway enhancements to a more significant reconstruction of the interchange on- and off ramps. Each transportation improvement project is described in detail below, illustrated in Figure 2, and summarized in Table 1.

Near/Long- Term Improvements

The I-84/Army Depot Access Road interchange has historically been, and likely will continue to be a low-volume interchange. The rural farming/agricultural land uses that it supports on the south side of I-84 are relatively minor in intensity and are forecast to continue to generate relatively low volumes of traffic through this interchange over the next 20 years. Likewise, future reuse of the UMCD site is also not anticipated to generate a significant amount of daily traffic volumes through this interchange when considering the following conditions and likely future development scenarios:

- Per their current plans, the Oregon National Guard (ORNG) is proposing to house their Regional Training Institute, a readiness center, and an assortment of training facilities on their portion of the UMCD site. Typical daily use and staffing of these facilities are not anticipated to generate a significant amount of trips as outlined in the Technical Appendix to this IAMP.
- The majority of future development associated with the Depot Industrial zone in the eastern portion of the UMCD site is anticipated to be oriented to the closer and more conveniently located I-82/Lamb Road interchange. As such, a minimal amount of associated vehicle and truck traffic is anticipated to use the I-84/Army Depot Access Road interchange.
- Future development of the Morrow County Port Industrial zone in the southwest quadrant of the UMCD site could potentially take access to the I-84 corridor via a new roadway connection to Patterson Ferry Road (see I-84/Paterson Ferry Road IAMP). As such, a minimal amount of associated vehicle and truck traffic is anticipated to use the I-84/Army Depot Access Road interchange.
- The existing Army Depot Access Road underpass at the adjacent UP Mainline has existing vertical and horizontal clearance limitations that would prevent some large trucks and oversized vehicles from accessing the ORNG, and potential future development associated with the Morrow County Port Industrial and Umatilla County Depot Industrial zones.

Based on the above noted conditions and assumed future development scenarios, the existing I-84/Army Depot Access Road interchange can continue to function as a low-volume rural interchange with only a few relatively minor access and safety improvements as noted below.

Project A. Realignment of Gun Club Lane Access (Near-Term)

The existing Gun Club Lane access off of the Army Depot Access Road has a large and expansive point of access. This connection is not well defined and intersects the Army Depot Access Road at a severe skew angle. Project A would include the construction of a more formal intersection that squares up the access to the Army Depot Access Road and realigns it opposite of the existing farm access on the east side of Army Depot Access Road. *This improvement would need to be constructed as part of future capital improvement project or when it is determined (through the Umatilla County and/or Morrow County development review process) that the current configuration cannot safely support future development-driven traffic volumes on Gun Club Lane.*

Table 1 - I-84/Army Depot Access Road Interchange Transportation Improvement Plan

Fig 1. Project Label	Near-Term Improvement Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost ¹	Potential Funding Sources
A	Construct a more formal Gun Club Lane and farm access intersection with the Army Depot Access Road	<ul style="list-style-type: none"> Safety: Create a more fully defined intersection that is squared up to the Army Depot Access Road Operations: Improve local roadway access efficiency. Trigger: When determined by future traffic studies that the existing Gun Club lane intersection can no longer safely support existing and future development-driven traffic volumes. 	\$42K	PDF
Fig. 1 Project Label	Long-Term/Vision Project Description	Implementation Need/Trigger for Improvement	Estimated Planning-Level Cost	Potential Funding Sources
B	Lengthen and realign the I-84 westbound off-ramp.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$0.54M	STIP, PDF, GF
C	Lengthen and realign the I-84 eastbound off-ramp and reconstruct Frontage/Ordinance Road.	<ul style="list-style-type: none"> Safety: Increase vehicle/truck queuing, upgrade ramp to current design standard. Operations: Eliminate ramp skew angle. Trigger: When determined by future traffic studies or as part of future capital improvements. 	\$1.06M	STIP, PDF, GF
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STIP – State Transportation Improvement Project

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- REMOVE STRUCTURE / ROADWAY
- IMPROVEMENT (SEE TABLE 1 FOR DESCRIPTION & COST ESTIMATE)

I-84/ARMY DEPOT ACCESS ROAD IAMP IMPROVEMENT PLAN
 UMATILLA COUNTY, OREGON

Figure 2

H:\proj\13848 - Umatilla Subarea Plan and Combined IAMP\dwg\shigs\13848_Fig003.dwg Jul 21, 2014 2:48pm - pmanell Layout Tab: Depot Fig 2

Long-Term/Vision Project Improvements

Anticipated future reuse of the UMCD site is not likely to generate a significant amount of traffic through the I-84/Army Depot Access Road interchange, and therefore no major infrastructure improvements would be needed at the interchange. However, the IAMP recognizes that the potential exists for intensified levels of traffic growth through the I-84/Army Depot Access Road as it relates to future reuse of the UMCD site. Specifically, future development associated with the Morrow County Port Industrial zone in the southwest quadrant of the UMCD site may need near- or long-term regional access to the I-84/Army Depot Access Road interchange until a primary access connection can be established via Paterson Ferry Road. It is also possible, but unlikely, that the ORNG could expand their operations beyond current plans. If either were the case, it can be expected that the I-84/Army Depot Access Road interchange will experience a significant increase in vehicular and truck traffic. As such, the following Long-Term/Vision Projects have been identified so that their potential need can be monitored and planned for over the 20-year life of the IAMP.

Project B. Improve I-84 Westbound Off-Ramp (Vision Project)

The existing I-84 westbound off-ramp is substandard in its length to safely and efficiently accommodate intensification in vehicle and truck traffic that could be generated by future development of the Port Industrial zone in the southwest quadrant of the UMCD site or expanded ORNG operations. Project B would lengthen and realign the off-ramp to better accommodate potential long-term vehicle and truck demand. *These improvements would be constructed when future development-driven traffic studies determine that they are needed for safety and/or operations reasons.*

Project C. Improve I-84 Eastbound Off-Ramp/Realign Frontage/Ordnance Road (Vision Project)

The existing I-84 eastbound off-ramp is substandard in its length to safety and efficient accommodate intensification in vehicle and truck traffic that could be generated by future development of the Port Industrial zone in the southwest quadrant of the UMCD site or expanded ORNG operations. Project B would lengthen and realign the off-ramp to better accommodate potential long-term vehicle and truck demand and eliminate the existing skew angle at Army Depot Access Road. In addition, this project would reconstruct a portion of the Frontage Road that would be impacted by the realigned off-ramp. *These improvements would be constructed when future development-driven traffic studies determine that they are needed for safety and/or operations reasons.*

Project D. Improve/Realign the I-84 Westbound On-Ramp (Longer-Term)

The existing I-84 westbound on-ramp is deficient in its length and cannot safely and efficiently accommodate the intensified vehicular/truck volumes that could be generated by future development of the Port Industrial zone in the southwest quadrant of the UMCD site or expanded ORNG operations. *This improvement would be constructed in conjunction with Project B or when determined to be needed for safety or operations reasons.*

Project E. Improve/Realign the I-84 Eastbound On-Ramp (Longer-Term)

The existing I-84 eastbound on-ramp is deficient in its length and has a large skew angle that cannot efficiently accommodate the intensified vehicular/truck volumes that could be generated by future development of the Port Industrial zone in the southwest quadrant of the UMCD site or expanded ORNG operations. *This improvement would be constructed in conjunction with Project C or when determined to be needed for safety or operations reasons.*

INTERCHANGE ACCESS MANAGEMENT PLAN

Access locations within the I-84/Army Depot Access Road interchange area were evaluated based on ODOT's Division 51 Access Management standards and an assessment of traffic operations and safety as described in Action 3C.3 of the Oregon Highway Plan. Accordingly, the Access Management Plan (AMP) will preserve the operational integrity and safety of the interchange and primary roadways serving it, while maintaining viable access to all parcels in the IMSA.

Access Management

Figure 3 illustrates the access management plan for the I-84/Army Depot Access Road interchange.

Army Depot Access Road

The access management plan for the Army Depot Access Road is primarily focused on not allowing new access to the roadway between the westbound ramp terminals and the UP Mainline railroad underpass to the north. The realignment/establishment of a Gun Club Lane/Existing Farm access (Project A) along the Army Depot Access Road is intended to formalize and optimize the location of this access. Along with this project, formalized access control should be established by ODOT to prevent future access along this limited corridor.

South of the interchange, formalized access control should be established along the realigned/reconstructed Frontage/Ordnance Road if/when the project is needed (See Long-Term/Vision Project C).



I-84/ARMY DEPOT ACCESS ROAD IAMP IMPROVEMENT PLAN
UMATILLA COUNTY, OREGON

Figure 3

Section 3 Implementation Plan

IMPLEMENTATION PLAN

INTRODUCTION

ODOT and Umatilla County will need to adopt elements of the I-84/Army Depot Access Road IAMP specific to the individual jurisdiction/agency. Since the IAMP involves both State and local government authority, some policies will guide ODOT actions and others will guide Umatilla County decisions. The Oregon Administrative Rule [(OAR 734-051-0155(2))] states that ODOT will work with local governments on any amendments to local comprehensive plans and transportation system plans and local land use and subdivision codes to ensure the proposed IAMP is consistent with the local plan and codes, prior to adoption by the Oregon Transportation Commission (OTC).

It is expected that the IAMP will be made part of the Umatilla County Comprehensive Plan by including it as an amendment to its Transportation System Plans (TSP). This amendment process will require notification and public hearings pursuant to the local legislative process. Umatilla County can adopt the I-84/Army Depot Access Road IAMP document in its entirety or by reference to the existing TSP, can prepare an ordinance that more specifically identifies what parts of the IAMPs are being adopted locally and how local plans and ordinances are being modified, and/or can issue a statement that local plans and ordinances are consistent with the recommendations of the IAMP.

ODOT Region 5 will prepare findings to support adoption of the I-84/Army Depot Access Road IAMP on the State's behalf, and the Oregon Transportation Commission (OTC) will deliberate and adopt the final documents as a facility plan and amendments to the Oregon Highway Plan (OHP). The following is a summary of the proposed actions to implement the IAMP.

PLAN ELEMENTS

Interchange Function and Policy Definition

Umatilla County should adopt a clear definition of the I-84/Army Depot Access Road Interchange function into its comprehensive plan and TSP to provide policy direction for management of the interchange area and achieve the objectives and goals of this IAMP. This will help to ensure consistency between future policy decisions and the interchange's intended function.

The I-84/Army Depot Access Road interchange provides a direct connection between I-84 and the Oregon National Guard (ONG) property. As well, this interchange will provide access to the Port Industrial zoned lane on the southwestern quadrant of the UMCD site. Finally, as the eastern portion of the Depot planning area develops, and internal roads are constructed, the I-84/Army Depot Access Road Interchange will provide secondary access from the east to the industrial and employment uses along I-82.

As ONG activities increase on the Depot property, use of the I-84/Army Depot Access Road Interchange will increase. Historically, the interchange provided secured access to the Umatilla Army Chemical Depot when it was operational. When those operations ceased, use of the interchange diminished. With renewed use of the site by the ONG for training activities, the interchange will see a reestablishment of daily activity.

I-84 is a major east-west interstate highway that connects the state of Oregon to the state of Idaho. I-84 is classified as an Interstate Highway by the Oregon Highway Plan (OHP) and designated as an Expressway and Statewide Freight Route.

Based on this description, the following function and policy definition was developed for the I-84/Army Depot Access Road Interchange:

“The function of the I-84/Army Depot Access Road interchange is to provide primary access for future training and operational activities performed by the Oregon National Guard on the former Umatilla Army Chemical Depot site. Traffic operations at the interchange will need to accommodate both large and small military vehicles. At the same time, the I-84/Army Depot Access Road Interchange may provide access to future Port Industrial development to the west of the interchange and to future industrial and employment uses to the east between this interchange and the I-82/Lamb Road Interchange.”

Interchange Area Management Plan (IAMP) Management Area

Umatilla County is the land use regulatory authority for the Interchange Management Study Area (IMSA). To ensure the continued operation and safety integrity of the interchange, Umatilla County should adopt an I-84/Army Depot Access Road IAMP Management Area. Future development and land use actions within the IAMP Management Area will be monitored to ensure that volume-to-capacity ratios do not exceed the adopted Oregon Highway Plan mobility standards at the ramp terminals. This can be accomplished through Development Review guidelines included within the proposed amendments to the County’s Zoning and Subdivision Ordinances as described in the following sections.

ADOPTION ELEMENTS

Implementation of the I-84/Army Depot Access Road IAMP will occur at several levels of government. Consistent with OAR 734- 051, Umatilla County will adopt legislative amendments to its transportation system plan and comprehensive plan to incorporate elements of the I-84/Army Depot Access Road IAMP. In addition, new land use ordinances or amendments to existing ordinances or resolutions may be required to ensure that the access management, land use management, and coordination elements of the IAMP are achieved. This adoption process will include Planning Commission/County Commission hearings at the County level.

Following successful adoption at the County level, the 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 being constructed.

To implement the I-84/Army Depot Access Road IAMP, the following actions shall occur:

ODOT:

- The IAMP shall be adopted by the Oregon Transportation Commission as part of the Oregon Highway Plan.

Umatilla County:

- Will amend the Transportation System Plan to incorporate the I-84/Army Depot Access Road interchange function and policy definition and recommended transportation improvements. 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.
- Will amend the Comprehensive Plan Map and Zoning Map to include an Interchange Management Area to identify where compliance with the I-84/Army Depot Access Road IAMP will be a condition of future development approval.
- Will amend the Development Code to require that development and redevelopment proposals within the Interchange Management Area show consistency with the IAMP and recommended improvements to allow the County to require improvements as a condition of approval. Amendments will ensure that proposals for new development within the UMCD and IMSA will be reviewed to determine if a need for different interchange improvement phases is triggered. Amendments to the following sections are recommended:
 - Section 152.018 Access Management and Street Connectivity
 - Section 152.019 Traffic Impact Analysis
- Work with Morrow County and ODOT to identify and pursue funding for the I-84/Army Depot Access Road interchange projects identified in this IAMP.

Morrow County:

If proposed development in the Port Industrial portion of the UMCD site precedes the construction of the envisioned Paterson Ferry Road-UMCD connector roadway, Morrow County will coordinate development review with Umatilla County. Prior to the construction of the connector roadway, Morrow County will:

- Notify Umatilla County of submitted applications for development proposals within the Port Industrial portion of the UMCD site, under Morrow County's jurisdiction.
- Require development applicants to obtain an Access Permit through Umatilla County Public Works as part of the development approval process.
- Work with Umatilla County to establish an appropriate funding mechanism to construct the necessary frontage road to connect the I-84/Army Depot Access Road interchange to the Port Industrial zoned lands.

MONITORING ELEMENTS

The purpose of the IAMP is to ensure that capacity at the interchange is preserved for its intended function. While a long-range plan, the IAMP needs to remain dynamic and responsive to development and changes to the adopted land use and transportation plans and may need to be periodically reviewed and updated. To accomplish this goal, a monitoring program is included that identifies triggers for reviewing the IAMP and assessing how development approval within the IAMP Management Area will be reviewed and coordinated.

IAMP Review Triggers

Periodically, the implementation program shall be evaluated by ODOT and Umatilla County to ensure it is accomplishing the goals and objectives of the IAMP. Events that may trigger an IAMP review include:

- Plan map and zone changes that have a "significant affect" pursuant to the Transportation Planning Rule (OAR 660-012-0060) and impact the I-84/Army Depot Access Road Interchange, or that are located within the IAMP Management Area.
- Proposed development that generates expected traffic volume at the I-84 ramp terminals that exceed the adopted mobility targets.
- Unanticipated intensification of ORNG uses that significantly exceed forecasts as identified in the Technical Appendix of the IAMP.

In addition to the established triggers for IAMP review, either agency may request a formal 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 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 Umatilla County Commission and the Oregon Transportation Commission.

If the findings and conclusions from the IAMP review 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 as an amendment to the Umatilla

County Transportation System Plan, requiring a Umatilla County public hearing, as an amendment to the Umatilla County Transportation System Plan and adoption by the Oregon Transportation Commission as an update to the Oregon Highway Plan.

DEVELOPMENT REVIEW

The following outlines the transportation requirements for development and zone change applications within the I-84/Army Depot Access Road Interchange Management Area and describes how Umatilla County will coordinate with Morrow County and ODOT.

Local Requirements

Umatilla County currently requires that proposed development comply with access management and traffic impact analysis requirements pursuant to the adopted Development Code. Umatilla County will amend the Development Code to require that development and redevelopment proposals within the Interchange Management Area show consistency with the IAMP Access Management Plan (AMP) and allow the County to recommend improvements as a condition of approval. Code amendments will ensure that all proposals for new development within the Umatilla County portion of the Depot site area will be reviewed to determine if a need for different interchange improvement phasing is triggered or additional improvements are needed to support the proposal. Amendments to the following sections are recommended:

- Section 152.018 Access Management and Street Connectivity
- Section 152.019 Traffic Impact Analysis

Section 152.018 will include the following provision:

Proposed access within an Interchange Area Management Plan (IAMP) will be consistent with this section and the Access Management Plan of the applicable IAMP. Where conflicts between code requirements and the applicable IAMP Access Management Plan exist, the Access Management Plan will govern.

In recognition that the I-82/Lamb Road interchange may have the ability to accommodate some level of development within the UMCD boundary prior to full implementation of the identified near-term interchange improvement projects (Projects A and B in the IAMP), special Traffic Impact Analysis (TIA) provisions will be amended in the County's TIA requirements (§152.019.B.2). These requirements will be specific to all future development located within the UMCD boundary of the larger IMSA. The entire TIA requirements with these new special provisions are included below with the new language underlined.

§ 152.019 TRAFFIC IMPACT STUDY.

(A) Purpose: The purpose of this section of the code is to implement Section 660-012-0045 (2) (e) of the State Transportation Planning Rule that requires the County to adopt a process to apply conditions to specified land use proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with an application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Analysis; and who is qualified to prepare the analysis.

(B) Applicability: A Traffic Impact Analysis shall be required to be submitted to the County with a land use application, apply:

(1) A change in plan amendment designation; or

(2) The proposal is projected to cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT:

(a) An increase in site traffic volume generation by 250 Average Daily Trips (ADT) or more (or as required by the County Engineer). The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips; or

(b) An increase in use of adjacent streets by vehicles exceeding the 10,000 pound gross vehicle weights by 20 vehicles or more per day; or

(c) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or vehicles queue or hesitate, creating a safety hazard; or

(d) A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area; or

(e) Any development proposed within the UMCD boundary of the I-84/Lamb Road or I-84/Army Depot Access Road Interchange Area Management Plan (IAMP) Management Area prior to the completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP; or

~~(e)~~ (f) For development within the I-82/US 730 Interchange Area Management Plan (IAMP) Management Area, the location of the access driveway is inconsistent with the Access Management Plan in Section 7 of the IAMP.

(C) Traffic Impact Analysis Requirements

(1) Preparation. A Traffic Impact Analysis shall be prepared by a professional engineer. The Traffic Impact Analysis will be paid for by the applicant.

(2) Transportation Planning Rule Compliance as provided in § 152.751.

(3) Pre-filing Conference. The applicant will meet with the Umatilla County Public Works Director and Planning Director prior to submitting an application that requires a Traffic Impact Analysis. The County has the discretion to determine the required elements of the TIA and the level of analysis expected. The County shall also consult the Oregon Department of Transportation (ODOT) on analysis requirements when the site of the proposal is adjacent to or otherwise affects a State roadway.

(4) For development proposed within the UMCD boundary of the I-84/Lamb Road or I-84/Army Depot Access Road Interchange Area Management Plan (IAMP) Management Area prior to the construction and completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP, the following additional submittal requirements may be required:

(a) An analysis of typical average daily vehicle trips using the latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE) or other data source deemed acceptable by the County Engineer.

(b) A truck and personal passenger vehicle mode split analysis.

(c) An analysis that shows the traffic conditions of the project at full buildout and occupancy, assuming the background traffic conditions at the year of expected project completion.

(d) Findings related to the impacts of the proposed development and the need for Projects A and B to mitigate those impacts.

Once Projects A and B have been completed, section (4) will no longer apply to new development.

(D) Approval Criteria: When a Traffic Impact Analysis is required; approval of the proposal requires satisfaction of the following criteria:

(1) Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis;

(2) If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the County's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the County Engineer, and ODOT when applicable; and

(3) The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:

- (a) Have the least negative impact on all applicable transportation facilities;
- (b) Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;
- (c) Make the most efficient use of land and public facilities as practicable;
- (d) Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and
- (e) Otherwise comply with applicable requirements of the Umatilla County Code.

(E) Conditions of Approval: The County may deny, approve, or approve a proposal with appropriate conditions.

(1) Where the existing transportation system is shown to be impacted by the proposed action, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed action.

(2) Where the existing transportation system is shown to be impacted by the proposed action, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed action may be required.

OREGON DEPARTMENT OF TRANSPORTATION / UMATILLA COUNTY COORDINATION

Following adoption of the I-84/Army Depot Access Road IAMP, Umatilla County will need to coordinate future development activities on the UMCD site with ODOT. The following describes steps both ODOT and Umatilla County will take when reviewing development proposals that may impact the I-84/Army Depot Access Road interchange. Umatilla County shall provide notice to the Oregon Department of Transportation (ODOT) on TIA studies when the site of the proposal is adjacent to or otherwise affects a State highway.

- Umatilla County shall consult the Oregon Department of Transportation (ODOT) on TIA requirements when the site of the proposal is adjacent to or otherwise affects a State highway.
- Umatilla County shall provide written notification to ODOT once a quasi-judicial or legislative land use application within the IAMP Management Area is deemed complete.
- ODOT shall have at least 20 days, measured from the date notice to agencies was mailed, to provide written comments to the County. If ODOT does not provide written comments

during this 20-day period, the County staff report will be issued without consideration of ODOT comments.

- The County shall invite ODOT to participate in a pre-filing conference for applications within an Interchange Management Area Plan Management Area or within a ¼ mile of any ODOT facility. Notice of actions requiring a public hearing shall be provided to ODOT at least twenty days prior to the date of the hearing.

Section 4 OAR & OHP Compliance

OAR AND OHP COMPLIANCE

The following section discusses the Oregon Administrative Rule (OAR) and Oregon Highway Plan (OHP) policy-based compliance issues that pertain to the development of the I-84/Army Depot Access Road IAMP.

OAR COMPLIANCE

The I-84/Army Depot Access Road IAMP was developed in collaboration with UMADRA, Umatilla County, and ODOT and was developed in accordance with the guidelines set forth in the State of Oregon’s Administrative Rules for Interchange Access Management Planning and Interchange Area Management Planning. Table 6 identifies the required planning elements from OAR 734-051 and documents how the IAMP satisfies the requirements.

Table 2 – I-84/Army Depot Access Road IAMP OAR Compliance

OAR 734-0051-0155 Requirement	How OAR is Addressed	Document Reference
Should be developed no later than the time the interchange is being developed or redeveloped -7010(7)(a)	This plan was developed to effectively plan for future development and traffic growth that could occur within the interchange area. Future improvements will be needed to safely accommodate forecast increases in vehicular and truck demand.	IAMP Technical Appendix "G"
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 -7010(7)(b)	The access management, transportation improvement plan, and Interchange Management Area elements identified in this plan will result in operational, safety, and capacity improvements.	IAMP Section 2
Should include short, medium, and long-term actions to improve operations and safety in the interchange area -7010(7)(c)	The IAMP includes a phasing plan for the transportation system improvements presented within the plan. These improvements address the near term needs identified by the existing conditions analysis as well as long-term demand needs that are expected to occur beyond the 20-year horizon period.	IAMP Section 2
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 -7010(7)(d)	A full analysis of existing and forecast operational and geometric conditions was conducted for this planning effort. The future volumes were developed based on approved zoning and comprehensive plan designations.	IAMP Technical Appendices "D", "E", & "G"
Should provide adequate assurance of the safe operation of the facility through the design traffic forecast period, typically 20 years -7010(7)(e)	Specific improvements are included in the plan to address safety concerns through improved geometric alignment and access spacing.	IAMP Section 2
Should consider existing and proposed uses of all property in the interchange area consistent with its comprehensive plan designations and zoning	A thorough analysis of surrounding land uses and land use potential was performed based on the current and approved comprehensive plan designations and zoning.	IAMP Technical Appendices "D", "E", & "G"

OAR 734-0051-0155 Requirement	How OAR is Addressed	Document Reference
-7010(7)(f)		
Is consistent with any applicable Access Management Plan, corridor plan or other facility plan adopted by the Oregon Transportation Commission	The access management plan included in the IAMP is consistent with the OHP.	IAMP Section 2
-7010(7)(g)		
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.	The implementation plan included in this IAMP documents the required amendments to local plans needed to adopt the IAMP. In addition, the implementation section outlines monitoring elements for the purpose of directing future land use action within the IAMP study area.	IAMP Section 3
-7010(7)(h)		

OREGON HIGHWAY PLAN COMPLIANCE

The I-84/Army Depot Access Road IAMP was developed in accordance with the policies set forth in the OHP. The following identifies the OHP Policies that pertain to the I-84/Army Depot Access Road 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.

Within the Interchange Management Study Area (IMSA), there are two ODOT highways. I-84 is an Interstate Highway designated as an Expressway. I-82 is an Interstate Highway also designated as an Expressway.

How Addressed: The I-84/Army Depot Access Road IAMP recognized the respective functions of each highway. Access standards, traffic control, and geometric considerations were informed by the applicable highway designation. The preferred concept includes modification to the interstate ramps to better accommodate future traffic volumes and truck types.

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 UMADRA, Umatilla County, and ODOT. The IAMP will be implemented by Umatilla County through the IAMP Management Area that will require coordinated agency review on all future development or land use actions within the Area.

Policy 1C: State Highway Freight System. This policy recognizes the need for the efficient movement of freight through the state. I-84 and I-82 are designated Freight Routes.

How Addressed: The transportation projects included in the plan were developed considering freight mobility needs, particularly at the EB and WB interchange on/off ramps.

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: I-84/Army Depot Access Road IAMP demonstrates that the interchange and surrounding transportation system will be able to meet ODOT mobility targets through the 20-year horizon.

Policy 1G: Major Improvements. This policy requires maintaining performance and improving safety by improving efficiency and management before adding capacity.

How Addressed: I-84/Army Depot Access Road IAMP focuses on improving the geometry of the existing interchange to improve efficiency and safety, adding capacity only where needed.

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: The transportation system was considered as a whole with improvements to the state and local system equally considered.

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: The new Gun Club Lane access and interchange ramp improvements will be reconstructed to eliminate existing deficiencies. In addition, the 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.

How Addressed: See Policy 3C below.

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.

How Addressed: The I-84/Army Depot Access Road IAMP includes an access management plan that improves access spacing over existing conditions.

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. All highways within the study area are designated truck routes.

How Addressed: The transportation improvements included in the IAMP plan improves traffic operations and safety for all vehicles, including freight vehicles.

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.

Technical Appendices for the I-82/Lamb Road, I-84/Army Depot Access Road, I- 84/Paterson Ferry Road Interchange Area Management Plans

Umatilla and Morrow Counties, Oregon

Draft

August 2014

Technical Appendices for the I-82/Lamb Road, I-84/Army Depot Access Road, I-84/Paterson Ferry Road Interchange Area Management Plans

Umatilla and Morrow Counties, Oregon

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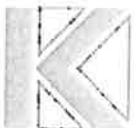
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August 2014



APPENDICES

- Appendix A Meeting Summaries**
- Appendix B Technical Memorandum #1: Project Background, Definition, Goals, and Objectives**
- Appendix C Technical Memorandum #2: Review of Adopted Plans and Regulations**
- Appendix D Technical Memorandum #3: Existing Land Use Analysis**
- Appendix E Technical Memorandum #4: Existing Transportation Facilities and Traffic Operations**
- Appendix F Technical Memorandum #5: Environmental Research**
- Appendix G Technical Memorandum #6: Future Land Use and Forecast Travel Demand**
- Appendix H Technical Memorandum #7: Interchange Area Concept Development and Alternatives Analysis**
- Appendix I Interchange Area Management Plan Implementation**

Appendix A Meeting Summaries

Kick-Off Meeting Agenda

Umatilla Army Depot

Combined Interchange Area Management Plan and Transportation System Subarea Plan

October 28, 2013

10:00 AM to 12:00 PM

Port of Morrow Conference Room

2 Marine Drive, Boardman, Oregon 97818

Conference Call Information:

1-866-771-1350

Conference #: 1425#

Security Pin: 1425#

1. Meeting Purpose and Introductions
2. Project Objectives and Key Deliverables
 - a. Combined Interchange Area Management Plan and Transportation System Subarea Plan
 - b. Operations and Infrastructure Analysis/Business and Operation Plan
3. Schedule
 - a. Key Milestones
 - b. Coordination between projects/consultant teams
4. Project Organization and Communication
 - a. Roles and responsibilities
 - i. UMADRA
 - ii. Technical/Public Advisory Committee (TPAC) Roster Finalization
 - iii. Steering Committee
 - b. Information/Technical Report Distribution and Sharing
 - c. Public Involvement
 - i. Project workshops
 - ii. Meeting/event announcements
 - iii. Project updates
5. Determine Project Study Area

6. Technical Analysis and Data Needs

- a. Transportation
- b. Land Use
- c. Environmental
- d. Infrastructure

7. Next Steps/Upcoming Meetings

- a. Next Steering Committee meeting
- b. First TPAC Meeting Date
- c. Public Workshop Date

Kick-Off Meeting – Summary Notes

Umatilla Army Depot

Combined IAMP and Transportation System Subarea Plan

Date and time: October 28, 2013, 10:00 AM to 12:00 PM

Location: Port of Morrow Conference Room, 2 Marine Drive, Boardman, Oregon 97818

Attendees:

- Bruce Bearchum II, CTUIR*
- Stormy Botefuhr, LRA*
- Don Chance, LRA*
- Tamra Mabbott, Umatilla County*
- Carla McLane, Morrow County*
- Lisa Mittelsdorf, Port of Morrow*
- Teresa Penninger, ODOT Region 5*
- Setphanie Seamaus, CTUIR*

Consultant Team:

- Frank Angelo, Angelo Planning Group*
- Alexis Casey, Mason Bruce Girard*
- Matt Hughart, Kittelson and Associates, Inc.*
- Andy Lindsey, Anderson Perry & Associates, Inc.*
- Jack Lynch, Matrix Design Group*
- Patrick Marnell, Kittelson and Associates, Inc.*
- Kate Parker, Mason Bruce & Girard, Inc.*
- Darci Rudzinski, Angelo Planning Group*

1. Meeting Purpose and Introductions

After introductions were made around the table Don Chance provided attendees with some background regarding the history of the Army Depot site and the 2009-10 Redevelopment Plan. The three primary planning objectives are accommodation of the National Guard, preserving the shrub-steppe habitat, and providing industrial development and employment opportunities. Information from URS, the firm once responsible for the incinerator operations and now for its dismantling, confirm that the Depot was once a significant employer during its peak in the late 1960s, with many workers coming from the Tri-cities area. While it is unrealistic to assume that that a return to those employment numbers will happen overnight, there is a local expectation that this area replace these jobs in the future and there is a desire to get developable land on the tax roles as soon as possible. The project schedule is specifically driven by the source of funding and the fact that it will be difficult to get an extension from the Department of Defense. The LRA is also in negotiations with the US Army National Guard and it is important to have a signed deal within the September 30, 2014 end date for this project.

Carla McLane, referencing her participation in two previous IAMP projects, brought up the funding sources for this IAMP. The Department of Defense BRAC and office of Economic Adjustment is providing the funding, with ODOT providing the local match. Don mentioned

that what is being pursued is a “no consideration transfer” where the Army transfers the property on a no cost basis, traditionally through profit sharing or sale, where the liability offsets the value. Don mentioned the specific Depot circumstances that may make this outcome a reality, including the future accommodation of the State component of the National Guard, but emphasized that there needs to be a team effort to ensure that the land is transferred to the local jurisdictions. Also important to note is that federal rules state that revenues off the site have to be reinvested for a 7-year period, during which time the LRA becomes an implementing local redevelopment authority, or ILRA.

2. Project Objectives and Key Deliverables

- a. Combined Interchange Area Management Plan and Transportation System Subarea Plan
- b. Operations and Infrastructure Analysis/Business and Operation Plan

Matt Hughart outlined the typical procedure for the development and adoption of an IAMP, emphasizing that the result will be a document that is consistent with locally and statewide adopted plans and one that addresses infrastructure needs to accommodate expected future growth. Future growth includes both regional growth as well as what is projected to happen on the Depot itself. The land use and transportation analysis would need to determine if large-scale reconstruction of the three interchanges serving the site is needed based on anticipated growth. As an alternative to large-scale improvements, there is a good chance that there will need to be “tweaks” to the existing facilities and how local roadways connect into the state highway system. Matt clarified that the IAMP and Transportation System Subarea Plan will focus on needed improvements to the interchanges and optimal local roadway connections to the interchanges. The parallel Matrix-led project will propose the internal circulation and roadway system that will serve future users internal to the Depot. Both Matt and Jack Lynch emphasized the need to coordinate the transportation planning efforts.

Jack Lynch described the work that Matrix will be undertaking during the same time period. He said that his team’s work will rely on the preferred land use plan that was just developed and a refined market analysis from this earlier planning effort. The first phase of work will entail developing the infrastructure plan for the base and is expect to conclude in January 2014. The second phase is estimating the infrastructure costs and updating the market analysis. The objective of the Business and Operation Plan is to develop a funding strategy or package that demonstrates that costs for infrastructure are balanced with growth and revenues for a 15-20 year time horizon. This type of economic development conveyance process typically is internal, without a public process, and the information is to inform the LRA in their negotiations with the US Army.

3. Schedule

- a. Key Milestones
- b. Coordination between projects/consultant teams

Key considerations in the schedule discussion include the need to conclude the project within the deadline set by the grant (September 30, 2014) and coordination with the LRA Board meeting dates and agendas. Don noted that this planning project is not likely to generate a great deal of public interest and that attendance at public meetings will be higher

if they are held during business hours, when LRA members can attend. Local County decision-makers, on the other hand, would more likely attend evening events.

Meeting attendees confirmed the date of the first TPAC meeting - Tuesday, November 19th, which will include an "IAMP 101" overview and project-specific background and objectives. Dates were also set for the next two TPAC/Public Workshops - Tuesday, January 21st and Tuesday, March 11th 2014. (See below for meeting details).

Teresa Penninger reminded attendees of the OTC adoption process and noted that ODOT staff will need to provide their commission information one month in advance of the hearing date to amend the Oregon Highway Plan. Don did not anticipate that there would be an issue with the timing of the state decision as it related to the grand deadline. Carla and Tamra Mabbott discussed the counties' adoption processes, anticipating local hearings in the July/August timeframe.

Matt emphasized that the project schedule is currently set up so that there is some flexibility. For instance, if there is a need to delay or push any project-related meeting and the overall project schedule slips, the implementation/adoption portion of the schedule can absorb this and not impact the contract end date.

4. Project Organization and Communication
 - a. Roles and responsibilities
 - i. UMADRA
 - ii. Technical/Public Advisory Committee (TPAC)
 - iii. Steering Committee
 - b. Information/Technical Report Distribution and Sharing
 - c. Public Involvement
 - i. Project workshops
 - ii. Meeting/event announcements
 - iii. Project updates

Matt committed to providing all draft products at least one week in advance of all scheduled TPAC meetings. Don will review draft products associated with the planning project and will distribute materials in advance of meetings. He will also be responsible for posting relevant information and meeting announcements on the UMADRA website. He does not anticipate much interest from the press, but will provide press releases and meeting dates/times as necessary. Darci Rudzinski provided a brief overview of the public involvement plan, noting that there are reporting requirements for projects that include federal funding (Title VI and Environmental Justice), as well as Statewide Planning Goal 1 (Public Involvement) considerations. The public involvement plan ensures that efforts will be made to include protected populations and, generally, encourage public participation. She noted that the consultant team will largely be providing the information that the LRA and Counties can then make available and distribute.

5. Determine Project Study Area

Attendees discussed the likely boundaries of a study area for the IAMP, as well as some of the important existing and future roadway connections in the area. Carla explained the current connection for Patterson Ferry and the refined conceptual alignment heading north to serve Irrigon. She also noted that Morrow County is in the process of amending their transportation improvement project list to include improvements on the south side of the Patterson Ferry interchange. South of I-84, Poleline Road will be reconfigured from its current "Y" formation to a "T" intersection. Carla noted the importance of a future frontage road from the Army Depot Interchange to Patterson Ferry but also noted that the potential alignment passes through EFU land and would impact at least one large private land owner. Tamra also noted that the land owners in the exception area to the east of the Lamb Road/Westland Road interchange will need to be contacted directly about the project and how it relates to the existing easements and that ideally their interests should be represented on the TPAC.

Matt noted that the TPAC will provide their input regarding the study area at their first meeting in November. Final comments pertaining to the study area focused on the access to property that will be zoned Depot Industrial on the southeast corner of the Army Depot (avoid breaking up parcel) and the National Guard's front entrance (future responsibility for construction).

6. Technical Analysis and Data Needs

- a. Transportation
- b. Land Use
- c. Environmental
- d. Infrastructure

Matt confirmed that the team members had what they needed to conduct field work after the meeting. An afternoon meeting with representatives from the counties and two ports was expected to yield future land use assumptions for specific areas on the Army Depot site.

7. Next Steps/Upcoming Meetings

- a. Next Steering Committee meeting
- b. First TPAC Meeting Date
- c. Public Workshop Date

Steering Committee meetings will be held on an "as needed basis" and may be conducted by phone. The next Steering Committee date was not set.

- TPAC Meeting #1
 - Tuesday, November 19, 2013 at the Port of Morrow
 - 10 AM – 12PM
- TPAC Meeting #2 and Public Workshop #1
 - Tuesday, January 21, 2014 at the Port of Morrow
 - 9 AM – 12PM for TPAC #2
 - 1 – 3 PM for Public Workshop #1

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- 3 – 4:30 PM: LRA Board Meeting

 - TPAC Meeting #3 and Public Workshop #2
 - Tuesday, March 11, 2014 - **TENTATIVE DATE (Location TBD)**
 - 10 AM – Noon for TPAC Meeting #3
 - 1 – 3 PM for LRA Meeting
 - 4 – 6 PM for Public Workshop #2

 - TPAC Meeting #4 and Public Workshop #3
 - Tuesday, May 6, 2014 - **TENTATIVE DATE (Location TBD)**
 - 10 AM – Noon for TPAC Meeting #4
 - 1 – 3 PM for LRA Board Meeting
 - 4 – 6 PM for Public Workshop #3

UMADRA

UMATILLA ARMY DEPOT LOCAL REUSE AUTHORITY

SIGN IN SHEET

KICK-OFF MEETINGS

- VAMP + SUB AREA PLAN

MEETING DATE 10/28/13 LOCATION Port of Morrow-Sand Hallow Conference Room

PLEASE PRINT

EMAIL ADDRESS

NAME/TITLE

NAME/TITLE	EMAIL ADDRESS
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Stormy Botefuhr URA Admin. Assis.	sbotefuhr@umadra.com
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ANDY LINDSEY CIVIL ENGINEER ANDREWS, PERRY & ASSOC.	ALINDSEY@ANDREWSPERRY.COM
DON CHANCE MANAGER DIRECTION	DOCHANCE@UMADRA.COM

Technical / Public Advisory Committee Meeting Agenda

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

November 19, 2013

10:00 AM to 12:00 PM

Port of Morrow Well Springs Conference Room

2 Marine Drive, Boardman, Oregon 97818

Conference Call Information (if needed):

1-866-771-1350

Conference #: 1425#

Security Pin: 1425#

1. Meeting Purpose and Introductions
 - a. Introduce TPAC members
 - b. TPAC Roles and Responsibilities
 - c. Review Project Objectives/Approach/Schedule
 - d. Coordination with Operations and Infrastructure Analysis/Business and Operation Plan
2. IAMP 101
 - a. Presentation
 - b. Q & A
3. Study Area Map Review
 - a. Discuss analysis/management area(s)
 - b. Review/adjust boundaries
4. Technical Memo #1: Definition and Background
 - a. Problem statement
 - b. Goals & objectives
5. Technical Memo #2: Review of Adopted Plans and Regulations
 - a. Regulatory framework
 - b. Depot redevelopment documents
6. Concluding Comments/Next Steps
 - a. TPAC comments on Memos #1 and #2 to LRA by December 3rd

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- b. Finalize Draft of Memos #1 and #2 by December 17th
 - c. Upcoming meetings:
 - TPAC #2 Meeting: January 21, 2014, 9:30-12:00 AM
 - Public Workshop #1: January 21, 2014, 1:30-3:00 PM

TPAC Meeting #1– Summary Notes

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Date and time: 11/19/13, 10:00 AM to 12:00 PM

Location: Port of Morrow Conference Room, 2 Marine Drive, Boardman, Oregon 97818

Attendees:

Stormy Botefuhr, LRA
Matt Hughart, Kittelson & Associates, Inc.
Stephany Seamaus, CTUIR
Patty Perry, CTUIR
Clint Spencer, City of Hermiston
Aaron Palmquist, City of Irrigon
Tamra Mabbott, Umatilla County
Debbie Pedro, Hermiston Chamber of Commerce
Tom Fellows, Umatilla County Public Works
Ace Clark, ODOT District 12
Jeff Wise, ODOT Region 5 Traffic
Andy Lindsey, Anderson Perry & Associates
Bob Nairns, Morrow County Public Works
Carla McLane, Morrow County
Bruce Bearchum II, CTUIR
Patrick Marnell, Kittelson & Associates, Inc.
Kate Parker, MBG
Don Chance, LRA
Frank Angelo, Angelo Planning Group
Darci Rudzinski, Angelo Planning Group

1. Introduction – Frank Angelo

- a. This is the 1st of four TPAC meetings
- b. The IAMP will focus on 3 different interchanges:
 - i. I-84/Patterson Ferry
 - ii. I-82/Lamb Road
 - iii. I-84/Army Depot
- c. Several of the private sector could not attend (Tamera noted this)
 - i. Meeting notes will be sent out and these members will be briefed after meeting if needed.

2. Schedule

- a. This is an aggressive Plan
- b. Please see handout for schedule in detail
- c. The second TPAC meeting will be held in conjunction with public workshop #1 and an LRA meeting
 - i. Date: Jan. 21st meeting will be at Port of Morrow
- d. Matt Hughart noted that the sunset date is for this project is September 2014
- e. Don Chance then added an outline of the overall schedule for a 2015 land transfer from the Army
 - i. Two counties need to zone and plan for the base before development can take place.
 - ii. Tamera Mabbott noted that Umatilla will move forward with the comprehensive plan and refer to the pending IAMP

3. IAMP 101 – Matt Hughart

- a. **Trip Generation for this site was discussed briefly**
 - i. A wildlife preserve is relatively low generator of traffic.
 - ii. Kittelson/Angelo are working with the Oregon National Guard to determine transportation needs.
 1. The IAMP will coordinate with on base development, but the interchanges and roads surrounding the base are the focus of the study.
 - iii. Industrial land/employment uses have the potential to generate more trips
- b. **Interchange Background**
 - i. Most Interchanges were built ~30 years ago.
 - ii. Initial planning and construction did not consider the long term capacity and safety.
 - iii. Circa 1990 ODOT recognizes need to plan for the need to preserve long term function of interchange infrastructure such as:
 1. Ramps and Terminals
 2. Cross Roads
 3. Surrounding Land and accesses
- c. **Objectives of an IAMP**
 - i. Accommodate long term traffic demand (local and regional).
 - ii. Coordinate land use planning with any interchange retrofits.
 1. This is critical in a limited funding environment.
 2. It is necessary to identify developments, how to fund these developments, and how to phase in these developments.
 - iii. Ensure cooperation between state and local agencies
- d. **Typical IAMP Components**

- i. Evaluation of interchange forms with public involvement
 - 1. This will balance interests from a wide variety of sources early in the process
- ii. Access management
 - 1. This allows for the ability to plan and limit number of driveways in the close proximity to the interchange.
 - a. Driveways close to an interchange are not ideal from an operational stand point.
 - i. Safety – can contribute to crashes
 - ii. Flow – can contribute to delay
 - b. ODOT prefers ¼ mile from ramp terminal to first full access driveway
 - i. ODOT views 750 feet as preferable for Right-In-Right-Out driveway
 - ii. These ODOT preference are goals to work in the direction of (not hard limits) in the case of existing accesses

e. Land Use

- i. It is necessary to identify what the future use might look like.
 - 1. It is unlikely for this IAMP, but if forecast trips were large enough then there could be limits put on the site such as:
 - a. Overlay Districts
 - b. Trip Caps
 - 2. Jeff Wise noted Senate Bill 408
 - a. Senate bill 408 addresses transportation needs and economic development, and gives more weight to economic growth.
- ii. Morrow and Umatilla Counties intend to adopt IAMP as part of local plans
 - 1. Then ODOT would adopt IAMP as part of state plans

4. Study Area

- a. The study area shown in Tech Memo #1.
 - i. The study area was determined after considering the depot, surrounding cities, and existing and changing land uses.
 - ii. The Patterson Ferry interchange was included because it might be needed to handle long term growth in the area.
 - iii. Tamera Mabbott and Jeff Wise suggested the need to consider the I-84/Westland Road interchange.
 - 1. Matt Hughart responded that the Westland interchange will be considered, and noted that:

- a. An study for this interchange occurred in 2004 for this interchange.
- b. This design effort will focus on the Lamb Road interchange (to account for Base redevelopment).
2. Aaron Palmquist raised concerned about traffic on Power Line Road
3. Carla McLane brought up the consideration of Bridge Road (Overpass) north of the Lamb Road interchange.
 - a. A frontage road on base could potentially connect to Bridge Road (but not to I-82)
 - i. This could connect the new industrial area to the Port.
 - ii. This could also connect to Hermiston.
4. The existing boundary (as shown in Tech Memo #1) was discussed
 - a. It was noted that land use in Irrigon are considered in the project, although Irrigon is not in the study boundary.
 - i. The existence (or non-existence) of new backdoor road into Irrigon would not change land uses, so the boundary does not include Irrigon.
5. Kittelson and Angelo Planning will take a new look at map and revise the boundary line work shown in Tech Memo #1
 - a. A new boundary will be presented for adoption at next TPAC meeting.
6. Tamera Mabbott also noted that eventually a new IAMP will be needed for the I-84/Westland interchange.

5. Tech Memo #1 – Matt Hughart

a. Goals and Objectives

1. *Protect the long-term function, operation, and safety of the I-84/Army Depot Access Road, I-82/Lamb Road, and I-84/Patterson Ferry Road interchanges.*
2. *Identify opportunities for enhanced roadway connectivity within the UCMD site that would provide public roadway connections between the I-84/Army Depot Access Road and I-82/Lamb Road interchanges.*
3. *Manage the allowed/envisioned land uses within the vicinity of the interchanges to provide for future economic growth over the next 20 years.*
4. *Identify current accesses along the interchange crossroads and develop a phased access management plan for the crossroads based*

on a detailed and collaborative process involving the Morrow/Umatilla Counties and local property owners. The access management plan will be based on key principles that balance highway mobility and safety.

5. *Identify opportunities for multi-modal accessibility to/from certain envisioned components of the UMCD site.*
 - a. Matt Hughart noted that it is a peripheral concern to allow access to site by non-cars
 - b. Don Chance noted that the site so isolated that multi-modal accessibility may be an unrealistic goal, and that we don't build sidewalks and bike lane just because of rules.
 - c. Rail access is seen by the group seems to be a more pressing concern than pedestrian or bike facilities
 - d. Aaron Palmquist and Carla McLane suggested that multi modal should focus on freight and rail.
 - e. Ace Clark noted that we should still look at this, but just have the frank discussion that the bikes were considered, but ultimately there is no need for specific infrastructure.
 - f. Darci Rudzinski notes that we should consider future land uses when thinking about multi-modal consideration.
 - i. Don Chance noted that a wildlife refuge could become a recreational site for bike/hike, but public access to this wildlife area will likely be restricted
 - g. Frank Angelo suggested that we should look at all aspects and state why we reject ped/bike type facilities.
 - h. Patty Perry reminded the group to not forget the public transit
6. *Collaborate throughout the planning process with design professionals, jurisdictional representatives, developers, local property owners, and the general public, including protected*

populations as established by federal and state regulations and policies.

7. *Comply with the intent of Statewide Planning Goals, including Goal 1: Public Involvement, Goal 2: Land Use Planning, Goal 5: Natural Resources, Goal 6: Air, Water and Land Resources Quality, Goal 7: Areas Subject to Natural hazards, Goal 8: Recreation Needs, Goal 9: Economic Development, Goal 12: Transportation, and Goal 14: Urban Growth Boundaries.*
8. *Identify funding and phased implementation strategies for identified near- and long-term improvements.*
 - i. Don Chance noted this project must have the other non-depot land uses paying their fair part of the upgrade costs. The full cost of infrastructure improvements can't be placed entirely on the Depot Site developments
9. *Develop implementation policies and regulations to be adopted into the Morrow and Umatilla County Comprehensive Plans, Transportation System Plans, and zoning ordinances, as appropriate.*

6. Tech Memo 2 – Darci Rudzinski

- a. This site is unique (not having been ever zoned before)
- b. Need to be consistent with state and local planning documents including:
 - i. State documents
 - ii. Local documents
 - iii. Access management rules (51)
 - iv. Senate Bill 408
 - v. IAMP Criteria
 - vi. Umatilla/Westland Road IAMP
 1. Even with extensive increase in traffic area this showed well-functioning infrastructure in the area
 - i. The Lamb/Westland Road intersection was the exception, and this intersection has been recently redone built.
 - vii. Recent Planning Documents
 1. There is a gap in guard documents

- a. Kittelson/Angelo Planning is working with guard to get these documents
- b. Tamara Mabbott has a (draft outdated plan) for uses as a starting point.
 - i. Guard has changed their plans for base from minor activates to more major ones.
 - ii. A 2010 plan included an interview with guard (but this information is likely out of date)
 - iii. A new presentation by the Guard has more updated numbers.
 1. Don will try to these get new numbers from Guard
 2. These will impact the IAMP interchanges and the Westland interchange too.
 - iv. Guard is considering moving tank training from Idaho, and has hired a consultant to investigate.

7. Final Considerations

8. Will Three Documents be required?

- a. Will one document with chapters be acceptable or will three documents be needed as a final product of these efforts?
 - i. Ace Clark and Jeff Wise will look into this on ODOT's end
- b. Separated documents for approval in different counties will be needed
 - i. This could be accomplished with chapters of a larger document, with one supporting appendix.

9. Please get comments to Don/Stormy on the tech memos by the 29th of November.

- a. Kittelson/Angelo Group will revise these memos by mid-December

10. Next TPAC meeting will be at 9:30 on Jan 21st

- a. Drafts of Tech Memos 3-6 will be discussed at this meeting.

11. Public Workshop from 1-3pm on Jan 21st will follow the TPAC meeting

12. LRA Board Meeting from 3-4:30 will follow the Public Workshop

13. A small discussion and review of the land transfer process followed

- a. Value of Land is set against the cost of improvements to determine how much the land will cost. If the cost of improvements exceeds the value, then the Army can give the land away for free. This is the expectation of all parties.
- b. The land will be transferred to ports/counties.
- c. For 7 years profits from the Site must be reinvested into the Site.

UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #1

MEETING DATE: 11/19/13
LOCATION: PORT OF MORROW

NAME/TITLE	EMAIL ADDRESS
Stormy Boddeuhr	sboddeuhr@umatilla.com
Stephanie Seaman	stephanseaman@ctuir.org
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CLINT SPENCER - HERMISTON	CSPENCER@HERMISTON.ORG
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Tamra Mabbett - U.M.Co.	tamra@co.umatilla.or.us
Debbie Pedro - Hermiston	debbie@hermistonchamber.com
Tom Fellows - Umatilla County Public Works	tfellows@umatillacounty.net
ACE CLARK - ODOT DISTRICT 12	ACE.W.CLARK@odot.state.or.us
JEFF WISE - ODOT Region 5 Traffic	JEFF.WISE@ODOT.STATE.OR.US
ANDY LINDSEY - Anderson Peery & Assoc.	ALINDSEY@ANDERSONPEERY.COM
Bob Nairns - Morrow County Public Works	bnairns@co.morrow.or.us
BRUCE DEARCHUM II - Asst Transportation Manager	brucebearchum@ctuir.org
Patrick Mainell - Kittelson	Pmainell@kittelson.com

Technical / Public Advisory Committee Meeting Agenda

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

January 21, 2014

9:30 AM to 11:30 PM

Port of Morrow Well Springs Conference Room

2 Marine Drive, Boardman, Oregon 97818

Conference Call Information (if needed):

1-866-771-1350

Conference #: 1425#

Security Pin: 1425#

1. Meeting Purpose and Introductions
 - a. Introductions
 - b. Review project objectives, milestones and schedule
 - c. Review meeting objectives
2. Final Review of Previous Memos/Work
 - a. Meeting Minutes From TPAC #1
 - b. Tech Memo #1: Project Background, Definition, Goals, and Objectives
 - c. Tech Memo #2: Review of Adopted Plans and Regulations
 - d. Interchange Management Study Area
3. Review New Memos
 - a. Technical Memo #3: Existing Land Use Analysis
 - b. Technical Memo #4: Existing Transportation Facilities and Traffic Operations
 - c. Technical Memo #5: Environmental Research
 - d. Technical Memo #6: Future Land Use and Forecast Travel Demand
4. Interchange Design 101 and Local Circulation 101
 - a. Introduction
 - b. Design Workshop & Sketching Alternatives
5. Concluding Comments/Next Steps
 - a. TPAC comments on Memos #3, #4, #5 and #6 to LRA by February 4th
 - b. Finalize Draft of Memos #3, #4, #5 and #6 by February 18th

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- c. Public Open House #1 – 1 PM at the Port of Morrow; presentation at 3 PM
 - d. Update on the Operations and Infrastructure Analysis/Business and Operation Plan
 - e. Upcoming meetings:
 - TPAC #3 Meeting: March 10, 2014, 9:30 AM-noon
 - Public Workshop #2: March 10, 2014, 4:30-6:00 PM

Technical / Public Advisory Committee Meeting #2 - Summary Notes

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

January 21, 2014

9:30 AM to 11:30 PM

Port of Morrow Well Springs Conference Room

2 Marine Drive, Boardman, Oregon 97818

Attendees:

Stormy Botefuhr, LRA
Stephany Seamaus, CTUIR
Patty Perry, CTUIR
Aaron Palmquist, City of Irrigon
Paul Howland, ODOT Hermiston Manager
Matt Hughart, Kittelson & Associates, Inc.
Stan Hutchison, Oregon Military Department
Joanna Manson, Oregon Military Department
Bob Nairns, Morrow County Public Works
Tom Fellows, Umatilla County Public Works
Andy Lindsey, Anderson Perry & Associates
Don Chance, LRA
Tamra Mabbott, Umatilla County
Debbie Pedro, Hermiston Chamber of Commerce
Patrick Marnell, Kittelson & Associates, Inc.
Dave Warrick, ODOT Interchange Engineering
Kate Parker, MBG
Terry Tallman, Morrow County
Teresa Penninger, ODOT Region 5
Frank Angelo, Angelo Planning Group
Darci Rudzinski, Angelo Planning Group
Carla McLane, Morrow County
Roy Swafford, Oregon Military Department
Lisa Mittelsdorf, Port of Morrow
Jeff Wise, ODOT Region 5 Traffic

1. Meeting Purpose and Introductions – Frank Angelo

- a. Introductions
- b. Review project objectives, milestones and schedule
- c. Review meeting objectives

2. Final Review of Previous Memos/Work

d. Meeting Minutes From TPAC #1 – Matt Hughart

- i. TPAC roles and responsibilities
 1. Attend Meeting
 2. Review Technical documents and provide input
 3. Act as the voice of the various stakeholders
- ii. Study Area
 1. Army Depot Site
 2. Three interchanges (Paterson Ferry, Army Depot, and Lamb Road)
 - a. Paterson Ferry is currently not a major impact on the site, but could be important in the future.
 3. Westland Exception Area (surrounding the Westland Interchange)
 4. Hermiston, Irrigon, Morrow County, and Umatilla County will be regional growth drivers.
 5. The north-eastern corner of Maps of the Depot needs updating in the Technical Memo Figures.
 - a. All IMSA maps need to include the 30 Acres in the NE corner.
- iii. Goals and Objectives
 1. The 11 Goals were adopted by the TPAC.
- iv. Schedule Reviewed
 1. The project is currently on schedule.
 - a. The adoption time line provides a little wiggle room, but the schedule is still tight.
 - b. The Counties should be able to adopt documents in the outlined timeline.

e. Tech Memo #1: Project Background, Definition, Goals, and Objectives – Frank Angelo

f. Tech Memo #2: Review of Adopted Plans and Regulations – Frank Angelo

- i. Technical memo 1 & 2 updates will be sent out to TPAC.
- ii. Final action on these will occur at next TPAC meeting.

g. Interchange Management Study Area

- i. This was addresses above.

3. Review New Memos

i. Memos 1-4 can still be updated. Please provide comments by Feb 4th.

h. Technical Memo #3: Existing Land Use Analysis - Darci Rudzinski

i. This memo describes what is occurring currently in the study area and what developments could happen with existing land uses and zoning.

ii. Port Industrial and Depot Industrial Zones will be applied to former parts of the Depot.

1. The Port Industrial Zone is currently in existence in Morrow County.
2. Umatilla County will adopt a Depot Industrial Zone in the near future.
3. The Depot has some trips associated with it and the existing infrastructure has been built to support these trips.

iii. Anderson Perry has inventoried the existing infrastructure

1. The Infrastructure is acceptable and has passed the latest inspections.
 - a. The existing Lamb Road access to Depot will provide some limitations.
 - b. The RxR underpass at Army Depot main entrance may provide some limitations.

i. Technical Memo #4: Existing Transportation Facilities and Traffic Operations - Matt Hughart

i. Traffic counts were taken in October of 2013.

1. As depot continues to decommission these trips will change.
2. Trips from the local Cities and Counties uses will continue to grow and evolve.

ii. Currently the ramp terminals and intersection in the Study Area function well.

iii. The Oregon Nation Guard (ORNG) has used the Depot Base since the 80s.

iv. The existing conditions memo goes into depth on the topic of Ordnance Road ownership.

j. Technical Memo #5: Environmental Research – Kate Parker

i. The environmental study area is smaller and focused on the Interchanges.

1. Potential for sensitive species was examined.
2. No wetlands exist in study area.
 - a. Some exist just south of Army Depot Interchange study area.

- b. Some exist north of the study area north of Paterson Ferry Interchange area.
- 3. Federally Protected Species in the area
 - a. Bull Trout and Steelhead
 - i. There are no water ways on site, but storm runoff is a concern.
- 4. State Protected Species in the area
 - a. Washington Ground Squirrel (WGS)
 - i. No signs of WGS were seen in study area.
 - ii. This will need to be readdressed if study area changes.
- 5. Burrowing Owls
 - a. Some work and studies have looked at these in the area.
 - i. Reintroduction has occurred in places.
 - b. Burrowing Owls are located on the Northern Depot Area away from the Interchange Study area.
 - c. Burrowing Owls are not a listed threatened or endangered species.
 - d. Matrix study will look at environmental issues on larger depot site.
- 6. Antelope have been removed from the site.
- 7. Morrow County Noxious Weed List will be used to supplement ODA information.
- k. Technical Memo #6: Future Land Use and Forecast Travel Demand – Frank Angelo/
Matt Hughart**
 - i. Future Land Uses
 - 1. ORNG Projected Land Uses
 - i. Regional Training Institute
 - ii. Readiness Center
 - iii. Training Facilities
 - b. Average weekday trips were estimated from these land uses.
 - i. Trips need to be reasonable and conservative

- c. New ORNG trips will be assumed to use the Army Depot Interchange.
- a. Comments from Stan Hutchison and Joanna Manson of the Oregon Military Department (ORNG)
 - a. The ORNG solidier typically serves one weekend a month, and two weeks a year. This means that typical trip peak on weekends and during the summer.
 - b. The Regional Training Institute full build displayed in the draft of Technical Memo 6 is for a 25 year build out (2034).
- d. ORNG Large Vehicle Transportation
 - i. Trucks carrying tanks and other large vehicles are coming in from the SE gate.
 - 1. Currently the ORNG assumes that this will probably not continue at this location with the developments.
 - 2. The main gate is problematic due to the RxR under pass clearance.
 - 3. Large Equipment may need to use the North Gate in the future to access.
 - a. This may impact the local roads.
 - b. ORNG will work in coordination with Counties as plans developed.
 - 4. TPAC is still open the SE gate (via the Lamb Road interchange) as a viable option for heavy and large equipment. This may require special considerations moving forward.
- e. Tamera Mabbott requested that the ORNG plan be included as an appendix.
 - i. Joanna Manson noted that the ORNG plan is based on the 2009 LRA Plan and this may conflict with the current plan and assumptions. Although the daily trips

estimated from this plan remain valid, it might be best to not include the document as an Appendix and cause confusion.

- ii. A decision to not include the document was made and Table 6-2 *ORNG June 2012 Site Development Plan Staffing Projections* will be removed from Technical Memo #2. References to the ORNG plan will still be made.
 - f. Tamera Mabbott requested that maps of existing roads on the Depot be included in Technical Memos as many of these roads will be preserved.
 - g. Matt Hughart requested a list of what can or cannot move through different accesses to the existing Depot Site. Stan Hutchison will follow up with ORNG transportation staff.
 - h. Frank Angelo suggests that a range of alternatives for growth at ORNG base be used for future scenario planning.
2. Wildlife Habitat
- a. Counties are working on a Zoning for the Wildlife area
3. Economic Development
- a. Port Industrial Zone – Morrow County
 - i. Development in this area will be generally low intensity.
 - 1. Carla McLane suggested that the area in the existing structures (i.e. the igloos) can be estimated.
 - 2. Carla noted that a zoning overlay (and not a dead restriction) will be used to limit the developable areas.
 - b. Depot Industrial Zone - Umatilla County
 - i. Three Subareas
 - 1. This zone will be applied to three subareas.

- ii. The 2 Operational Scenarios in Technical Memo #6 have been expanded to 4 scenarios as shown in a handout (this will be updated in the final memo).
 - iii. Don Chance notes that commercial development is vital to make the cost of infrastructure developments pencil out.
 - iv. Commercial development was at one point limited to supporting the industrial uses, but now is open to general commercial. Land uses that would draw interstate traffic would be desirable.
 - v. There are concerns that this type of development could be problematic with industrial and ORNG heavy vehicle uses.
 - vi. An ODOT Maintenance Facility may be located on the Depot site
 - 1. Currently this is not the most likely scenario (an alternate site is under consideration).
- c. Operation under the 4 Scenarios
- i. The 75K and 50K scenarios are viewed as the best and most realistic scenarios to focus on going forward.
 - ii. At the Lamb Road Interchange the west leg of the interchange is insufficient to support future growth and development at the Depot site.
 - 1. Large Semi-Truck turning radius would require use of both existing lanes.
 - 2. A new leg, at minimum ¼ mile in length, would be needed to accommodate expected land uses and meet ODOT standards.
 - iii. Under all scenarios at least one of the ramp terminals at Lamb Road are over capacity (design standards).
 - 1. Some other traffic control feature would be needed to accommodate build out.

2. This interchange serves surrounding area in addition to the Depot uses.
3. Mark Warrick added concerns about the grade of the road and noted that potential improvements that could require widening the existing bridge.

iv. Army Depot Interchange

1. The ramp terminals may require additional traffic control in the future.
2. The RxR underpass will be further examined for clearance issues.
3. Gun Club Road Access will need to be cleaned up.

d. Westland Exception Area

- i. The lodging estimates in the existing draft of Technical Memo #6 will be revised.

4. Interchange Design 101 and Local Circulation 101 –SKIPPED

- I. Introduction
- m. Design Workshop & Sketching Alternatives

5. Concluding Comments/Next Steps - Matt Hughart

- i. Alternatives Analysis
- ii. Implementation
- iii. Cost Estimations
- n. **TPAC comments on Memos #3, #4, and #5 to LRA by February 4th**
 - i. **Technical Memo #6 to be updated and sent out, and comments can follow.**
- o. **Finalize Draft of Memos #3, #4, and #5 by February 18th**
- p. Public Open House #1 – 1 PM at the Port of Morrow; presentation at 3 PM
- q. Update on the Operations and Infrastructure Analysis/Business and Operation Plan
- r. Upcoming meetings:
 - **TPAC #3 Meeting: March 10, 2014, 9:30 AM-noon**
 - **Public Workshop #2: March 10, 2014, 4:30-6:00 PM**

**UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #2**

MEETING DATE: 1/21/14

LOCATION: PORT OF MORROW

NAME/TITLE

EMAIL ADDRESS

Stephanie Swannans Economic Dev. Chair	stephanie.swannans@chair.org
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Aaron Perlaquist, city of Irigon	manager@ci.irigon.or.us
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Stan Hutchison, OMD, Chief Planning & Programming	Stanley.g.hutchison.mil@mail.mil
Jessie Kinison, NWS, Planner	jessie.kinison@state.or.us
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DAVID CHANCE - LRA	DOCHANCE@UMADRA.COM
Tamra Mabbott, Umatilla County Planning Dir.	tamra@co.umatilla.or.us
Debbie Pedro Hermiton Chamber	debbie@hermitonchamber.com
Patrick Marnell, Kittelson	pmarnell@kittelson.com
Dave Warrick ODOT Intch. Engr	david.d.warrick@odot.state.or.us

Technical / Public Advisory Committee Meeting #3 - Summary Notes

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

March 31, 2014

1:30 PM to 4:00 PM

Stafford Hansel Conference Room

Hermiston, Oregon

Attendees:

Carla McLane, Morrow County
Stephany Seamaus, CTUIR
Matt Hughart, Kittelson & Associates, Inc.
Jeff Wise, ODOT Region 5 Traffic
Debbie Pedro, Hermiston Chamber of Commerce
Teresa Penninger, ODOT Region 5
Tamra Mabbott, Umatilla County
Bob Nairns, Morrow County Public Works
Tom Fellows, Umatilla County Public Works
Dave Warrick, ODOT Interchange Engineer
Patrick Marnell, Kittelson & Associates, Inc.
Don Chance, LRA
Andy Lindsey, Anderson Perry & Associates
Michele Martin, BRAC
Jeff Atwood, Army Corps of Engineers
Stan Hutchison, Oregon Military Department
Joe Duncan, Army Corps of Engineers
Paul Howland, ODOT Hermiston Manager
Herb Stahl, Stahl Farms
Patty Perry, CTUIR
Martin Nelson, 249th RTI OANG
Tim Beinent, Oregon Military Department
Lisa Mittelsdorf, Port of Morrow
Aaron Palmquist, City of Irrigon
Frank Angelo, Angelo Planning Group
Larry Givens, Commissioner Umatilla Co.

1. Introduction – Frank/Matt

- a. Meeting Outline
- b. Sign-in sheet

2. Background Conditions - Matt

- a. LOS and V/C ratios for 2035 forecast conditions are within acceptable mobility targets.
 - i. There is discussion about how different cities (Portland, Salem, etc.) have established alternate mobility targets.
- b. History of Lamb Road Interchange – **Dave Warrick**
 - i. Lamb Road Interchange was built on easement from the Army Depot
 - ii. The interchange was originally designed to include SB ramps only.
 - iii. Ultimately a NB/SB design was implemented (1982).
 - iv. The existing freeway curves create some difficulties for the interchange on and off ramps.

3. Interchange Design 101 – Matt

- a. Interchange Types and Forms
- b. Design Considerations
- c. Study Area Considerations

4. Lamb Road Interchange – Matt

- a. Growth Scenarios
 - i. Strong Growth Scenario Operations.
 1. Does not meet standard without mitigation.
 - ii. Moderate Growth Scenario Operations.
 1. Does not meet standard without mitigation.
 - iii. Phased Growth Scenario Operations.
 1. Does meet standard with some minor improvements.
- b. Lamb Road Interchange Improvement Concepts
 - i. **L1 - No Interchange Improvements**
 1. ~\$1.2M
 2. Realigns the cross road approach.
 3. Does not address capacity issues under Strong or Moderate Growth Scenarios.
 - ii. **L2 – Minimally Improved Diamond**
 1. ~3.2 M
 2. Realigns the cross road approach.
 3. Lengthens the NB/SB off-ramps.
 4. Widens NB/SB off-ramps.
 5. Maintains existing stop control.

6. Does not fully address capacity issues under Strong or Moderate Growth Scenarios, but would address Phased growth scenario.
- iii. **L3 – Minimally Improved Diamond with Partial Signalization**
 1. ~3.5 M
 2. Realigns the cross road approach.
 3. Lengthens the NB/SB off-ramps.
 4. Widens NB/SB off-ramps.
 5. Signalize the SB ramp terminal.
 6. Fully address Strong, Moderate, and Phase growth scenarios.
 - iv. **L4 - Improved Diamond with Widened Lamb Road**
 1. ~9.85 M
 2. Realigns the cross road approach.
 3. Lengthens the NB/SB off-ramps.
 4. Widens NB/SB off-ramps.
 5. Widens Lamb Road to 3-Lanes (includes widened bridge).
 6. Maintains existing stop control.
 7. Does not fully address capacity issues under Strong or Moderate Growth Scenarios.
 - v. **L5 - Improved Diamond with Widened Lamb Road and Partial Signalization**
 1. ~10.2 M
 2. Realigns the cross road approach.
 3. Lengthens the NB/SB off-ramps.
 4. Widens NB/SB off-ramps.
 5. Widens Lamb Road to 3-Lanes (includes widened bridge).
 6. Signalize the SB ramp terminal.
 7. Fully address Strong, Moderate, and Phase growth scenarios.
 - vi. **L6 - Improved Diamond with Roundabout at SB Ramp Terminal**
 1. ~3.7 M
 2. Realigns the cross road approach.
 3. Lengthens the NB/SB off-ramps.

4. Installs a roundabout at the SB ramp terminal.
5. Fully address Strong, Moderate, and Phase growth scenarios.

vii. L7 - Improved Diamond with Roundabout at SB and NB Ramp Terminals

1. ~4.7 M
2. Realigns the cross road approach.
3. Lengthens the NB/SB off-ramps.
4. Installs roundabouts at the SB and NB ramp terminal.
5. Fully address Strong, Moderate, and Phase growth scenarios.

viii. L8 – Single Quadrant Parclo A

1. ~\$15-20 M (a more refined estimate will be made)
2. Realigns the cross road approach.
3. Lengthens the NB/SB off-ramps.
4. Installs a looping SB on-ramp.
5. Realigns and Improves the SB off-ramp
6. Fully address Strong, Moderate, and Phase growth scenarios.

5. Army Depot Interchange -- Matt

- a. A legal-load semi can clear the bridge and does today. -- **OMD**
- b. Oversized large loads could not clear the bridge today. -- **OMD**
- c. Parts of Gun Club Lane may be on RxR right-of-way – **Carla**
- d. Lamb Road Interchange Improvement Concepts
 - i. **A1 – No interchange Improvements**
 1. Minimal Costs
 2. Realigns Gun Club Lane.
 - ii. **A2 – Minimally Improved Interchange**
 1. \$4-\$5 M
 2. Realigns Gun Club Lane.
 3. Lengthens the EB and WB on/off ramps.
- e. Little support is given for improving the Army Depot interchange - **Carla, Don, and others.**
- f. Patterson Ferry interchange might need the same level of improvements as seen with the Army Depot interchange if similar levels of trips were assigned in the area. – **Carla**

6. Evaluation Criteria and Matrix

- a. Criteria
 - i. Transportation Operations
 - ii. Multimodal Accessibility
 - iii. Land Use
 - iv. Economic Development
 - v. Environmental, Social, and Equity Factors
 - vi. Accessibility and Connectivity
 - vii. Cost
 - viii. Implementation
- b. Evaluation
 - i. L2, L3, L6, L8 warrant further consideration
 - ii. A1, and A2 warrant further consideration

7. Discussion and Reaction to Concepts

- a. **Aaron** – Could we build a L2/L3/L6 scenario to allow for an eventual L8-style loop ramp? This could be a valuable addition to a long term view of the project. Answer...you could, but it would impact the SB on-ramp design in a manner that would likely require additional widening over the railroad overpass.
- b. **Dave** – A roundabout would need to include freight industry partners in the design process.
- c. **Carla** - Does ODOT have a preference?
 - a. Roundabout have less delay
 - i. May require more earthwork
- d. **Carla** – What does ODOT feel about the weaving zone at the 82/84 interchange?
 - a. Probably ok under current conditions - **Dave**
 - b. Mainline analysis would need to be done under future conditions. - **Dave**
- e. **Teresa** - ODOT has financial realities
 - a. All things equal ODOT would pick a cheaper Diamond interchange.
 - b. 1-3 Million probably feasible, but beyond that finances become be more difficult.
- f. **Dave** – distance between interchange is difficult to address with an auxiliary lane without significant cost due to the RxR bridge.

- g. **Stephanie** - What is the Zoning Requirement like for the Westland Exception area?
 - a. The zoning has been in place since the 80s.
 - b. Over 200 trips per day requires a Traffic Impact Analysis.
- h. **Don** – Reality is that L3 is the best option.
 - a. For not much more than L2 you get full build out potential.
 - b. L6 (roundabout) is not looked highly on by the group, but should be considered for further analysis.
 - c. L8 is too expensive unless ODOT wants to put in a lot of money (which they likely don't).
- i. **Don**- Fixing the S-curve on the Depot site and adding a signal could be a locally funded improvement.
 - a. This would be about 1.5 M of the 3.2 M cost of the L3 scenario.
 - b. The reminder could be requested from legislature.
- j. **Frank** – It may be too soon to drop L8. It shows the full build out process. Don agrees.
- k. **Carla** – Support given for L2, L3, L8 for further consideration.
- l. **Matt** – The real question is a L3/L6 vs L8
 - a. L3/6 are quite similar other than Roundabout vs Signal
 - b. **Bob** Adds that L6 (roundabout) gets you a little farther towards the capacity of L8.
- m. **Aaron** – Requests to see a more fine-tuned cost estimate for L8
- n. **Don** - Would like to have the Board adopt an option at Lamb.
 - a. Next meeting date will be set and sent to group
- o. **Frank** confirms that options move forward are:
 - a. A1 and A2
 - b. L3,L6, and L8

**UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #3**

MEETING DATE: 3/31/14

LOCATION: Stafford Hansell Building, Hermiston, OR

NAME/TITLE	EMAIL ADDRESS
Carla McLane, Planning Director	cmclane@co.morrow.or.us
Stephanie Spaulding, Economic Development CTR	sstephan@seamans@stud.or.us
JEFF WISE, Traffic Eng, P.E., DOT	JEFF.WISE@ODOT.STATE.OR.US
Debbie Tedro - Hermiston Chamber of Commerce	debbie@hermistonchamber.com
Teresa Penning, Planning Manager, ODOT	teresa.b.penning@odot.state.or.us
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Bob Nairns - Morrow County Public Works	bnairns@co.morrow.or.us
Tom Fellows, Umatilla County Public Works Director	tfellows@umatillacounty.net
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Patrick Mainell / Analyst, Kittleson	pmainell@kittleson.com
DONALD CHANCE	DOCHANCE@UMADRA.COM
ANDY LINDSEY, Anderson Peery & Assoc.	ALINDSEY@ANDERSONPEERY.COM
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Jeff Atwood, USACE	jefferson.c.atwood@usace.army.mil

**UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #3**

MEETING DATE: 3/31/14

LOCATION: Stafford Hansell Building, Hermiston, OR

NAME/TITLE

EMAIL ADDRESS

NAME/TITLE	EMAIL ADDRESS
Stan Hutchison - Oregon Military Department	stanley.a.hutchison.mil@mail.mil
JOE DUNHAM - Army Corps of Engineers	JOSEPH, C. DUNHAM @ USAACE, ARMY, MIL
Karl Howland - ODOT Hermiston Manager	Paul L. Howland @ odot.state.or.us
HERB STAHL - STAHL FARMS	herbstahl@hotmail.com
Perry Perry, Senior Planner CTUIR	pattyperry@ctuir.org
Martin Nelson - 244 R-I Oregon Army Nth	!Garcia! mazel-phel's-on @ mail.com
Tim Rued	
Lisa Mittelsdorf - Port of Morrow	lisa@mportofmorrow.com
Larry Givens - Commissioner Umatilla Co.	Larry.Givens@umatilla.net
Aaron Palquist - City of Irigoien	manager@ci.irigoien.or.us

Technical / Public Advisory Committee Meeting #4 - Summary Notes

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

May 5, 2014

2:00 PM to 4:00 PM

Port of Morrow

Boardman, Oregon

Attendees:

Carla McLane, Morrow County
Shane Finck, Umatilla County
Stephanie Seamaus, CTUIR
Matt Hughart, Kittelson & Associates, Inc.
Joanne Manson, Oregon Military Department
Garry Neal, Port of Morrow
Rod McKee, Anderson Perry & Associates
Teresa Penninger, ODOT Region 5
Tom Fellows, Umatilla County Public Works
Dave Warrick, ODOT Interchange Engineer
Patrick Marnell, Kittelson & Associates, Inc.
Don Chance, LRA
Terry Tallman, Morrow County Judge, Morrow County Court
Herb Stahl, Stahl Farms
Patty Perry, CTUIR
Lisa Mittelsdorf, Port of Morrow
Frank Angelo, Angelo Planning Group

1. Introduction – Matt/Frank

- a. Recap of last TPAC meeting and Open House
- b. Sign-in sheet

2. I-84 and Army Depot Access Road interchange Review -- Matt

- a. Current conditions:
 - i. Currently has substandard on/off ramps.
 - ii. Can accommodate anticipated ORNG normal daily traffic.
 - iii. Union Pacific (UP) Railroad underpass has 15 foot clearance.
 - iv. Minor access management improvements at Gun Club Lane and farm access.
- b. To accommodate freeway oriented industrial growth in the Port Industrial zoning, interchange improvements are projected to cost 3.4 million dollars.

- i. This does not include any modifications to Union Pacific (UP) railroad underpass. This would run \$1-2 million dollars or more.
- c. Carla adds that some buildings have been built on the Gun Club Lane that might affect the realignment of the road.
- d. Joanna asks if Gun Club provides access to the Depot Site.
 - i. The road does not.
 - ii. Joanna adds that access to the Port of Morrow Industrial Areas is needed for a one-to-one comparison.

3. Paterson Ferry Road Options -- Matt

- a. The Port Industrial Area may be more efficiently accessed via Paterson Ferry Road.
- b. This would require building a road through Exclusive Farm Use (EFU) zoned land.
 - i. This is procedurally difficult, but possible.
- c. Paterson Ferry Interchange could handle the increase in trips associated with the Port of Morrow Industrial Areas with only minor improvements.
- d. New access road would need to intersect Paterson Ferry Road as far north as possible to avoid impacting the at-grade rail crossing.
- e. Gary adds that the Port of Morrow would probably want a grade separated crossing for trucking efficiency and safety before developing the site as an industrial park.
 - i. 35-40 rail crossings a day would make an at-grade crossing problematic.
 - ii. Matt adds that grade separation of the rail crossing at Paterson Ferry would make this alternative more expensive than using the Army Depot alternative.

4. Morrow County Planning Board has pushed back some on the restricted zone on portions of the Port Industrial area -- Carla

- a. What would happen if zoning restriction is removed?
- b. As long as the impacts of the 900 and 1800 acres were identified in the IAMP then removing the restriction would not require separate plan amendments.
- c. An IAMP that is structured to allow for flexibility and a choice between Army Depot/Paterson Ferry Interchanges and Restricted/Unrestricted land uses is desirable.
 - i. Matt adds that this may result in spending money at one interchange that may not be ultimately needed.
 - ii. The existing Army Depot interchange is not built to handle industrial truck type trips.
- d. ODOT Rail may need to be involved in the process because of the issues with the railroad underpass and the potential for a grade separated crossing at Paterson Ferry.
- e. LRA would like all the options:
 - i. All the alternatives will be documented.
 - ii. No final recommendation would be made leaving options open.
 - iii. Local amendments could be used to move down one path or the other.

5. I-82/Lamb Road Interchange Review - Matt

- a. Long Term Needs (With Development)
 - i. New Eastbound Leg;
 - ii. Redesign of NB and SB off ramps;
 - iii. Turn lanes on ramps; and
 - iv. Traffic Control.
- b. Alternatives:
 - i. L3 – Signalization
 - ii. L6 – Roundabout
 - 1. L3 and L6 are similar, other than the type of traffic control used on the SB ramp terminal.
 - 2. L3 & L6 are both adequate for projected Strong Growth conditions.
 - iii. L8 – Parclo A Loop Ramp
 - 1. Would provide additional capacity beyond the L3 and L6 options.
 - 2. Would better accommodate SB on-ramp traffic.
 - 3. There is concern from the group about what are the safety issues of the Loop Ramp (particularly in wintery conditions)?
 - a. Dave Warrick noted that some loop ramps were constructed 30/40 years ago and use smaller radius loops.
 - i. This accounts for some of the perceived safety issues.
 - b. Today a 150'-200' radius would be used.
 - iv. L3 could be designed to allow for a future conversion to a Loop Ramp.
 - 1. This would not cost much more than an L3 that does not allow for the additional flexibility.
 - 2. L3 modified cost 4.7 million.
 - v. L6 could also be designed to allow for a future conversion to a Loop Ramp.
 - 1. L3 modified cost 5.9 million.
 - 2. Truckers have concerns about traveling through roundabouts.
 - 3. ODOT will need to work with trucking partners on implementing a roundabout, but this is possible.
 - 4. Freight is not incompatible with a roundabout.
 - vi. Don noted that L3 seems to be the most viable option.
 - 1. This is especially true when L8 can be accommodated in the future.
 - 2. The group generally agrees, but there is support to keep the roundabout as an option.
 - 3. The potential TSDC might be harder to swallow if the added cost of the roundabout were included.
 - vii. Final choice to keep both options in the IAMP is made.

6. Phasing of Improvements - Matt

- a. Some trips can happen before improvements are needed.

- i. For example, the hairpin turn on the eastbound leg of Lamb Road will not accommodate industrial trips. However, it probably can accommodate employment type trips (as it did with the incineration operations).
- ii. The IAMP can identify phases of improvements and what types of trips can be accommodated by each.
- iii. Language could require that all developments in the area conduct a traffic impact study including and analysis of trip types.
- b. The traffic impact study process is viewed by the group as a good way to facilitate a phased improvement strategy.
- c. Cost breakdown by improvement would help stakeholders make informed decisions.

7. Phases of Lamb Road Improvements - Matt

- a. *Short (0-5 years)* – Improve eastbound leg and remove hairpin.
- b. *Medium/Long* – Ramp Improvements and Traffic Control.
 - i. Use transportation impact study to determine when improvements are needed.

8. Potential Implementation Steps - Funding Options - Matt

- a. TSDC charges have not been used in the area for industrial uses (Pendleton has a city wide one).
 - i. TSDC adoption will require official action.
 - 1. The IAMP can be the vehicle for adoption if desired.
- b. IAMP will list a menu of funding options.
- c. Don feels that the burden of the hairpin turn replacement should be the burden of future development.
- d. Additionally, Don adds that the interchange improvements are a mix of existing problems, additional trips from the site, and other additional trips in the area.
 - i. Westland Exception Area trips are adding to the interchange and potentially they should pay into the TSDC.
 - 1. This process might be more difficult on land that has already gone through an exception process.
- e. Leaving a TSDC on the menu for Umatilla might be a good idea
 - i. A TSDC that fund 5-10% might provide match funding for future grants.
 - ii. The county could adopt this policy in the future when this match is needed.
- f. Showing the TSDC for the Depot Redevelopment alone and the Depot Redevelopment and Westland Area would allow Umatilla to make the choice from the set of options.

9. ODOT Sand Shed – Teresa

- a. ODOT had planned to locate a Sand Shed to the southeast of the interchange.
 - i. The Shed needs more room, which is flat and level, and that is close to the interchange.
 - 1. ODOT is interested in a temporary area near the hairpin turn and a permanent location somewhere near the interchange.

2. The land closest to the interstate is the most valuable the LRA would likely want to have ODOT on land a little farther away from the interchange.
 - ii. Once the land is in the LRA ownership it should be easy to transfer land to ODOT.

10. Next Steps

- a. Earlier Tech Memos will be updated
 - i. Once Tech Memos are final Carla will present them to the Morrow County Planning Commission.
- b. Public workshop 12:30-2:30 pm 5/6/14 at Port of Morrow Riverfront Room.
- c. LRA meeting at 3:00pm 5/6/14 at Port of Morrow Riverfront Room.
- d. Local Adoption Procedures to Follow in August/September.

**UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #4**

MEETING DATE: 05/05/14

LOCATION: Stafford Hansell Building, Hermiston, OR

NAME/TITLE	EMAIL ADDRESS
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**UMATILLA ARMY DEPOT COMBINED IAMP AND TRANSPORTATION SYSTEM SUBAREA PLAN
SIGN IN SHEET - TPAC MEETING #4**

MEETING DATE: 05/05/14

LOCATION: Stafford Hansell Building, Hermiston, OR

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UMCD
INTERCHANGE AREA MANAGEMENT PLAN &
TRANSPORTATION SUBAREA PLAN

Public Workshop #1

January 21, 2014

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UMCD
INTERCHANGE AREA MANAGEMENT PLAN &
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UMCD
INTERCHANGE AREA MANAGEMENT PLAN &
TRANSPORTATION SUBAREA PLAN

Public Workshop #2
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UMCD
INTERCHANGE AREA MANAGEMENT PLAN &
TRANSPORTATION SUBAREA PLAN

Public Workshop #3

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UMCD
INTERCHANGE AREA MANAGEMENT PLAN &
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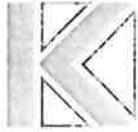
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Appendix B
Technical Memorandum #1:
Project Background, Definition,
Goals, and Objectives



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

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TECHNICAL MEMORANDUM #1 - Final

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Project Background, Definition, Goals, and Objectives

Date: December 13, 2013 Project #:13848
To: Don Chance, Technical/Public Advisory Committee (TPAC)
From: Matt Hughart, AICP
cc: Frank Angelo and Darci Rudzinski, Angelo Planning Group

The purpose of this memorandum is to provide an overview of the Umatilla Army Depot Combined Interchange Area Management Plan and Transportation System Subarea Plan, including the project background, purpose and intent, goals, objectives, evaluation criteria, and proposed study area.

Project Background

The Umatilla Army Chemical Depot (UMCD) is currently in the process of formally being decommissioned and prepared for reuse/redevelopment. The Umatilla Chemical Depot Reuse Authority (UMADRA or often referred to as the "LRA"¹) is chartered with administering the transition of the UMCD and is leading the planning process. Following the completion of a Redevelopment Plan in 2010, reuse/redevelopment of the UMCD has been envisioned to accommodate a new 7,500 acre Oregon National Guard training base, a 5,678 acre habitat refuge, and approximately 3,000 acres of industrial/warehouse development.

With the long range reconfiguration of envisioned land uses on the UMCD site, it is recognized that transportation patterns and traffic demands will likely change. Some of these changes may impact the existing freeway interchanges that serve the UMCD and surrounding area. In accordance with Oregon Administrative Rule 734-051, a specialized transportation plan known as an Interchange Area Management Plan (IAMP) is being prepared to identify and address potential access, infrastructure, land use regulations. In consultations between UMADRA and the Oregon Department of Transportation (ODOT), it has been determined that a combined three interchange IAMP should be prepared for the UMCD site. This planning effort is hereby referred to as the UMCD Combined IAMP and Subarea Plan.

¹ UMADRA is currently comprised of Morrow County, Umatilla County, the Ports of Morrow and Umatilla, and the Confederate Tribes of the Umatilla Indian Reservation.

I-84/Army Depot, I-82/Lamb Road, and I-84/Paterson Ferry Road Interchanges

The UMCD is bordered to the south by Interstate 84 (I-84) and to the east by Interstate 82 (I-82). From these two interstate freeways, two existing interchanges actively serve the UMCD: I-84/Army Depot Access Road interchange and I-82/Lamb Road interchange. A third interchange, I-84/Paterson Ferry Road, has the potential to serve the UMCD in the future. A general description and function statement for each interchange are outlined below.

The I-84/Army Depot Access Road interchange was constructed in 1967 and functions as the UMCD's main point to access to the I-84 corridor. In addition to serving the UMCD, this interchange also serves the agricultural lands located south of I-84. The I-82/Lamb Road interchange was constructed in 1986. The primary function of this interchange is to provide access to the Westland Road Exception Area and the City of Hermiston via the Lamb Road/Westland Road corridor. In addition, the I-82/Lamb Road interchange functions as a secondary point of access to the UMCD. A third interchange, I-84/Paterson Ferry Road, does not currently serve the UMCD, but has been included in the IAMP planning project given its potential to provide access at some point in the future. This interchange is located approximately 2.5 miles west of the UMCD and functions as a regional point of access to the agricultural lands located north and south of the I-84 corridor.

Together, these three interchanges and the local/regional roadways that serve them will be the focal point for the *UMCD Combined IAMP and Subarea Plan*.

Conditions Statement

The I-84/Umatilla Army Depot and I-82/Lamb Road interchanges were both designed and constructed at a time in which the primary use of the UMCD was to store and ship chemical weapons, ordnance, and other military supplies. The I-82/Lamb Road interchange, which was constructed after the I-84/Umatilla Army Depot interchange, was partially planned in anticipation of the industrial chemical weapons incineration facility with its associated large construction workforce and sizable operations workforce. With a future vision for the UMCD that includes a change in military uses (Oregon National Guard), environmental preservation, and economic development, the existing freeway interchange infrastructure serving the site has the potential to be utilized in a manner and capacity that is different from historical patterns. In addition, the access roads and supporting localized roadway infrastructure that connect the UMCD to the freeway interchanges were specific in purpose, and may require modification for the new land uses under consideration. As such, a detailed land use, traffic forecasting, and engineering process is required to fully understand the existing capacities of the freeway interchange infrastructure and what improvements, if any, are necessary to fully support the full range of envisioned reuse/redevelopment activities on the UMCD.

Purpose and Intent Statement

The purpose of the *UMCD Combined IAMP and Transportation Subarea Plan* is to develop a strategic land use, infrastructure, and access management plan that focuses on those I-84 and I-82 interchanges that currently serve the UMCD and surrounding land uses or that could serve it in the future.

The intent of the planning effort will identify and develop land use management strategies for the envisioned reuse/redevelopment components of the UMCD, identify any interchange infrastructure improvements needed to support future reuse/redevelopment components, create an access management plan for each interchange crossroad, identify basic internal circulation needs within the UMCD site, and develop mechanisms that can be used to fund identified infrastructure improvements.

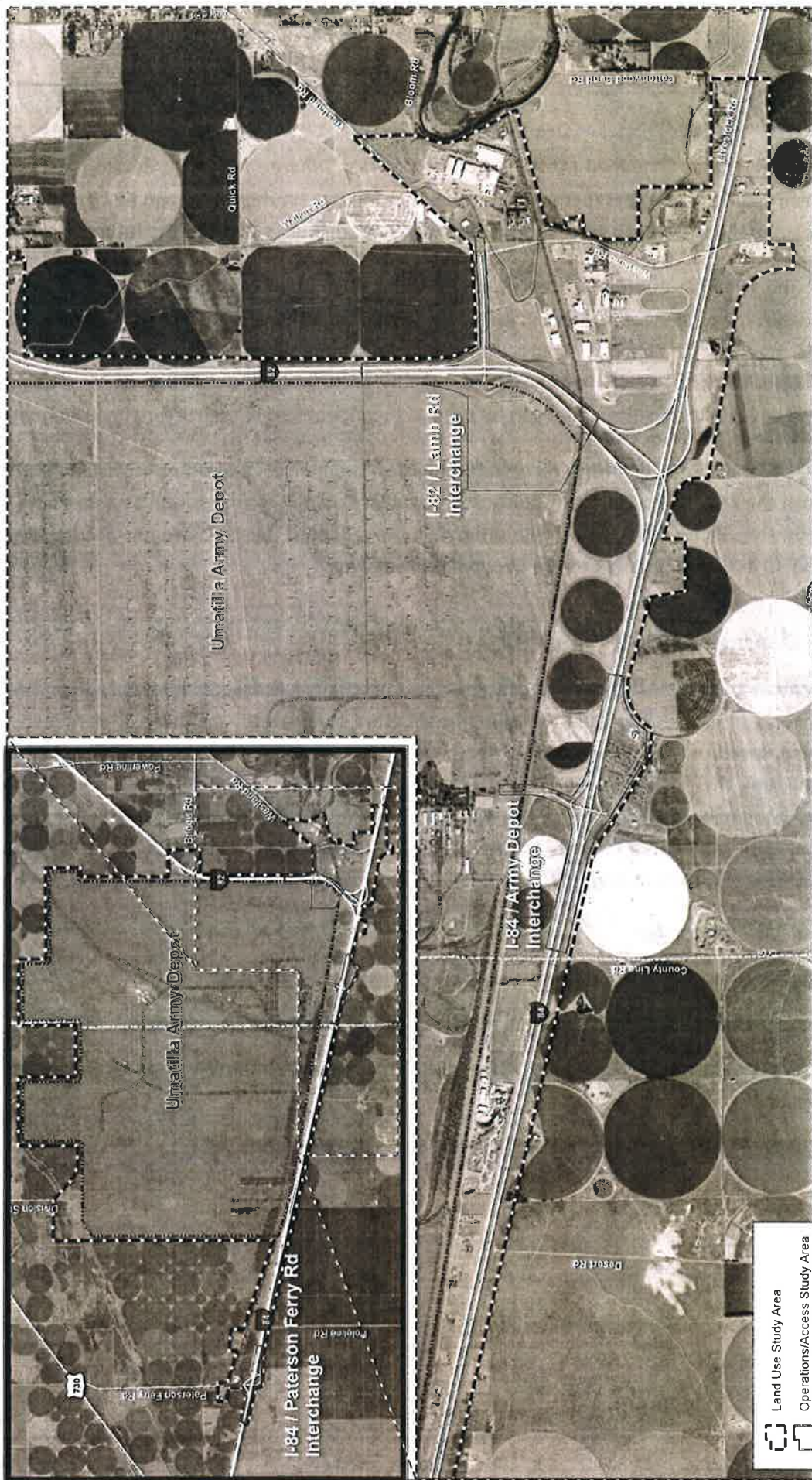
The IAMP and subarea planning effort will result in policies, ordinances, and other provisions that will be adopted into the respective Morrow County and Umatilla County Transportation System Plan (TSP) and Comprehensive Plans. The IAMP will ultimately be adopted by the Oregon Transportation Commission (OTC) as an amendment to the *Oregon Highway Plan*.

Interchange Management Study Area (IMSA)

Within the context of the IAMP planning process, the Interchange Management Study Area (IMSA) defines the extents of the detailed land use and infrastructure study area. As previously described, the IAMPs will focus specifically on the freeway interchanges that serve the UMCD and surrounding land uses. At a minimum, the IMSA includes properties, as well as all access points within ½ mile from the noted freeway interchanges as defined by the State of Oregon's IAMP Guidelines. In order to capture the overarching land use related impacts of the reuse/redevelopment of the UMCD as well as growth potential of immediately surrounding uses, the IMSA is proposed to include the following areas:

- The entire UMCD site
- Westland Road Exception Area – area east of I-82 and north of I-84
- Industrial zoned land located north of the Paterson Ferry Road interchange
- Access points on the north side of the UMCD that would potentially connect to the City of Irrigon

A draft Interchange Management Study Area (IMSA) map is shown in Figure 1-1.



Interchange Management Study Area
 Morrow / Umatilla Counties
 Figure 1-1

Coordinate System: NAD 1983 MARS StatePlane Oregon North FIPS 3001 Feet Int

Operations and Access Study Area

The Operations and Access Study Area includes all access points and intersections within the IMSA and encompasses those key intersections that have the potential to affect traffic operations in the respective interchange areas over a 20-year planning period. This study boundary identifies the area for which operational analysis will be completed and the area that will be considered for the Access Management Plan (although access spacing requirements from the interchange are only ¼ mile). The study intersections include:

1. I-84 Westbound (WB) Ramp Terminal/Army Depot Access Road
2. I-84 Eastbound (EB) Ramp Terminal/Army Depot Access Road
3. I-82 Northbound (NB) Ramp Terminal/Lamb Road
4. I-82 Southbound (SB) Ramp Terminal/Lamb Road
5. Lamb Road/Westland Road
6. I-84 Westbound (WB) Ramp Terminal/Paterson Ferry Road
7. I-84 Eastbound (EB) Ramp Terminal/Paterson Ferry Road

Draft Goals and Objectives

The IAMP process is intended to protect the function of the study interchanges for the next 20 years while accounting for changes in land use and traffic patterns brought about by reuse/redevelopment of the UMCD. As stated in Policy 3C of the *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." To this end, working collaboratively with the Technical/Public Advisory Committee (TPAC) and public, the Goals, Objectives, and Priorities of the Combined IAMP and Subarea Plan are to:

1. Protect the long-term function, operation, and safety of the I-84/Army Depot Access Road, I-82/Lamb Road, and I-84/Paterson Ferry Road interchanges.
2. Identify opportunities for enhanced roadway connectivity within the UCMD site that would provide public roadway connections between the I-84/Army Depot Access Road and I-82/Lamb Road interchanges.
3. Manage the allowed/envisioned land uses within the vicinity of the interchanges to provide for future economic growth over the next 20 years.
4. Identify current accesses along the interchange crossroads and develop a phased access management plan for the crossroads based on a detailed and collaborative process involving

the Morrow/Umatilla Counties and local property owners. The access management plan will be based on key principles that balance highway mobility and safety against:

- a. The findings of County TSPs and land use plans; and
 - b. Local economic development objectives for properties that require access to the state highway.
5. Identify opportunities for freight-based multi-modal accessibility to/from certain envisioned components of the UMCD site.
 6. Identify opportunities for public transit service to future reuse/redevelopment of the UMCD site.
 7. Collaborate throughout the planning process with design professionals, jurisdictional representatives, developers, local property owners, and the general public, including protected populations as established by federal and state regulations and policies.
 8. Comply with the intent of Statewide Planning Goals, including Goal 1: Public Involvement, Goal 2: Land Use Planning, Goal 5: Natural Resources, Goal 6: Air, Water and Land Resources Quality, Goal 7: Areas Subject to Natural hazards, Goal 8: Recreation Needs, Goal 9: Economic Development, Goal 12: Transportation, and Goal 14: Urban Growth Boundaries.
 9. Identify phased implementation strategies for identified near- and long-term interchange infrastructure and interchange crossroad improvements.
 10. Identify interchange infrastructure funding strategies that could be applied to future reuse/redevelopment of the UMCD and other land uses within the IMSA.
 11. Develop implementation policies and regulations to be adopted into the Morrow and Umatilla County Comprehensive Plans, Transportation System Plans, and zoning ordinances, as appropriate.

Draft Evaluation Criteria

Based on the goals and objectives, the following draft evaluation criteria were assembled to ensure that potential interchange improvement concepts would be evaluated for consistency with the overall intent of the community and the project. The eight evaluation criteria are as outlined in Table 1-1.

Table 1-1 – Draft Combined IAMP Evaluation Criteria

Evaluation Criteria	Description	Relationship to Goals and Objectives
Transportation Operations	<ul style="list-style-type: none"> • Safety • Mobility • Freight mobility 	1,2,4,5
Multimodal Accessibility	<ul style="list-style-type: none"> • Transit mobility 	2,5,6
Land Use	<ul style="list-style-type: none"> • Right-of-way impacts • Compatibility with land use 	3,7,8
Economic Development	<ul style="list-style-type: none"> • Near-term growth accommodation • Long-term growth accommodation 	3,7,8
Environmental, Social, and Equity Factors	<ul style="list-style-type: none"> • Environmental impacts • Socio-economic impacts 	7,8
Accessibility and Connectivity	<ul style="list-style-type: none"> • Local roadway connectivity • Future access to undeveloped properties • Access spacing requirements 	1,2,4,5,6,8
Cost	<ul style="list-style-type: none"> • Cost relative to other improvement concepts 	9,10,11
Implementation	<ul style="list-style-type: none"> • Impacts to existing and proposed developments • Ability to construct in phases 	9,10,11

Appendix C
Technical Memorandum #2:
Review of Adopted Plans and
Regulations

Memorandum

TO: Technical and Public Advisory Committee
FROM: Frank Angelo, Principal
Darci Rudzinski, AICP
DATE: December 11, 2013
CC: Matt Hughart, AICP, Kittelson & Associates, Inc.
RE: Interchange Area Management Plans
Technical Memo #2: Review of Adopted Plans and Regulations

INTRODUCTION

This memorandum provides an overview of the regulatory framework pertaining to the land use and transportation systems in the vicinity of the Interstate 82 (I-82)/Lamb Road (Exit 10) interchange that serves the Umatilla Army Chemical Depot (UMCD) and the City of Hermiston and the I-84/Army Depot (Exit 177) and I-84/Paterson Ferry Road (171) interchanges.

This memorandum summarizes relevant state and local regulatory documents, long-range plans, and adopted policies and identifies how they influence transportation planning in the vicinity of the interchanges and possible future transportation improvements. These documents create a planning framework for the UMCD Combined IAMP and Transportation System Subarea Plan ("UMCD Combined IAMP and Subarea Plan"). Also reviewed are relatively recent documents developed to support redevelopment on the UMCD, a site that spans two counties (Morrow and Umatilla) and that has never been zoned or subject to Oregon's statewide land use program. Technical Memorandum #2 defines the planning objectives for this project and includes a proposed Interchange Management Study Area (IMSA).

Planning Framework

The Statewide Planning Goals relevant to planning for the state highway system express the state's policies on land use and related topics such as economic development, public facilities, transportation, and urbanization. Oregon's statewide goals are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect. The local comprehensive plans must be consistent with the Statewide Planning Goals. Plans are reviewed for such consistency by the state's Land Conservation and Development Commission (LCDC). When LCDC officially approves a local government's plan, it becomes the controlling document for land use in the area covered by that plan.

The Transportation Planning Rule (TPR) requires that land use plans and the transportation system plan are consistent with one another. It requires cities, counties, and the state to adopt transportation system plans that integrate land use and transportation planning.¹

The Oregon Transportation Plan (OTP) is a policy document developed by ODOT in response to the federal and state mandates for systematic planning for the future of Oregon's transportation system. The OTP is intended to meet statutory requirements (ORS 184.618(1)) to develop a state transportation policy and comprehensive long-range plan for a multi-modal transportation system. The OTP, with all of the associated modal plans, constitutes the state transportation system plan (TSP).

The 1999 Oregon Highway Plan (OHP) implements the OTP by establishing long-range policies and investment strategies for the State Highway System. As an element and modal plan of the OTP, the OHP guides the planning, operations, and financing of ODOT's Highway Division. Related transportation administrative rules establish procedures and criteria used by ODOT to coordinate with other jurisdictions and to govern aspects of highway design in compliance with statewide planning goals and in a manner compatible with acknowledged comprehensive plans and consistent with Oregon Revised Statutes (ORS), Oregon Administrative Rules (OAR), and the OHP.

The local comprehensive plan documents for both Morrow County and Umatilla County respectively contain objectives and policies that are intended to guide growth and development over a long-range (20-year) planning horizon. These policies are based on the specific qualities and characteristics of the counties and reflect local plans and needs for future improvements. The comprehensive plans are intended to be consistent with the Statewide Planning Goals. The County TSPs, the transportation elements of the local comprehensive plans, are also reviewed here. TSPs contain policies relating to the transportation system, including street function and design and bicycle/pedestrian facilities. TSPs also outline planned transportation improvements.

Land use and zoning ordinances are used to implement the policies identified in comprehensive plans. They specify the different zoning districts and provide standards, regulations, and review procedures for all development within those zones.

The following transportation and land use plans were reviewed for policies and regulations applicable to the UMCD Combined IAMP and Subarea Plan. The page numbers have been included so that the documents reviewed can be easily accessed in this memorandum.

¹ Elements of IAMPs, such as policies addressing interchange planning and access management requirements, are typically adopted into local plans and ordinances and the IAMP document itself is adopted by the Oregon Transportation Commission as a Facility Plan of the Oregon Highway Plan. The IAMP planning process considers how existing and planned land uses are likely to impact the future function of the subject interchange. In addition to transportation improvements, recommendations in IAMPs can include land use restrictions. Restrictions on what uses are allowed in the vicinity of the interchange, for example, could be adopted as part of an IAMP to ensure that future development will not generate traffic that will exceed the capacity of the facility.

Documents Reviewed

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STATE OF OREGON

Statewide Planning Goals

Statewide Planning Goal 1: Citizen Involvement

Goal 1, Citizen Involvement, requires those jurisdictions that prepare, adopt, and maintain comprehensive plans to provide the “opportunity for citizens to be involved in all phases of the planning process.” Pursuant to the goal, the planning process includes preparation of plans and implementation measures, adoption of plans and implementation measures, and minor and major amendments to adopted plans. Technical information associated with the planning process must be available to citizens in an understandable form; accessible means for providing feedback must also be available.

Development of the UMCD Combined IAMP and Subarea Plan for the interchanges will involve meetings of a Technical and Public Advisory Committee (TPAC) and will be guided by a Steering Committee that is a subset of the TPAC. The TPAC membership will include UMADRA members, ODOT staff, staff from the two counties, and key property and business owners who may have a vested interest in the planning project. The TPAC members will provide local input into the process, using their knowledge of the area and issues related to the interchanges to guide the project. The Steering Committee will be involved in more of the logistical decision-making and is made up of UMADRA and County staff, as guided by the respective boards and commissions. In addition, three public workshops will be held during various stages of the plan’s development to provide information and updates on the planning process. The required public hearings for adoption of the UMCD Combined IAMP and Subarea Plan at both the local (two counties) and state level will also provide opportunity for public comment. All of these public involvement activities will be guided by and assessed according to Goal 1.

Statewide Planning Goal 2: Land Use Planning

Goal 2, Land Use Planning, requires that a land use planning process and policy framework be established as a basis for all decisions and actions relating to the use of land. Goal 2 is important for four reasons. First, Goal 2 requires planning coordination between those local governments and state agencies "which have programs, land ownerships, or responsibilities within the area included in the plan." In developing the UMCD Combined IAMP and Subarea Plan, Goal 2 will require coordination between UMADRA, ODOT, and Morrow County, which has planning authority over the area surrounding the I-84/Paterson Ferry Road interchange, and Umatilla, which has land use authority in areas adjacent to the I-84/Army Depot and the I-82/Lamb Road interchanges. The Oregon National Guard will also continue to be a major land owner and user that will rely on the future transportation system and interchanges. Coordination between this planning effort and the future plans on land that will be used for National Guard activities is a project priority. Coordination is particularly important because land use decisions in the vicinity of the interchanges have an effect on future use and operations.

A second important element of Goal 2 is that land use decisions and actions must be supported by an "adequate factual base." This requirement applies to both legislative and quasi-judicial land use actions and requires that such actions be supported by "substantial evidence." In essence, it requires that there be evidence that a reasonable person would find to be adequate to support findings of fact that a land use action complies with the applicable review standards.

Third, Goal 2 requires that city, county, state, and federal plans and actions related to land use be "consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268." This provision is important because elements of the UMCD Combined IAMP and Subarea Plan will need to be consistent with the locally adopted TSPs. To meet this state requirement, the outcome of this planning project will include recommendations for amendments to the counties TSPs.

In the case of the exclusive farm land (EFU) in the vicinity of the the interchanges, Goal 2 also provides a framework for allowed uses, including transportation improvements, on EFU. Note that EFU is the predominant land use designation south of the I-84 within the IMSA, as well as surrounds the I-84/Paterson Ferry Road interchange. Goal 2 includes standards for taking an "exception" to one or more statewide planning goals. The Goal 2 exception standards apply when a local government or property owner proposes to use property in a manner otherwise prohibited by one or more statewide planning goals. Exception standards would need to be met before a more intensive land use designation could be adopted on parcels currently designated as EFU by the county; exception standards also need to be met to justify a transportation improvement on EFU.

The Goal 2 exceptions standards are interpreted in significant detail in **OAR 660, Division 4**. Rule sections particularly relevant to developing a UMCD Combined IAMP and Subarea Plan for the subject interchanges are:

- OAR 660-004-0022, which establishes standards under which uses such as residential or industrial development may be justified on rural lands; and
- OAR 660-004-0020(2)(b), which requires demonstration why a proposed use cannot reasonably be accommodated on nonresource land or inside a UGB.

The Goal 2 exceptions criteria provide resource lands with a very high level of protection from higher intensity rural non-farm uses. See page 29 of this memorandum for Morrow County's ordinance regulating land zoned Exclusive Farm Use and p. 37 for Umatilla County's development requirements for same.

Statewide Planning Goal 3: Agricultural Lands

Statewide Planning Goal 3, Agricultural Lands, requires that agricultural lands be preserved and maintained for farm use. The goal is implemented through zoning that limits uses on agricultural lands to "farm uses and those nonfarm uses defined by commission rule that will not have significant adverse effects on accepted farm or forest practices." Such zoning is commonly referred to as "exclusive farm use" zoning.

Statewide Planning Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces

The purpose of Goal 5, Natural Resources, Scenic and Historic Areas, and Open Spaces, is to “protect natural resources and conserve scenic and historic areas and open spaces.” This goal requires local governments to inventory natural and cultural resources in their jurisdictions and to develop and adopt programs to conserve and protect them. Among the resources to be inventoried are: riparian corridors, wetlands, federal Wild and Scenic Rivers, state Scenic Waterways, groundwater resources, wildlife habitat, natural areas, wilderness areas, open spaces, scenic views and sites, mineral and aggregate resource areas, energy sources, and historic and cultural areas.

Goal 5 resources will be identified within the IMSA as part of documenting existing conditions for this planning exercise. Improvements proposed in the UMCD Combined IAMP and Subarea Plan must comply with this goal and the counties’ Goal 5 policies and programs accordingly.

Statewide Planning Goal 6: Air, Water and Land Use Resources Quality

Jurisdictions must comply with state and federal environmental agency regulations. Goal 6 calls for jurisdictions to “maintain and improve the quality of the air, water and land resources of the state.” Waste and process discharges within a jurisdiction may not exceed the carrying capacity of the local air shed and water shed in the long-term, nor degrade the quality or otherwise threaten the availability of the air shed and water shed services.

This goal and corresponding policies in the counties’ comprehensive plans must be taken into account in developing and selecting alternatives for improvements to the interchanges.

Statewide Planning Goal 7: Areas Subject to Natural Hazards

Goal 7 was adopted by the State to “protect people and property from natural hazards.” The goal requires local jurisdictions to adopt comprehensive plans, including inventories, policies, and implementation measures, for identifying natural hazard areas and prohibiting or limiting development in these areas. Although local jurisdictions may define others, the goal defines natural hazard areas as those subject to floods (both coastal and riparian), landslides, earthquakes and related events, and wildfires.

Similar to Goal 5 resources, natural hazards will be identified in the IMSA. Improvements proposed in the IAMPs must comply with this goal and the local jurisdictions’ Goal 7 policies and programs accordingly.

Statewide Planning Goal 8: Recreational Needs

Goal 8 was adopted to “satisfy the recreational needs of the citizens of the state and visitors, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” The goal requires that local governments conduct comprehensive recreational planning by identifying recreational needs, planning for facilities in sufficient quantities and locations to meet these needs, and working with private companies and other partners in meeting these needs. While

there are no existing recreational facilities open to the public within the IMSA, the Paterson Ferry interchange provides access to the Umatilla National Wildlife Refuge and the Columbia River Heritage Trail north of the IMSA, along the Columbia River. Areas that are designated Wildlife Habitat in the future may also be accessible to the public for low-impact recreation, such as hiking and nature observing, in the future.

Statewide Planning Goal 9: Economic Development

The intent of the State's economic development Goal is to "provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens." Local comprehensive plans and policies must support this goal and should include an assessment of existing economic conditions and comparative advantages along with policies addressing economic development and development opportunities. Plans must also identify an adequate supply of sites with characteristics suitable for a variety of employment and economic development, and limit development around identified industrial sites to that which is compatible with uses allowed on the sites. The goal suggests implementation measures such as tax incentives and disincentives, preferential assessments, land use regulations, capital improvement planning and programming, and fee or partial fee acquisition.

The UMCD Combined IAMP and Subarea Plan must demonstrate the ways in which the preferred alternative selected for future improvements to each interchange supports this goal and the economic development policies adopted in the counties' comprehensive plans.² The I-82/Lamb Road interchange is a vital connection for freight and commuters between the Tri-Cities area in Washington, the City of Hermiston and other I-84 destinations. It also serves the UMCD via a perimeter road and provides direct connection to I-82 and I-84 for established businesses east of the interchange. I-84/Paterson Ferry Road interchange provides access to agricultural lands located north and south of I-84 and provides a connection to US 730. Transportation analysis performed for the UMCD Combined IAMP and Subarea Plan will rely on existing land use designations (i.e. planned land uses).³

Statewide Planning Goal 11: Public Facilities and Services

Statewide Planning Goal 11 requires that jurisdictions plan and develop timely, orderly and efficient public facilities systems and services that serve as a framework for urban and rural development. Public facilities and services for rural areas are supposed to be provided at levels appropriate for

² Both counties are preparing to adopt local comprehensive plan and zoning designations for land within the study area that is expected to transfer from Federal to county ownership. Proposed amendments are based on recently completed Land Use Analysis documents (September 2013) that implement future employment goals through modifications to the Morrow County Port Industrial zone and a new Umatilla County Depot Industrial Zone that applies to specific Depot properties. See the summary of the Land Use Analysis documents on p. 20 of this memorandum.

³ The recommendations of the September 2013 Land Use Analysis documents will be the basis for the transportation analysis. The counties adoption hearings for comprehensive plan and code amendments consistent with the Land Use Analysis recommendations are expected to be concluded in 2014. Any future modifications of land uses in the area that require re-zoning or development code modifications that allow for more intensive development will need to comply with Goal 12 and the Transportation Planning Rule (TPR) so that development in the area can occur in a way that protects the capacity and safe function of the interchanges and any future state transportation investments.

rural use only and should not support urban uses. Both Morrow County and Umatilla County are currently seeking a Goal 11 exception in conjunction with applying county zoning to specific areas in the UMCD. A Goal 11 exception is sought in the event extension of urban scale water to rural lands is needed to these areas.⁴

Statewide Planning Goal 12: Transportation

Statewide Planning Goal 12, Transportation, requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a safe, convenient, and economic transportation system. This is accomplished through development of transportation system plans (TSPs) based on inventories of local, regional, and state transportation needs.

Goal 12 is implemented through **OAR 660, Division 12**, the Transportation Planning Rule (TPR), which is reviewed later in this document. The TPR contains numerous requirements governing transportation planning and project development. The TPR requires local governments to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors and sites for their identified functions (OAR 660-012-0045(2))." This policy is achieved through a variety of measures, including:

- Access control measures which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;
- Standards to protect future operations of roads;
- A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;
- A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;
- Regulations to provide notice to ODOT of land use applications that require public hearings, involve land divisions, or affect private access to roads; and
- Regulations assuring that amendments to land use designations, densities and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP. (See also OAR 660-012-0060.)

LCDC's rules implementing Goal 12 do not regulate access management. ODOT adopted OAR 734, Chapter 51, to address access management and it is expected that ODOT, as part of this project, will engage in access management consistent with its Access Management Rule. This will involve a review of existing access points within at least one-quarter mile of the interchange ramps. See OAR 734, Division 51 on page 14 of this memorandum for a review of these access management rules.

⁴ In *Foland v. Jackson County*, 239 Or App 60 (2011), the Oregon Court of Appeals clarified that where a Goal 14 exception is taken to allow urban-scale non-residential uses on rural lands, a corresponding Goal 11 exception is required to allow the extension of public facilities to serve the use.

Statewide Planning Goal 14: Urbanization

Goal 14 regulates urban growth boundaries. The goal requires that the following factors be considered with proposing a UGB modification:

- Efficient accommodation of identified land needs;
- Orderly and economic provision of public facilities and services;
- Comparative environmental, energy, economic, and social consequences;
- Compatibility of the proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.

Additionally, ORS 197.298 establishes priorities for including land inside urban growth boundaries. The first (highest) priority for inclusion is land that is designated "urban reserve" land. The second priority is land adjacent to a UGB that is identified as "an exception area or nonresource land." The third priority is land that is designated as "marginal land" and the final (lowest) priority is land that is designated for agriculture, forestry, or both. Land in the vicinity of the I-84/Paterson Ferry interchange zoned EFU, as well as land south of the railroad tracks, is the lowest priority land to consider for future urbanization. Morrow and Umatilla County is in the process of taking "exceptions" to Goals 11 and 14 and apply industrial zoning to allow urban-scale industrial uses and public facilities and services on rural lands.

Oregon Transportation Plan (2006)

The Oregon Transportation Plan (OTP) is a comprehensive plan that addresses the future transportation needs of the State of Oregon through the year 2030. The primary function of the OTP is to establish goals, policies, strategies and initiatives that guide the development of the State's transportation modal plans, such as the Oregon Highway Plan and Oregon Bike and Pedestrian Plan.

The OTP emphasizes:

- Maintaining and maximizing the assets in place
- Optimizing the performance of the existing system through technology
- Integrating transportation, land use, economic development and the environment
- Integrating the transportation system across jurisdictions, ownerships and modes
- Creating sustainable funding
- Investing in strategic capacity enhancements

The UMCD Combined IAMP and Subarea Plan will seek to maximize performance of the existing transportation system by, for example, the use of technology and system management before considering larger and costlier additions to the system.

Oregon Highway Plan (1999, last amended 2013)

The Oregon Highway Plan (OHP) is a modal plan of the OTP that guides ODOT's Highway Division in planning, operations, and financing. The UMCD Combined IAMP and Subarea Plan is being developed in coordination with ODOT so that projects, policies, and regulations proposed as part of the plan document will comply with or move in the direction of meeting the standards and targets related to safety, access, and mobility that are established in the OHP. Ultimately the UMCD Combined IAMP and Subarea Plan will need to be found consistent with the OHP and will be reviewed by the Oregon Transportation Commission (OTC) for adoption. If adopted, it will be one of the many special facility plans that have amended the OHP over the years.

Policies in the OHP emphasize the need to efficiently manage the highway system to increase safety and to extend highway capacity, partner with other agencies and local governments, and use new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The following policies, in particular, are relevant to the Combined IAMP/Sub-Area Plan.

Policy 1A: State Highway Classification System

The OHP classifies the state highway system into four levels of importance: Interstate, Statewide, Regional, and District. ODOT uses this classification system to guide management and investment decisions regarding state highway facilities. The system guides the development of facility plans, such as the Combined IAMP/Sub-Area Plan, as well as ODOT's review of local plan and zoning amendments, highway project selection, design and development, and facility management decisions including road approach permits. Interstate 84 (I-84) and I-82 are interstate freeways that are part of the National Highway System (NHS). The purpose and management objectives of these highways are provided in Policy 1A, as summarized below.

- **Interstate highways** provide connections between major cities in a state, regions of the state, and other states. A secondary function in urban areas is to serve regional trips within the urban area. Their primary objective is to provide mobility and, therefore, the management objective is to provide for safe and efficient high-speed continuous-flow operation in urban and rural areas.

In addition to the state highway classification system, I-84 and I-82 are freight routes as discussed under Policy 1C.

Policy 1B: Land Use and Transportation

Policy 1B applies to all state highways. It is designed to clarify how ODOT will work with local governments and others to link land use and transportation in transportation plans, facility and corridor plans, plan amendments, access permitting and project development. Policy 1B recognizes the need to find balance between serving local communities (accessibility) and the through traveler (mobility) on state facilities. 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.

Policy 1C: State Highway Freight System

The primary purpose of the State Highway Freight System is to facilitate efficient and reliable interstate, intrastate, and regional truck movement through a designated freight system. This freight system, made up of the Interstate Highways and select Statewide, Regional, and District Highways, includes routes that carry significant tonnage of freight by truck and serve as the primary interstate and intrastate highway freight connection to ports, intermodal terminals, and urban areas. I-84 and I-82 carry this designation and consequently higher highway mobility standards than other statewide highways. In addition, both highways have recently been designated “Reduction Review Routes,” where proposed activities (including those proposed in planning documents approved by a public agency) that will alter, relocate, change or realign these facilities must be reviewed for possible “Reduction of Vehicle-Carrying Capacity.” New Oregon Administrative Rule 731-012-0010 explains the review process and requirements.⁵

Policy 1F: Highway Mobility Policy

Policy 1F sets mobility targets for ensuring a reliable and acceptable level of mobility on the state highway system. The targets are used to assess system needs as part of long range, comprehensive planning transportation planning projects (such as this Combined IAMP/Sub-Area Plan), during development review, and to demonstrate compliance with the Transportation Planning Rule (TPR).

Significant amendments to Policy 1F were adopted at the end of 2011. The revisions were made to address concerns that state transportation policy and requirements have led to unintended consequences and inhibited economic development. Policy 1F now provides a clearer policy framework for considering measures other than volume-to-capacity (v/c) ratios for evaluating mobility performance.⁶ Also as part of these amendments, v/c ratios established in Policy 1F were changed from being standards to “targets.” These targets are to be used to determine significant effect pursuant to TPR Section -0060. Table 1 includes the mobility targets include for the state facilities in the IMSA.

⁵ September 2013 OHP text amendments provide the following explanation: “The 2003 legislature adopted changes to Oregon Revised Statutes (ORS) 366.215. This statute identifies the Oregon Transportation Commission’s authority to build and modify state highways. The statute states that that the Commission may not permanently reduce the ‘vehicle-carrying capacity’ of an identified freight route unless safety or access considerations require the reduction or a local government requests the reduction. In the context of this statute, ‘vehicle-carrying capacity’ references the vertical and horizontal clearance for larger vehicles. Depending on the size and weight of a truck, oversized vehicles are issued permits on an annual or trip specific basis.

The need to protect existing vertical and horizontal clearance is different from the mobility function of the State Highway Freight System. The designated Reduction Review Routes identify where the Department will apply the OAR 731-012-0010 review of vertical and horizontal clearance.”

⁶ The v/c may be the actual or projected rate of flow on a designated lane group during a specific time period (e.g., p.m. peak hour). A v/c ratio over 1.0 indicates the road or intersection is over-capacity; a v/c ratio under 1.0 indicates there is still room to accommodate additional vehicles. Definition from ODOT’s *Analysis Procedures Manual*, June 2007.

Table 1. State Facility Mobility Targets in IMSA

I-84	0.70 v/c
I-82	0.70 v/c

Policy 1G: Major Improvements.

This policy requires maintaining performance and improving safety on the highway system by improving efficiency and management on the existing roadway network before adding capacity. The state’s highest priority is to preserve the functionality of the existing highway system. Tools that could be employed to improve the function of the existing interchanges include access management, transportation demand management, traffic operations modifications, and changes to local land use designations or development regulations.

After existing system preservation, the second priority is to make minor improvements to existing highway facilities, such as adding ramp signals, or making improvements to the local street network to minimize local trips on the state facility.

The third priority is to make major roadway improvements which could, in the case of interchange improvements, include adding lanes or reconfiguring on- or off- ramps. As part of this planning process, Umatilla County and Morrow County will work with ODOT to determine how future improvements at the interchanges can implement this policy.

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. As part of this planning process, Umatilla County and Morrow County will identify improvements to the local road system that support the planned land use designations in the vicinity of the interchanges and that will help preserve capacity and ensure the long-term efficient and effective operation of the interchanges.

Policy 3A: Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing, and type of road intersections on state highways to ensure the safe and efficient operation of state highways consistent with the classification of the highways.

Action 3A.2 calls for spacing standards to be established for state highways based on highway classification, type of area, and posted speed. Tables in OHP Appendix C present access spacing standards which consider urban and rural highway classification, traffic volumes, speed, safety, and operational needs. As shown on Table 17 in the OHP, the spacing standard from the I-84 and I-82 interchanges to the first major intersection of a crossroad is 1,320 feet.

The access management spacing standards established in the OHP are implemented by access management rules in OAR 734, Division 51, addressed later in this report.

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 existing interchanges, provide safe and efficient operations between connecting roadways, and minimize the need for major improvements. Consistent with this policy, the UMCD Combined IAMP and Subarea Plan planning process will include developing and analyzing alternatives for optimizing the function and capacity of the existing interchanges prior to selecting a package of improvements that will comprise a preferred alternative.

The counties' role in access management includes the following: "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)." An outcome of this planning process will be local TSP and regulatory amendments consistent with the recommendations in the Combined IAMP/Sub-Area Plan, which will include an access management plan, identified funding, and local street network improvements necessary to implement the preferred package of improvements for the three interchanges.

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. I-84 and I-82 are designated Freight Routes. A principal function of the interchanges is to accommodate safe and efficient freight movements by providing free-flow movements for through-traffic on the Interstate system and for traffic accessing existing (and future planned) industrial areas.

Transportation Planning Rule (OAR 660-12)

The Transportation Planning Rule (TPR) implements Goal 12 (Transportation) of the statewide planning goals. The TPR contains numerous requirements governing transportation planning and project development. The TPR provides the connection between local development codes and access management, coordinated land use review procedures, and other standards, allowances, and requirements to protect road operations and safety. Recommended implementation measures for the UMCD Combined IAMP and Subarea Plan may entail county code amendments to ensure TPR provisions as well as IAMP recommendations are captured in the code.

Section -0045

OAR 660-012-0045 requires each local government to amend its land use regulations to implement its TSP. It also requires local government to adopt land use or subdivision ordinance regulations

consistent with applicable federal and state requirements “to protect transportation facilities, corridors and sites for their identified functions.”

Local compliance with -0045 provisions is achieved through a variety of measures, including access control measures, standards to protect future operations of roads, and expanded notice requirements and coordinated review procedures for land use applications. Local development codes should also include a process to apply conditions of approval to development proposals, and regulations ensuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities, and performance standards of facilities identified in the TSP.

The TPR does not regulate access management. ODOT adopted OAR 734-051 to address access management and this planning project and outcomes will need to be consistent with the Access Management Rule. Requirements include reviewing existing access points within at least one-quarter mile of interchange ramps. See the review of OAR 734-051 in the next section for a review of these access management rules.

Section -0060

The most recent amendments to TPR, effective January 1, 2012, include new language in Section -0060 that allows a local government to exempt a zone change from the “significant effect” determination if the proposed zoning is consistent with the comprehensive plan map designation and the TSP.

Access Management Rule (OAR 734-051)

Oregon Administrative Rule (OAR) 734-051 defines the State’s role in managing access to highway facilities in order to maintain functional use and safety and to preserve public investment. The rule includes spacing standards for varying types of state roadways and criteria for granting right of access and approach locations onto state highway facilities.

Amendments to OAR 734-051 were adopted in early 2012 based on passage of Senate Bill 1024 and Senate Bill 264 in the 2010 and 2011 Oregon Legislature respectively. The amendments were intended to allow more consideration for economic development when developing and implementing access management rules, and involved changes to how ODOT deals with approach road spacing, highway improvements requirements with development, and traffic impact analyses requirements for approach road permits. Senate Bill 408, which passed in the 2013 legislative session and becomes effective January 1, 2014, is expected to result in further rulemaking. This bill provides new requirements for development of facility plans and directs ODOT to develop an access management strategy⁷ for each highway modernization or improvement project. ODOT must develop key principles for each facility plan, which will be used to evaluate how abutting properties may retain or obtain access to the state highway during and after plan implementation. In

⁷ The development of this LAMP, a planning-level document, will not result in an “access management strategy,” which is more specifically tied to project development and construction of improvements.

developing the key principles, the department must also develop a methodology to weigh the benefits of a highway improvement to public safety and mobility against the locally adopted TSP and land uses permitted in the local comprehensive plan, as well as the economic development objectives of affected real property owners who require access to the state highway. If a facility plan identifies the need to modify, relocate or close existing private approaches, the plan must include key principles for managing access to the state highway and a timeline for plan implementation. Each facility plan also must document that there was collaborative discussion and agreement between the department and the affected cities and counties regarding the location of county roads and city streets that intersect a state highway within the study area.

OAR 734-051-4020 (Standards and Criteria for Approval of Private Approaches)

New spacing standards were established in 2012 for new or modified approaches to statewide highways⁸ but spacing standards related to interchanges (spacing of tapers between interchanges, spacing between ramp tapers and approaches or intersections with left-turns) were not amended.⁹ The amendments also allow access management plans (AMPs) and IAMPs to establish spacing standards that may take precedence over the highway/approach spacing standards in the rule.¹⁰

Interchange improvements that are proposed in the IAMP will need to meet or improve, “by moving in the direction of,” the access management spacing standards by means of an access management strategy, plan, or mitigation proposal.¹¹

OAR 734-051-7010 (Access Management Plans and Interchange Area Management Plans)

Section -7010 of OAR 734-051 identifies when, how and why ODOT will develop access management plans and interchange area management plans for particular sections of a highway. An IAMP must comply with the following criteria, unless it can be demonstrated that a criterion is not applicable.

- Be developed no later than the time an interchange is designed or is being redesigned.
- Identify opportunities to improve operations and safety in conjunction with roadway projects and property development or redevelopment and adopt policies provisions, and development standards to capture those opportunities.
- Include short, medium, and long-range actions to improve operations and safety within the designated study area.

⁸ Tables 3-6 in OAR 734-051

⁹ Tables 7-10 and Figures 1-4 in OAR 734-051

¹⁰ Pursuant to OAR 734-051-4020(8)(b)(C), spacing standards in AMPs and IAMPs may take precedence only over spacing standards in Tables 3-5 of OAR 734-051.

¹¹ OAR 734-051-1070(2), (3), and (4)

- 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.
- Provide adequate assurance of the safe operation of the facility through the design traffic forecast period, typically twenty (20) years.
- Consider existing and proposed uses of all the property within the designated study area consistent with its comprehensive plan designations and zoning.
- Be consistent with any applicable access management plan, corridor plan or other facility plan adopted by the commission.
- Include 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.

The UMCD Combined IAMP and Subarea Plan will include an access management plan that will meet or move in the direction of compliance with spacing standards in OAR 734-051 and its development will be consistent with the applicable criteria established for IAMPs in the rule. To be consistent with the direction provided in Senate Bill 408, the development and evaluation of alternatives to address identified transportation system deficiencies should acknowledge the impacts and benefits to the local economy, as measured by adopted local land use designations (allowed uses) and economic development objectives of the property owners. The IAMP access management plan should “include level of detail sufficient to inform affected real property owners of the potential for the modification, relocation or closure of existing private approaches within the area (§4(3)(c)).” The location of local streets that intersect with the state highway system in the vicinity of the subject interchanges will be discussed with the counties during the existing conditions phase of the project.

Highway Design Manual

The Highway Design Manual includes ODOT standards and procedures for the location and design of new construction, major reconstruction, and resurfacing, restoration or rehabilitation (3R) projects. The Highway Design Manual is used for all projects that are located on state highways. Section 9.6, Interchange Design, includes the design standards, guidelines, and processes for designing interchanges for State Highways. ODOT, through the Engineering Services Unit, and FHWA must approve the reconstruction of an interchange on the Interstate system. The proposed interchange design must be prepared on the Standard Interchange Layout Sheet by the Engineering Services Unit or authorized representative. The approved design is then used for contract plans. Proposed modifications as a result of this planning process to the I-82/Lamb Road and two I-84 interchanges are subject to the standards in 9.6.1, Freeway Interchange Design.

LOCAL PLANNING DOCUMENTS

US Army Umatilla Chemical Depot Redevelopment Plan (2010)

In July 2010, the Local Reuse Authority (LRA), made up of representatives from the Port of Morrow, Umatilla County, Morrow County, the Port of Umatilla, and the Confederated Tribes of the Umatilla Indian Reservation, unanimously approved the the Umatilla Chemical Depot Redevelopment Plan (“Redevelopment Plan”).¹² The Redevelopment Plan articulates the overarching goal of the project, which was to develop a plan to support economic development and job creation; environmental preservation, with an emphasis on the shrub-steppe habitat; and reuse to accommodate the needs of the Oregon National Guard.

The Redevelopment Plan designates land for agriculture, highway commercial uses, industrial uses, military training, and wildlife refuge. In particular, the plan includes:

- More than 5,000 acres for wildlife refuge and habitat protection;
- More than 7,000 acres for use by the Oregon National Guard for training grounds and facilities;
- About 1,075 acres for highway commercial/industrial uses;
- More than 2,000 acres for industrial grounds with approximately 942 acres of that property restricted to help preserve wildlife habitat; and
- More than 600 acres for agricultural use.

Land close to the existing UGB for the City of Irrigon currently designated for agricultural uses may be considered for urban uses and inclusion into the UGB in the future. However, the redevelopment plan only provides specific building sizes and employee numbers for the section of the site proposed to be reused for the Oregon National Guard Intermediate Training Complex (ITC). ITC facilities include the following:

- Company Supply and Administration (8,940 sq. ft.)
- Open bay barracks (570 beds including classrooms and laundry)
- Dining facilities (200 people per company) (13,500 sq. ft. Consolidated Dining Facility)
- ID Processing Center (1,044 sq. ft.)
- Field Maintenance Shop (6,144 sq. ft.. building plus vehicle parking area)
- M1 Abrams Tank Simulation Conduct of Fire Trainer (SIMCOFT) Facility
- Range Operations building (2,508 sq. ft.)
- Ammunition Holding Area

¹² http://umadra.com/f_redevelopment1.html

- Small Arms Live-Fire Range Complex
- Tank Crew Proficiency Course (TCPC) (two miles by 1 mile)
- Mobile Conduct of Fire Trainer Pad (M-COFT)
- Helipad
- Fuel Storage and issue point
- Supporting Infrastructure including utilities and roadways.

The estimated support staff for the ITC would be 63 employees and Table 2 below summarizes the facilities, soldiers trained, and land use requirements for Oregon National Guard reuse of the UMCD site.

Table 2. Oregon National Guard Staffing, Facilities, and Land Requirements

Facility	Annual Throughput Requirement	Firing Points/Lanes	Land Use Requirements
Intermediate Training Center	9,780 Soldiers	NA	100 acres
Ammunition Supply Point	NA	NA	35 acres
Field Maintenance Shop/Unit Training Equipment Site	NA	NA	10 acres
Range Operations and Maintenance Facilities	NA	NA	15 acres
Combat Pistol Qualification Course	196 Soldiers	15	553 acres
25m Zero Range	644 Soldiers	16	811 acres
Modified Record Fire Range	644 Soldiers	16	1,446 acres
Grenade Launcher Range	51 Soldiers	4	50 acres
Maneuver Training Area	3,685 Soldiers	NA	5,200 acres

The redevelopment report describes conditions of existing infrastructure including air transportation, rail transportation, electrical power, water, sewer, storm water, and roadways. The redevelopment plan recommends the following roadway policies.

Allows access, restricted where appropriate, to the redevelopment zones (Military Training, Wildlife Refuge, Industrial, Highway Commercial/Industrial);

Allows traffic to pass to and through UMCD for improved access associated with the City of Irrigon area;

Recognizes the security considerations of the Oregon National Guard;

Designates certain portions of the road system as County Right-of-Way (necessary, for example, through the wildlife refuge); and

Allows for the development and maintenance of the road system in a sustainable fashion, largely developed by the Oregon National Guard.

The redevelopment plan and implementation strategy do not identify needed infrastructure improvements. The plan specifically recommends that additional infrastructure analysis be

conducted in order to develop a separate Infrastructure Redevelopment Plan consistent with the proposed uses and implementation strategy.

The plan also addresses the process by which Depot land will be made available for redevelopment and notes that the land use designations suggested in the LRA Master Plan can be incorporated into the respective Morrow and Umatilla county comprehensive plans through a local plan amendment and adoption process. This local adoption process is currently taking place, after refinement of the land uses in the 2010 Redevelopment Plan was completed through the 2013 Land Use Analysis planning process (see review on p. 20 of this memorandum).

Recent Documents Associated with Depot Redevelopment

Preferred Development Plan (May 2013)

The Preferred Development Plan¹³ is based upon the negotiated Reuse Plan for the UMCD site that was completed on April 2, 2013. It identifies six major land use parcels and includes assumptions for the future type and intensity of development for these areas. It also anticipates the transportation investments, both upgrades to existing roadways and new facilities, that will be required to support the new development and outlines a phased approach for these improvements (p. 5). The analysis describes revenue opportunities that can support the costs of maintenance, marketing, management and operations (p. 6) and goes into detail regarding operating and capital costs associated with redeveloping the site.

The analysis also projects potential job creation at the UMCD site, based on industrial land absorption and occupied square footage over time. The financial model assumes the absorption and development of eight acres of industrial land annually, resulting in 50,000 square feet of new facilities developed annually. This, plus the absorption of 10,000 square feet of existing facilities beginning in Year 4 (when the facilities in the Demil Area are expected to be available), could result in more than 500,000 square feet of space being occupied By Year 10. Assuming, an industrial employment density, at the end of the fifteen year forecast period, the project could include between 600 and 900 on-site employees.

The future land use assumptions and employment projections from the feasibility analysis will be refined through the UMCD Combined IAMP and Subarea Plan planning process, in consultation with the Business and Operations Plan work.

Regional Economic Analysis (July 2013)

The Regional Economic Opportunities Analysis (REOA) report¹⁴ evaluates economic opportunities for the regional economy, defined as Morrow and Umatilla Counties, which are part of a larger

¹³ *Preliminary Development Feasibility Analysis* memorandum, Jeffrey Donohoe Associates, May 2013.

¹⁴ *Regional Economic Analysis Morrow and Umatilla Counties* report, Johnson Reid, LLC and Angelo Planning Group, July 2013.

economic region that includes the Tri-Cities area in Washington. The objective of the report is to identify suitable types of future development for the UMCD site. The analysis summarizes national, state and local trends, including an in-depth look at growth projections for Oregon's basic industries, state and regional employment projections, and commute patterns. The key economic development assets of the study area (p. 24) include the natural amenities of the Columbia Basin, availability of quality power, transportation linkages, proximity to a large educated work force, diversity of available land and economic development support from the port districts and Confederated Tribes of the Umatilla Indian Reservation.

The REOA concludes that future development on the site should focus on uses that can benefit from its unique attributes, as opposed to uses that can be readily accommodated on the region's existing employment land inventory. Ideal types of businesses include warehouse/distribution uses and the site, due to its size and location, could possibly host an agglomeration of such uses, as well as support retail necessary to support the potentially large-scale of industrial development. Additional commercial could capitalize on the regional accessibility of the site as well. The report notes that office tenants are likely only as part of industrial development and that a future power plant location should be on a portion of the site with less accessibility and lower visibility. An evaluation of specific potential industries is also included in the REOA, starting on p. 25.

The market analysis and site marketability and feasibility of the proposed uses from the REOA will inform the Business and Operations Plan currently under development.

Land Use Analysis (September 2013)

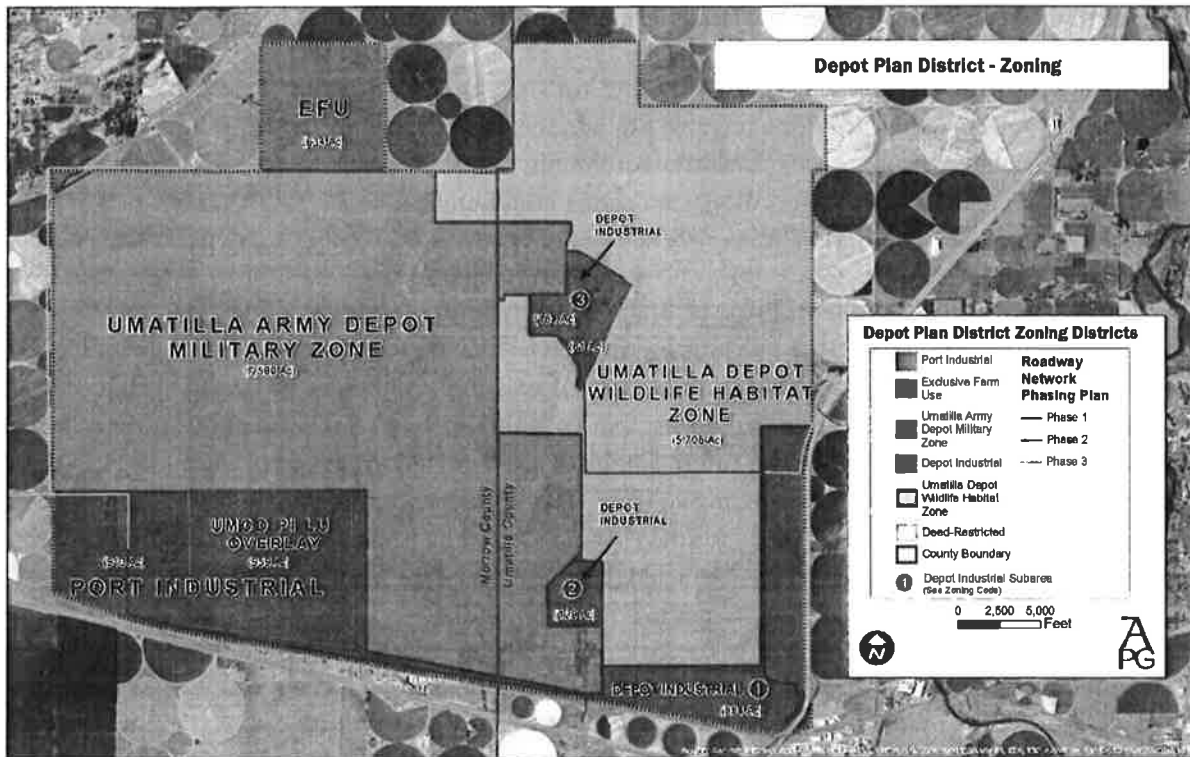
The Umatilla Army Depot Reuse Authority recently completed a Land Use Analysis as key step in the transformation of the UMCD property from its prior military service to a new, major employment center for Umatilla and Morrow Counties. This work was informed by the REOA and a transportation review, and included needed statewide planning goal exceptions that will enable new zoning and future land use entitlements. The Land Use Analysis is actually two documents, with similar background information supporting redevelopment of the UMCD but specific direction for each of the two counties regarding necessary land use actions.¹⁵

The Land Use Analysis work was coordinated with a Development Feasibility Analysis that evaluated development options for the UMCD site. The Land Use Analysis recommended a planning and zoning implementation approach for approximately 3,000 acres of industrial property. This approach included developing a new zoning district (Depot Industrial Zone) for the industrial properties in Umatilla County and modifying Port Industrial zoning requirements for future application on a UMCD site in Morrow County (see Figure 1). The REOA, the statewide land use planning goal exceptions (Goals 11 and 14) and the transportation strategy framework was accepted

¹⁵ Statewide Land Use Goal Exceptions for the Umatilla Army Depot, Umatilla County, Angelo Planning Group, September 2013 and Statewide Land Use Goal Exceptions for the Umatilla Army Depot, Morrow County, Angelo Planning Group, September 2013.

by the Local Reuse Authority (LRA) Board as the direction for future development on the UMCD property.

Figure 1: Proposed Depot Plan District



Site Development Plan ORNG Umatilla Training Center (June 2012)

The Site Development Plan for the Oregon National Guard (ORNG) Umatilla Training Center anticipates developing the former UMCD into the ORNG Umatilla Training Center cantonment, a transition that would require facility growth and expansion, including transient training (TT) barracks and officers quarters, along with TT unit operational facilities to support a brigade combat team-light (BCT-L) of approximately 3,300 troops. The ORNG Umatilla Training Center will be the new home of the ORNG Regional Training Institute (RTI) as it relocates from its present location in Monmouth, Oregon. Table 1 in the plan lists the assigned units and their required strengths; the 3,888 population figure shown includes the BCT-L troops, RTI student population, and full time staff needed to support the Training Center.

As summarized in the introduction section, the Site Development Plan provides narrative descriptions of existing conditions at the ORNG Umatilla Training Center cantonment and training area. The plan includes tables that reflect existing facilities and facility requirements based on the future stationing plan, and a future development plan that graphically illustrates potential solutions

to correct facility deficiencies and develop the site into a Maneuver Training Center-Light (MTC-L). Plan recommendations reflect the ORNG's needs for near term occupation and use of existing facilities to support training requirements, as well as the future development of transient training troop housing, dining facilities, and unit operational facilities, along with maintenance, storage, administrative, educational, maneuver/training areas, and small arms weapons ranges.

The plan's land use summary describes existing uses on the site (Section 3 Site Analysis). The Training Center currently provides training site administrative facilities, training facilities, TT unit operational facilities, maintenance facilities, community support facilities, and troop housing and dining facilities in support of the ORNG and units conducting Inactive Duty Training (IDT) and Annual Training (AT) at the MTC-L.

Section 4, Future Development Plan, includes development actions necessary for developing a MTC-L capable of supporting the billeting, logistics, live-fire, and maneuver training requirements of a BCT-L. Table 3 summarizes the square footage of existing facilities as compared the amount of square footage needed for the required assets; the Appendix includes a more detailed comparison of the existing and required assets. The future land uses are depicted in two graphics in the Appendix, one focused on the main cantonment area (177 acres) and the expansion area to the west (107 acres) and the other expanded to show plans for the training area. The preferred future land use associated with the Future Development Plan depicted in these graphics may be modified once federal jurisdiction is transferred and ORNG boundaries are clarified.

The Future Development Plan is a conceptual plan to direct inner agency funding requests and provide future development guidance. It is a 25-30 year plan; securing funding for implementation is variable year-to-year but, because the site/facility needs have been prioritized in the long-range plan, funding may be secured at any time.

Umatilla County Westland Road/I-84/I-82 Interchange Area Transportation Plan (2004)

The Umatilla County Westland Road/I-84/I-82 Interchange Area Transportation Plan ("Transportation Plan") was adopted by Umatilla County as a refinement to the County's TSP.¹⁶ It is a sub-area study that addresses specific land uses and transportation issues in the Westland Road/I-84/I-82 interchange area and includes a list of transportation improvements needed to support the 20-year employment growth expected in the study area, as well as land use policy recommendations. The study area, shown in Figure 1-1 of the Transportation Plan, extends to the Westland Road/Agnew Road intersection in the north, includes the I-82/Lamb Road/Westland

¹⁶ http://www.co.umatilla.or.us/planning/Planning_Documentss.html

Road interchange, and extends south of the Westland Road/I-84 interchange to Noble Road. The major focus within the 640-acre study area is land that is zoned commercial and industrial.¹⁷

The Existing Conditions chapter includes a summary of roadway characteristics within the study area (Table 31 Street Inventory), a driveway inventory (Figures 3-2 to 3-7, Table 3-2), and intersection lane geometry and traffic controls at the subject interchanges (Figure 3-7). A summary of existing zoning, a land inventory, and employment forecasts (2020) are included in this chapter and were used to arrive at a “low traffic forecast scenario.” The amount of future industrial and commercial land assumed to be developed in 2023 under this scenario was based on applying a 0.62 percent annual employment growth rate for Umatilla County, consistent with the data from the State Office of Economic Analysis (p. 4-6). The Transportation Plan also developed a “high forecast scenario” (Section 4.7) for the planning horizon, assuming build out of approximately 23% of the available industrial land (in warehouse development) and 30,000 square feet of commercial (double the amount of the “low traffic” scenario). Finally, a “full build out” methodology is explained, assuming every potentially developable parcel within the study area develops. Future trip generation was calculated for all three scenarios and the Transportation Plan concludes that all the roadways within the study area should be adequate to serve all future development with the exception of the needed alignment improvement of the Westland Road/Lamb Road/Walker Road intersection (p. 4-15). All of the study intersections are also projected to operate at acceptable levels of service and v/c ratios, with the exception of the Lamb Road/Walker Road/Westland Road intersection.

Section 5.0, Development of Improvements, includes recommendations to address existing and future deficiencies. The proposed realignment improvements at the Westland Road/Lamb Road/Walker Road intersection were recently completed in 2013. Other recommended improvements include improvements to Westland Road (p. 5-1) and the realignment of Stafford Hansel and access management south of I-84 (p. 5-5 - 5-7).

Morrow County Comprehensive Plan (1986)

The Morrow County Comprehensive Plan describes existing conditions and establishes goals, policies, and implementation measures for topics including citizen involvement, land use, transportation and urbanization. Transportation policies have since been updated by adoption of the Morrow County Transportation System Plan (TSP), which now serves as the Transportation Element of the County Comprehensive Plan. Policies that are relevant to land use and transportation planning in the IMSA are discussed below.

The County’s Goal 1 policies (p. 31) are consistent with the State’s, which requires that the County has a citizen involvement process that allows for the opportunity for citizens to be involved in all phases of the planning process. The UMCD Combined IAMP and Subarea Plan planning process will be aided by TPAC. Local planning and public works representation on this committee will

¹⁷ Note that this plan’s study area excludes the two parcels zoned Limited Rural Light Industrial and Light Industrial Limited Use Overlay that lay east of the I-84/Army Depot, but includes areas zoned Light Industrial and Rural Tourist Commercial further east, along Westland Road.

ensure that Morrow County interests are included in the planning process. Membership on TPAC will also include Confederated Tribes of the Umatilla Indian Reservation representation, as well as other key property owners, business owners, and interested citizens who may have a vested interest in the planning project. Membership on the TPAC will also reflect county interests as they relate to the function and design of the interchanges and how the local roadway system is designed to access these facilities. Finally, a probable outcome of the project are specific recommended policy, and possibly regulatory, changes to county plans and transportation documents. Amendments to local plans and code provisions will require a legislative adoption process, consistent with adopted Morrow County policies, as well as land use procedures, and Statewide Planning Goal 1.

As stated earlier, there is designated EFU land in the vicinity of all the interchanges south of I-84 and it is the predominant land use at the I-84/Paterson Ferry Road interchange. Land designated EFU is restricted by a minimum lot size, as well as the types of uses allowed, specified in the County's Zoning Ordinance. Policies in the Agricultural Lands Element in the Comprehensive Plan obligate the County to preserve agricultural lands, to protect agriculture as the County's main economic enterprise, and to balance environmental and other economic considerations. EFU policies that limit development have implications for the expected demand placed on the interchanges in this area, in particular the Paterson Ferry interchange. See the section on Statewide Planning Goal 3 in this memorandum for further discussion of protecting agricultural land and its relationship to this planning process.

The General Land Use Element in the Comprehensive Plan explains general land use categories but also establishes a one-map system for comprehensive plan designations and zoning, showing how land use categories and zones correspond. Implementation measures identified in the General Land Use Element require that all proposed plan and zone changes demonstrate that they are consistent with Statewide Planning Goals and County plan policies and procedures.

The Urbanization Element of the County Comprehensive Plan provides a summary of the Urban Area Comprehensive Plans for the five incorporated cities in the county: Boardman, Irrigon, Ione, Heppner, and Lexington. The Urbanization Element does not establish additional goals and policies then what is established in each of these cities' individual plans.

Morrow County Transportation System Plan (2012)

The County has jurisdiction over design, construction, and maintenance of county roadways within its boundaries, as well as for non-state facilities located outside of city limits but inside the urban growth boundary area. The Morrow County TSP¹⁸ guides the management of existing transportation facilities and the design and implementation of future facilities in the County for the next 20 years. This TSP constitutes the transportation element of the county's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule (TPR) (OAR 660-12-045). It identifies transportation projects for implementation under a Morrow County Capital

¹⁸ <http://morrowcountyoregon.com/planning/tsp/2012%20TSP%20Table%20of%20Contents.htm>

Improvement Program (CIP) and inclusion in the Oregon Department of Transportation (ODOT) Statewide Transportation Improvement Program (STIP).

Chapter 2 of the TSP contains the goals and policies that guide transportation system planning and development in the County. Policies under Goal 1 address how the County will coordinate with other transportation providers, including ODOT and the Port of Morrow, to meet the need of transportation system users within the County. Goals and policies in the adopted TSP that are most relevant to the UMCD Combined IAMP and Subarea Plan are those that address the relationship between transportation and planned land uses, access, transportation mobility, and safety. Adopted County Goals and objectives related to these topics, as well as others that may have bearing on interchange planning, are included below.

Goal 2 Land Use

Support land use planning with appropriate transportation improvements.

Policy 2.1. Design all new roadways to meet county and state adopted road design standards, as a minimum.

Policy 2.2. Identify and reserve future road corridors.

Policy 2.3. Require new development proposals, plan amendments, and zone changes to conform to the TSP as required by the TPR.

Policy 2.9. Utilize adopted ODOT access management standards for State facilities and proposed access management standards in this TSP for County facilities.

Policy 2.10. Request an exception to any statewide goal before the construction of roads, highways, and other transportation facilities and improvements not otherwise allowed outright in resource lands (EFU and FU zones).

Goal 3 Economic Development

Enhance economic development through transportation improvements.

Policy 3.1. Support transportation system improvements that contribute to economic development opportunities.

Policy 3.2. Pursue opportunities to improve access to business and employment centers for all modes of travel.

Policy 3.3. Pursue opportunities to improve access to tourist and recreation sites, such as the Columbia River Heritage Trail and the County Off-Highway Vehicle (OHV) Park, for all modes of travel.

Goal 4 Quality of Life

Promote a high quality of life in Morrow County by providing a well-developed transportation system that is appropriate to its surroundings.

Policy 4.2. Maintain the rural character of the county in the areas outside the designated urban areas.

Goal 5 Roadway System

Provide and maintain a safe, efficient roadway system to provide mobility throughout the County.

Policy 5.1. Design and construct all new roadways to the county's adopted road design standards, as a minimum.

Policy 5.7. Improve connectivity within the County by identifying and working to improve additional road corridors.

Goal 6 Bicycle, Pedestrian, Equestrian, and Transit Modes

Support the use of other modes of transportation (bicycles, pedestrians, equestrians, and transit) through effective transportation improvements.

Policy 6.1. Include design features, such as widened shoulder areas to accommodate bicycles, pedestrians, and equestrians in the county roadway design standards.

Policy 6.3. Continue the development of the Columbia River Heritage Trail, and other similar facilities, for recreational uses.

Goal 8 Freight and Goods Movement

Promote efficient movement of freight and goods throughout the County.

Policy 8.3. Encourage improvements to rail freight facilities by encouraging improvement to intermodal connections.

Goal 9 Finance

Use a fiscally sound approach to financing transportation system improvements.

Policy 9.1. Develop a financial strategy for funding transportation system improvements.

Policy 9.2. Explore innovative funding methods, such as system development charges, to finance transportation system improvements.

Policy 9.3. Coordinate with other transportation users and providers to seek joint funding opportunities for transportation system improvements.

Policy 9.4. Actively seek available funding sources for transportation system improvements.

In addition to these policies, the County also adopted policy language pertaining to the Port of Morrow and the I-84/US 730 interchanges, when the IAMPs for these interchanges were adopted by reference as elements of the County’s Transportation System Plan. A likely outcome of this planning process will be recommendations for new or updated county policies that support UMCD Combined IAMP and Subarea Plan findings and recommendations for improvements at the interchanges. Interchange-related policies will be recommended for adoption by the counties, anticipating a legislative action that would amend each county’s transportation policies.

An inventory of the existing transportation system is provided in Chapter 3. The UMCD is noted as occupying a large portion of northern Morrow County and having an effect on land use, road placement, and traffic patterns. The Union Pacific line paralleling I-84, a spur of which serves the UMCD, is mentioned under rail freight services. Chapter 3 also includes an overview of buildable lands. Future development on buildable lands located south of Irrigon in the Division Street-4th Road area and west of Irrigon, north of U.S. 730, as identified in the TSP, will hasten the need for north south connectivity through the IMSA and will likely have traffic implications at the I-84/Paterson Ferry Road interchange.¹⁹

Also acknowledged is the critical role access management will play in accommodating the trips generated from future growth; Chapter 6 of the TSP includes recommend minimum distance between connections for roads and highways elsewhere in the County (p. 3-10). It is expected that the UMCD Combined IAMP and Subarea Plan will include an access management plan for each interchange studied. Chapter 3 also includes an overview of the “Port of Morrow System,” describing the three industrial sites (Boardman Industrial Park and East Beach Industrial Park, Airport Industrial Park and South Morrow Industrial Park). The areas zoned Morrow County General Industrial within the study are are not specifically mentioned

State highways are described as “the backbone of Morrow County’s roadway system in” used for “virtually all of the through traffic in the County,” as they connects each of the County’s cities and other population centers. State highway facilities that are the subject of this planning study, as summarized in the TSP, are included in Table 3.

Table 3. State Highways Serving Morrow County within the IMSA

State Highway Designation	Location Served	Highway Category
I-84 (Old Oregon Trail State Highway No. 6)	East of US 730 to Umatilla County, to I-80 and I-15, Boise and Salt Lake City.	Interstate Highway
US 730 (Columbia River Highway State Highway No. 2)	From I-84, east through Irrigon to Umatilla County.	Regional Highway

¹⁹ Existing and future land uses will be explored in Technical Memoranda #3 and #4.

The TSP confirms that the County relies on ODOT's adopted access management policies to control access on state highways.

The 2003 ADTs for the state highways and selected local roadways within the County are included in Chapter 3 Existing Conditions and Inventory but new traffic counts have been recorded for this project and will be presented in Technical Memorandum #4. The TSP concludes that, with such low V/C ratios on the County roads known to carry the highest traffic volumes, existing capacity deficiencies on any County roadways are unlikely, despite the fact that limited traffic counts are available for county roads (3-24). Table 3-9 in the TSP reflects the OHP V/C standards for I-84; Table 3-10 summarizes existing (2005) v/c ratios on state highways in the County and shows that traffic movement on I-84 is well within standards.²⁰

Chapter 4 contains the expected future conditions that will impact the transportation system, based the expected growth in population and travel demand, and proposed improvements. County population in 2030 is expected to show an increase of 922 residents, for a total of 12,455 residents (p. 4-2).²¹ For purposes of future transportation demand forecasting, adjustments to the population-based rates of growth were made to reflect the greater proportion of employment, medical and commercial services available in north County. Three different annual growth rates were developed to estimate 2030 daily traffic volumes: a 3.0%/year rate was assigned to the north county; 2.0% in mid-county from approximately Baker Lane to Willow Creek Road, and 1.0% per year in south county. As stated in the TSP, these growth rates are consistent State of Oregon's efforts to promote employment growth in rural counties and are generally consistent with the adopted TSPs in the cities. ODOT prepares 20-year forecasts of average daily traffic (ADT) on all state highways, which are also used for projecting future travel demand. On I-84, projected average annual growth rates ranged from 1.9% near Boardman to 2.5% near the Port of Morrow interchange, rates which the TSP concluded were generally consistent with the annual rate of 3.0% the County's methodology applied in the north County.

The TSP anticipates that the Port of Morrow will bring "many hundreds of jobs" to the County within the 20-year time planning horizon of the TPS (p. 4-1). The plan also notes that the Port of Morrow is interested in other sites in Morrow County outside of the four established industrial parks (the Boardman and East Beach Industrial Parks, the Airport Industrial Park, and the south Morrow Industrial Park) and is actively seeking opportunities to increase industrial development. The TSP documents that the UMCD is a "sizable opportunity" for future redevelopment and reuse and notes that substantial planning and engineering work will be necessary to remove unexploded munitions and provide an adequate roadway system to accommodate heavy vehicle and personnel movement. In addition, future planning and TSP amendments will need to identify needed improvements and an implementation strategy (p. 4-2).

²⁰ I-84 east of Paterson Ferry Road is at 0.38 V/C.

²¹ Year 2030 population projections were estimated by applying the 2.5% annual growth rate to the 2004 State's Office of Economic Analysis (OEA) certified population estimates for the County and its cities.

Roadway performance was evaluated using volume to capacity (V/C) criteria; future V/C ratios were calculated for existing and projected 2024 traffic volumes (Table 4-2). The only segment of I-84 that approaches its v/c threshold is I-84 east of the Paterson Ferry interchange, where the estimated existing v/c ratio of 0.48 is projected to increase to 0.66. Estimated 2024 v/c ratios in the vicinity of the study intersections that are at or above 0.10 include Paterson Ferry Road (2024 V/C of 0.16 north of I-84).

To facilitate efficient traffic movement and establish future local street networks, the TSP includes a series of figures that present a conceptual street network plan for buildable lands in north County. Figure 4-9 is a placeholder for the Umatilla Depot Area Transportation Plan.

Chapter 5, Future Transportation System Options Analysis, includes the major Port of Morrow projects that the Port identified as necessary to increase capacity, allow for economic development, increase safety, and improve intermodal access (Table 5-2). These projects are also included in Chapter 6 (Table 6-8) and include: Extended ramps and taper lanes on I-84 westbound between I-82 and a point west of the I-84/Army Depot Interchange; Merge/diverge lanes eastbound on I-84 between a point west of the I-84/Army Depot Interchange and the I-84/I-82 Interchange; Modifications to the connector ramps at the I-84/I-82 Interchange to provide two-lane on or off ramps, and; Improvements to the I-84/Army Depot Interchange to facilitate I-82/I-84 merge/diverge lanes. At the time that the last TSP update was adopted these projects were neither funded nor scheduled.

Chapter 6, Transportation System Plan, includes land use development requirements, including the transportation improvements required under the TSP, for most types of development permits (Table 6-5). The transportation requirements fall into the basic categories of access and system improvements. A transportation impact analysis (TIA) must be submitted as part of the development approval process for proposed developments that generate more than 400 daily passenger car equivalent trips. The TSP lists the information necessary to include in a TIA (p. 6-9) and contains guidelines to complete a TIA (Appendix C).

Morrow County Zoning Ordinance (Revised, 2001)

There are two Morrow County zoning designations within the IMSA in the vicinity of I-84/Paterson Ferry Road: General Industrial (M-G) and Exclusive Farm Use (EFU). Uses permitted in the EFU zone are primarily restricted to uses that are associated with farming zone; consistent with state law, the county has identified certain uses that are permitted outright, while others require a conditional use permit. The parcels zoned General Industrial are developed with uses consistent with that zone. The county is in the process of modifying the Port Industrial (P-I) zoning chapter and applying that zone to an area in the vicinity of the I-84/Army Depot interchanged that is accessed from Gun Club Lane that Permitted uses and development requirements of these zones will be explored in Technical Memorandum #3. The existing and future development potential of land zoned for farm uses and industrial uses will be explored in Technical Memorandum #4.

Article 4 includes the County's access management standards. Section 4.010.F identifies that access within the influence area of existing or proposed state highway interchanges is regulated by standards in OAR 734-051 and that, at the time of redevelopment, change of use, or highway construction, reconstruction or modernization at the existing interchanges, the goal is to meet or move in the direction of meeting the appropriate spacing standards. Pertinent to the local roadway system that will serve future users at the UMCD site, Table 4.010-2 includes the standards for public or private access, based on the classification of the roadway. Section 4.035 includes the submittal requirements for land use development applications (Table 4.035-1). A TIA is required for all types of development that is expected to generate 400 daily trips or more; the County Planning Commission, County Planning Director or County Public Works Director or designee may require a TIA for any level of development.

Pursuant to Article 8, Amendments, any amendments to the code text or zoning map must be consistent with the County Comprehensive Plan (Section 8.050.C). Article 8 also requires that applicants demonstrate that public services and facilities are sufficient to support a change in designation, consistent with the Transportation Planning Rule, 660-012-0060 (Section 8.050.B). Where the recommendations of the UMCD Combined IAMP and Subarea Plan are not consistent with locally adopted plans and ordinances the plan will include recommended amendments to ensure consistency.

Morrow County Subdivision Ordinance (Revised, 2005)

The County Subdivision Ordinance contains the minimum standards governing land development approval, including subdivision and partitioning, necessary to implement the land use and transportation policies contained within the County Comprehensive Plan and TSP.

Partitions within the EFU Zone are required to provide for the continuation of the existing commercial agricultural enterprises within the area as well as meet the minimum lot requirements, with few exceptions, as detailed in Section 5.120 of the Subdivision Ordinance.

County roadway standards are included in Section 8.020; any proposed local roadway improvements included in the UMCD Combined IAMP and Subarea Plan must comply with the Roadway Standards table or seek an amendment to these standards as part of plan adoption. Requirements for developments with access onto state highways are included in Subsection 8.020.T; the County Subdivision Ordinance reinforces that applications for development with access onto state highways must be provided to ODOT for review to ensure consistency with these state standards and that access within the influence area of existing state highway interchanges is regulated by standards in OAR 734-051. Under this Subsection is also the County access permit requirement for land use development proposing access onto a County road and a table with the access spacing standards. Access permit requirements for land use development are outlined in Section 4.010 of the Morrow County Zoning Code.

A Master Development Plan is required for all developments more than 100 parcels and for all phase or planned unit developments. One of the requirements of a Master Development Plan is a transportation impact analysis (TIA); if the subject property includes frontage on a state highway, the TIA must meet ODOT traffic impact study requirements (Section 3.070.C).

Umatilla County Comprehensive Plan (1983, Amended)

The policies developed as part of the comprehensive planning process for the county are found in Chapters 4-17 of the plan document. Those policies that are relevant to land use and transportation planning in the IMSA are provided below.

Chapter 4: The Planning Process

8. Conversion of resource lands to non-resource uses shall follow procedures for plan amendments and Section 19a, Chapter 827 of Oregon Laws.

9. Conversion of resource lands (agricultural) to a non-resource designation shall follow procedures described in the Plan Map Section for Non-Resource lands. Umatilla County will not permit lands designated as Non-Resource to be converted to another designation that would allow a more intense level of use.

A portion of the IMSA under Umatilla County jurisdiction falls within a West County Irrigation District (the Westland Irrigation District) and is considered resource/agricultural land by the county. The policies above establish a planning process that ultimately serves to protect designated resource lands from more intensive types of development.

Chapter 5: Citizen Involvement

1. Provide information to the public on planning issues and programs, and encourage continuing citizen input to planning efforts.

3. The County will, when revising and updating the Plan, appoint area citizen committee with members representing the broadest possible interest and concerns to take advantage of their valuable information and knowledge.

The UMCD Combined IAMP and Subarea Plan planning process will be aided by an advisory committee (TPAC). County planning and public works representation on this committee will ensure that Umatilla County interests are included in the planning process. The makeup of TPAC will also include key property owners, business owners, and tribal representative who have a vested interest in the planning project. Membership on the TPAC will reflect county as well as land-owner interests, as they relate to the function and design of the interchanges. Finally, a probable outcome of the project are recommendations for specific policy, and possibly regulatory, changes to county plans and transportation documents. Amendments to county plans and code provisions will require a

legislative adoption process, consistent with adopted county policies, as well as land use procedures, and Statewide Planning Goal 1.²²

Chapter 6: Agriculture

2. Establish four agricultural designations with several types of management regulations to protect and maintain the existing agricultural economy character of the county. The following Comprehensive Plan Designations are identified and corresponding preservation measures listed (see Plan and Zoning Map for locations of agricultural designations and EFU zone types):

(b) West County Irrigation District - 40 acre minimum lot parcel size;

As stated earlier, part of the IMSA has a county exclusive farm use (EFU) land use designation. This land is designated as part of the West County Irrigation District and is restricted by a minimum lot size, as well as the types of uses allowed (see discussion under the Statewide Planning Goal 3 section in this memorandum).

Chapter 9: Air, Water and Land Quality

1. Discharges from existing and future developments shall not exceed applicable environmental standards.

This policy is consistent with Statewide Planning Goal 6, Air, Water and Land Resources Quality, which directs that waste and process discharges within a jurisdiction cannot exceed the carrying capacity, or degrade the quality, of the local air shed and water shed in the long-term. The environmental impacts of any proposed changes to the interchange or the local transportation system related to the function of the interchange will be taken into account in developing and selecting alternatives for the interchange area.

Chapter 12: Economy of the County

5. In close proximity to cities, yet outside of urbanizable areas, limit commercial development to those areas that meet the requirements of Goal 2 and ORS 197.732 for an exception in resource areas. Commercial development shall also be limited to land demanding activities that require few public services.

This policy recognizes the pressure to urbanize land in close proximity to cities. It is consistent with the county's policies protecting resource lands, stating only those lands that meet the requirements of a goal exception will be considered for commercial development. In addition, commercial development must be limited to those uses that put the least demand on public services. The county is currently in the process of taking "exceptions" to Goals 11 (Public Facilities and Services) and 14 (Urbanization) and applying industrial zoning on select UMCD parcels to allow urban-scale industrial uses and public facilities and services on rural lands. Through the recent Land Use

²² Note, Policy 3 under Citizen Involvement is likely addressing more comprehensive updates to the Plan and not more focused policy change recommendations that may result from the UMCD Combined LAMP and Subarea Plan planning process.

Analysis planning process (reviewed earlier in this memorandum), the County has determined that limited commercial uses can be supported in this area.

Chapter 15: Transportation

1. The Transportation System Plan (TSP) is an element of this Comprehensive Plan and identifies the general location of transportation improvements, changes in specific alignment of proposed County Road and highway projects that will be permitted without plan amendment.

4. Operation, maintenance, repair, and preservation of existing transportation facilities shall be allowed without land use review, except where specifically regulated.

5A. New development proposals will be reviewed for consistency with the County and Cities' Transportation System Plans.

5B. County shall protect the function of existing or planned roadways or roadway corridors through the application of appropriate land use regulations.

7. Access onto state highways shall be limited, consolidated, and otherwise be controlled as much as feasible. Access control shall emphasize coordination of traffic and land use patterns through the use of frontage roads and access collection points (see OAR 734.051). ODOT will be provided notice of land use applications and development permits that have access or frontage onto State Highways.

15. Encourage preservation and expansion of existing lines and rail company service.

25A. Examine interchanges and other potential commercial and industrial locations for appropriateness of development taking into consideration access, sewer and water availability and environmental conditions.

25B. Identify and evaluate factors limiting development in this area.

26. Umatilla County shall encourage the development of bikeways and pedestrian accessways to existing and potential activity centers.

These transportation policies largely direct county actions as they relate to county facilities and are important to consider where the recommendations of the UMCD Combined IAMP and Subarea Plan include changes to the local transportation system or access management measures on local roadways. Policies 7 and 25A relate closely to this current planning process, highlighting the county's commitment to access management on state facilities and the need to balance land uses with the transportation system, as well as taking into account other factors.

Chapter 18 of the Comprehensive Plan describes the different land use designations established by the county and where the designations apply. A portion of county land within the IMSA is designated West County Irrigation District, which applies to small and medium farms (40-acre lot size) located on the outer edges of the Hermiston and Westland Irrigation Districts. The intent of this designation is to recognize a particular pattern of parcelization that has occurred in these areas

and to protect those agricultural enterprises that have developed there. These designated areas serve as a transition between smaller Special Agriculture uses (20-39 acres in size), and the larger, more extensive agricultural operations found in the North/South County Agricultural Regions (160-acre minimum lot size).

For the West County Irrigation District, the Comprehensive Plan states that:

A combination of parcel size regulations and non-farm review measures shall be implemented to maintain the existing mixture of part-time and full-time farming operations. However, a 40 acre minimum parcel size will be used as the specific measure to adhere to ORS 215.780.

As discussed elsewhere in this memorandum, EFU policies limit development of a certain areas within the IMSA, which in turn has implications on the expected future demand placed on the interchanges.

Umatilla County Transportation System Plan (2002)

The Umatilla County TSP guides the management of existing transportation facilities and the design and implementation of future facilities in Umatilla County for the next 20 years. This TSP constitutes the transportation element of the county's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule (TPR) (OAR 660-12-045). It identifies transportation projects for implementation under a Umatilla County Capital Improvement Program (CIP) and inclusion in the Oregon Department of Transportation (ODOT) Statewide Transportation Improvement Program (STIP).

Among the goals and objectives in the adopted TSP that are most relevant to the UMCD Combined IAMP and Subarea Plan are those that address transportation mobility, access, and the relationship between transportation and planned land uses. Those goals and objectives are found in Chapter 2 of the TSP and are included below.

Goal 1

Preserve the function, capacity, level of service, and safety of the local streets, county roads, and state highways.

Objectives

Develop access management standards.

Develop alternative, parallel routes.

Promote alternative modes of transportation.

Promote transportation demand management programs.

Promote transportation system management.

Develop procedures to minimize impacts to and protect transportation facilities, corridors, or sites during the development review process.

Goal 2

Ensure that the road system within the county is adequate to meet public needs, including those of the transportation disadvantaged.

Objectives

Develop a countywide transportation plan.

Meet identified maintenance level of service standards on the county and state highway systems.

Evaluate the transportation needs and land use characteristics of the unincorporated communities within the county to ensure adequate mobility for these areas.

Develop and adhere to a 20-year road program for maintenance and improvement of the existing county road system (including bridges).

Review and revise, if necessary, road cross-section standards for local, collector, and arterial roads to enhance safety and mobility.

Work with ODOT to develop access management strategies for Highways US 395, US 730, OR 11, OR 37, OR 74, OR 204, OR 207, OR 244, and Highways 332, 334, 335, and 339.

Evaluate the need for traffic control devices, particularly along the highways. Umatilla County Transportation Plan April 2002

Evaluate areas where safety is a concern.

Use the development review process to protect future right of way and to ensure roadway improvements are provided in a timely manner and are constructed to county standards.

Goal 3

Improve coordination among the cities of Umatilla County, the Oregon Department of Transportation (ODOT), the US Forest Service (USFS), the Federal Highway Administration (FHWA), and the county.

Objectives

B. Cooperate with ODOT in the implementation of the Statewide Transportation Improvement Program (STIP).

D. Take advantage of federal and state highway funding programs.

H. Work with Umatilla Army Depot on any emergency evacuation plans for possible chemical weapons accidents.

Goal 4

Increase the use of alternative modes of transportation (walking, bicycling, and public transportation) through improved access, safety, and service.

Objectives

B. Provide sidewalks or shoulders and safe crossings on collectors and arterials.

D. Seek Transportation and Growth Management (TGM) and other funding for projects evaluating and improving the environment for alternative modes of transportation.

Goal 6

Encourage the continued and improved rail transportation of goods and reinstatement of rail passenger service.

Objectives

A. Encourage the preservation and reactivation of existing lines and rail company service.

In addition to these policies, the County also adopted policy language pertaining to the I-82/US 730 interchange as when the I-82/US 730 Interchange Area Management Plan was adopted by reference as an element of the County's TSP in 2012. A likely outcome of this planning process will be recommendations for new or updated county policies that support UMCD Combined IAMP and Subarea Plan findings and recommendations for improvements at the interchanges.

An inventory of the existing transportation system, including level of service criteria and a summary of operations by road type is provided in Chapter 4. Westland/Highland Road, from I-84 to Bridge Road, is listed as an "important county road" (Table 4-1). This road provides connections to I-82 and I-84 and access to large industrial businesses. Table 4-5 summarizes the operations of freeways in Umatilla County for 1996 average conditions and peak summer conditions. Interstate 82, in the IMSA ("0.30 miles north of I-84"), is identified as having a level of service (LOS) of A under both conditions. Interstate 84 west of I-82 also operates at LOS A under average and peak conditions.

Chapter 5 contains traffic volume forecasts for Umatilla County based on historic growth on the state highway system and historic and projected population growth. Forecasts were only prepared for the state highway system in the county, since the volumes on these roadways are much higher than on any of the county roads. Traffic volumes on I-82 in the IMSA are expected to increase by approximately 92 percent by the year 2018 (Table 5-4) from 1996 levels. Volumes on I-84 in the vicinity of the IMSA are expected to increase by 148 percent.

Chapter 7 contains detail operational plans for the transportation systems in Umatilla County, including roadway classifications, design standards, and access management standards. This chapter does not contain any standards for I-82 or US 730 because they are under ODOT jurisdiction and state standards in the OHP and Design Manual apply.

Chapter 9 contains recommended policy and ordinance language for adoption into the Umatilla County Comprehensive Plan and Development Code. Recommended policy and code language pertains to the approval process for transportation facilities, protection of transportation facilities, access management, and a process for coordinated review of land use decisions.

Umatilla County Development Code (Revised, 2013)

The County Development Code implements the land use and transportation policies contained within the County Comprehensive Plan and TSP. The county zoning designations within the IMSA, east of the I-82/I-84 merge, are Light Industrial Limited Use Overlay, Limited Rural Light Industrial, Light Industrial, Rural Tourist Commercial and, extending north to the I-82/Westland interchange, Exclusive Farm Use (EFU). Uses are permitted in the EFU zone consistent with state law; the county has identified certain uses that are permitted outright, while others require a zoning permit or land use decision. Per section 152.751 of the code, any amendments to the code text or zoning map must be consistent with the County Comprehensive Plan and Land Use Map.

The County is in the process of amending the land use designations and zoning on specific parcels within the UMCD to a new “Depot Industrial” designation and adopting amendments to the Development Code for this zone. Permitted uses and development requirements of these zones will be explored in Technical Memorandum #3.

Section 152.018 in the Development Code includes access management and street connectivity standards; Section 152.019 details when a traffic impact analysis is required and the requirements for such an analysis.²³

²³ Note that these sections were revised for consistency with the adopted I-82/US 730 Interchange Area Management Plan.

Appendix D
Technical Memorandum #3:
Existing Land Use Analysis

Memorandum

TECHNICAL MEMORANDUM #3 - FINAL

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Existing Land Use Analysis

Date: February 21, 2014

To: Don Chance (UMADRA); Technical/Public Advisory Committee (TPAC)

From: Frank Angelo, Darci Rudzinski and Andrew Parish, Angelo Planning Group

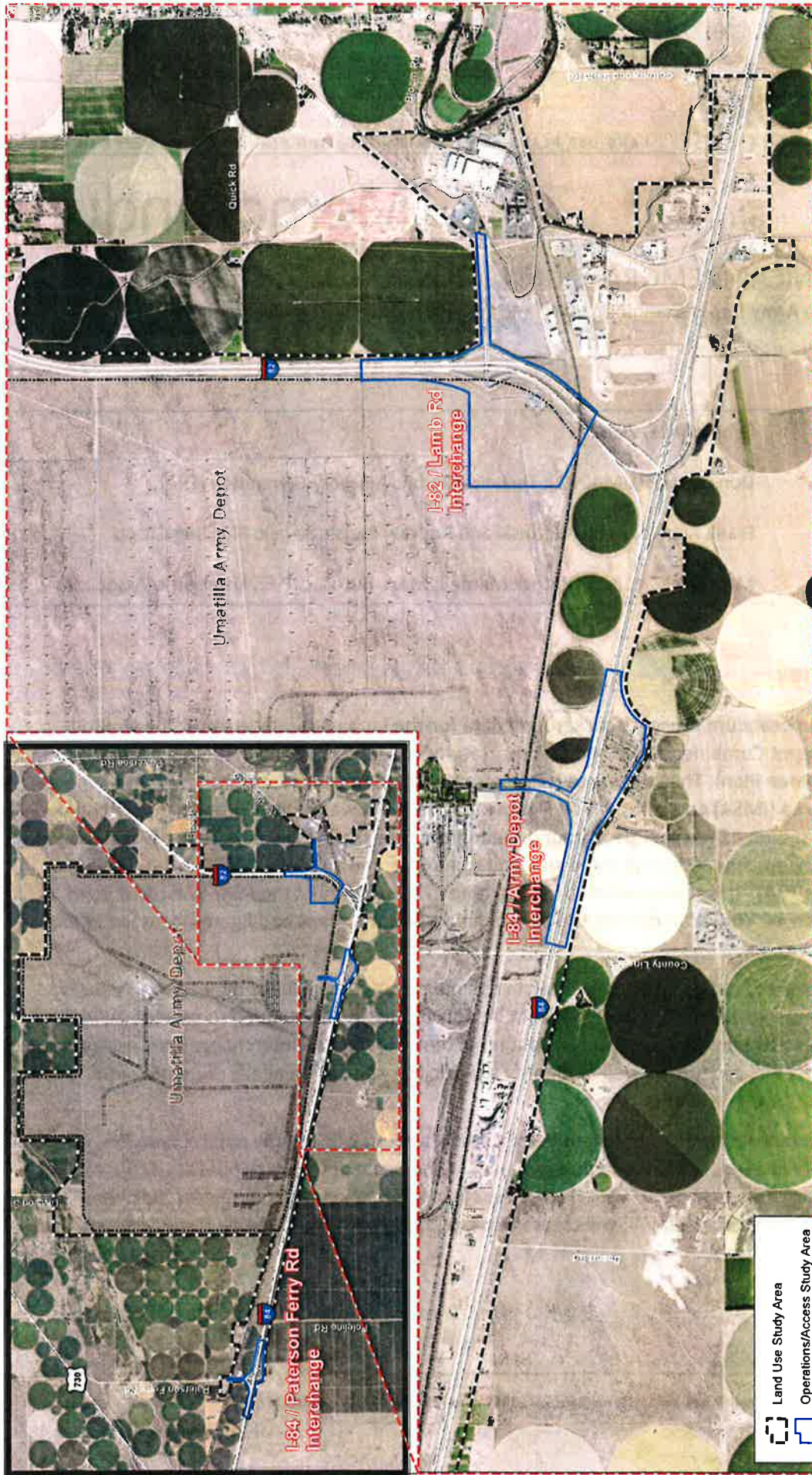
cc: Matt Hughart, AICP; Patrick Marnell, Marc Butorac, P.E., Kittelson & Associates

Overview

This memorandum presents background data for the land use study area for the Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan (UMCD Combined IAMP and Subarea Plan). The study area is hereafter referred to as the Interchange Management Study Area (IMSA) and is shown on Figure 3-1. The IMSA was initially proposed in Technical Memorandum #1 (Project Background, Definition, Goals, and Objectives). The original IMSA boundary encompassed the three study interchanges and all of the UMCD; after discussion with the TPAC, it was expanded to include land in the vicinity of the I-84/ Westland Road Interchange. The IMSA defines the area of analysis in the maps and figures included in this memorandum.

The review of land use data presented in this memorandum includes discussion of existing land use designations and uses in the IMSA. This discussion is intended to provide an idea of the types and intensity of existing or potential demands on the interchanges and surrounding transportation system, as well as identify specific transportation needs of existing and potential future land uses.

In addition, information presented in this memorandum will identify natural features, as well as man-made fixtures of the landscape, such as the ordnance storage bunkers or igloos. The land use review, combined with the review of transportation facilities and traffic operations in Technical Memorandum #4, will create a comprehensive look at existing conditions within the study area.



Legend

- Land Use Study Area
- Operations/Access Study Area
- Umatilla Army Depot
- County Boundary

**Interchange Management Study Area
Morrow / Umatilla Counties**

Figure 3-1

Coordinate System: NAD 1983 HARN StatePlane Oregon North FIPS 2601 Feet/MI

Location & Geography

The IMSA is located in north-central Oregon in the southern part of the Columbia Basin. The Columbia Basin, generally characterized by mixed shrub-steppe and grassland habitats with a semiarid and cool climate, extends from central Washington down into northeast and north-central Oregon. The topography in the vicinity of the IMSA is level to gently rolling and slopes northwest to the Columbia River.

The westerly portion of the IMSA is located in Morrow County (2012 pop. 11,300), with the easterly portion located in Umatilla County (pop. 77,120). The Columbia River lies about 2.5 miles north. The closest cities to the IMSA are:

- Hermiston (2012 pop. 16,995) – approximately 2 miles to the east
- Boardman (pop. 3,235) – approximately 7 miles to the west
- Irrigon (pop. 1,830) – approximately .25 miles to the north
- Umatilla (pop. 7,015) – approximately 2 miles to the northeast

Other nearby cities include Pendleton, Oregon (pop. 16,715) and the Tri-Cities in Washington (pop. 262,500).

Land Use

Generalized Land Use

The majority of the IMSA is comprised of the Umatilla Chemical Depot (UMCD), an area that has never been zoned or subject to Oregon's statewide land use program. The UMCD currently occupies about 17,000 acres acquired either through purchase or Federal land transfer. In addition, the Army has acquired approximately 2,600 acres of land on the north and east sides of the Depot on which there is a restrictive easement. Construction of a structure or dwelling is prohibited within the restricted easement areas.

There are a number of existing land uses on the Depot site, including but not limited to:

- Ammunition Storage Areas – 5,933 acres
- Ammunition Demolition Areas – 1,716 acres
- Warehouse and Storage Areas – 786 acres
- Administrative Offices and Housing – 151 acres
- Open Space Buffer Areas – 4,851 acres

The storage and demolition of ordnance and buffer zone land use areas account for more than three-quarters of the UMCD acreage.

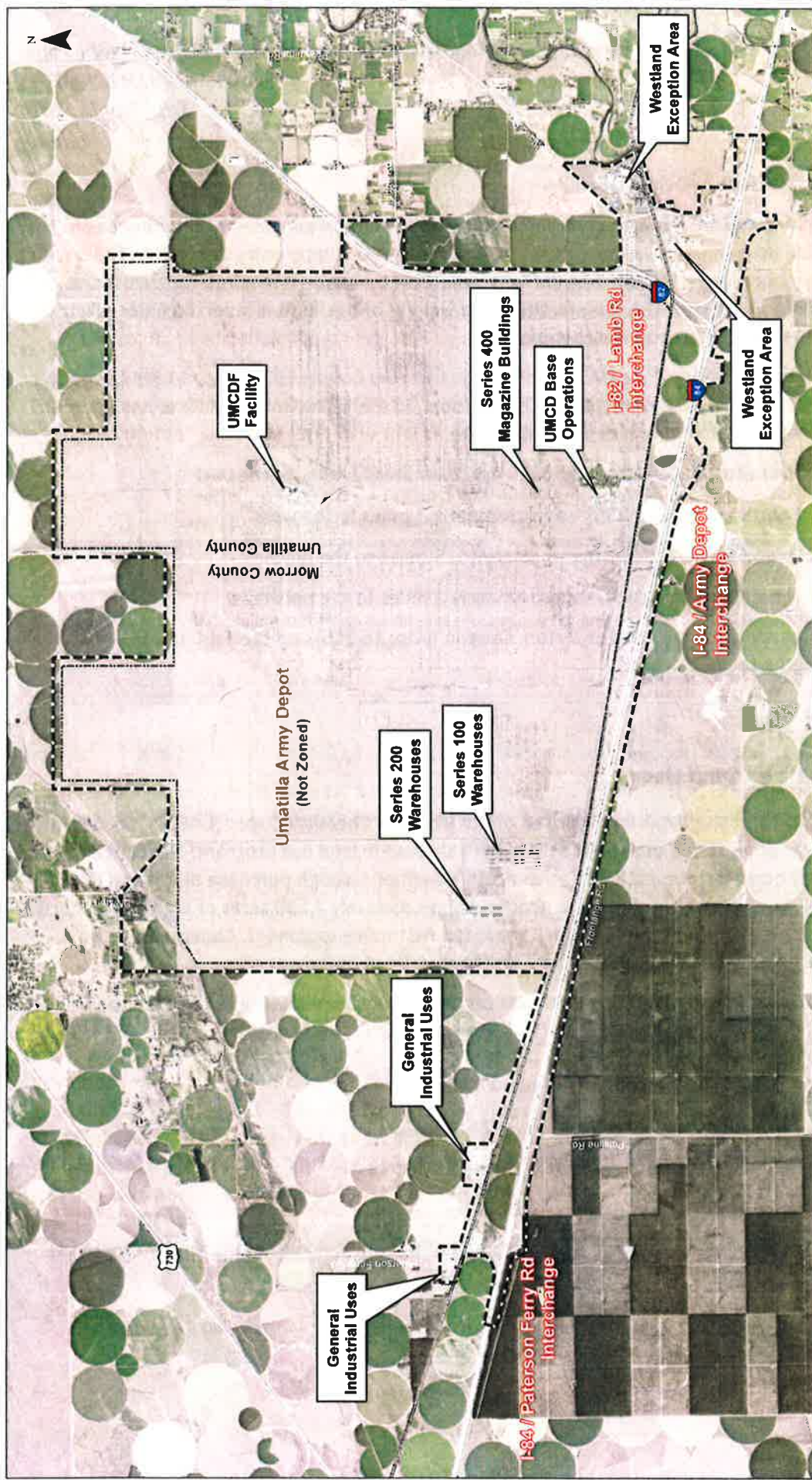


Figure 3-3

Existing Land Use Features

Land Use Study Area
Umatilla Army Depot



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERS

The areas that are within the IMSA, but outside of the UMCD, have some industrial development that complies with the zoning described in the previous section. The most significant development opportunities are around the I-84/Westland Road Interchange, in particular where there are vacant or underutilized parcels.

Because it is expected that land uses will change in a manner that is consistent with the future county zoning, it is instructive to note potential future uses that may have a significant impact on the subject interchanges and transportation facilities approaching the interchanges. Future uses may also have particular service needs related to the freeway and other transportation facilities. These uses are discussed by zone district within the IMSA in Table 3-2.

Table 3-2 - Notable Existing Land Uses by Zone District

Zone	Existing and Potential Future Land Uses
Morrow County	
General Industrial	<ul style="list-style-type: none"> • Five parcels in the vicinity of I-84/Paterson Ferry Road are developed with industrial uses and are not expected to further develop/redevelop with more intensive uses within the IAMP planning horizon.
Farm Residential	<ul style="list-style-type: none"> • Roughly 10-15 parcels to either side of I-84 south of the Depot are zoned Farm Residential. Several existing residences are present with access on Gun Club Ln. to the north of I-84 and Frontage Rd. to the south.
Exclusive Farm Use	<ul style="list-style-type: none"> • No land use changes are expected in areas zoned EFU.
Umatilla County	
Light Industrial	<ul style="list-style-type: none"> • Development in the exception area north and southeast of I-84/Westland Road Interchange is predominantly truck-freight related, with both a 100,000 square foot FedEx facility and a 25,000 square foot UPS distribution center operating within the zone. • A 350,000 square foot Lamb Weston Food Processing plant, 160,000- square foot Americold building, and approximately 180,000 square foot Hermiston Generating Company Power Plant and Substation are also located within this zone. • A portion of this exception area is zoned Light Industrial with a Limited Use overlay (see below).
Light Industrial Limited Use Overlay	<ul style="list-style-type: none"> • Roughly 35 acres of the Light Industrial land north of I-84/Westland Road Interchange is covered by a Limited Use overlay, which limits uses to those justified by the Goal Exception Statement. • An approximately 100,000 square foot Fed-Ex warehouse and distribution facility is located within the overlay.

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan
Existing Land Use Analysis
February 21, 2014

Zone	Existing and Potential Future Land Uses
Limited Rural Light Industrial	<ul style="list-style-type: none"> • 30 acres to the west of the Light Industrial Limited Use area is zoned Limited Rural Light Industrial. The land appears vacant. Consistent with the zoning, future uses in this area could include light manufacturing, storage and freight-related businesses.
Rural Tourist Commercial	<ul style="list-style-type: none"> • Land in two separate areas near the I-84/Westland Road Interchange is zoned Rural Tourist Commercial. • The northern, 20-acre segment appears to be vacant. • The 89-acre area in the south contains land both north and south of the interchange. The northern area appears vacant, while the area south of the interchange contains a Shell gas station.
Agri-Business	<ul style="list-style-type: none"> • About 30 acres of land near the I-84/Westland Road Interchange is designated Agribusiness. The land is currently being used as a livestock storage or processing facility. [Northwestern Livestock Commission]
Exclusive Farm Use	<ul style="list-style-type: none"> • No land use changes are expected in areas zoned EFU. Three discrete portions of EFU land along I-84 to the south and southeast of the Depot lie within an Aggregate Resource Overlay. At least two aggregate extraction/processing uses are present south of I-84.



Attachment A: County Zoning District Regulations

As discussed the memorandum, land in the IMSA is subject to the land use regulations in the Morrow County Zoning Ordinance and the Umatilla County Development Code. Because future development and redevelopment in the IMSA will be subject to county requirements, knowing the zoning designations, permitted uses, and lot standards in the IMSA provides information about the type and intensity of transportation demand to be expected in the area. Table A-1 provides a detailed summary of the purposes, permitted uses, and lot standards in each zoning district in the IMSA and the corresponding Comprehensive Plan designation. While not yet applied to land within the IMSA, both the Port Industrial (Morrow County) and the Depot Industrial (Umatilla County) zones are also included in Table A-1 for reference. Note that the list of uses under each zoning district is not exhaustive, but is meant to provide an indication of the type and intensity of land uses permitted, or permitted conditionally.

Table A-1 - IMSA Zoning Districts and Comprehensive Plan Designations

Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
Morrow County		
Port Industrial	Purpose <ul style="list-style-type: none"> • To provide for port-related industrial uses and aerospace-related uses which are not devoted to research and development • Intended to be applied to primarily port-owned lands Uses <ul style="list-style-type: none"> • Aerospace-related industrial uses, power generating and utility facilities and manufacturing, refining, processing or assembling of any agricultural, mining or industrial product are permitted outright • Commercial uses that serve the needs of employees within the zone are permitted conditionally • Mineral extraction/mining uses, asphalt plants and solid waste transfer stations are permitted conditionally. 	Industrial



Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<p>Lot and Building Standards</p> <ul style="list-style-type: none"> No minimum lot size 	
General Industrial	<p>Purpose <i>None indicated.</i></p> <p>Uses</p> <ul style="list-style-type: none"> Retail and wholesale businesses, construction-related businesses, freight hubs, warehouses and distributions centers, machine shops, and food processing. More intensive manufacturing and processing uses, industrial uses entailing outdoor storage, and public and semi-public uses are permitted conditionally. <p>Lot and Building Standards</p> <ul style="list-style-type: none"> No minimum lot size. 	Industrial
Farm Residential (FR2)	<p>Purpose To provide a rural residential zone that acknowledges pre-existing homes on small lots outside the Urban Growth Boundary (UGB).</p> <p>Uses</p> <ul style="list-style-type: none"> Single-family housing, farming (with some restriction), utilities, parks, community centers, and other public uses that serve rural residential uses are allowed outright. Duplexes, water and sewer facilities, golf courses, stables, and vet clinics are permitted conditionally. <p>Lot and Building Standards</p> <ul style="list-style-type: none"> Lots in this zone must be at least two acres. 	
Exclusive Farm Use	Purpose	



Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<ul style="list-style-type: none"> • Preservation of agricultural land and uses • Only allow uses that are compatible with agricultural uses. <p>Uses</p> <ul style="list-style-type: none"> • Agricultural production and harvesting, buildings associated with agricultural uses, accessory dwellings, farm worker dwellings, restoration of established dwellings and other lawful buildings, improvements to roads, schools not within three miles of the UGB, churches, wineries, and solid waste disposal facilities (with restrictions) are permitted outright in the EFU zone. • Certain single-family homes, mining operations, golf courses, private recreation facilities, public- or non-profit-owned parks and community centers, utilities, road expansions, and other solid waste and composting facilities are uses that are permitted conditionally. <p>Lot and Building Standards</p> <ul style="list-style-type: none"> • The lot standard for agricultural units in the zone is 160 acres. 	
Umatilla County		
Depot Industrial	<p>Purpose</p> <ul style="list-style-type: none"> • To apply appropriate zoning to planned land uses as lands are transferred out of federal ownership. <p>Uses</p> <ul style="list-style-type: none"> • Freight-related uses, contractor's equipment storage yard, machine shop, welding shop, wholesale businesses, and manufacturing, compounding, assembling or treatment of a wide variety of products (excluding rendering plants) are permitted outright in all three Subareas. • Ice or cold storage plant and greenhouse or nursery are allowed in Subareas 1 and 2. • Bottling work, concrete block or pipe manufacture, custom meet cutting and cold storage locker and food products manufacturing (with exclusions) are allowed in Subareas 1 and 3. 	Industrial



Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<ul style="list-style-type: none"> • Grain elevator or flower mill is allowed in Subarea 1; data centers are allowed in Subareas 2 and 3. • Additional conditional uses are allowed in Subarea 3 and include automobile wrecking yard, commercial gravel pit, concrete or asphalt manufacturing plant, and utility facility and power generation plant (also allowed conditionally in Subarea 1). • Retail and service uses may be located in Subarea 1, but are limited to a maximum of 5% of the total acreage within the DI Zone (excluding the restricted area). A master plan is required prior to the issuance of a zoning permit for development. Allowed uses include vehicle sales and leasing, leasing or renting consumer, home, and business goods (including groceries, garden supplies and furniture), and entertainment uses (including restaurants, bars, bowling alleys, theaters, health clubs and recreational vehicle parks). <p>Lot and Building Standards</p> <ul style="list-style-type: none"> • Minimum lot size is one acre, unless subsurface disposal system can be located on less. 	Industrial
Light Industrial	<p>Purpose</p> <ul style="list-style-type: none"> • Provide areas for industrial use that are less intensive than heavy industrial uses, less offensive to adjacent land uses, and are compatible with certain commercial uses. • Areas near major transportation facilities (including highways, railroads, and waterways) that are generally suited for industry are appropriately zoned LI. <p>Uses</p> <ul style="list-style-type: none"> • Freight-related uses, contractor's equipment storage yard, machine shop, welding shop, wholesale businesses, and manufacturing, compounding, assembling or treatment of a wide variety of products (excluding rendering plants) are permitted outright. • Information center, mini warehouse, veterinary clinic (excluding kennels), and professional office building are also permitted outright. • Conditional uses include automobile service station, automobile wrecking yard, commercial amusement 	Industrial

Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<p>establishment, commercial gravel pit, daycare and junkyards.</p> <ul style="list-style-type: none"> Major manufacturing, repairing, compounding, fabricating, assembling, processing, or storage is also permitted as a conditional use, with minimum employment (200 employees or more) and size (20 acres or more) restrictions. <p>Lot and Building Standards</p> <ul style="list-style-type: none"> Minimum lot size is one acre, unless subsurface disposal system can be located on less. 	
<p>Limited Use Overlay (Light Industrial)</p>	<p>Purpose</p> <ul style="list-style-type: none"> Limit the list of permitted uses and general activities allowed in the underlying zone when a plan amendment and zone change rezones a parcel to that underlying zone through the taking of an exception to a statewide land use planning goal. <p>Uses</p> <ul style="list-style-type: none"> A commercial service center, approved as part of the FedEx Freight facility. 	<p>Light Industrial</p>
<p>Limited Rural Light Industrial</p>	<p>Purpose</p> <ul style="list-style-type: none"> Provide areas for industrial uses that are appropriate for rural locations, less intensive than heavy industrial uses, less offensive to adjacent land uses, and are compatible with certain commercial uses. Areas near major transportation facilities (including highways, railroads, and waterways) that are generally suited for industry are appropriately zoned LRLI. Applied to lands zoned industrial after to January 1, 2004 that are outside unincorporated communities and urban growth boundaries. <p>Uses</p> <ul style="list-style-type: none"> Industrial uses in conjunction with farm, forest or aggregate use. Wholesale business, storage building or warehouse, in conjunction with farm or forest use. 	<p>Industrial</p>

Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<ul style="list-style-type: none"> • Custom meat cutting and cold storage locker; food products processing (except meat processing and rendering plants), ice or cold storage plant. • Blacksmith or machine shop; contractor's equipment storage yard; product manufacturing, compounding, assembling or treatment. • Information center, mini-storage, greenhouse or nursery, veterinary clinic (kennels prohibited), truck sales, service, storage and maintenance (building not to exceed 35,000 square feet of floor space). • Conditional uses include automobile wrecking yard, commercial gravel extraction and processing, concrete manufacturing, utility and public power generating facilities, wood processing facilities and junkyards. <p>Lot and Building Standards</p> <ul style="list-style-type: none"> • Minimum lot size is one acre, unless subsurface disposal system can be located on less. • Some size restrictions may apply for building expansions where the structure existed on or before November 12, 2005. 	
Rural Tourist Commercial	<p>Purpose</p> <ul style="list-style-type: none"> • To serve the traveling public along major traffic corridors or at appropriate recreational locations outside unincorporated communities and urban growth boundaries, including major interstate interchanges. • Applied to commercial lands outside unincorporated communities and urban growth boundaries for which an exception to Goal 14 has not been approved. • Permit the continuation and expansion of existing uses and to provide rural scale tourism-related employment uses. <p>Uses</p> <ul style="list-style-type: none"> • Service stations, eating establishments, over-night accommodations, sporting goods or bait shop, laundromat • Information center 	Commercial



Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<p>Lot and Building Standards</p> <ul style="list-style-type: none"> • Minimum lot size is one acre, unless subsurface disposal system can be located on less. • Buildings may not exceed 3,500 square feet of floor space, unless the pre-date July 1, 2005. • Motels and hotels that existed on July 1, 2005 may expand up to 35 units or up to 50% of the number of existing units, whichever is larger, with no limitation on square footage. • Structures that existed on July 1, 2005 may expand to a building size of 4,500 square feet or to a size that is 50% larger than the building size that existed on July 1, 2005, whichever is larger. 	
Agri-Business Zone	<p>Purpose</p> <ul style="list-style-type: none"> • To provide areas for certain types of agriculturally oriented businesses and services, such as storage, handling or processing of agricultural products, which may not otherwise need to be located in more intensive commercial or industrial areas. <p>Uses</p> <ul style="list-style-type: none"> • Farm use are permitted outright, with the exception of livestock feed yards and sale yards and hog farms, which are conditional uses, and the raising of fur-bearing animals and poultry farms, which are prohibited. • Collection, sorting and packaging or processing agricultural commodities, slaughter house, commercial greenhouse or nursery and cold storage are all conditionally permitted uses. 	
Exclusive Farm Use	<p>Purpose</p> <ul style="list-style-type: none"> • Preserve and maintain agricultural lands for farm use, including range and grazing uses • Conserve and protect scenic resources; to maintain and improve the quality of air, water and land resources of the county • Establish criteria and standards for farm and non-farm uses and related and supportive uses which are deemed appropriate. 	Exclusive Farm Use



Zoning District	Purpose, Permitted Uses and Lot Standards	Corresponding Comprehensive Plan Designation
	<p>Uses</p> <ul style="list-style-type: none">• Farm use, as defined in ORS 215.203, farm dwelling/accessory dwellings, accessory buildings• Farm stand, winery, and agri-tourism (single event).• Conditional uses include mining, private and public parks, community center and solid waste disposal <p>Lot Standards</p> <ul style="list-style-type: none">• Farm parcels, minimum of 80 acres• Non-farm dwelling parcels, minimum 4 acres unless site suitability approval from the Department of Environmental Quality can be obtained	

Appendix E
Technical Memorandum #4:
Existing Transportation
Facilities and Traffic Operations



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 F 503.228.5230 F 503.273.8169

TECHNICAL MEMORANDUM #4 - FINAL

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Existing Transportation Facilities and Traffic Operations

Date: February 21, 2014 Project #:13848
To: Don Chance (UMADRA); Technical/Public Advisory Committee (TPAC)
From: Matt Hughart, AICP; Pat Marnell; Marc Butorac, P.E.; Andy Lindsey, P.E.
cc: Frank Angelo & Darci Rudzinski, Angelo Planning Group

This memorandum provides a review of existing transportation facilities, traffic operations, safety, and access within the vicinity of the following three interchanges:

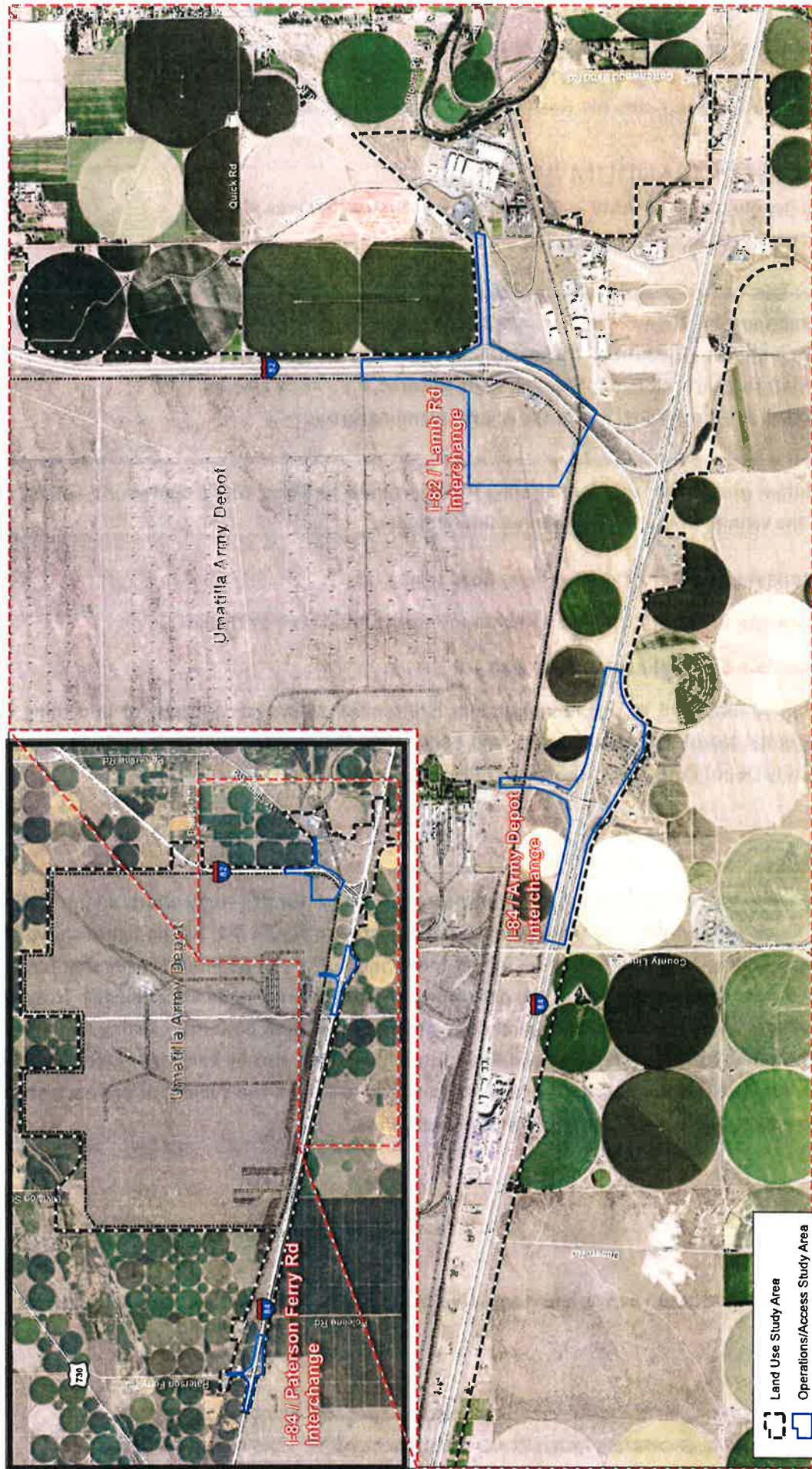
- Interstate 84 (I-84) / Paterson Ferry Road (Exit 171),
- Interstate 84 (I-84) / Umatilla Army Depot Access Road (Exit 177), and
- Interstate 82 (I-82) / Lamb Road (Exit 10)

The information summarized in this memorandum is intended to provide a basis for informing and identifying potential long-term opportunities and constraints for meeting the goals and objectives of the Umatilla Army Depot Combined IAMP and Transportation Subarea Plan.

STUDY AREA

To help define the extent of the land use and transportation review for this study effort, an Interchange Management Study Area (IMSA) has been defined and depicted in Figure 4-1. As the figure shows, the IMSA has been drawn to include those areas within the vicinity of the three interchanges that have, or are expected to have a direct impact on the daily function of the three study interchanges. Note that for purposes of predicting future transportation demand and circulation patterns, existing and allowed land uses in the vicinity of the I-84/Westland Road Interchange will also be considered (see Technical Memorandum #6), but traffic operations and safety analysis has been the subject of previous studies and will not be addressed in detail as part of this IAMP process.¹

¹ Umatilla County Westland Road/I-84/I-82 Interchange Area Transportation Plan, 2004, H. Lee & Associates in Association.



Interchange Management Study Area
 Morrow / Umatilla Counties

Figure
 4-1

Coordinate System: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Unit

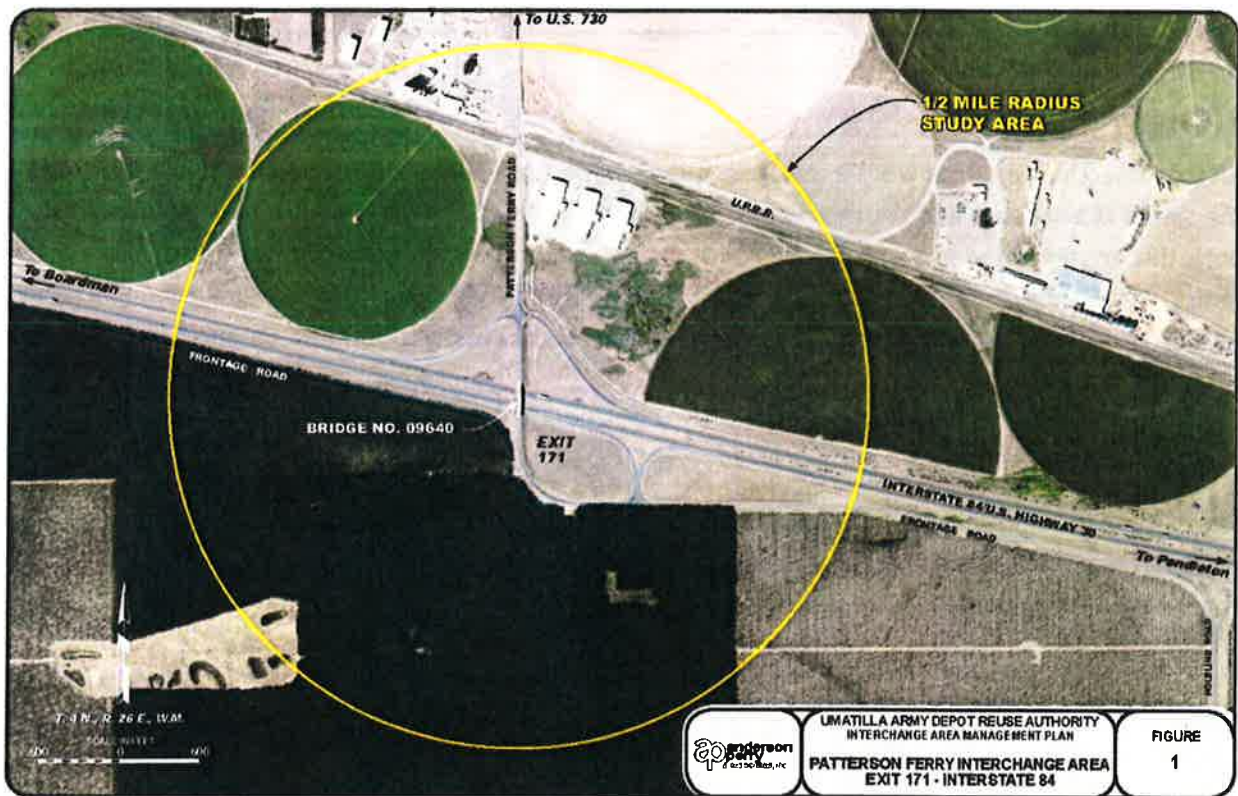
EXISTING TRANSPORTATION INVENTORY

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 within the IMSA. A detailed description of these facilities is provided in the following sections.

I-84 / Paterson Ferry Road (Exit 171) Interchange

The I-84/Paterson Ferry Road interchange is located at Exit 171 in Morrow County. The westbound ramp terminal is a diamond interchange with ramps connecting to Paterson Ferry Road. The eastbound ramp terminal is a Parclo-B (with exiting loop ramp and standard entering on-ramp beyond the crossroad) interchange connecting to Frontage Road. Both east- and westbound ramp terminals are stop-controlled. The interchange area is shown on Exhibit 4-1.

Exhibit 4-1 - I-84/Paterson Ferry Road Interchange



Interchange Structure

The Paterson Ferry Road overpass is a steel girder structure with a reinforced concrete deck with two travel lanes over I-84. The structure was last inspected in March 2012. Some noteworthy remarks from the inspection include small transverse cracking in the reinforced concrete deck, at approximately 4- to 6-foot spacing, as well as some spots of rust on the girders and splice plate. The bridge rail is noted as

substandard, which is typical for bridges of this age. Structurally, the overpass is sound and received a sufficiency rating of 94.7. Table 4-1 provides a summary of the overpass structure.

Table 4-1 - I-84/Paterson Ferry Road Interchange Structure

	Structure Details
Bridge Identification Number	09640
Year Built	Overpass constructed in 1967, Interchange added in 1991
Last Inspected	March 5, 2012
Lanes	2 On : 4 Under
Average Daily Traffic (ADT)	270
Year of ADT	2010
Number of Main Spans	5
Structure Length	265 feet
Deck Width	32.2 feet
Vertical Clearance Below Deck	17.2 feet
Design Load/Restrictions	HS 20/No Restrictions
Sufficiency Rating	94.7

Ramp Evaluation

All four interchange ramps were evaluated to determine the existing design parameters. This includes the speed change area and the main curve of each ramp. The required speed change lane lengths for both the entrance and exit ramps are based on the existing design speed of the main curve of the ramps. Required exit ramp speed change lane lengths are based on truck traffic exiting the interstate. All design features evaluated are approximate and further investigation must be done to determine actual values.

Existing Eastbound Interchange

The existing conditions of the eastbound entrance and exit ramps are shown on Table 4-2. The entrance ramp has adequate speed change area for traffic accelerating onto I-84. However, the exit ramp speed change area does not meet current design standards.

Table 4-2 - I-84/Paterson Ferry Road Interchange, Eastbound Ramps

	Approximate Design Speed (mph)	Needed Acceleration Length (feet)	Existing Acceleration Length (feet)	Needed Deceleration Length (feet)	Existing Deceleration Length (feet)
Entrance Ramp	35*	1,000**	1,300		
Exit Ramp	35*			750**	500

*Approximate

**Values from ODOT Highway Design Manual Chapter 9 Grade Separation & Interchanges
mph = miles per hour

Existing Westbound Interchange

The existing conditions of the westbound entrance and exit ramps are shown in Table 4-3. The entrance ramp has adequate speed change area for traffic accelerating onto I-84. However, the exit ramp speed change area does not meet current design standards.

Table 4-3 - I-84/Paterson Ferry Road Interchange, Westbound Ramps

	Approximate Design Speed (mph)	Needed Acceleration Length (feet)	Existing Acceleration Length (feet)	Needed Deceleration Length (feet)	Existing Deceleration Length (feet)
Entrance Ramp	50*	750**	850		
Exit Ramp	55*			440**	250

*Approximate

**Values from ODOT Highway Design Manual Chapter 9 Grade Separation & Interchanges

mph = miles per hour

Roadways Served

Paterson Ferry Road

Paterson Ferry Road is a Rural Major Collector located entirely in Morrow County. It runs north-south from the Columbia River Highway (US 730) to I-84. It serves primarily rural farm land and a small number of rural industrial properties located near the Union Pacific railroad tracks, north of the I-84/Paterson Ferry Road interchange. There is currently no access between Paterson Ferry Road and the Umatilla Army Depot.

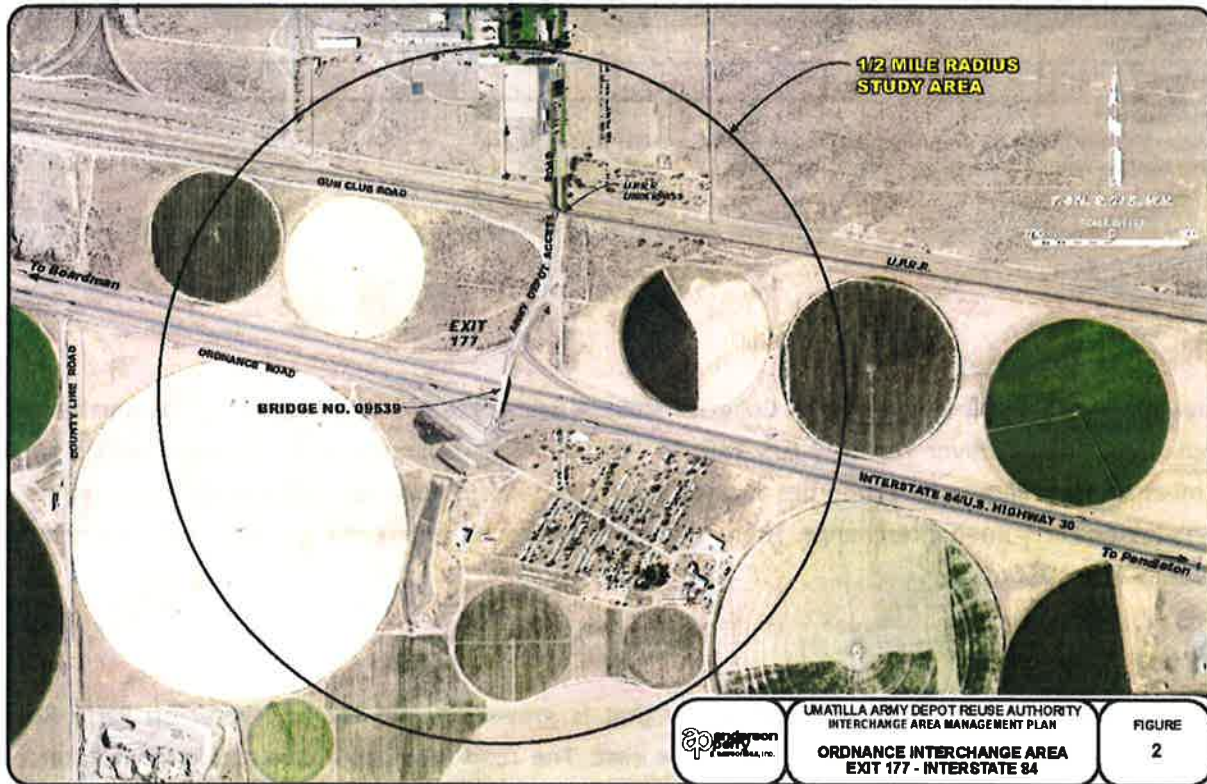
Frontage Road

Frontage Road is a Morrow County roadway that is gravel west of the I-84/Paterson Ferry Road interchange and a two-lane paved road to the east. The road provides a connection from Paterson Ferry Road to Bombing Range Road to the west and Poleline Road to the east. The road runs east-west and parallel to I-84. This road provides access to poplar plantations located south of I-84 and is classified as a Rural Major Collector.

I-84/Umatilla Army Depot Access Road (Exit 177) Interchange

The I-84/Umatilla Army Depot Access Road interchange is located at Exit 177 in Umatilla County. The interchange is a traditional diamond-style interchange. The eastbound ramp terminal intersects Frontage Road/Ordnance Road while the westbound ramp terminal intersects the Umatilla Army Depot Access Road. Both east- and westbound ramp terminals are stop-controlled. The interchange area is shown on Exhibit 4-2.

Exhibit 4-2 - I-84/Umatilla Army Depot Access Road Interchange



Interchange Structure

The I-84/Umatilla Army Depot Access Road overpass is a steel girder structure with a reinforced concrete deck. The structure was last inspected in March 2012. The inspection found large transverse cracks through the deck, spaced at approximately 4 to 6 feet. Rust was also noted on the girders, steel columns, and splice plates. The bridge rail is noted as substandard, which is typical for bridges of this age. Structurally, the bridge is sound and has a sufficiency rating of 96.6. Table 4-4 provides a summary of the structure.

Table 4-4 - I-84/Umatilla Army Depot Access Road Interchange Structure

	Structure Details
Bridge Identification Number	09539
Year Built	1967
Last Inspected	March 7, 2012
Lanes	2 On : 4 Under
ADT	330
Year of ADT	2010
Number of Main Spans	5
Structure Length	284 feet
Deck Width	38.1 feet
Vertical Clearance Below Deck	16.6 feet
Design Load/Restrictions	HS 20/No Restrictions
Sufficiency Rating	96.6

Ramp Evaluation

All four interchange ramps were evaluated to determine the existing design parameters. This includes the speed change area and the main curve of each ramp. The required speed change lane lengths for both the entrance and exit ramps are based on the existing design speed of the main curve of the ramps. Required exit ramp speed change lane lengths are based on truck traffic exiting the interstate. All design features evaluated are approximate and further investigation must be done to determine actual values.

Existing Eastbound Interchange

The existing conditions of the eastbound entrance and exit ramps are shown on Table 4-5. The eastbound entrance ramp has adequate speed change area for traffic accelerating onto I-84. However, the eastbound exit ramp speed change area does not meet current design standards.

Table 4-5 - I-84/Umatilla Army Depot Access Road Interchange, Eastbound Ramps

	Approximate Design Speed (mph)	Needed Acceleration Length (feet)	Existing Acceleration Length (feet)	Needed Deceleration Length (feet)	Existing Deceleration Length (feet)
Entrance Ramp	50*	750	750		
Exit Ramp	60*			450	400

*Approximate
**Values from ODOT Highway Design Manual Chapter 9 Grade Separation & Interchanges
mph = miles per hour

Existing Westbound Interchange

The existing conditions of the westbound entrance and exit ramps are shown in Table 4-6. The westbound entrance ramp has adequate speed change area for traffic accelerating onto I-84. However, the westbound exit ramp speed change area does not meet current design standards.

Table 4-6 - I-84/Paterson Ferry Road Interchange, Westbound Ramps

	Approximate Design Speed (mph)	Needed Acceleration Length (feet)	Existing Acceleration Length (feet)	Needed Deceleration Length (feet)	Existing Deceleration Length (feet)
Entrance Ramp	55*	750	800		
Exit Ramp	55*			450	350

*Approximate

**Values from ODOT Highway Design Manual Chapter 9 Grade Separation & Interchanges

mph = miles per hour

Roadways Served

Umatilla Army Depot Access Road

Army Depot Access Road connects the main entrance of the Umatilla Army Depot to I-84 at exit 177. It is a paved two-lane roadway that has an underpass located approximately one-quarter mile from the interchange. The underpass carries two lanes of traffic and 4-foot sidewalks on each side of the road underneath the Union Pacific Railroad and has a 15-foot vertical clearance and a 30-foot horizontal clearance. Additionally, this road provides access to Gun Club Lane and several parcels of exclusive farm land located directly south of the Umatilla Army Depot.

ODOT owns the access road within the immediate vicinity of the interchange ramp terminals while Umatilla County owns the road up to the Union Pacific Railroad underpass. From there, the road is considered to be part of the Umatilla Army Depot.

Gun Club Lane

Gun Club Lane is a gravel road that connects to the Umatilla Army Depot Access Road. The road provides access to the local gun club as well as rock quarries and agricultural fields. The road is a local Umatilla County roadway that parallels both I-84 to the south and Union Pacific Railroad to the north.

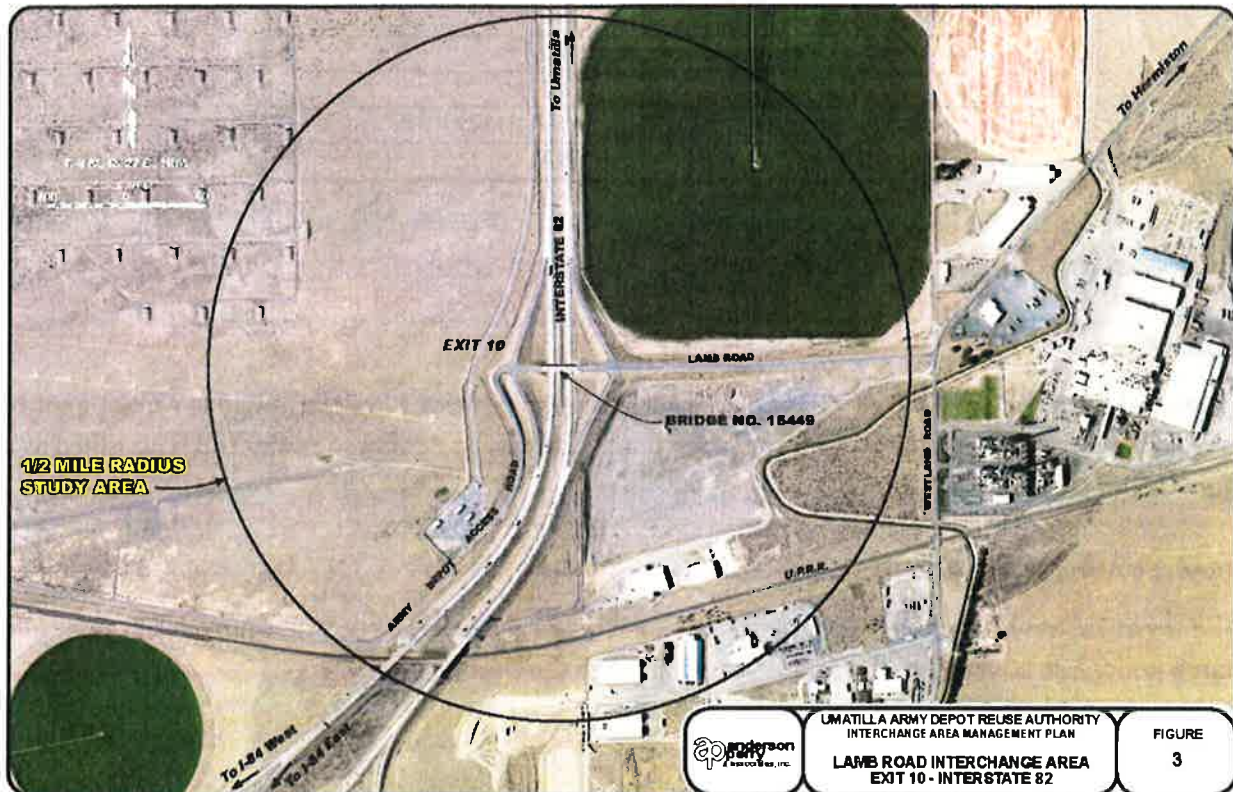
Ordnance Road/Frontage Road

Ordnance Road is a two-lane paved road that offers a connection from Exit 177 to County Line Road, Poleline Road, and Paterson Ferry Road to the west. The Umatilla County roadway runs east-west, parallel to I-84, and is classified as a Rural Major Collector. Ordnance Road has several small accesses to agricultural fields.

I-82 / Lamb Road (Exit 10) Interchange

The I-82/Lamb Road interchange is located at Exit 10 in Umatilla County and provides accessibility to industrial areas as well as the City of Hermiston. The interchange is a diamond-style interchange, with access from both east- and westbound lanes. The east- and westbound off-ramps enter onto Lamb Road. Both east- and westbound off-ramps are stop-controlled. The interchange area is shown on Exhibit 4-3.

Exhibit 4-3 - I-82/Lamb Road Interchange



Interchange Structure.

The I-82/Lamb Road interchange is a prestressed concrete girder structure with reinforced concrete columns, abutments, and deck. The overpass carries two lanes of Lamb Road over I-82. The structure was last inspected in September 2013. The inspection noted that, though there was slight cracking in the deck, it was minimal overall and there was also minor cracking in the abutment and pier caps. Structurally, the overpass is sound with a sufficiency rating of 95.6. Table 4-7 provides a summary of the structure.

Table 4-7 - I-82/Lamb Road Interchange Structure

	Structure Details
Bridge Identification Number	16449
Year Built	1985
Last Inspected	September 25, 2013
Lanes	2 On : 4 Under
ADT	1,800
Year of ADT	2010
Number of Main Spans	2
Structure Length	262 feet
Deck Width	39.2 feet
Vertical Clearance Below Deck	16.9 feet
Design Load/Restrictions	HS 25/No Restrictions
Sufficiency Rating	95.6

Roadways Served

Lamb Road

Lamb Road is a two-lane paved road that provides access from Exit 10 to the Umatilla Army Depot to the west and Westland Road to the east. Lamb Road is a Umatilla County roadway and is classified as a Rural Major Collector.

Umatilla Army Depot East Gate Access Road

The Umatilla Army Depot East Gage Access Road is a two-lane paved road that provides access from Lamb Road/ Exit 10 at I-82 to the southeast entrance of the Depot.

I-82

I-82 is a four-lane Interstate Highway that runs north-south through Umatilla County between I-84 and the Washington State line. I-82 is part of the National Highway System and is designated in the Oregon Highway Plan as an Interstate Highway, Freight Route, and Truck Route. I-82 connects I-84 and I-90 and provides the primary freight and passenger car route between the Seattle-Tacoma metropolitan area and the Boise, Idaho and Salt Lake City, Utah metropolitan areas.

I-84

I-84 is a four-lane Interstate Highway that runs east-west through Morrow and Umatilla Counties. Like I-82, I-84 is part of the National Highway System and is designated in the Oregon Highway Plan as an Instate Highway, Freight Route, and Truck Route. I-84 is the primate east-west highway in the State of Oregon and connects the Portland metropolitan area to the Boise, Idaho metropolitan areas.

A summation of all study area roadways and their characteristics is provided in Table 4-8.

Table 4-8 - Existing Transportation Facilities and Roadway Designations

Interchange	Roadway	Roadway Ownership/ Functional Classification	Cross-Section	Posted Speed (MPH)	Side-walks, Bike Lanes, On Street Parking
I-84/Paterson Ferry Road Interchange	I-84	ODOT - <i>Interstate Highway</i>	4-Lanes	65	-
	Paterson Ferry Road	Morrow County - <i>Rural Major Collector</i>	2-Lanes	Not Posted	None
	Frontage Road	Morrow County - <i>Rural Major Collector</i>	2-Lanes	Not Posted	None
I-84/ Army Depot Access Road	I-84	ODOT - <i>Interstate Highway</i>	4-Lanes	65	-
	Umatilla Army Depot Access Road	Umatilla County - <i>Local Road</i>	2-Lanes	Not Posted	None
	Gun Club Lane	Umatilla County - <i>Local Road</i>	2-Lanes (gravel)	Not Posted	None
	Frontage Road/ Ordnance Road	Umatilla County - <i>Rural Major Collector</i>	2-Lanes	Not Posted	None
I-82/ Lamb Road	I-82	ODOT - <i>Interstate Highway</i>	4-Lanes	65	None
	Lamb Road	Umatilla County - <i>Rural Major Collector</i>	2-Lanes	55	None
	Umatilla Army Depot Access Road	Private	2-Lanes	Not Posted	None

¹ODOT highway classifications are from the 1999 Oregon Highway Plan (Reference 1) and County roadway classifications are from the Umatilla and Morrow County Transportation System Plans (Reference 2 and 3)

Rail Facilities

The Union Pacific rail line extends through the IMSA along the southernmost boundary of the Umatilla Army Depot. This Class I line-haul freight line connects to the City of Portland to the west and the City of Boise to the east. The rail line is grade separated over the Umatilla Army Depot Access Road, but has at-grade crossings at Paterson Ferry Road and Westland Road.

EXISTING TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

Eight study intersections in and around the IMSA we identified in coordination with ODOT, Umatilla County, and Morrow County. The study intersections are:

- I-84 EB Ramp Terminal / Paterson Ferry Road / Frontage Road
- I-84 WB Ramp Terminal / Paterson Ferry Road
- I-84 EB Ramp Terminal / Umatilla Army Depot Access Road
- I-84 WB Ramp Terminal / Umatilla Army Depot Access Road
- Umatilla Army Depot Access Road / Gun Club Lane
- I-82 SB Ramp Terminal / Lamb Road
- I-82 NB Ramp Terminal / Lamb Road
- Westland Road / Lamb Road

Traffic counts were collected at the study intersections in October 2013 from 6-9 a.m. and from 3-6 p.m. All counts are shown in 5-minute intervals and include vehicular turning movements, pedestrian movements, and bicycles (although no pedestrians or bicyclist were observed). Table 4-9 summarizes the traffic count time periods.

Table 4-9 - Traffic Count Summary

Intersection	Count Date	Intersection	Count Date
ODOT Intersections		County Intersections	
I-84 EB Ramp Terminal/ Army Depot Access Road	AM: 10/30/2013 PM: 10/29/2013	Army Depot Access Road / Gun Club Lane	AM: 10/30/2013 PM: 10/29/2013
I-84 WB Ramp Terminal/ Army Depot Access Road	AM: 10/30/2013 PM: 10/29/2013	Westland Road/ Lamb Road	10/16/2013
I-82 SB Ramp Terminal/ Lamb Road	10/16/2013		
I-82 NB Ramp Terminal/ Lamb Road	10/16/2013		
I-84 EB Ramp Terminal/ Paterson Ferry Road	10/16/2013		
I-84 WB Ramp Terminal/ Paterson Ferry Road	10/16/2013		

¹NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

Peak Hour Development

Traffic volumes were reviewed for the three interchange areas to determine the one-hour system peak periods for the operation analysis. A system peak period was identified for both the weekday a.m. and p.m. peak periods. The weekday a.m. peak hour was found to be 6:05 – 7:05 a.m. The weekday p.m. peak hour was found to be 4:30 – 5:30 p.m.

Intersection Operational Standards

ODOT uses volume-to-capacity (V/C) ratio standards to assess intersection operations. Table 6 of the *Oregon Highway Plan* (OHP, Reference 1) and Table 10-2 of the *Oregon Highway Design Manual* (HDM, Reference 4) provide maximum volume-to-capacity ratios for all signalized and unsignalized intersections outside the Metro area. The OHP ratios are used to assist in the planning phase identifying future system deficiencies, while the HDM ratios are used to establish a 20-year design life solution that correct previously identified deficiencies. The ODOT controlled intersections within the study area include the interchange ramp terminals on I-82 and I-84, which are designated as Interstate Highways outside of a Metropolitan Planning Organization (MPO).

The applicable performance standard for Umatilla County intersections, as defined in Umatilla County's *2002 Transportation System Plan* (TSP) (Reference 2), is LOS E or better. The state highway mobility target as set forth by ODOT in the *Oregon Highway Plan* (Reference 1) for the study intersections at the freeway ramp terminals is a maximum volume-to-capacity ratio of 0.70.

No study intersections, other than the I-84/Paterson Ferry ramp terminals which are subject to ODOT's operational standards, are located in Morrow County. Table 4-10 summarizes the intersection performance standards for the study intersections.

Table 4-10 - Intersection Performance Standards

Intersection	Traffic Control ¹	OHP Standard	HDM Standard	Umatilla County Standard
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	TWSC	v/c < 0.70	v/c < 0.60	-
I-84 WB Ramp Terminal/ Paterson Ferry Road	TWSC	v/c < 0.70	v/c < 0.60	-
I-84 EB Ramp Terminal/ Army Depot Access Road	TWSC	v/c < 0.70	v/c < 0.60	-
I-84 WB Ramp Terminal/ Army Depot Access Road	TWSC	v/c < 0.70	v/c < 0.60	-
Army Depot Access Road / Gun Club Lane	TWSC	-	-	LOS E
I-82 SB Ramp Terminal/ Lamb Road	TWSC	v/c < 0.70	v/c < 0.60	-
I-82 NB Ramp Terminal/ Lamb Road	TWSC	v/c < 0.70	v/c < 0.60	-
Westland Road/ Lamb Road	TWSC	-	-	LOS E

¹TWSC: Two-way stop-controlled (unsignalized)

Seasonal Adjustment Factor

30th Highest Hour Volumes (30 HV) for the study intersections were calculated based on the traffic counts collected in October of 2013 and the application of a seasonal adjustment factor. The Oregon Department of Transportation Analysis Procedures Manual (Reference 5) identifies three methods for identifying seasonal adjustment factors. All three methods are informed by information provided by Automatic Traffic Recorders (ATR) located in select locations throughout the State Highway System that

collect traffic data 24-hours a day/365 days a year. Each method was evaluated to determine the most appropriate for the study area.

The I-84 and I-82 ramps serve rural roads and are more heavily impacted by local traffic patterns than interstate traffic patterns. For this reasons the Seasonal Trend Table Method was determined to be the most appropriate method to develop 30 HVs for the ramp terminals and other study intersections. The results of the evaluations are summarized below.

Seasonal Trend Method

The Seasonal Trend Method uses average values from the ODOT ATR Characteristic Table for each seasonal traffic trend. For the Umatilla Subarea, the agriculture seasonal traffic trend values were used to derive 30 HV volumes. Table 4-11 summarizes the average values for seasonal traffic trends during the count times and the peak period as provided in the ODOT Seasonal Trend Table.

Table 4-11: Seasonal Trend Table

Trend	15-Oct	1-Nov	Peak Period Seasonal Factor
Agricultural	0.9263	0.9984	0.7981

Based on the data in Table 3, the traffic counts at all other study intersections were adjusted by the following factors, depending on count date:

- Counts taken 10/16/2013
 - $\frac{\text{Traffic Counts (15-October)}}{\text{Peak Period Seasonal Factor}} = \frac{0.9263}{0.7981} = 1.16$

- Counts taken 10/29/2013 & 10/30/2013
 - $\frac{\text{Traffic Counts (1-November)}}{\text{Peak Period Seasonal Factor}} = \frac{0.9984}{0.7981} = 1.25$

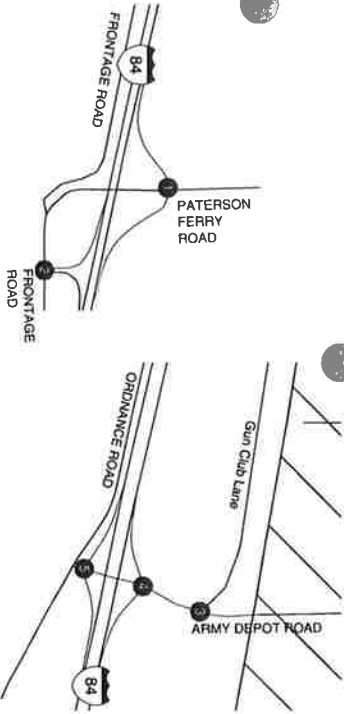
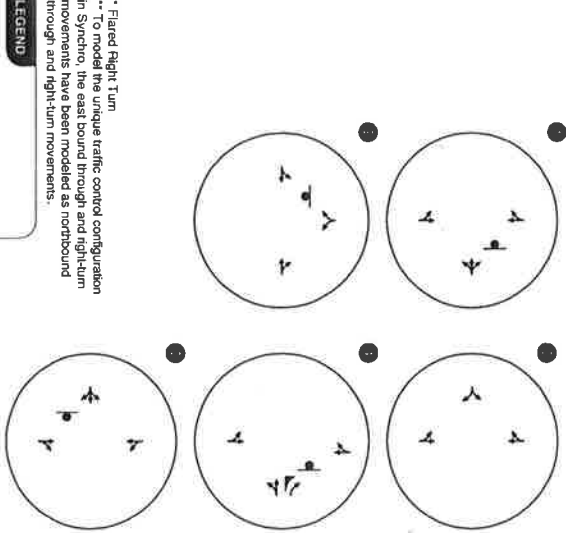
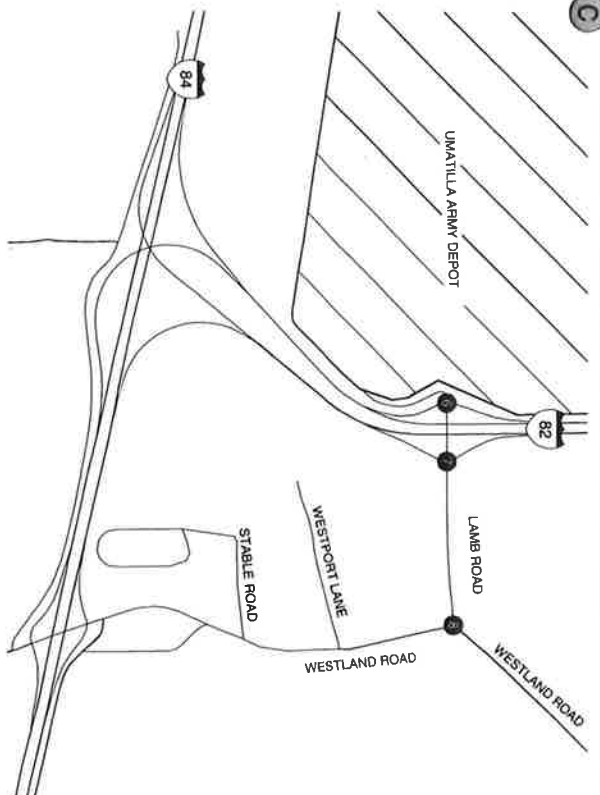
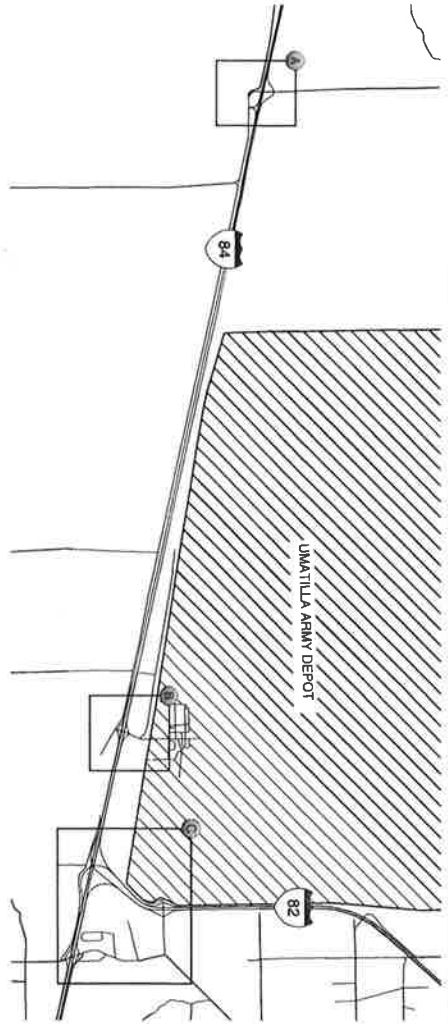
Study Intersection Operations Analysis

Intersection level-of-service (LOS) and volume-to-capacity (v/c) ratios were calculated for each of the study intersections based on the appropriate ODOT traffic operations procedures.

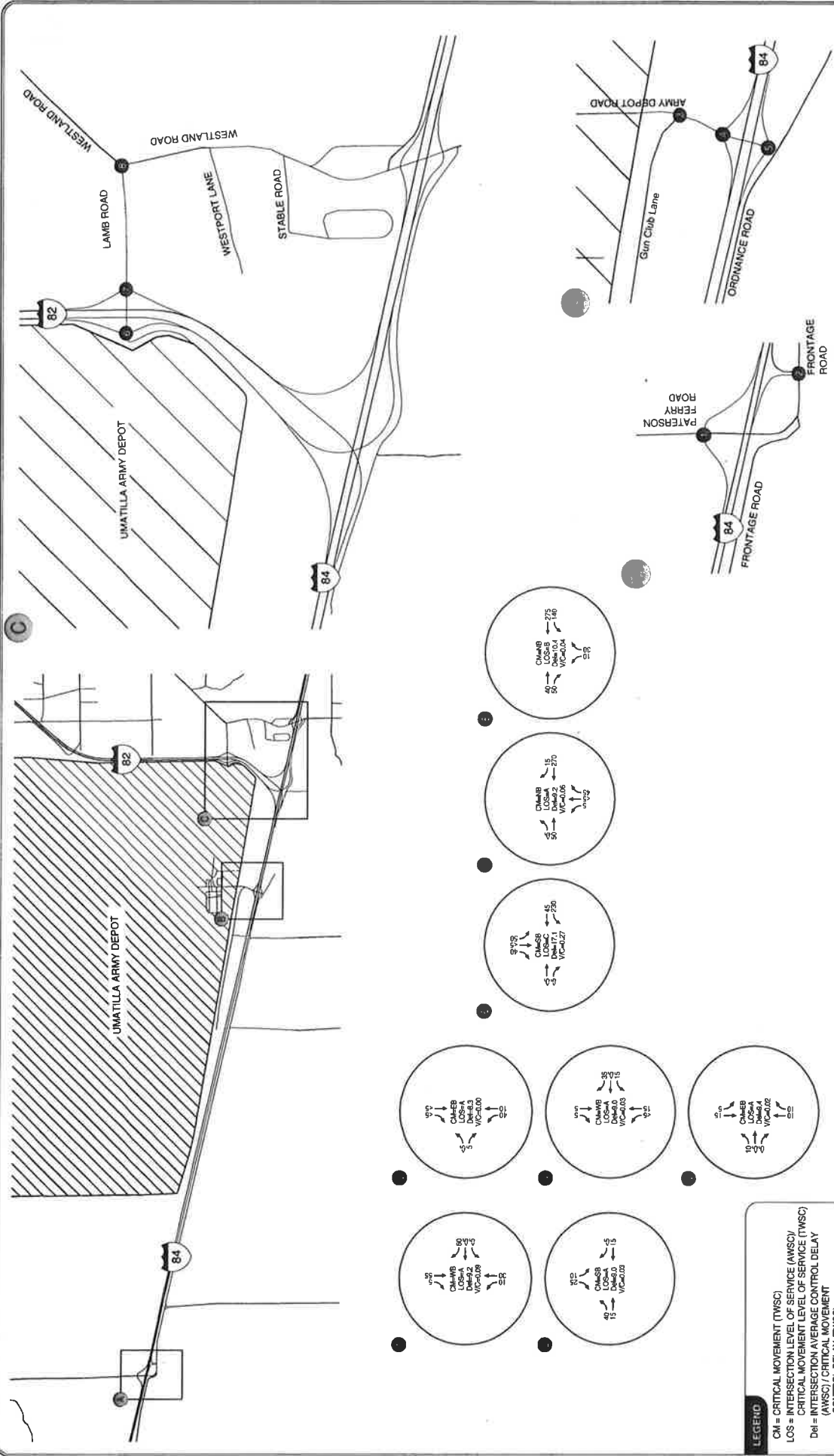
Figures 4-2 through 4-4 show the existing lane configurations, traffic control, and operational analysis results of the study intersections during the weekday a.m. and p.m. peak hours. As summarized in Table 4-12, all study intersections were observed to operate acceptably during the weekday a.m. and p.m. peak hours.

Table 4-12 - Existing Traffic Operations Summary

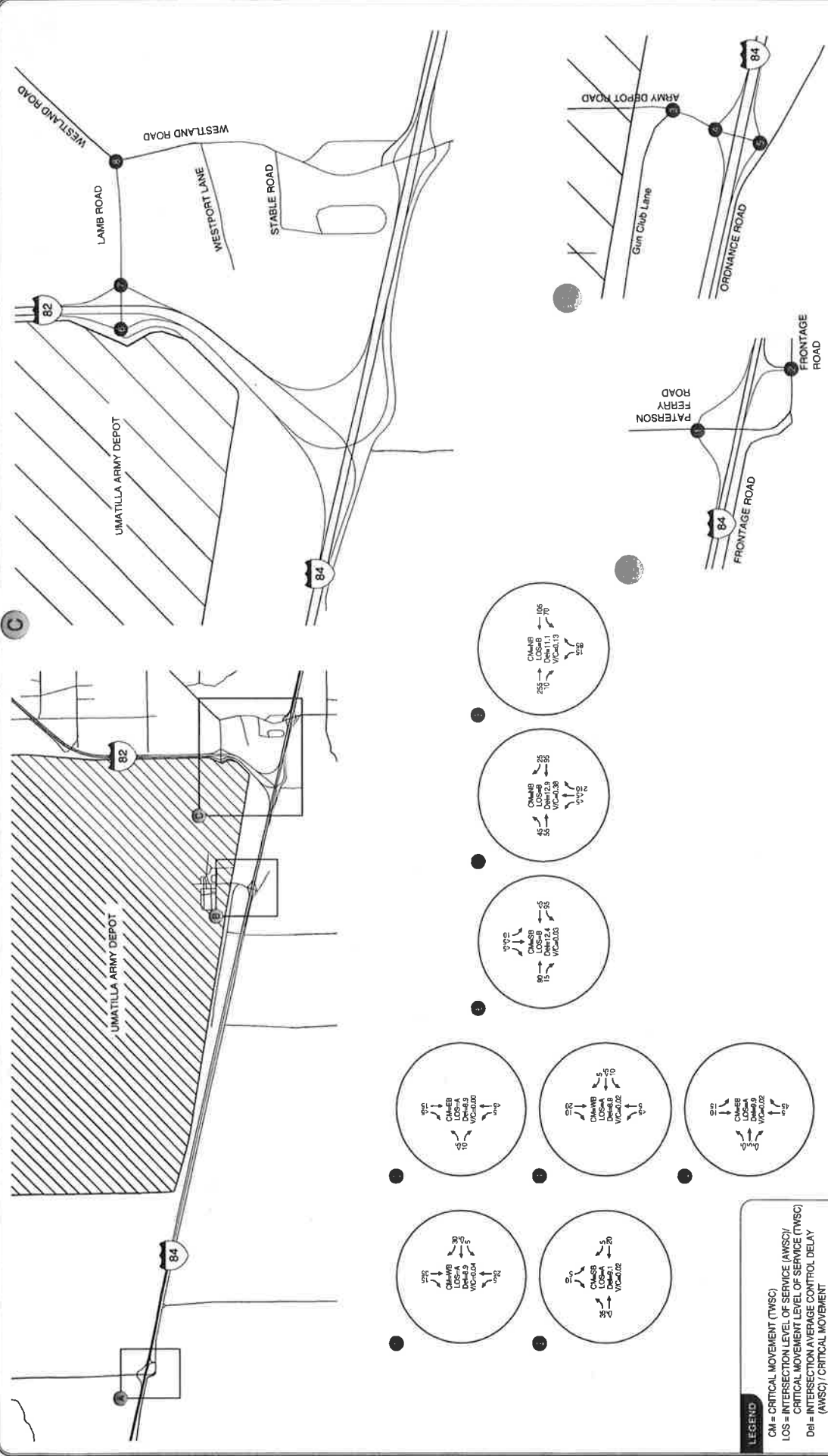
Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.03	A	0.02	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.09	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Access Road	A	0.02	A	0.02	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Access Road	A	0.03	A	0.02	v/c < 0.70	Yes
Army Depot Access Road / Gun Club Lane	A	0.01	A	0.01	LOS E	Yes
I-82 SB Ramp Terminal/ Lamb Road	C	0.27	B	0.03	v/c < 0.70	Yes
I-82 NB Ramp Terminal/ Lamb Road	A	0.06	B	0.38	v/c < 0.70	Yes
Westland Road/ Lamb Road	B	0.04	B	0.13	LOS E	Yes



EXISTING TRAFFIC CONTROL DEVICES
UMATILLA COUNTY, OREGON



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LEGEND

- CM = CRITICAL MOVEMENT (TWSC)
- LOS = INTERSECTION LEVEL OF SERVICE (AWSC)/ CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
- Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
- V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
- TWSC = TWO-WAY STOP CONTROL
- AWSC = ALL-WAY STOP CONTROL

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING

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TRAFFIC SAFETY

The crash histories at the study area intersections and along the Lamb Road were reviewed in an effort to identify potential safety issues. Crash records were obtained from ODOT for the five-year period from January 1, 2008 through December 31, 2012. Table 4-13 contains the summary of the reported non-interstate mainline crashes.

Table 4-13 - Summary of Reported Crashes, Study Intersections and Interchange Ramp Terminals

Intersection	Collision Type				Severity			Total
	Rear-End	Turning	Angle	Other	PDO ¹	Injury	Fatal	
I-84 EB Ramp Terminal/ Paterson Ferry Road	-	-	-	1	1	-	-	1
I-84 WB Ramp Terminal/ Paterson Ferry Road	-	-	-	-	-	-	-	-
I-84 EB Ramp Terminal/ Army Depot Access Road	-	-	-	1	-	1	-	-
I-84 WB Ramp Terminal/ Army Depot Access Road	-	-	-	-	-	-	-	-
Army Depot Access Road / Gun Club Lane	-	-	-	-	-	-	-	-
I-82 SB Ramp Terminal/ Lamb Road	1	-	-	-	-	1	-	1
I-82 NB Ramp Terminal/ Lamb Road	-	-	-	-	-	-	-	-
Westland Road/ Lamb Road	1	1	-	-	2	-	-	2
Lamb Road Segment from Westland Road to NB I-82 Ramps	1	-	-	-	1	-	-	1

¹Property Damage Only

As shown in Table 4-13, there have been no more than two crashes at any study intersection or on segments between study intersections over the most recent 5-year analysis period. As such, there are no distinguishable patterns of intersection-related crashes to suggest further investigation is needed.

Crashes on I-84 and I-82 within the IMSA were also reviewed in an effort to identify potential safety issues on the freeway segments near the study interchange ramp terminals. Again, crash records were obtained from ODOT for the five-year period from January 1, 2008 through December 31, 2012. Table 4-14 contains the summary of reported interstate crashes.

Table 4-14 - Summary of Reported Crashes, Interstate Mainline (In the Vicinity of Ramps)

Segment	Collision Type				Severity			Snow or Ice Related	Total
	Rear-End	Side Swipe	Overturn	Fixed Object	PDO ¹	Injury	Fatal		
I-84 EB near Paterson Ferry Road Ramps	1	1	1	1	2	2	-	2	4
I-84 WB near Paterson Ferry Road Ramps	1	1	2	-	3	1	-	2	4
I-84 EB near Army Depot Access Road Ramps	-	-	3	-	1	2	-	2	3
I-84 WB near Army Depot Access Road Ramps	-	1	4	3	4	4	-	4	8
I-82 NB near Lamb Road Ramps	-	-	1	2	2	1	-	1	3
I-82 SB near Lamb Road Ramps	1	-	5	3	6	4	-	6	9

¹Property Damage Only

As shown in Table 4-14, on average over the most recent 5-year analysis period, less than two crashes occurred per year on any of the freeway segments located near the study area. These crashes were primarily single vehicle incidents, with only 5 of 31 reported crashes involving multiple vehicles. Over half of the total crashes, and 12 of the 16 overturn crashes, occurred during snowy or icy conditions. 20 of the 31 crashes list speed or driving too fast as a contributing cause of the crash; 5 crashes list fatigue as a contributing cause of the crash.

EXISTING ROADWAY ACCESS CONDITIONS

Oregon Administrative Rule 734, Division 51 and the Oregon Highway Plan (OHP) identify ODOT's access management standards within the vicinity of interchanges. Based on an outright application of the standards, no full public or private access is allowed within 1,320 feet (¼ mile) from the ramp terminals:

Existing roadway access conditions have been inventoried for all interchange crossroads within ¼ mile of the respective interchange ramp terminal. This inventory was conducted by the project team and is summarized in Table 4-15.

Table 4-15 - Interchange Cross Road Public/Private Access Inventory

Roadway	Approach Type	Side of Roadway	Type of Use Served
I-84/Paterson Ferry Road Interchange			
Paterson Ferry Road	Private (1,155' north of I-84/Westbound Paterson Ferry Road ramp terminal)	East	Rural Industrial Business
Paterson Ferry Road	Private (1,230' north of I-84/Westbound Paterson Ferry Road ramp terminal)	West	Farm/Field Access
Paterson Ferry Road	Public (665' west of I-84/EB Paterson Ferry Road ramp terminal)	South	Frontage Lane
I-84/Umatilla Army Depot Access Road Interchange			
Umatilla Army Depot Access Road	Private (450' north of the I-84/Westbound Umatilla Army Depot Access Road ramp terminal)	East	Farm/Field Access
Umatilla Army Depot Access Road	Public (450' north of the I-84/Westbound Umatilla Army Depot Access Road ramp terminal)	West	Gun Club Lane
Ordnance Road/Frontage Road	Private (130' south of the I-84/Eastbound Umatilla Army Depot Access Road ramp terminal)	South	Farm/Field Access
Ordnance Road/Frontage Road	Private (1,240' south of the I-84/Eastbound Umatilla Army Depot Access Road ramp terminal)	South	Farm/Field Access

REFERENCES

1. Oregon Department of Transportation. *1999 Oregon Highway Plan*. 1999.
2. David Evans and Associates. *Umatilla County Transportation System Plan*. 2002.
3. CTS Engineers. *Morrow County 2005 Transportation System Plan*. 2005.
4. Oregon Department of Transportation *Oregon Highway Design Manual*. 2006.
5. Oregon Department of Transportation. *Analysis Procedures Manual*. 2006.

Appendix F
Technical Memorandum #5:
Environmental Research

Mason, Bruce & Girard, Inc.
707 SW Washington Street, Suite 1300
Portland, OR 97205-3530

MEMORANDUM

DATE: February 5, 2014

TO: Matt Hughart, Kittelson & Associates, Inc.

FROM: Alexis Casey and Kate Parker, MB&G

SUBJECT: Technical Memorandum #5: Environmental Research
Umatilla Army Depot Combined IAMP: I-82/Lamb Road Interchange, I-84/Umatilla Army Depot Access Road Interchange and I-84/Paterson Ferry Road Interchange
Morrow and Umatilla Counties

1.0 INTRODUCTION

This Technical Memorandum (TM) summarizes available baseline biological, wetland, and water quality information for lands within the vicinity of the I-82/Lamb Road interchange (I-82 Exit 10), I-84/Umatilla Army Depot Access Road interchange (I-84 Exit 177) and I-84/Paterson Ferry Road interchange (I-84 Exit 171) in Morrow and Umatilla Counties, Oregon. It has been prepared in support of the Umatilla Chemical Depot Reuse Authority's (UMADRA) Umatilla Army Chemical Depot (UMCD) Combined Interchange Area Management Plan (IAMP) and Transportation System Subarea Plan Project (Project). This TM also describes natural resource permits and clearances that may be necessary for implementation of the Project. Existing baseline data has been reviewed and compiled in this TM to summarize the environmental character of the Project area, and to help the design team develop alternatives that avoid and/or minimize environmental impacts associated with the Project.

1.1 Purpose

The purpose of this Project is to plan for long-term traffic needs for the redevelopment of the UMCD by identifying and addressing potential access, infrastructure, and land use regulations affecting the three interchanges that currently serve, or have the potential to serve, the UMCD (I-82/Lamb Road interchange, I-84/Umatilla Army Depot Access Road interchange and I-84/Paterson Ferry Road interchange). This TM will support the IAMP being prepared in accordance with Oregon Administrative Rule 734-051.

1.2 Area of Potential Impact (API)

For the purposes of this TM, the API for the Project encompasses the I-82/Lamb Road interchange, I-84/Umatilla Army Depot Access Road interchange and I-84/Paterson Ferry Road interchange. The I-82 Lamb Road interchange and I-84/Umatilla Army Depot Access Road

interchange are located within unincorporated Umatilla County. The I-84/Paterson Ferry Road interchange is located within unincorporated Morrow County (Figure 1).

Topography within the API is relatively flat and slopes gently to the north, toward the Columbia River. The elevation of the API ranges from approximately 590 to 605 feet above mean sea level (msl) within the I-82/Lamb Road interchange area, 575 to 605 feet above msl within the I-84/Umatilla Army Depot Access Road interchange area, and 480 to 500 feet above msl within the I-84/Paterson Ferry Road Interchange area (Google Earth 2013).

The API has experienced alterations to the natural landscape resulting from the construction of I-84 and I-82, from the operation and maintenance of the UMCD, and ongoing adjacent agricultural practices. Extensive irrigation practices have been in use for decades on agricultural lands within the API. The majority of the native vegetation has been removed within the API.

No waterbodies are located within the API; however, the Westland F Canal, a concrete-lined irrigation channel operated by the Westland Irrigation District is located 0.3 mile east of the I-82/Lamb Road interchange and flows north (Figure 1). The Umatilla River is located approximately 1 mile east of the I-82/Lamb Road interchange. The West Extension Irrigation Canal (Boardman Canal) also flows approximately 2 miles north of the I-84/Paterson Ferry Road interchange. The Columbia River is located approximately 6.6 mile north of the I-84/Paterson Ferry Road interchange, approximately 7.7 miles north of the I-84/Umatilla Army Depot Access Road interchange, and approximately 6.9 miles north of the I-82/Lamb Road interchange.

Land use within the API consists of highway and secondary roadways, as well as the UMCD. Adjacent land use is primarily agricultural, with some industrial development.

2.0 METHODS

The following sections of this report summarize baseline biological, wetland, and water quality data collected for the API and describe potential natural resource permits and clearances required to complete the Project based upon a review of existing database information and a cursory site investigation conducted by Mason, Bruce & Girard, Inc. (MB&G) on October 28 and 29, 2013. This site investigation was conducted mainly from the roadways, although portions of the northwest quadrant of the I-84/Paterson Ferry Road interchange API were surveyed on foot.

MB&G categorized vegetation communities within the API following Johnson and O'Neil's Wildlife-Habitat Relationships in Oregon and Washington classification system (O'Neil *et al.* 2001). These communities were digitized using aerial photos.

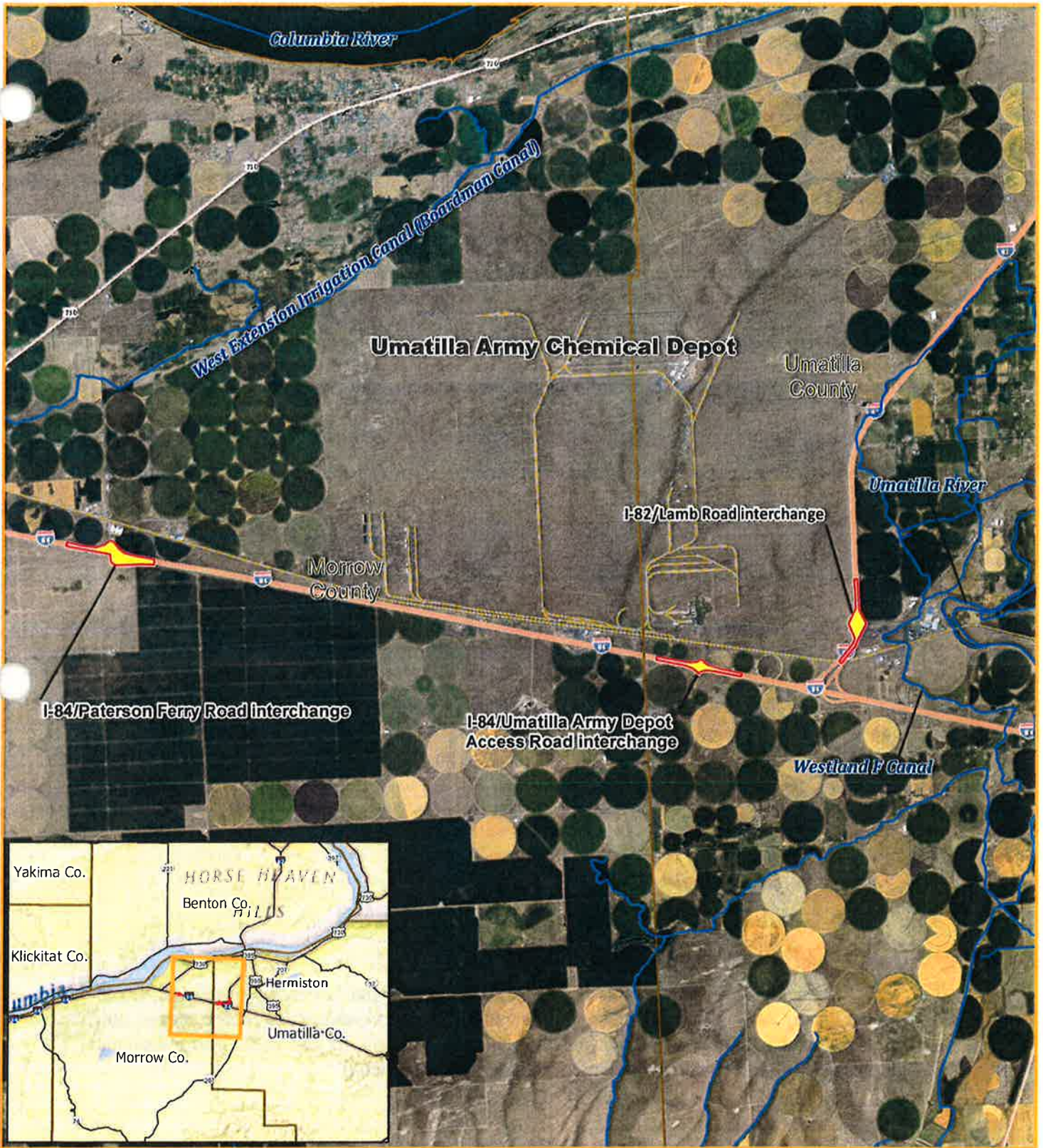





Figure 1.
Umatilla Army Chemical Depot Combined IAMP and Transportation System Subarea Plan
Environmental Research API and Vicinity Map

-  Area of Potential Impact (API)
-  Streams
-  Counties



1 inch = 1.5 miles
 0 0.5 1 2 3 Miles

MB&G

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 Figure1_Vicinity_Final_IM.mxd 2/6/2014

Potential presence of sensitive species within the API was researched prior to the site investigation using a query of the Oregon Biodiversity Information Center database (ORBIC) (ORBIC 2013), the U.S. Fish and Wildlife Service (USFWS) list of Federally Listed, Proposed, Candidate Species and Species of Concern under the Jurisdiction of the Fish and Wildlife Service Which May Occur within Morrow and Umatilla Counties, Oregon (USFWS 2013a), and a query of the StreamNet database (StreamNet 2013). Oregon Department of Fish and Wildlife (ODFW) biologists were also consulted regarding potential presence of state-listed species within the API (Kirsch 2013). Potential habitat for sensitive species within the API was documented during the October 28 and 29, 2013 site investigation.

Noxious weeds that occur on the Oregon Department of Agriculture's (ODA) Noxious Weed Policy and Classification System (ODA 2013) were also reviewed prior to the site investigation. Any noxious weeds observed during the site investigation were recorded.

Potential jurisdictional wetlands and waters were identified prior to the site investigation using aerial photographs (Google Earth 2013), Oregon Wetland Assessment Protocol (ORWAP) and National Wetland Inventory (NWI) mapping (OSU 2013, USFWS 2013b), the Soil Survey of Morrow County, Oregon (Holser 1983), and the Soil Survey of Umatilla County, Oregon (Johnson and Makinson 1988). An Oregon Department of State Lands (DSL) database search for previous wetland delineations within the API was also conducted (Heather Howard, pers. comm., Wetlands Support Assistant, Department of State Lands, November 14, 2013). General Land Office (GLO) survey mapping was utilized to determine if any historic streams were present within the API (University of Oregon Libraries 2013).

Receiving waterbodies for the API were reviewed using the Oregon Department of Environmental Quality's (DEQ) Water Quality Assessment Database (DEQ 2013a). The Lower Umatilla Basin Groundwater Management Area Action Plan and 2013 Evaluation of Action Plan Success were reviewed (DEQ 1997, DEQ 2013b) as was the Oregon Water Resource Department report on Ground Water Supplies in the Umatilla Basin (OWRD 2003).

3.0 EXISTING ENVIRONMENTAL RESOURCES

3.1 Biological Resources

3.1.1 Wildlife-Habitat Communities

The API addressed in this TM contains one general wildlife-habitat community: urban & mixed environs (Figures 2a, 2b and 2c). Two other wildlife-habitat communities, shrub steppe and agriculture, pastures and mixed environs, are located adjacent to the API. The following paragraphs describe each wildlife-habitat community in further detail.



Umatilla Army Chemical Depot

I-82/Lamb Road interchange

Walker Road

Westland Road

Westland Road

Lamb Road

Generation Road

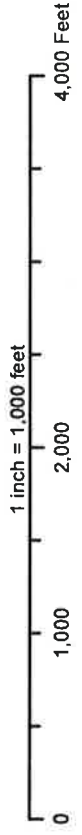
Westport Lane

Stable Lane

Unimproved Road

-  Area of Potential Impact (API)
-  Urban and Mixed Environments
-  National Wetland Inventory Wetlands

Figure 2a.
Wildlife-Habitat Communities
I-82/Lamb Road Interchange
Umatilla County, Oregon



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Figure2_Final_2/16/2014



Figure 2b.

Wildlife-Habitat Communities
I-84/Umatilla Army Depot Access Road Interchange
Umatilla County, Oregon

-  Area of Potential Impact (API)
-  Urban and Mixed Environments
-  National Wetland Inventory Wetlands



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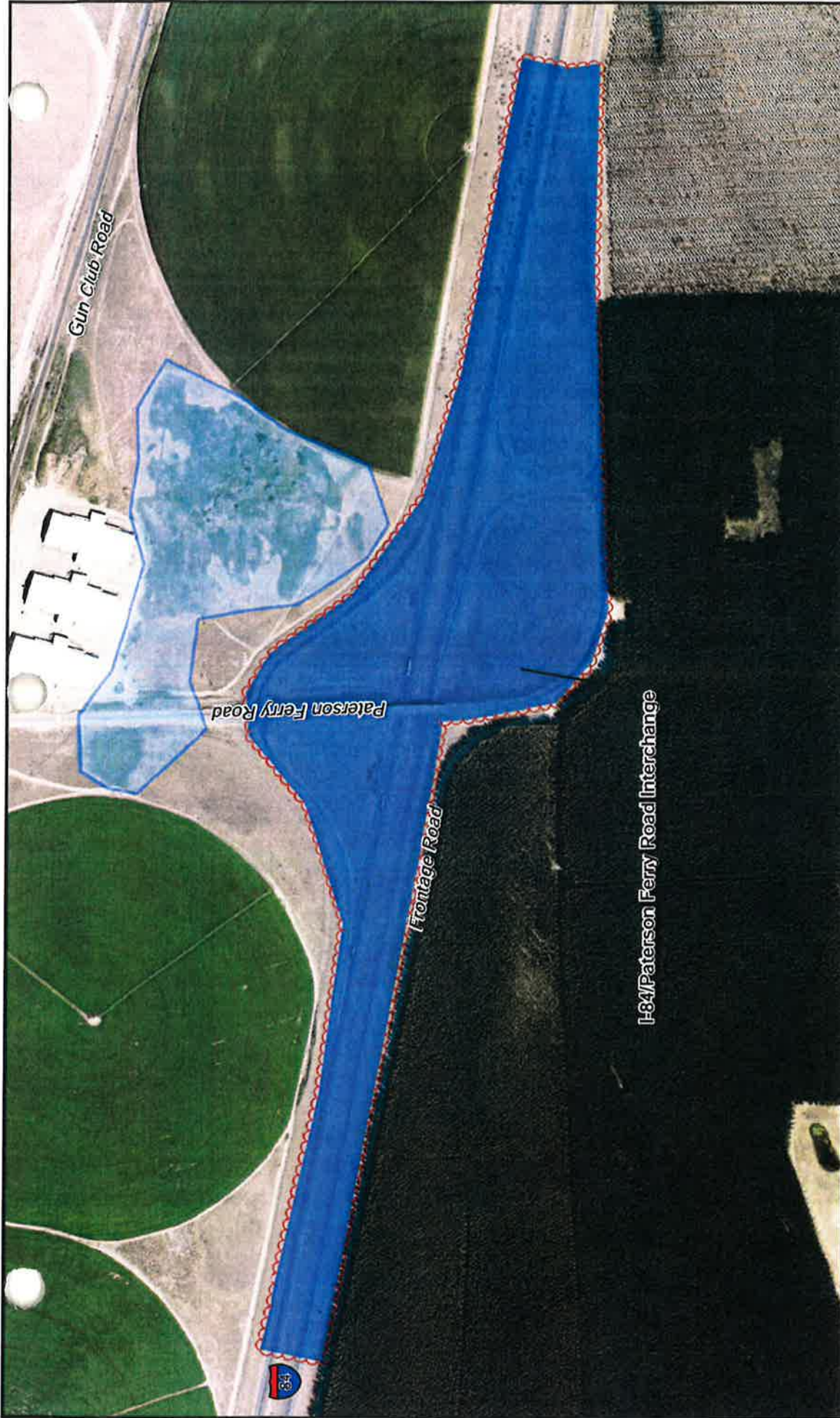



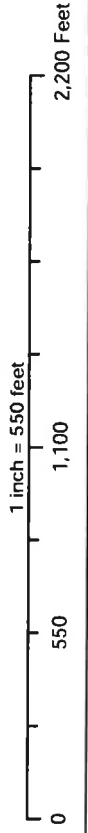


Figure 2c.
Wildlife-Habitat Communities
I-84/Paterson Ferry Road Interchange
Morrow County, Oregon

-  Area of Potential Impact (API)
-  Urban and Mixed Environments
-  Potential Field Assessed Wetland



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The I-82/Lamb Road interchange, I-84/Umatilla Army Depot Access Road interchange, and I-84/Paterson Ferry Road interchanges are comprised entirely of the urban & mixed environs wildlife-habitat community that is associated with I-84 and I-82. Vegetation within this community is a mix of non-native and native species associated with roadside development. The urban & mixed environs community with the API contains approximately 60% impervious surface cover.

The shrub-steppe wildlife-habitat community is located in the immediate vicinity of the project API, including portions of the UMCD. It is dominated by non-native cheat grass (*Bromus tectorum*). Because the shrub-steppe community was the least disturbed wildlife-habitat community within the vicinity of the API, individual plant species observed in the adjacent shrub-steppe community were recorded during the site investigation and are listed in Table 1. This table does not constitute a complete inventory of plant species within this community, but is presented to convey the general species composition observed during the site investigation. Black-billed magpies (*Pica pica*), American kestrel (*Falco sparverius*), and western meadowlarks (*Sternella neglecta*) were also observed in this area during the site investigation.

The agriculture, pastures and mixed environs wildlife-habitat community is also located outside the project API but in the immediate vicinity. Areas utilized for agriculture outside the API are irrigated for cultivated crops and are also used for tree plantations.

Table 1. Typical Shrub-Steppe Community Vegetation within the Project API

Scientific Name	Common Name	Native Status ¹
<i>Achillea millefolium</i>	Common yarrow	Native
<i>Bromus tectorum</i>	Cheat grass	Introduced
<i>Cichorium intybus</i>	Chicory	Introduced
<i>Chrysothamnus nauseosus</i>	Gray rabbitbrush	Native
<i>Chrysothamnus viscidiflorus</i>	Green rabbitbrush	Native
<i>Lactuca serriola</i>	Prickly lettuce	Introduced
<i>Opuntia polyacantha</i>	Plains pricklypear	Native
<i>Poa bulbosa</i>	Bulbous bluegrass	Introduced
<i>Purshia tridentata</i>	Bitterbrush	Native
<i>Salsola kali</i>	Russian thistle	Introduced
<i>Taeniatherum caput-medusae</i>	Medusahead	Introduced
<i>Wyethia mollis</i>	Woolly mule-ears	Native

¹ Source Natural Resource Conservation Service Plants National Database (<http://plants.usda.gov/index.html>)

3.1.2 Threatened and Endangered Species

Data from the USFWS, StreamNet, ODA, and ORBIC focused on a 2-mile radius of the Project API indicated that three wildlife and fisheries species that are listed as threatened or endangered under the federal and state Endangered Species Acts (ESA) have the potential to occur within the vicinity of the API (USFWS 2013a, StreamNet 2013, ODA 2013, ORBIC 2013). A listing of these species, including their federal and state status and whether critical habitat is designated, is shown in Table 2. No listed plant species were identified during the records review or site investigation.

Table 2. Threatened and Endangered Species with the Potential to Occur Within the Vicinity of the API*

Scientific Name	Common Name	Federal Status	State Status	Critical Habitat?	Habitat
<i>Oncorhynchus mykiss</i>	Steelhead (Middle Columbia River DPS, spring run)	T	SV	Yes, within the Umatilla River (east of project API)	Umatilla River
<i>Salvelinus confluentus</i>	Bull trout (Umatilla SMU)	T	SC	Yes, within the Umatilla River (east of project API)	Umatilla River
<i>Uroditellus washingtoni</i>	Washington ground squirrel	C	E	No	Sagebrush grassland in silty loam soils, particularly soils in the Warden series

E= Endangered; T=Threatened; C=Candidate; SV=Sensitive Vulnerable; SC=Species Critical
DPS=Distinct Population Segment; SMU=Species Management Unit

* The Columbia River is located outside the vicinity of the API.

Although habitat for steelhead and bull trout does not exist within the Project API, these species inhabit the Umatilla River located east of the API. Steelhead and bull trout are included in this TM due to the potential for indirect impacts to these species from contaminants contained in stormwater runoff flowing from proposed interchange improvements. It should also be noted that additional listed fish species utilize the Columbia River located north of the API for migration.

The Project API does not include shrub-steppe habitat, which is the preferred habitat for Washington ground squirrels, but this wildlife-habitat community is prevalent in the immediate vicinity. Surveys for Washington ground squirrels have been conducted on the UMCD and no Washington ground squirrels have been detected (M. Kirsch, pers. comm. 2013; Canestorp 2008). However, ODFW indicated that because this species has been found elsewhere in Umatilla County and there is shrub-steppe habitat present in the vicinity of the API (including portions of the UMCD), further investigations may be needed within the API to positively rule out the presence of Washington ground squirrels (Kirsch 1996).

ODFW indicated that the UMCD supports other shrub-steppe obligate species including long-billed curlews (*Numenius americanus*), loggerhead shrikes (*Lanius ludovicianus*), and western burrowing owls (*Athene cunicularia hypogea*) (Mark Kirsch, pers. comm. 2013). These three species and a number of other reptiles, amphibians, birds, mammals, and plants were included on a list of faunal and floral species of special concern potentially found on the UMCD as part of the Integrated Natural Resources Management Plan (October 2007 through September 2012) for

the UMCD (Canestorp 2008). However, these species are not listed as threatened or endangered under the Federal or State Endangered Species Act.

3.1.3 Noxious Weeds

Thirty ODA-listed weed species occur within Umatilla County (Umatilla County 2013) (Appendix B) and 21 ODA-listed weed species occur in Morrow County (Weedmapper 2011) (Appendix B). During the October 28 and 29, 2013 site investigation, MB&G biologists observed rush skeletonweed (*Chondrilla juncea*) and an unidentified knapweed species (*Centaurea* sp.) in close proximity to the API. These species are listed on the ODA noxious weed list (ODA 2013). Due to the timing of the site investigation outside the optimal blooming period for noxious weeds, not all weed species or populations may have been identified. In addition, only small portions of the API were traversed on foot, which likely further limited identification of weed species or populations. A complete noxious weed survey within the project footprint would be required during later design phases of the project to comply with Oregon Department of Transportation (ODOT) requirements.

3.2 Wetlands and Waters Resources

No wetlands or waters were mapped within the project API (USFWS 2013b, OSU 2013) and no wetlands or waters were identified within the API during the October 2013 site investigation. MB&G identified one potential palustrine emergent (PEM)/palustrine scrub-shrub (PSS) wetland northwest of and outside the I-84/Paterson Ferry Road interchange API (Figure 2c). This wetland is not identified on NWI or ORWAP mapping. In the vicinity of the I-84/Umatilla Army Depot Access Road interchange API, three palustrine unconsolidated bottom, artificially excavated (PUBx) wetlands were identified on NWI mapping south of and outside of the project API (OSU 2013, USFWS 2013b) (Figure 2b). MB&G confirmed the presence of these features outside the API during the field investigation.

No previous wetland delineations that had received concurrence from the DSL have been conducted within the API (H. Howard, pers. comm. 2013). The Boardman Canal, which is north and outside the I-84/Paterson Ferry Road interchange API, does not appear on the 1870 GLO survey, but is shown as an irrigation canal on the 1940 GLO survey (University of Oregon Libraries 2013). The Westland F Canal, which is east and outside the I-82/Lamb Road interchange API, does not appear on the 1875 GLO survey, but is shown as an irrigation canal on the 1941 GLO survey (University of Oregon Libraries 2013). No historic streams are mapped on the GLO surveys within the API.

3.3 Water Quality Resources

Water quality parameters and standards have been established by the DEQ to protect the beneficial uses of Oregon's waterways. The API is bisected by the Umatilla and Mid Columbia Lake Wallula 4th level Hydrologic Unit Code (HUC) watersheds (HUCs 17070103 and 17070101, respectively). The Umatilla River is the receiving waterbody for the eastern portion of the API and waters from both watersheds ultimately flow to the Columbia River.

Development, agricultural activities, and industrial and commercial uses have affected the water quality within the Umatilla and Columbia Rivers. As such, the DEQ has listed the segment of the Umatilla River located east of the API as a 303(d) water quality-limited water body because it does not meet water quality standards for iron or manganese; it has an approved total maximum daily load (TMDL) for ammonia, fecal coliform, temperature, and turbidity (Table 3) (DEQ 2013b). The DEQ has also listed the segment of the Columbia River located north of the API as a 303(d) water quality-limited waterbody because it does not meet water quality standards for pH and temperature. In addition, the segment of the Columbia River located north of the API has an approved TMDL for dioxin and total dissolved gas (Table 4) (DEQ 2013b).

Table 3. Water Quality Parameters for the Umatilla River (RM 0 to 32.1)

Parameter	Listing Status	Season	Listing Date
Ammonia	TMDL approved	Year round	2004
Fecal coliform	TMDL approved	Summer	2002
Iron	303(d) listed	Year round	2004
Manganese	303(d) listed	Year round	2004
Temperature	TMDL approved	Summer	2002
Turbidity	TMDL approved	Spring/Summer	2002

Table 4. Water Quality Parameters for the Columbia River (RM 213.7 to 287.1)

Parameter	Listing Status	Season	Listing Date
Dioxin	TMDL approved	N/A	1998
pH	303(d) listed	Fall/Winter/Spring	2004
Temperature	303(d) listed	Year round	2004
Total dissolved gas	TMDL approved	Year round	2002

The API is part of the Lower Umatilla Basin Groundwater Management Area (GMA), established by DEQ in 1990 due to elevated nitrate levels detected in groundwater samples. DEQ published an action plan in 1997 that identifies point-source pollutants and plans to reduce groundwater contamination. The major point-source nitrate-nitrogen pollutants in the GMA include irrigated agriculture, food processing water, confined animal feeding operations, domestic sewage where septic systems occur in high densities, and the UMCD's washout lagoons (DEQ 1997). A report evaluating whether groundwater quality was improving in the GMA found that nitrate levels continue to increase, though the rate of increase is lower than in past years (DEQ 2013a).

The API is within Oregon Water Resources Department designated Ordinance Critical Ground Water Areas. The Ordinance Areas include 175 square miles of basalt aquifers near the UMCD (Ordinance Basalt Critical Ground Water Area) and 82 square miles of alluvial aquifers within the UMCD (Ordinance Gravel Critical Ground Water Area). Though new small "exempt uses" of water are allowed, new groundwater rights are not issued for the Ordinance Critical Ground Water Area due to significant ground water overdraft and declines (OWRD 2003, Cornish 2010).

4.0 REGULATORY PERMITTING AND APPROVAL REQUIREMENTS

4.1 Biological Resources

4.1.1 Threatened and Endangered Species

The API does not contain suitable habitat for any federally-listed plant species. A No Effect Memorandum should be prepared to document these findings. However, construction of interchange improvements has the potential to impact state-listed Washington ground squirrel and federally-listed steelhead and bull trout.

Due to the presence of shrub-steppe habitat within the vicinity of the API, additional efforts to document the presence/absence of Washington ground squirrels may be necessary. This additional work may include providing project limits mapping to ODFW biologists to determine if Washington ground squirrel presence is likely.

Although unlikely, if Washington ground squirrels are found to inhabit portions of the API, the project design team should utilize this information to avoid direct impacts to this species, if at all possible. For state-listed ESA species, before a state agency takes, authorizes, or provides financial assistance for actions on state-owned or leased land, or on land where the state holds a recorded easement, the agency must consult with ODFW. This consultation includes determining if a project is consistent with established programs, or if no programs exist, whether the project has the potential to appreciably reduce the likelihood of the survival or recovery of the species. Notification must be provided to ODFW if it is determined that a project has the potential to appreciably reduce the likelihood of the survival or recovery of the species. ODFW typically responds to this notification within 90 days.

Although direct impacts to listed fish species (including steelhead and bull trout) are not expected to result from transportation improvements within the API, increases in impervious surface may cause indirect stormwater impacts to steelhead, bull trout, and other listed migratory fish species downstream of the API in the Columbia River or Umatilla River. Due to these anticipated indirect effects to listed species, a Biological Assessment (BA) or ODOT Programmatic Federal Aid Highway Program (FAHP) ESA compliance Notification may need to be prepared if stormwater from new impervious surfaces and the contributing impervious area is not infiltrated on-site. Upon submittal of the BA to the regulatory agencies, the National Marine Fisheries Service (NMFS) for steelhead and the USFWS for bull trout, a review timeline of 135 business days for a BA with a Likely to Adverse Affect (LAA) effect determination or 45 days to review a BA with a Not Likely to Adversely Affect (NLAA) determination would be required. If the FAHP is used for ESA compliance, Federal Highway Administration (FHWA) or NMFS (depending on the approval requirements) requires between 60 and 120 days for a consistency review.

4.1.2 Oregon Fish Passage Law

It is unlikely that native migratory fish as defined by Oregon's Fish Passage Law currently or historically utilized the API as there are no waterbodies within the API. As such, transportation improvements within the API are likely exempt from providing fish passage in accordance with the Oregon Fish Passage Law. Confirmation with ODFW Fisheries Biologists should be sought to verify this exemption.

4.1.3 Migratory Bird Treaty Act

Nesting migratory birds have the potential to occupy the API due to the suitable habitat provided by the trees and shrubs that were observed during the October 28 and 29, 2013 site investigation. The federal Migratory Bird Treaty Act (MBTA) prevents the take of adult migratory birds, their young, eggs, and all body parts. Take permits are not widely available so preventative measures are recommended to avoid violations of the law. Under this law, adult migratory birds can be deterred from nesting and empty nests can be removed or disturbed, but active nests and attending adults are not to be harassed. Incidental take of migratory birds is typically avoided by activity timing restrictions as well as preventive measures. The only anticipated activity that has the potential to conflict with the MBTA is the clearing of trees or shrubs that may provide nesting habitat for migratory birds. Any vegetation removal (clearing and grubbing) should occur between September 1 and March 1, outside the nesting period for migratory birds.

4.1.4 Noxious Weeds

Based on the October 28 and 29, 2013 site investigation and the review of available information, noxious weed populations are located within the API. As a result, prior to construction of any transportation improvements, a botanical clearance, which will include a detailed noxious weed survey, will need to be conducted during the appropriate blooming period (May-July) for the species listed in Appendix B in order to satisfy ODOT requirements.

The results of the noxious weed surveys should be documented in a Botanical Clearance Report. Noxious weed populations located within the API should be included on project plans and removed prior to construction of proposed improvements. In addition, inspection and cleaning of construction equipment prior to entry into the construction site should be required. Weed seeds can easily become trapped in the tread of tires or within the crevices of heavy machinery, and spread across the API during construction. Weed control should also be required during the one-year post-construction maintenance period to prevent the spread of noxious weeds.

4.2 Wetlands and Waters Resources

Impacts to jurisdictional wetlands and waters are not likely because there are no wetlands or waters located within the API. However, if the API is expanded (especially the I-84/Paterson Ferry Road interchange API to the north or the I-84/Umatilla Army Depot Access Road interchange API to the south), impacts to jurisdictional features could occur. If impacts to jurisdictional wetland and/or waters feature result from the Project, compliance with Section 404 of the Clean Water Act, administered by the U.S. Army Corps of Engineers (ACOE) and the Removal/Fill Law, administered by the DSL would be required. If proposed impacts are less than 50 cubic yards, the DSL will not require a Removal/Fill permit. If proposed impacts are less than 0.5 acre, then the improvements may qualify for the ACOE Nationwide Permit #14, Linear Transportation Projects. If (1) proposed wetland impacts are less than 0.5 acre, (2) the proposed volume impacts to waters of the state are 5,000 cubic yards or less, (3) existing transportation structures are being modified, and (4) mitigation can be provided through payment-in-lieu, then the DSL General Permit (GP) for Certain Transportation-Related Structures may apply to the proposed improvements. If more than 0.5 acre of wetland and/or waters impacts is required, an individual permit will be required from the ACOE and DSL. A wetland/waters delineation and report will be required for proposed improvements to determine accurate wetland/waters locations and dimensions.

The ACOE and DSL will require compensatory mitigation for permanent impacts to wetlands/waters of the U.S. and State. The API is not located within a wetland mitigation bank service area or an in-lieu fee bank service area, therefore, alternative forms of mitigation, including payment-in-lieu (for DSL-jurisdictional impacts only) or on- or off-site wetland creation, enhancement, or restoration, will need to be considered if such impacts occur. Minimal on-site locations for wetland creation are available within the API or adjacent to the API, as the hydrology sources are limited and the majority of the API is located within ODOT right-of-way, which is regularly maintained (i.e., mowed). If on- or off-site mitigation is proposed, the DSL and ACOE will require a compensatory wetland mitigation plan.

4.3 Water Quality Resources

There are no 303(d) listed or TMDL-approved waters located within the API. However, stormwater runoff from the Project may eventually flow into the Umatilla and Columbia Rivers, which are 303(d) listed and have approved TMDLs. Consequently, plans should be developed to prevent untreated stormwater generated from within the API from eventually being discharged into the Umatilla and Columbia Rivers.

The DEQ's 401 Water Quality Certification (WQC) process will be triggered if an ACOE permit is required. If the 401 WQC process is triggered, a Stormwater Management Plan (SWMP) will need to be prepared and will need to be approved by the DEQ.

If construction activities disturb more than one acre of land, a National Pollutant Discharge Elimination System (NPDES) 1200-C permit from DEQ will be required per Section 402 of the CWA. This permit requires that the applicant prepare an Erosion and Sediment Control Plan which utilizes approved Best Management Practices to prevent erosion and control sediment runoff from the construction site. In addition, the permit requires the applicant to inspect and maintain erosion controls to ensure they are working properly.

The Lower Umatilla Groundwater Management Area Action Plan has not identified transportation development infrastructure as a contributing factor to elevated nitrate levels in the groundwater (DEQ 1997). However, if any dewatering would be required for transportation improvements due to elevated groundwater levels, the disposed water will need to be infiltrated onsite and not introduced to a wetland or other surface water. Disposal authorization would be required from DEQ through a special letter permit or letter from DEQ, depending on the volume of water removed and the duration of the dewatering activity (P. Richerson, pers. comm. 2011).

If water is needed for short-term construction purposes or for long-term water use (i.e., landscape irrigation), a limited license or water right, respectively, will be required from the OWRD. Groundwater withdrawals will not be allowed for transportation improvements within the Ordinance Critical Groundwater Areas. If municipal water sources are utilized, no additional permitting will be required (T. Justus, pers. comm. 2011).

4.4 Regulatory Summary

Table 5 provides details regarding the applicable natural resource permits, approvals, and clearances likely needed for transportation improvements proposed in the IAMP.

Table 5. Summary of Applicable Permits, Approvals, and Clearances for implementation of the UMCD Combined IAMP and Transportation System Subarea Plan

Type of Permit / Approval/ Clearance	Issuing Agency	Permit / Approval / Clearance	Estimated Approval Timeline (after submittal)
ESA Consultation for federally- listed fish species	NMFS USFWS	FAHP Notification or Biological Opinion	60-120 days (FAHP) 45 days (NLAA) 135 days (LAA)
ESA Consultation for state-listed wildlife species	ODFW	ODFW Project Approval	90 days
Migratory Bird Treaty Act Compliance for tree clearing	ODOT	None (if trees and shrubs are removed outside MBTA nesting period of March 1 – September 1)	N/A
Noxious Weed Clearance	ODOT	Botanical Clearance Report	N/A
Wetland Delineation Report Letter of Concurrence	DSL	Wetland/Waters Delineation Report approval	120 days
Wetland Delineation Jurisdictional Determination (only if API is expanded)	ACOE	Wetland/Waters Delineation Report approval	60 days
Wetland/Waters Removal/Fill Permit (only if API is expanded)	DSL	Joint Permit Application approval	GP: 40 days after Wetland/Waters Delineation Report concurrence Individual Permit: 120 days
Wetland/Waters Section 404 Clean Water Act Permit (only if API is expanded)	ACOE	Joint Permit Application approval	Nationwide permit: 75 days, Individual permit: 120 days
Section 401 Clean Water Act Certification (only if API is expanded)	DEQ	401 Water Quality Certification	Up to 1 year
Section 402 Clean Water Act Certification	DEQ	1200-C	30 days
Dewatering disposal approval	DEQ	Special letter permit or letter from DEQ	Several weeks to several months
Water rights	WRD	Limited license or water right	30 days to 1 year

5.0 REFERENCES

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Appendix A

Representative Photographs of Area of Potential Impact

1



2



MB&G

Mason, Bruce &
Girard, Inc.

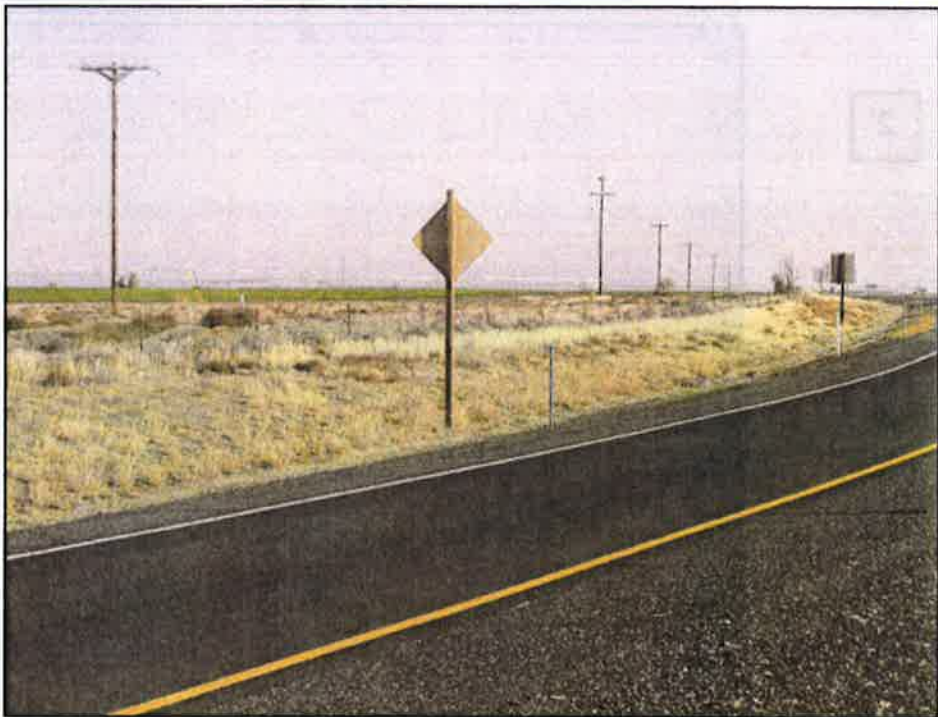
October 28, 2013

1. View to the southeast of the I-84/Paterson Ferry Road Area of Potential Impact (API) showing the urban & mixed environs wildlife-habitat community.
2. View to the southwest of the I-84/Paterson Ferry Road Interchange showing the urban & mixed environs wildlife-habitat community.

3



4




MB&G	3. View to the southwest of the I-84/Umatilla Army Depot Access Road API showing the urban & mixed environs wildlife-habitat community.
Mason, Bruce & Girard, Inc.	4. View to the northeast of the westbound off ramp of the I-84/Umatilla Army Depot Access Road API, which is comprised of the urban & mixed environs wildlife-habitat community. Irrigated agriculture can be seen in the background of the photograph outside the API.
October 28, 2013	

5



6



	5. View to the southwest of the I-82/Lamb Road API showing the urban & mixed environs wildlife-habitat community. The Umatilla Chemical Depot (UMCD) can be seen at the right of the photograph behind the fence.
Mason, Bruce & Girard, Inc. October 28, 2013	6. View to the southeast of the I-82/Lamb Road API showing the urban & mixed environs wildlife-habitat community.

Appendix B

Noxious Weed Lists for Umatilla and Morrow Counties

ODA-listed Noxious Weeds Occurring in Umatilla County.

Scientific Name	Common Name	ODA Classification
<i>Acroptilon repens</i>	Russian knapweed	B
<i>Aegilops cylindrical</i>	Jointed goatgrass	B
<i>Agropyron repens</i>	Quackgrass	B
<i>Alhagi pseudalhagi</i>	Camelthorn	A
<i>Ambrosia artemisiifolia</i>	Ragweed	B
<i>Cannabis sativa</i>	Marijuana	A
<i>Cardaria draba</i>	Hoary cress	B
<i>Carduus nutans</i>	Musk thistle	B
<i>Centaurea calcitrapa</i>	Purple starthistle	A
<i>Centaurea diffusa</i>	Diffuse knapweed	B
<i>Centaurea jacea</i> xc. <i>Nigra</i>	Meadow knapweed	A
<i>Centaurea maculosa</i>	Spotted knapweed	A
<i>Centaurea solstitialis</i>	Yellow starthistle	B
<i>Chondrilla juncea</i>	Rush skeletonweed	A
<i>Cirsium arvense</i>	Canada thistle	B
<i>Cuscuta pentagona</i>	Dodder	B
<i>Echium vulgare</i>	Viper's bugloss	B
<i>Euphorbia esula</i>	Leafy spurge	A
<i>Hypericum perforatum</i>	St. Johnswort	B
<i>Kochia scoparia</i>	Kochia	B
<i>Lepidium latifolium</i>	Perennial pepperweed	B
<i>Linaria dalmatica</i>	Dalmation toadflax	B
<i>Lythrum salicaria</i>	Purple loosestrife	A
<i>Onopordum acantium</i>	Scotch thistle	B
<i>Roripa sylvestris</i>	Creeping yellow cress	A
<i>Secale cereal</i>	Cereal rye	B
<i>Senecio jacobaea</i>	Tansy ragwort	A
<i>Sorghum halepense</i>	Johnsongrass	B
<i>Sphaerophysa salsula</i>	Austrian peaweed	B
<i>Tribulus terrestris</i>	Puncturevine	B

Source: 2013 Umatilla County Noxious Weed list. Available at URL:

<http://www.co.umatilla.or.us/road/weedlist.htm>

Note: Per ORS.570.505-570.600, the list of noxious weeds in Umatilla County above was adopted from the 2003 Umatilla County Noxious Weed Control List. The weeds listed are those on the 2003 Oregon State Department of Agriculture list currently found growing or known to have grown previously in Umatilla County.

A= a weed of known economic importance which occurs in the state/county in small enough infestations to make eradication/containment possible; or is not known to occur, but its presence in neighboring states/county make future occurrence in Oregon seem imminent. B=a weed of economic importance which is regionally abundant, but which may have limited distribution in some counties.

ODA-listed Noxious Weeds Occurring in Morrow County, Oregon

Scientific Name	Common Name	ODA Classification
<i>Acroptilon repens</i>	Russian knapweed	B
<i>Aegilops cylindrica</i>	Jointed goatgrass	B
<i>Avena fatua</i>	Wild oats	B
<i>Cardaria draba</i>	White top (Hoary cress)	A
<i>Cardus nutans</i>	Musk thistle	A
<i>Centaurea diffusa</i>	Diffuse knapweed	B
<i>Centaurea maculosa</i>	Spotted knapweed	B
<i>Centaurea solstitialis</i>	Yellow starthistle	A
<i>Chondrilla juncea</i>	Rush skeletonweed	A
<i>Cirsium arvense</i>	Canada thistle	B
<i>Conium maculatum</i>	Poison hemlock	B
<i>Convolvulus arvensis</i>	Field bindweed	B
<i>Crupina vulgaris</i>	Common crupina	A
<i>Cuscuta</i> spp.	Field dodder	B
<i>Cynoglossum officinale</i>	Houndstongue	A
<i>Elymus caput-meduseae</i>	Medusahead rye	B
<i>Euphorbia esula</i>	Leafy spurge	A
<i>Hemizonia pungens</i>	Spikeweed	A
<i>Hypericum perforatum</i>	St.Johnswort (Klamath weed)	B
<i>Kochia scoparia</i>	Kochia	B
<i>Linaria dalmatica</i>	Dalmatian toadflax	A
<i>Linaria vulgaris</i>	Yellow toadflax	A
<i>Lythrum salicaria</i>	Purple loosestrife	A
<i>Onopordum acanthium</i>	Scotch thistle	A
<i>Salvia aethiopsis</i>	Mediterranean sage	A
<i>Secale cereal</i>	Cereal rye	B
<i>Senecio jacobaea</i>	Tansy ragwort	A
<i>Sonchus arvensis</i>	Perennial sowthistle	B
<i>Sorghum halepense</i>	Johnsongrass	B
<i>Tribulus terrestris</i>	Puncturevine	B

Source: Morrow County Weed Board 1999.

A= a weed of known economic importance which occurs in the state/county in small enough infestations to make eradication/containment possible; or is not known to occur, but its presence in neighboring states/county make future occurrence in Oregon seem imminent; control of 'A' listed weeds is mandated by Morrow County Ordinance. B=a weed of economic importance which is regionally abundant, but which may have limited distribution in some counties. Morrow County Ordinance recommends control of these species.

Appendix G
Technical Memorandum #6:
Future Land Use and Forecast
Travel Demand



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

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TECHNICAL MEMORANDUM #6 – FINAL

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Future Land Use and Forecast Travel Demand

Date: **February 21, 2014** Project #:13848
To: **Don Chance, Technical/Public Advisory Committee (TPAC)**
From: **Matt Hughart, AICP; Pat Marnell; Marc Butorac, P.E., P.T.O.E – Kittelson & Associates, Inc.
Frank Angelo and Darci Rudzinski, AICP - Angelo Planning Group**

The purpose of this memorandum is to document the 20-year forecast land use conditions and traffic operations associated with the Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan.

OVERVIEW

The analysis of future land uses within the Interchange Management Study Area (IMSA) was focused on areas that are expected to have new activity, new development, or redevelopment potential that would generate traffic at the three study interchanges. These areas of new traffic generating potential are likely to include the following:

- An on-going Oregon National Guard (ORNG) training base located on 7,500-acres of the existing Umatilla Army Depot site.
- Growth associated with the planned 3,150-acre Port Industrial/Depot Industrial development zones. This section includes the approximately 3,150 acres within the Umatilla Army Depot site that is expected to be zoned for industrial/employment uses (by both Morrow and Umatilla Counties) to implement the Umatilla Army Depot Land Use Study prepared in 2013.
- Continued growth associated with the Westland Road Exception Area. The Exception Area in the southeast corner of the IMSA already has significant existing development – FedEx distribution center, Lamb Weston food processing plant, Americold Building, and the Hermiston Generating Company Power Plant and Substation. There are additional undeveloped parcels, approximately 138 acres, including those designated for highway tourist uses that can be realistically assumed to be developed over the next 20 years.
- Continued regional growth within both Morrow and Umatilla Counties outside the IMSA, including growth in the incorporated cities of Irrigon and Hermiston.

FUTURE LAND USE

The Umatilla Army Depot (Depot) is a unique facility and land use in the State of Oregon. Established more than seventy years ago by the U.S. Army, the Depot site encompasses approximately 17,000 acres spanning Morrow and Umatilla Counties. In 1940 the Army selected the site in northeastern Oregon that became the Depot. Ten months (January to October 1941), 7,000 workers, and thirty-five million dollars later the prairie site was transformed into a complex of warehouses, munitions storage bunkers, shops and office buildings connected by a web of roads and railroad tracks. The Depot opened in 1941 with the mission to store, maintain and transfer a variety of military items, from blankets to ammunition. The Depot has supported multiple war efforts, including the Korean Conflict, Vietnam, Grenada, Panama, Operation Desert Shield, and Operation Desert Storm. Besides its conventional ammunition and general supply missions, the Depot was assigned a new mission in 1962 – receiving and storing chemical ammunition. Between 1962 and 1969, the Depot received various types of chemical ammunitions as one of six Army installations in the U.S. that stored chemical weapons.

In the mid-1980's, Congress directed the Army to dispose of the nation's aging chemical weapons stockpile. In 1988, the Umatilla Army Depot was placed on the Department of Defense Base Realignment and Closure (BRAC) list to review the future of the facility. It was decided that the base would remain open until the chemical stockpile at the Depot was destroyed. To accommodate this mission, the Umatilla Chemical Disposal Facility (UMCDF) was constructed in the northeastern portion of the site and destruction of the chemical ammunitions stored at the Depot took place from 2004 to 2012. The 2005 BRAC round of announcements has the Umatilla Army Depot scheduled for closure after the incineration facility has completed its mission (including decontamination, decommissioning, and closure) in about 2014.

Representatives of Morrow and Umatilla Counties, Morrow and Umatilla Port Districts, the Confederated Tribes of the Umatilla Indian Reservation, and numerous state and local agencies have been involved with planning for future uses of the Depot for more than twenty years. On May 14, 2013 the Umatilla Army Depot Local Reuse Authority (LRA) endorsed an economic development and land use strategy to transition the Depot away from military operations towards a more comprehensive use of the property. This strategy has consistently emphasized three overarching goals for future use of the site:

- Military Reuse (accommodating the needs and plans of the ORNG)
- Wildlife Habitat/Environmental Preservation (with a special emphasis on the shrub-steppe habitat)
- Economic Development (job creation)

The recently completed Land Use Analysis provided the Draft planning and zoning implementation approach for the Depot known as the Depot Plan District zoning. The Land Use Analysis was subject to a rigorous review by both Morrow and Umatilla Counties. While Morrow and Umatilla Counties have not formally adopted the Depot Plan District zoning, adoption is expected to occur in early 2014. Therefore,

for future planning purposes it is appropriate to use the zoning endorsed by the LRA. Figure 6-1 provides a graphical breakdown of the draft Depot Plan District showing the military reuse (ORNG), wildlife habitat/environment preservation, and industrial zones endorsed by the LRA. Table 6-1 shows the total gross acreage by zoning district.

Figure 6-1 - Depot Plan District Draft Zoning Map

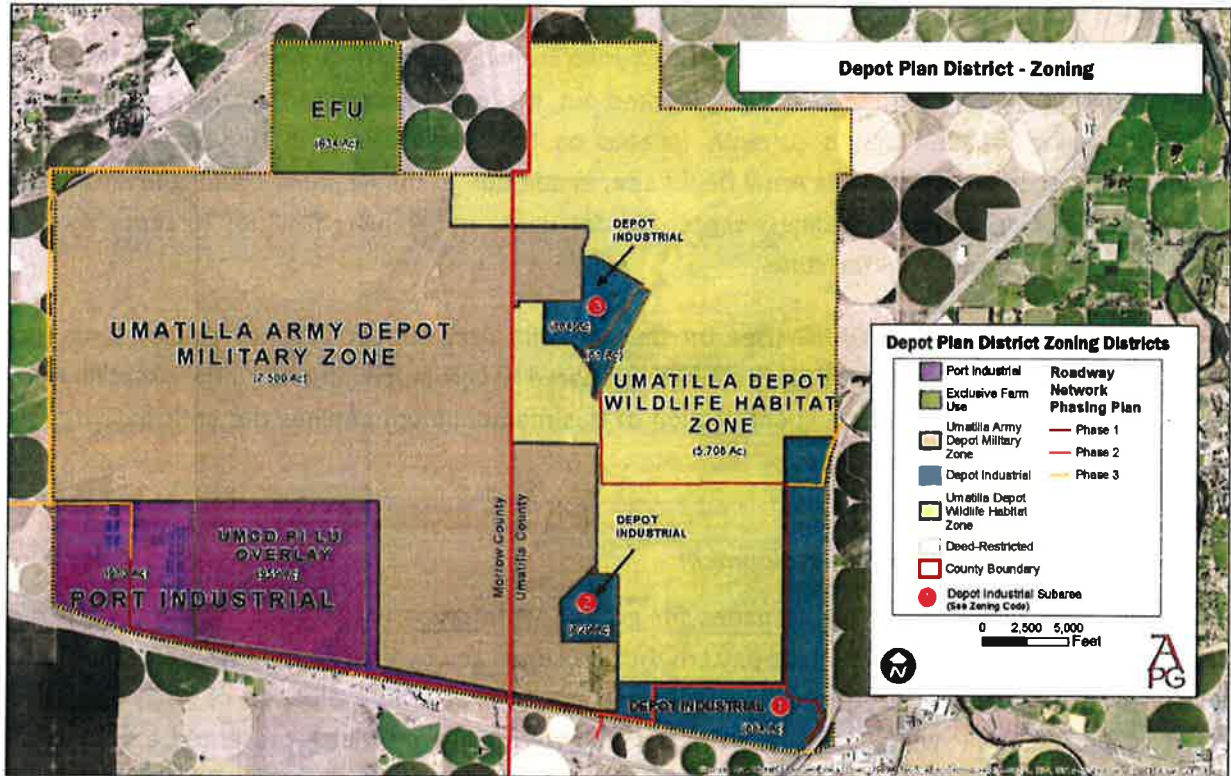


Table 6-1 - Depot Plan District Breakdown

Plan District Designation	Acres (% of District)	Proposed Zoning
Umatilla Army Depot Military	7,500 (44%)	None, pending decisions by each County on whether to zone the Military/Oregon National Guard portion of the Depot.
Wildlife Habitat	5,678 (33%)	None, pending decisions on ownership of the Habitat area.
Industrial (Morrow County)	1,872 (11%)	Port Industrial (existing zoning district)
Industrial (Umatilla County)	1,278 (8%)	Depot Industrial (new zoning district)
Agriculture (Morrow County)	634 (4%)	Exclusive Farm Use (existing zoning district)

The following sections of this memorandum outline the assumptions and future land use/traffic conditions that are anticipated to result from this future vision of the Umatilla Army Depot and the key areas surrounding the Depot.

Assumed Planned Uses on the Umatilla Army Depot Site

Oregon National Guard (ORNG)

As shown in Figure 6-1, the ORNG is planning to utilize over 7,500 acres¹ of the Umatilla Army Depot for a variety of uses. For the purposes of the IAMP study, it has been assumed in consultation with ORNG officials that the future uses will require staffing needs comparable to what has been outlined in the June 2012 *Site Development Plan for the ORNG Umatilla Training Center* document. Although the exact details of the future operation are still being worked out, it is understood that the ORNG will move its Regional Training Institute that is currently located on the Western Oregon University campus in Monmouth, Oregon to the Umatilla Army Depot site. In addition to the Regional Training Institute, the site will also include a future readiness center, tenant units, and training facilities to support other military units from throughout the state.

With these identified future ORNG uses on the Umatilla Army Depot site, it is recognized that associated daily traffic volumes will likely change compared to current conditions on the Umatilla Army Depot site. The Future Traffic Conditions section of this memorandum outlines the anticipated traffic conditions associated with these uses.

Port Industrial/Depot Industrial Development

Four future land use/employment scenarios for growth were prepared for each subarea within the Depot Plan District based on the zoning pattern that was endorsed by the LRA in May 2013. They were developed to provide a range of possible outcomes and to enable an evaluation of potential future needs within the IAMP work. Initially, two scenarios were explored that represented a reasonable “build-out” of the Depot area and a percentage (65%) of full build out, which assumed a more modest pace of growth. These two scenarios were developed in consultation with staff from both counties and input from the Port of Morrow and Port of Umatilla. These scenarios, while consistent with local economic development aspirations, reflected a total number of square feet that appeared high given the historical pattern and rate of growth in the area. As well, the assumptions underlying Scenarios #1 and #2 were not consistent with the findings of the consultant team developing the Operations and Infrastructure Analysis and Business Operation Plan for the Depot. Based on further input, growth scenarios #3 and #4 were developed using less aggressive assumptions that better reflected the rural character of the area, the distance from population centers, and historical growth trends. Scenario #3 still assumes approximately 75,000 square feet of employment is developed each year within the Depot Plan District, over the twenty-year planning horizon. Scenario #4 reflects a “slower growth” outcome, assuming approximately 50,000 square feet is developed every year over the planning horizon.

¹ Federal regulations allow for an approximately 7,500 acres site to be used in on-going military training.

The four future growth scenarios were shared and discussed at the January TPAC meeting and Public Workshop. Based on careful consultation with the team developing the Operations and Infrastructure Analysis and Business Operation Plan and review by county and Port representatives, it was determined that only Scenarios #3 and #4 are reasonable approximations of possible growth scenarios within the 20-year time horizon. Therefore, Scenarios #3 (“Strong Growth”) and #4 (“Moderate Growth”) are included in this assessment of future growth and will be used to forecast the impacts of future development on the transportation system.

The following sections present a summary of the two employment forecasts to 2035 (the end of the IAMP planning horizon) in Morrow County and Umatilla County respectively. *Appendix A presents the detailed development assumptions that are associated with each of the employment forecasts that are summarized in tables below.*

Morrow County – Port Industrial Zone

As shown in Figure 6-1, the LRA has recommended designating and zoning the 1,872 acres in the Morrow County exception area for Port Industrial use. “Port-related industrial uses” are those uses permitted outright or conditionally under Section 3.073, Port Industrial (PI) Zone of the Morrow County Zoning Ordinance. Uses authorized in the PI zone include, but are not limited to, port-related chemical and metal industrial uses; manufacturing, refining, processing or assembly of any agricultural, mining or industrial product; power generating and utility facilities; ship building and repair; rail loop and spur dependent uses; and effluent disposal of industrial wastes and agricultural activities in conjunction therewith. Authorized uses also include manufacturing, warehousing, packaging, processing, compounding, constructing, treatment, assembly, storage, testing, finishing, refinishing, repair, and wholesale sale and distribution of products, and any other industrial use authorized by ORS 777.250.

Figure 6-2 shows an expanded view of the PI area in Morrow County. Of the total 1,872 acres, 959 acres will be subject to a limited use overlay, which will only allow the use of the existing structures (igloos). The reuse of existing structures, allowed under the limited use overlay, may encourage a minor amount of future job growth in the area. The remaining 913 acres (730 net developable acres) are available for immediate future development.

Because there is the potential for the limited use overlay to be removed over the next 20 years, the Strong Growth scenario will account for development of the total 1,872 acres and the Moderate Growth scenario will account for only the 913 acres not subject to the limited use overlay.

Discussions with Morrow County and Port of Morrow representatives indicate that the developable PI area is best suited for rail-related warehouse and storage uses. These uses are typically not labor intensive and, therefore, will not generate large numbers of jobs. However, the site’s locational advantages and very large, flat developable area, makes an attractive location for these uses. The 2035 employment forecasts for the PI area are summarized in Table 6-2.

Figure 6-2- Morrow County Port Industrial Zone

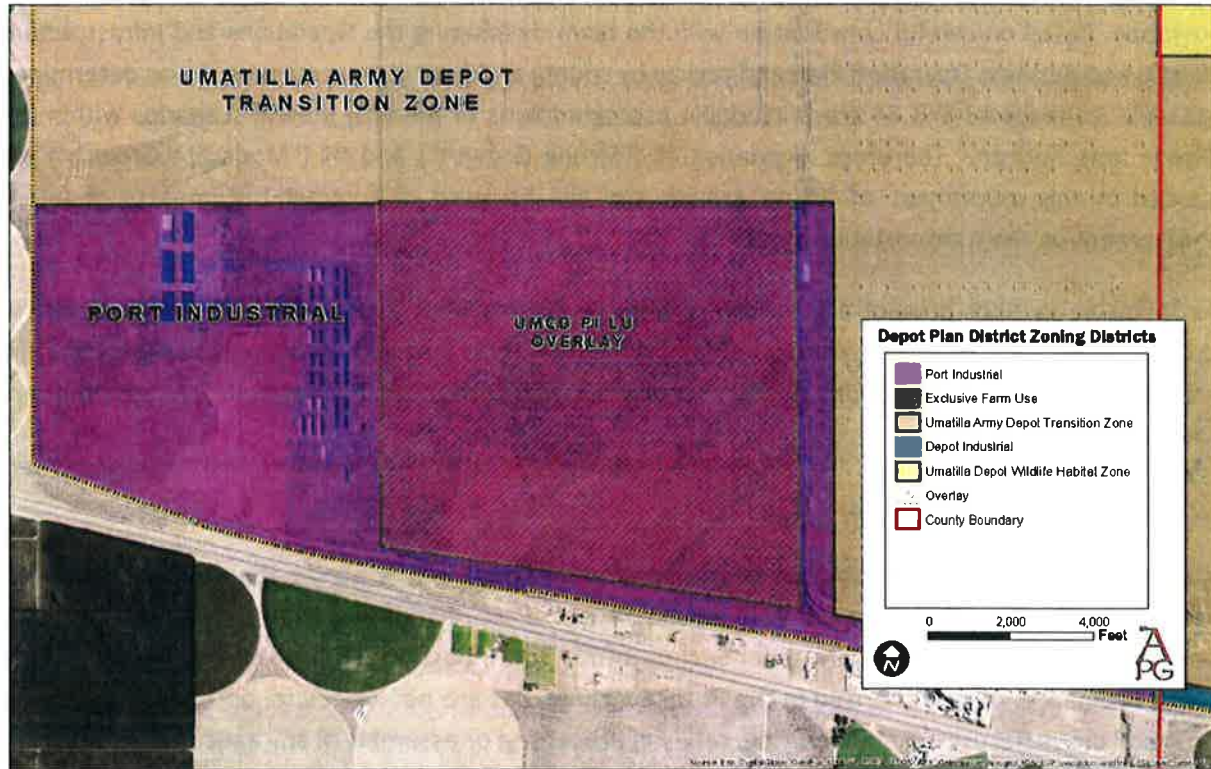


Table 6-2 - Morrow County Port Industrial Zone: Future (2035) Development Summary

	Gross / Net Acres	Total Square Feet	Total Employees
2035 Strong Growth Scenario			
Port Industrial	913 / 730 acres	477,243 SF	159
Port Industrial (With Out Limited Use Overlay)	959 / 767 acres	501,288	167
Total		978,531 SF	326
2035 Moderate Growth Scenario			
Port Industrial	913 / 730 acres	318,162 SF	106
Port Industrial (With Limited Use Overlay)	959 acres	n/a	n/a
Total		318,162 SF	106

Umatilla County – Depot Industrial Zone

As shown on Figure 6-1, there are three discrete subareas identified for industrial development in the Umatilla County portion of the Depot Plan District. Descriptions of these subareas are provided below.

Subarea 1 encompasses approximately 884 undeveloped acres located in the southeast corner of the Umatilla Army Depot at the junction of I-82 and I-84. As shown on Figure 6-3, the proposed L-shaped configuration of this exception area will provide immediate access to the interstate system via existing interchanges to I-82 on the east and I-84 on the south.

Figure 6-3 - Umatilla County Depot Industrial Zone: Subarea 1 & 2



Subarea 1 is recognized as the key opportunity site for industrial development and is considered one of the best sites for distribution/warehouse/logistics uses in the region and the state for the following reasons:

- Unique location at the confluence of two interstate freeways. There are only seven locations in Oregon where interstate freeways/connecting loop freeways intersect – and six of them are in the Willamette Valley with surrounding lands largely developed.
- Immediate accessibility to existing interchanges to each freeway.
- The two interstate highways adjoining this area serve a large, multi-regional and multi state area and provide direct freighting opportunities for intensive levels of industrial development. As such, the interstate facilities can support industrial activities far beyond

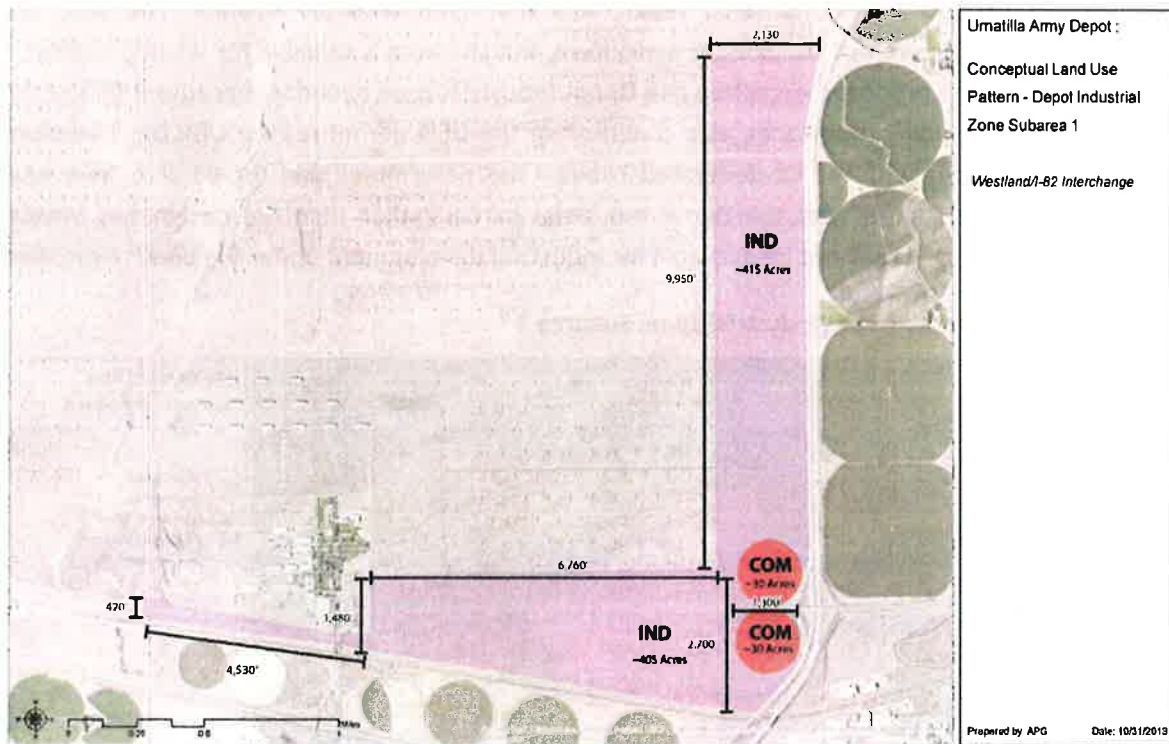
what would commonly be found in a rural area. The highways serving this area serve an area extending from Seattle, Vancouver BC and Spokane to the north to Portland to the west, Boise and Salt Lake City to the east, and northern California to the south via US 395.

- Large, level site with more than 800 acres under a single ownership – the largest undeveloped site at the junction of two interstate freeways in Oregon.
- Proximity and accessibility to other transportation modes to support industrial uses and freight movement, including UP rail facilities and the nearby Hinkle yard, and Port shipping facilities on the Columbia River.
- Proximity to nearby communities (Hermiston, Umatilla, Boardman, and Irrigon) with available residential land, housing and other services to support industrial jobs at this location.

Subarea 1 is intended to accommodate a range of distribution/commerce uses that can maximize the economic development potential of a large, unique site located at the junction of two interstate freeways. With immediate accessibility to interchanges to I-84 on the south and I-82 on the east, Subarea 1 is intended primarily for land-intensive freight related uses that can take advantage of easy truck access on and off the interstate system and avoid traffic congestion and other community impacts within urban areas.

Because of its accessibility and visibility, a maximum of 5 percent of the net developable acreage within the Depot Industrial Zone (excluding the restricted area of Subarea 3) may be allocated to retail and service uses. The retail uses must be located in Subarea 1. A draft development concept for the industrial / commercial land use pattern in Subarea 1 of the Depot Industrial zone is shown in Figure 6-4. Future commercial uses in this subarea may include sales and personal service oriented uses, in addition to highway tourist oriented uses which are also allowed in this zone. Because of the locational advantages and size of this site, there is the potential that these commercial activities may be more intense than what could be accommodated east of I-82. However, in contrast to the exception area, growth may be slowed somewhat by the lack of infrastructure and allied or support business in the immediate area. Future planning associated with the Business Operation Plan that is being developed for the Depot site will provide a more refined development concept for this area.

Figure 6-4 - Umatilla County Depot Industrial Zone: Subarea 1 Conceptual Land Use



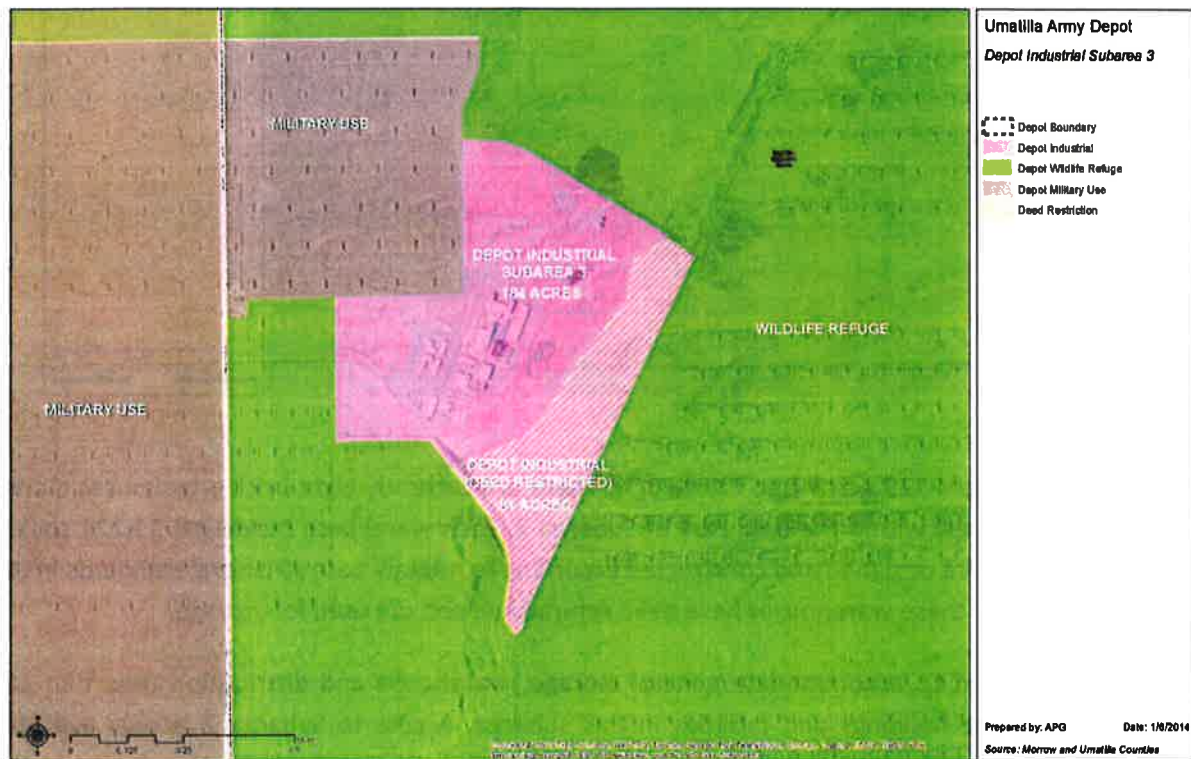
Subarea 2 encompasses 129 acres (see Figure 6-3). There are currently eight brick warehouses (Series 400 Magazine Buildings) within the boundary of Subarea 2. Each warehouse building is 11,227 square feet. The buildings were designed and constructed according to military base structural standards in the early 1940's. Some of these warehouses have been refurbished and are used for storage.

Subarea 2 is intended to accommodate general storage, warehouse and distribution uses that can largely utilize existing buildings and facilities in this subarea. Access to Subarea 2 is only available through the secured main gate and entry to the Administration Area that will be transferred to the Oregon National Guard. Therefore, the range of permitted and conditional industrial uses for Subarea 2 is more limited and future development opportunities are constrained. This entry road connects with I-84 via the existing Army Depot interchange.

The American Red Cross currently uses at least five concrete igloos on the Depot site for storage of emergency supplies. The Red Cross has been coordinating with the LRA and intends to consolidate and expand this use into storage warehouse(s) located in Subarea 2. The Red Cross is working with Oregon Emergency Management and the Federal Emergency Management Agency to make sure enough emergency supplies and trained volunteers are in place. By utilizing existing warehouse(s) in Subarea 2 for storage of emergency supplies, the Red Cross also has opportunities to partner with the Oregon National Guard to load and transport supplies in the event of an emergency or natural disaster.

Subarea 3 includes a total of 265 acres. As shown on Figure 6-5, approximately 81 acres of Subarea 3 (Coyote Coulee) will be subject to deed restrictions that limit land disturbance. The soils and topography in the coulee are not suitable for agriculture, but the area is valuable for wildlife habitat. It has been included in the proposed exception and Depot Industrial zone boundary because it falls within the area subject to on-going monitoring as a condition of the DEQ permit for the UMCDF. Therefore, the LRA – in consultation with the Confederated Tribes – has determined that the 81 acre “restricted area” should be consolidated with the Depot Industrial parcel rather than the designated Wildlife Habitat area, even though it will not be available for industrial development under the deed restriction.

Figure 6-5 - Umatilla County Depot Industrial Zone: Subarea 3



Subarea 3 is intended to accommodate a range of general industrial uses that can leverage the substantial and recent investment in buildings, infrastructure and other site improvements constructed to support the UMCDF mission. The UMCDF site and Subarea 3 are the most recently and intensively developed areas on the entire Umatilla Army Depot site. The structures were all constructed within the last ten years and there has been a recent and significant investment in infrastructure, including but not limited to electric power facilities, natural gas and communication facilities. More than 1,000 employees worked at the UMCDF as the stockpiled chemical weapons were incinerated. The incinerator building has since been demolished as a condition of the DEQ permit. Even with this large building removed, the remaining infrastructure and other improvements constructed to support the UMCDF make Subarea 3 very attractive for future industrial uses.

Once the Army has completed all the required decommissioning and closure activities at the UMCDF, Subarea 3 is anticipated to be available as a part of the overall “economic development” transfer of Depot property to the LRA and transition to new urban industrial uses. Because of the infrastructure and its relative isolation, the UMCDF site has been identified as an area that is uniquely attractive for specific industrial uses, including but not limited to data centers. The local region has already exhibited success in the recruitment of data center development, such as the Amazon facilities on Port of Morrow and Port of Umatilla properties.

General site requirements for data centers are as follows:

- Access to current and future power sources: Data centers require significant amounts of power, as well as high quality transmission. Any power failures are highly costly. Access to more than one power grid improves marketability. Stability and affordability of future power pricing is also essential.
- Natural risk: Data centers will not locate in areas susceptible to natural disaster. This limits the marketability of some areas in the country, most notably hurricane risk in the Gulf States and Southeastern Seaboard, and tornado risk in the Great Plain States. The primary natural risks in the Morrow/Umatilla County region are drought, range fires and volcanic ash fallout.
- Cooling and climate: Data centers generate heat, and cooling is an essential function of the facility. Data centers are increasingly being attracted to moderate desert climates, where systems are being designed to capture cool nighttime air.
- Security: Data centers typically want to be inconspicuous. Further, regulations sometimes require that data is physically stored in the region from which it is collected. Data centers require low levels of visibility, and prefer a buffered site with some isolation.

Umatilla County finds that Subarea 3 is an appropriate and suitable area for future development of data center(s) in addition to other industrial uses that would find the above physical development characteristics attractive.

Based on the above subarea characteristics, 2035 employment forecasts have been prepared and are summarized in Table 6-3.

Table 6-3 - Umatilla County Depot Industrial Zone: Future (2035) Development Summary

	Gross / Net Acres	Total Square Feet	Total Employees
2035 Strong Growth Scenario			
Depot Industrial Subarea 1	824 / 659 acres	574,295 SF	287
Depot Commercial Subarea 1	60 / 48 acres	313,632 SF	627
Depot Industrial Subarea 2	129 / 103 acres	n/a	n/a
Depot Industrial Subarea 3	184 / 147 acres	160,301 SF	160
Depot Industrial Subarea 3 (Restricted)	81 acres	n/a	n/a
Total		1,048,228	1,075
2035 Moderate Growth Scenario			
Depot Industrial Subarea 1	824 / 659 acres	430,721 SF	215
Depot Commercial Subarea 1	60 / 48 acres	209,088 SF	418
Depot Industrial Subarea 2	129 / 103 acres	n/a	n/a
Depot Industrial Subarea 3	184 / 147 acres	128,241 SF	128
Depot Industrial Subarea 3 (Restricted)	81 acres	n/a	n/a
Total		768,050	762

Wildlife Portion of Depot Plan District

An approximately 5,700-acre area within the Depot Plan District (see Figure 6-1) will be set aside as a Wildlife Refuge and will be protected in the future through zoning restrictions. At this point, the property has not been zoned and remains in federal ownership. Application of zoning to the Wildlife Refuge is pending and will be based on a determination of ultimate ownership. For purposes of the IAMP planning process, no employment growth or traffic-generating activity is forecast for this area.

Westland Road Exception Area

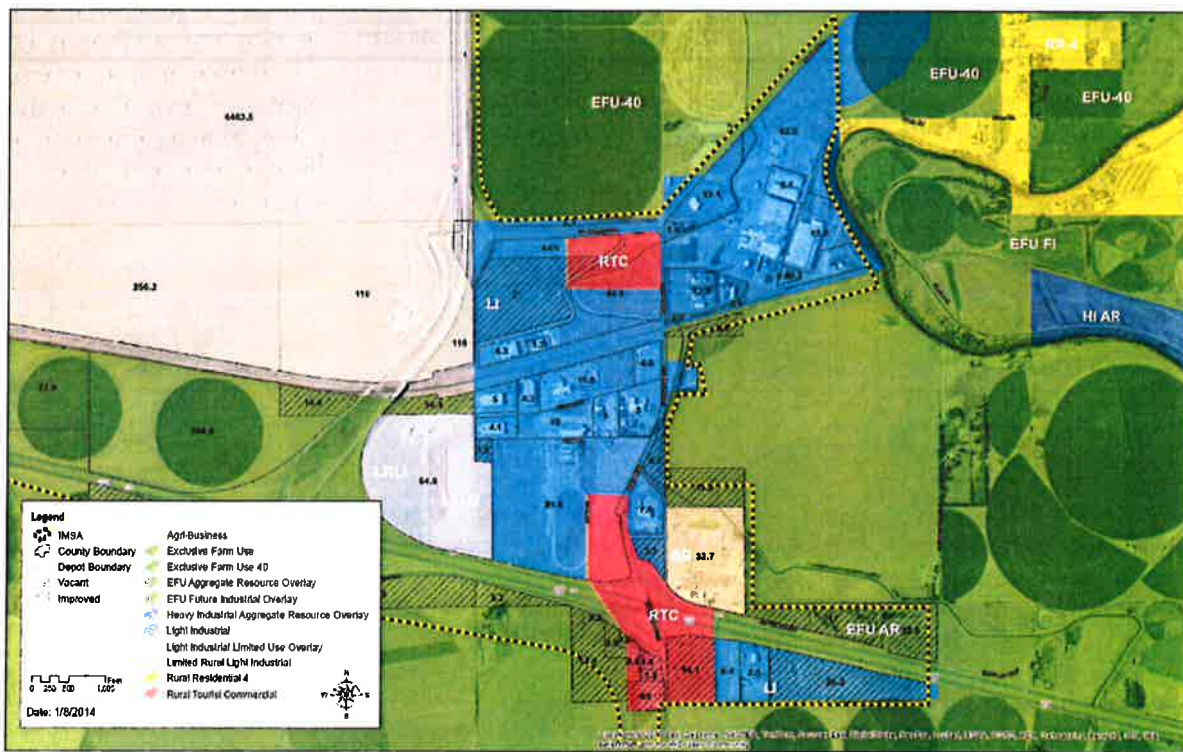
Outside of the areas of the Depot identified for future industrial and commercial, the most significant development opportunities are around the Westland Road/I-84 Interchange. Located in close proximity to the I-84 and I-82 freeways, this area already has developed with a number of urban scale uses, including an approximately 100,000 square-foot FedEx warehouse and distribution facility; a 25,000 square-foot UPS distribution facility; 350,000 square-foot Lamb Weston Food Processing plant; 160,000 square-foot Americold building; and approximately 180,000 square-foot Hermiston Generating Company Power Plant and Substation. In addition to these existing uses, a number of other planned facilities are likely to be built in the near-term including a new truck/travel center located in the northwest quadrant of the I-84/Westland Road interchange and a potential future power generating facility.

Employment forecasts were prepared for the Westland Road Exception area based on a pattern of existing uses already sited in the vicinity of the I-84 interchange and the amount of vacant land available for future development. Unlike the Depot Plan District Area, which is largely a “blank slate” for future development, the area in the vicinity of the Westland Road/I-84 interchange has an

established and emerging pattern of development and future growth is expected to be similar in use and intensity. For this reason, only a 100% "build-out" scenario is presented to illustrate future employment in this area. Development assumptions are summarized below and outlined in Table 6-4.

To the west of the Fed-Ex truck-freight distribution center there are approximately 30-acres of vacant land zoned Limited Rural Light Industrial. Consistent with the underlying zoning shown in Figure 6-6 and existing uses in the area, future uses on this land could include light manufacturing, storage and freight-related businesses. Due to this parcel's proximity to the existing freight-distribution center, it is assumed that future development on this site will be an expansion of warehouse or freight distribution uses.

Figure 6-6 - Umatilla County Exception Area Zoning



Approximately 39 acres of Light Industrial with frontage along Westland Road or in close proximity to this roadway are vacant and assumed to develop within the planning horizon. South of I-84, there are approximately 25 acres of vacant industrial zoned land. Similar to uses anticipated for future Umatilla Depot Industrial areas that have good access to I-82 and I-84, it is assumed that Light Industrial areas in the expectation area will develop with land intensive freight-related uses.

There are also approximately 60-acres of Rural Tourist Commercial in the vicinity of the Westland Road/I-84 interchange, the location of which is shown in Figure 6-6. A truck stop has already been approved for the commercial area directly north of I-84, west of Westland Road. Commercial land further north, closer to the I-82/Lamb Road Interchange, is vacant and the assumption is that this area will develop with a mixture of retail and service commercial.

South of the interchange, parcels zoned for Rural Tourist Commercial are vacant, with the exception of the Shell gas station located on a 2.5 acre parcel. Based on the location of these parcels and their good visibility from I-84 and access via the Westland Road Interchange, assumptions for future growth in this area include additional service commercial, a hotel/motel and a restaurant.

Table 6-4 Westland Road Exception Area: Build-Out (2035) Summary

Umatilla County	Gross / Net Acres	Total Square Feet	Total Employees
Limited Rural Light Industrial	30 / 24	104,544	35
Light Industrial	64.2 / 51	223,724	112
Rural Tourist Commercial:			
Lodging and Restaurant (S. of I-84)	14.1 / 11	73,704	74
Service (S. of I-84)	7.4 / 6	38,681	39
Retail and Service (N. of I-84, at Lamb Road)	22 / 18	114,998	115
Total	137.7 / 110	555,651	374

FUTURE TRAFFIC CONDITIONS

Based on the noted potential levels of development and redevelopment in the IMSA, and factoring in regional growth from outside the IMSA, future year 2035 traffic conditions were estimated along the study area interchanges, roadways, and intersections. In order to more accurately assess the impacts of potential long-term redevelopment on the Umatilla Army Depot site, the future traffic conditions analysis was prepared for the following iterations:

- Year 2035 Background Traffic Conditions – includes estimates for local and regional traffic growth but does not include anticipated growth due to reuse/redevelopment of the Umatilla Army Depot site.
- Year 2035 Total Traffic Conditions - includes estimates for local, regional, and Umatilla Army Depot reuse/redevelopment traffic growth.

Year 2035 Background Traffic

Year 2035 “Background” traffic volume forecasts do not include traffic growth from reuse/redevelopment of the Umatilla Army Depot as outlined in the earlier sections of this memorandum. Instead, this scenario isolates the impacts of continued local and regional growth in and around the IMSA at the study area interchanges and intersections. The year 2035 “Background” scenario was developed based on the currently adopted Morrow and Umatilla County comprehensive plans and assumptions regarding continued local and regional through traffic growth. The remainder of this section describes the methodology and assumptions used to develop year 2035 background traffic forecasts.

2035 Background Traffic Growth

As described in the Existing Land Use and Existing Traffic Conditions memorandum, the characteristics and service area of each study interchange are unique. For this reason, different methodologies were used to estimate 2035 background traffic growth at each interchange as outlined in the sections below.

I-84/Paterson Ferry Road Interchange

The I-84/Paterson Ferry Road Interchange primarily serves agricultural land consisting of field crops, poplar tree farms, and dairy farms. It also serves a saw mill, quarrying operations, and a small amount of isolated industrial use. Due to the predominately rural character of the interchange service area, the I-84/Paterson Ferry Road interchange is not anticipated to experience significant regional traffic growth. Instead, Morrow County staff anticipates some continued growth with the poplar tree farms and associated saw mill, a potential new veneer plant, and expansion of existing dairy farms. To conservatively account for this growth potential, the existing traffic volumes at key interchange ramp terminal movements were doubled during the weekday a.m. and p.m. peak hours.

I-84/Umatilla Army Depot Interchange

The I-84/Umatilla Army Depot Interchange primarily serves as the main access to the Umatilla Army Depot and secondarily serves as an access to the agricultural land on the south side of I-84. As the "Background" traffic conditions is assuming no growth or change to the Umatilla Army Depot and the agricultural lands south of I-84 are not anticipated to change, no traffic growth modifications are assumed under 2035 background conditions.

I-82/Lamb Road Interchange

Of the three study interchanges, the I-82/Lamb Road interchange has the greatest potential to experience significant regional and local growth. Regional growth is likely to come in the form of anticipated traffic volume increases along the I-82 corridor and growth within the City of Hermiston. To capture regional growth at the I-82/Lamb Road interchange terminals and adjacent Lamb Road intersections, an annual growth rate of 1.0 percent was applied. This growth rate is consistent with other recent traffic studies conducted in the vicinity of the Westland Road interchange.

In addition to regional growth, the I-82/Lamb Road interchange will likely experience a more significant amount of growth associated with continued buildout of the Westland Road Exception Area. In the Westland Road Expectation Area, there are currently two planned developments; a truck stop/travel center and a power generating station² located along segments of Westland Road. Following a review of the traffic impact studies for these two near-term projects, the estimated net new trips were added to the growth-adjusted (regional) I-82/Lamb Road traffic volumes.

Lastly, it is recognized that that the Westland Road Exception Area has the potential for further infill over the next 20 years as outlined in Table 6-4. To account for this long-term infill growth, commercial trips were estimated using the ITE manual Trip Generation while industrial trips were estimated using an industrial-related trip rate calculation based on existing Exception area uses. *Detailed calculations of these trip rates are summarized in Appendix B.* The resulting net new weekday a.m. and p.m. peak hour trips were then distributed to the study area intersections based on existing and anticipated travel patterns.

Year 2035 Background Traffic Operations

Future year 2035 Background weekday a.m. and p.m. peak hour traffic volumes were determined by applying the noted growth rates, in-process traffic volumes, and infill trip generation estimates to the

² Umatilla County has approved the truck stop development project located on Westland Road and it has been assumed that it will be constructed within the 20-year planning horizon. The power generating plant is still in the early planning and approval phases and has not yet been formally approved by Umatilla County. However, for conservative purposes, the anticipated traffic associated with the power generating plant has been included given its likely impact on long-term traffic volumes at the I-82/Lamb Road interchange.

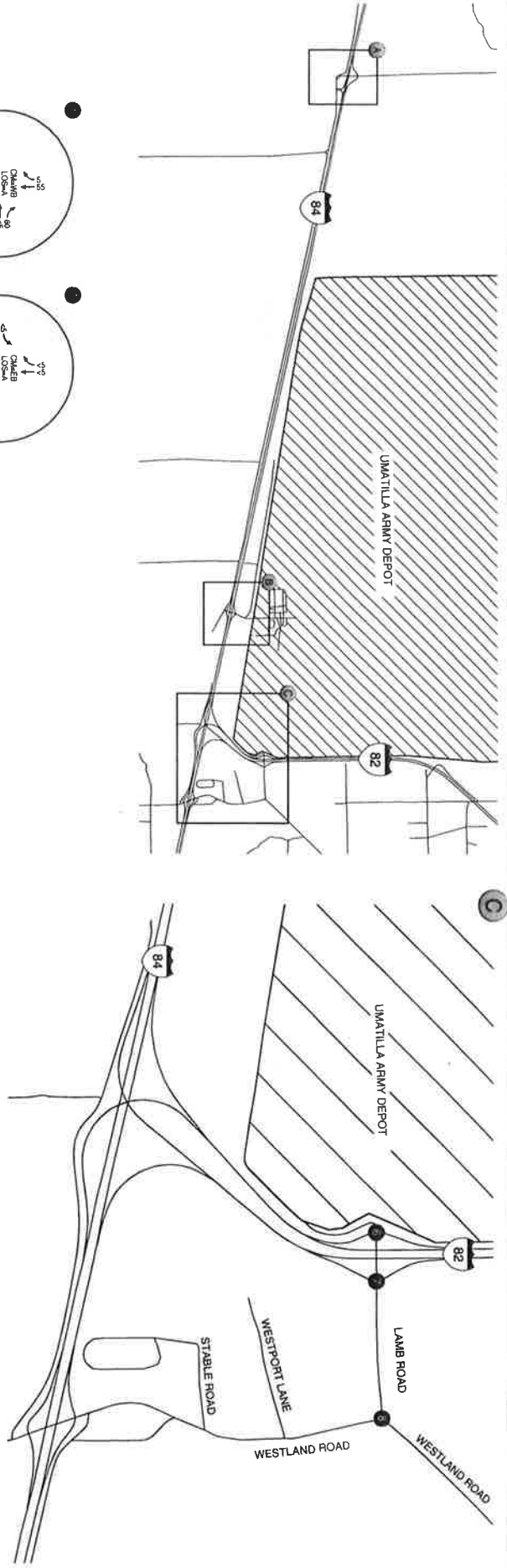
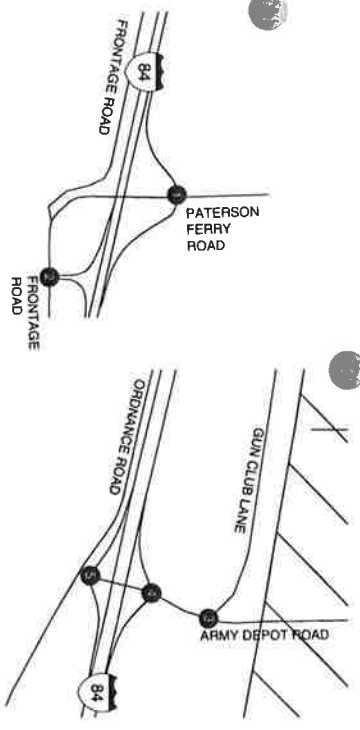
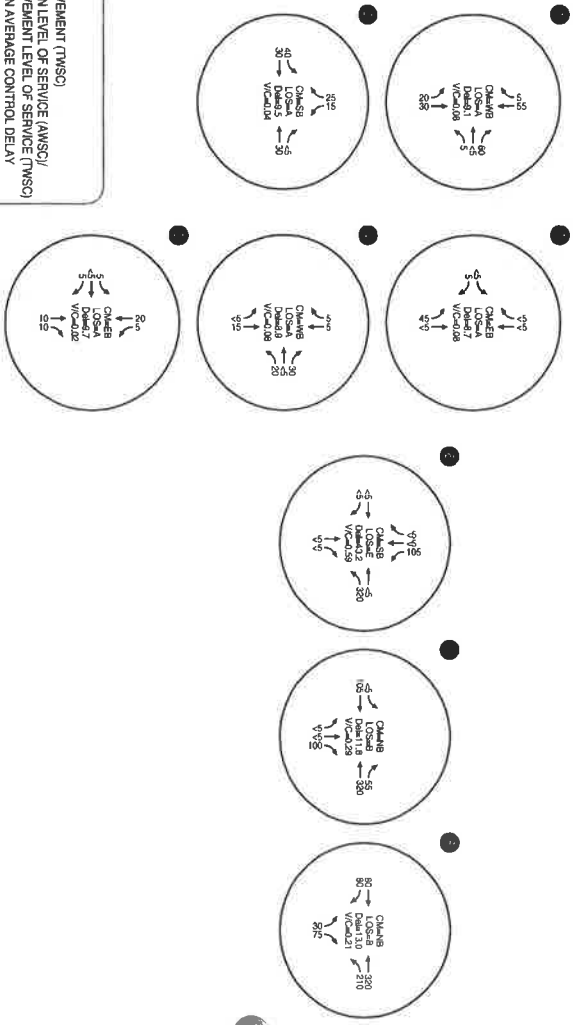
existing study network. The resulting year 2035 weekday a.m. and p.m. peak hour traffic volumes are shown in Figures 6-7 and 6-8, respectively. As summarized in Table 6-5, all of the interchange ramp terminals and study intersections are forecast to continue to operate at acceptable standards.

Table 6-5 - 2035 Background Traffic Operations Summary

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.04	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.08	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Access Road	A	0.02	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Access Road	A	0.07	A	0.02	v/c < 0.70	Yes
Army Depot Access Road / Gun Club Lane	A	0.08	A	0.02	LOS E	Yes
I-82 SB Ramp Terminal/ Lamb Road	E	0.59	B	0.11	v/c < 0.70	Yes
I-82 NB Ramp Terminal/ Lamb Road	B	0.29	C	0.54	v/c < 0.70	Yes
Westland Road/ Lamb Road	B	0.21	B	0.24	LOS E	Yes

LEGEND

- CM = CRITICAL MOVEMENT (TWSC)
- LOS = INTERSECTION LEVEL OF SERVICE (AWSC)
- CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
- Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
- VC = CRITICAL VOLUME-TO-CAPACITY RATIO
- TWSC = TWO-WAY STOP CONTROL
- AWSC = ALL-WAY STOP CONTROL

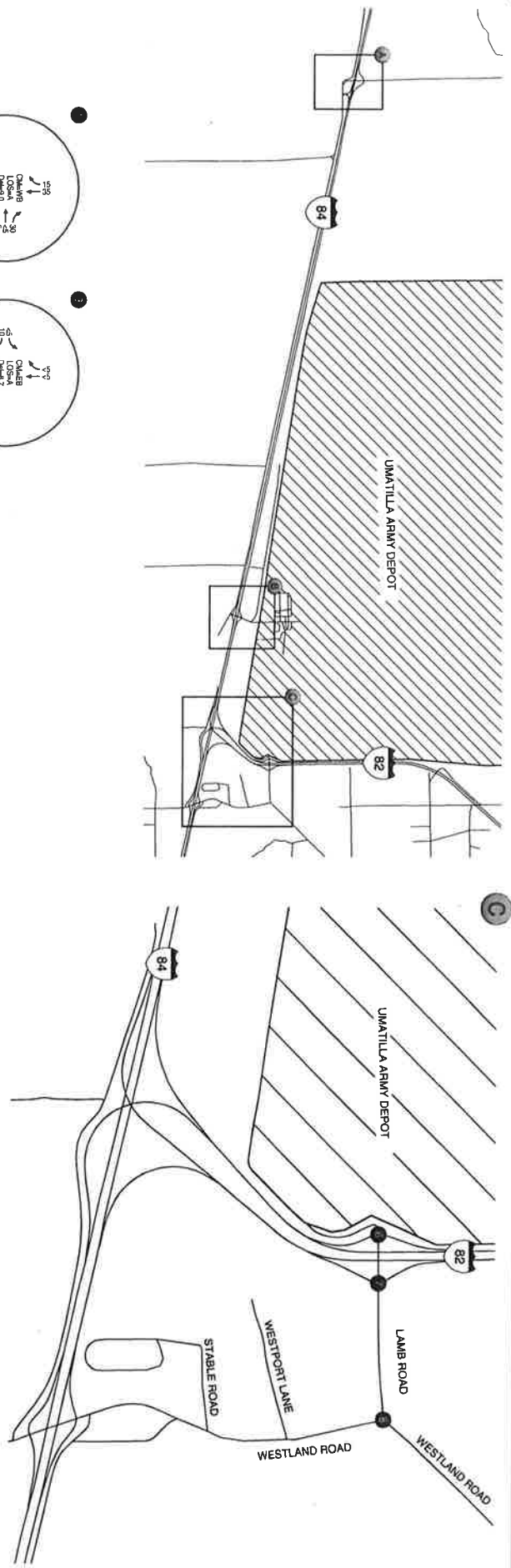
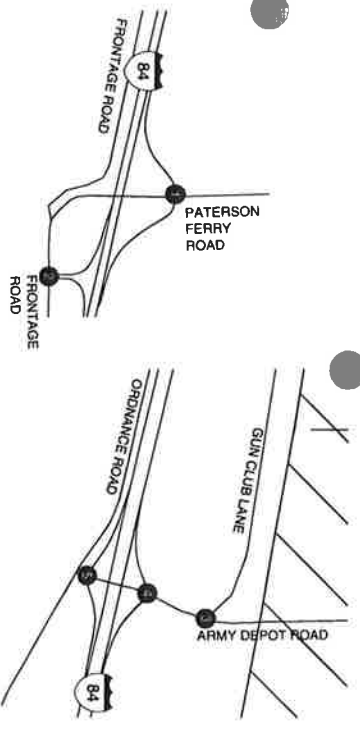
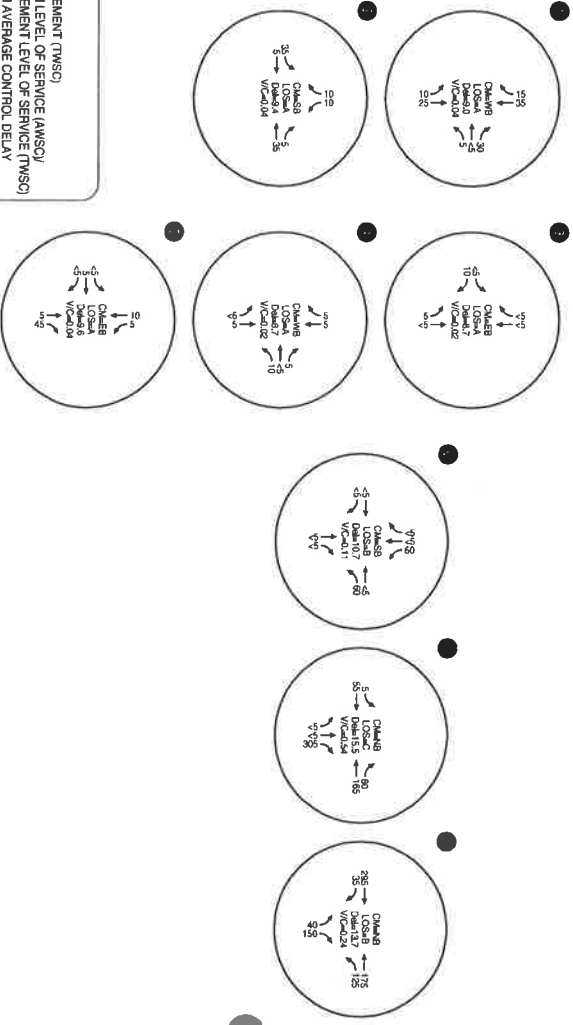


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2035 BACKGROUND CONDITIONS, WEEKDAY AM PEAK HOUR
UMATILLA COUNTY, OREGON

LEGEND

CM = CRITICAL MOVEMENT (TMSQ)
 LOS = INTERSECTION LEVEL OF SERVICE (AMSCQ)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE (TMSQ)
 Del = INTERSECTION AVERAGE CONTROL DELAY (AMSCQ) / CRITICAL MOVEMENT CONTROL DELAY (TMSQ)
 TMSQ = CRITICAL VOLUME-TO-CAPACITY RATIO
 TMSQ = TWO-WAY STOP CONTROL
 AMSCQ = ALL-WAY STOP CONTROL



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2035 BACKGROUND CONDITIONS, WEEKDAY PM PEAK HOUR
 UMATILLA COUNTY, OREGON

Year 2035 Total Traffic Scenario

Year 2035 "Total" traffic volume forecasts include all of the traffic growth estimates from the "Background" scenario and the traffic growth estimates from the anticipated reuse/redevelopment of the Umatilla Army Depot. This includes anticipated traffic growth from the ORNG and Port Industrial/Depot Industrial zones. The remainder of this section describes the methodology and assumptions used to develop year 2035 total traffic forecasts.

Oregon National Guard Use

As previously stated, the ORNG is planning to move its Regional Training Institute that is currently located on the Western Oregon University campus in Monmouth, Oregon to the Umatilla Army Depot site. In addition to the Regional Training Institute, the site will also include a future readiness center, tenant units, and training facilities to support other military units from throughout the state. The specific details associated with this vision are still being refined, however for the purposes of the IAMP study, it has been assumed in consultation with ORNG officials that the future uses will be comparable to what has been outlined in the *June 2012 Site Development Plan for the ORNG Umatilla Training Center* document. Anticipated staffing plans were derived from this document and a resulting trip generation profile was developed. *Appendix B contains the detailed trip generation calculations.* The resulting net new weekday a.m. and p.m. peak hour trips were then distributed to the I-84/Umatilla Army Depot interchange based on existing and anticipated travel patterns.

Morrow County – Port Industrial Zone

Table 6-2 assumes that the Morrow County Port Industrial Zone will have up to 1,495 net developable acres to accommodate a variety of industrial related uses. Table 6-2 shows the anticipated 2035 development square footage under the strong and moderate growth scenarios. For the purposes of this study, it has been assumed that this potential development will include large warehouse/storage facilities. Using the High Cube/Warehouse land use from the ITE publication, *Trip Generation*, weekday a.m. and p.m. peak hour trips were generated and distributed to the I-84/Umatilla Army Depot interchange. *Appendix B contains the detailed trip generation calculations.*

Umatilla County – Depot Industrial Zone

Subarea 1 encompasses approximately 884 undeveloped acres located in the southeast corner of the Umatilla Army Depot at the junction of I-82 and I-84. As shown in Table 6-3, it is assumed that this area will have approximately 659 acres of distribution/warehouse/logistics uses and approximately 48-acres of service commercial and highway oriented retail uses. Table 6-3 shows the anticipated 2035 development square footages under the strong and moderate growth scenarios. To account for this development potential, industrial related trips were estimated using an industrial-related trip rate calculation based on existing Westland Road Exception area uses.

As previously noted, the commercial-related uses are likely to include sales and personal service oriented uses, in addition to highway tourist oriented uses. For the purposes of this study, it has been assumed that this will include a factory outlet mall, a truck stop, gas station, several fast-food restaurants, and a motel. The ITE manual, Trip Generation, was then used to develop a trip generation profile for these commercial-related uses. *Detailed calculations of these trip rates are summarized in Appendix B.* The resulting net new weekday a.m. and p.m. peak hour trips were then distributed to both the I-84/Umatilla Army Depot and I-82/Lamb Road interchanges.

Subarea 3 includes a total of 265 acres and is intended to accommodate a range of general industrial uses that can leverage the substantial and recent investment in buildings, infrastructure and other site improvements constructed to support the UMCDF mission. For the purposes of this IAMP study, Subarea 3 has been assumed to accommodate a large data center. Based on studies at other data centers in Oregon and California, a trip generation rate for this use was estimated and the resulting weekday a.m. and p.m. peak hour trips were distributed primarily to the I-84/Lamb Road interchange. *Detailed trip generation calculations are included in Appendix B.*

Year 2035 Total Traffic Operations

Future year 2035 Total weekday a.m. and p.m. peak hour traffic volumes were determined by adding the noted ORNG, Port Industrial, and Depot Industrial related volumes to the background traffic volumes with trips routed through the study intersections and interchanges based on their anticipated origins and destination. The resulting year 2035 weekday a.m. and p.m. peak hour traffic conditions are shown in Figures 6-9 and 6-10 for the strong growth build out scenario. Table 6-6 summarizes the operations at the interchange ramp terminals and study intersections.

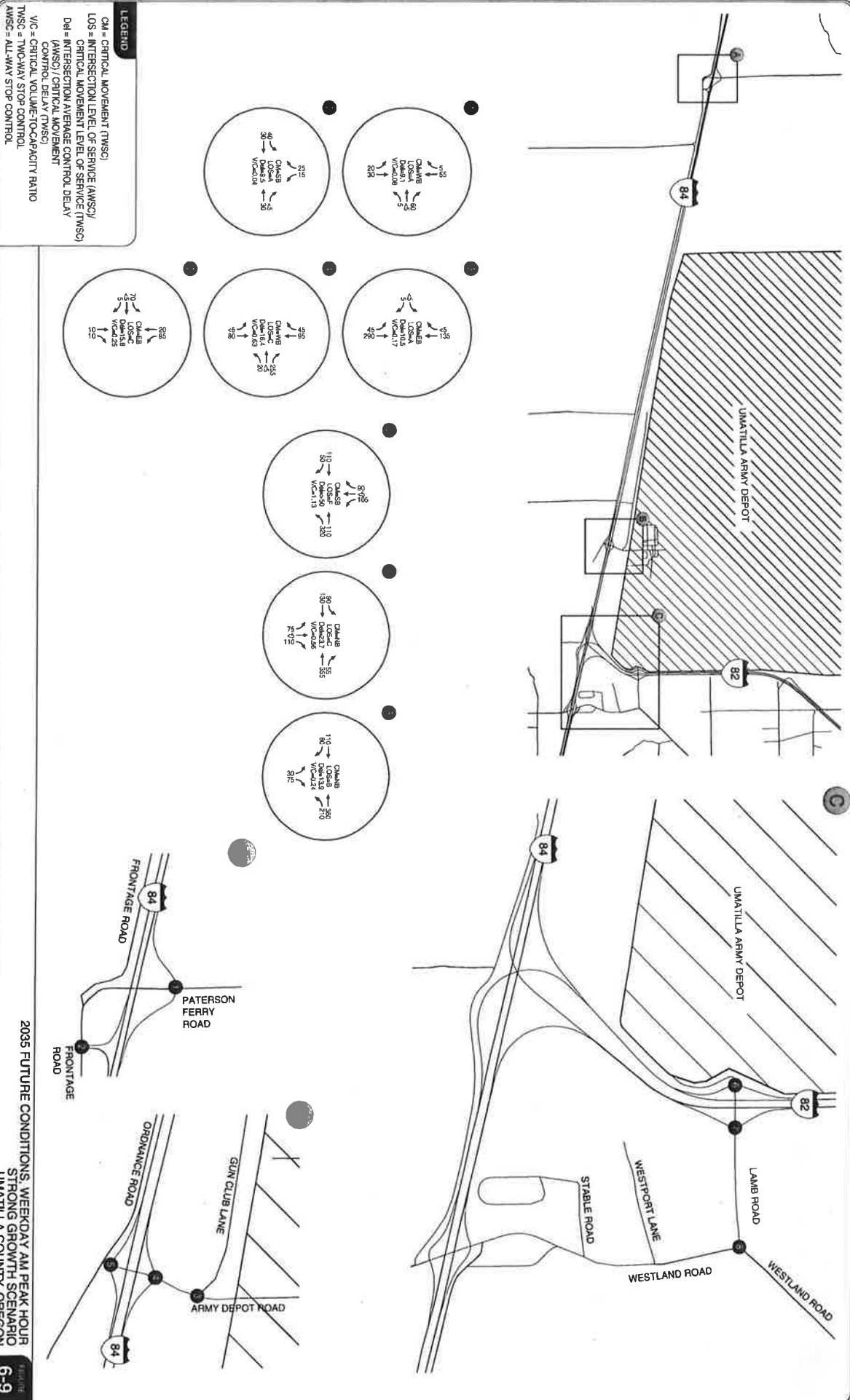
Table 6-6 - 2035 Total Traffic Operations Summary (Strong Growth Scenario)

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.04	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.08	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Access Road	C	0.25	C	0.23	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Access Road	C	0.63	B	0.20	v/c < 0.70	Yes
Army Depot Access Road / Gun Club Lane	A	0.17	A	0.19	LOS E	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	1.13	C	0.52	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.56	F	0.94	v/c < 0.70	No
Westland Road/ Lamb Road	B	0.24	C	0.28	LOS E	Yes

As shown in Table 6-6, the following intersections are forecast to operate with high levels of delay or operate above capacity:

- I-82 SB Ramp Terminal/Lamb Road
- I-82 NB Ramp Terminal/Lamb Road

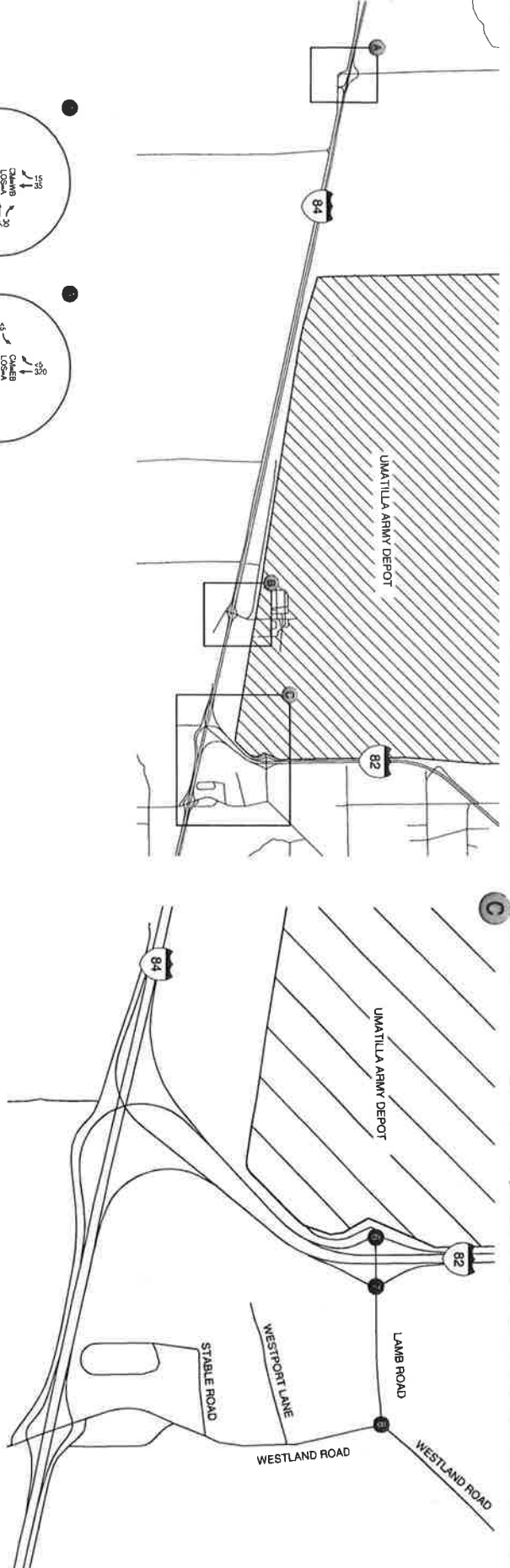
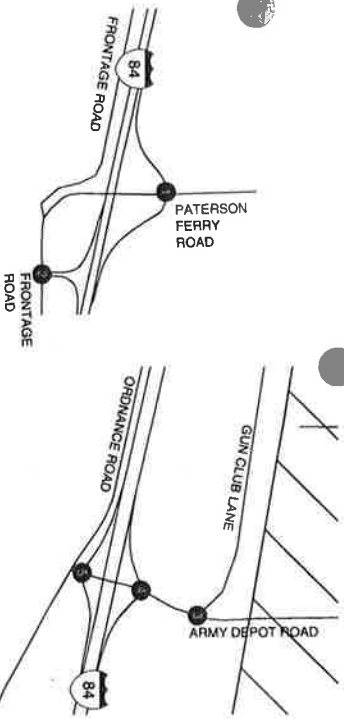
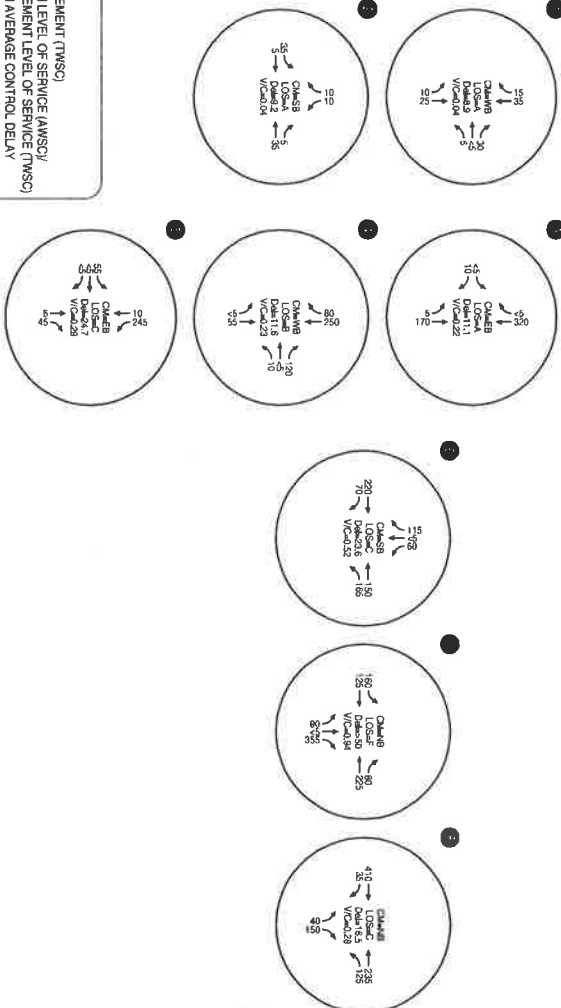
These findings demonstrate that the assumed level of Umatilla Army Depot reuse/redevelopment at the strong growth level will require capacity and infrastructure improvements at the I-84/Umatilla Army Depot and I-82/Lamb Road intersections.



2035 FUTURE CONDITIONS, WEEKDAY AM PEAK HOUR
STRONG GROWTH SCENARIO
UMATILLA COUNTY, OREGON

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LEGEND
 CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE (AWSC)
 CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
 Dbl = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
 VC = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL



2035 FUTURE CONDITIONS, WEEKDAY PM PEAK HOUR
 STRONG GROWTH AND UNLIMITED ZONING SCENARIO
 UMATILLA COUNTY, OREGON

Figures 6-11 and 6-12 show the weekday a.m. and p.m. peak hour traffic conditions for the moderate growth build out scenario. Table 6-7 summarizes the operations at the interchange ramp terminals and study intersections.

Table 6-7 - 2035 Total Traffic Operations Summary (Moderate Growth Scenario)

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.03	A	0.03	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.07	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Access Road	B	0.10	C	0.15	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Access Road	B	0.26	B	0.16	v/c < 0.70	Yes
Army Depot Access Road / Gun Club Lane	A	0.06	A	0.16	LOS E	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	0.90	C	0.40	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.37	C	0.71	v/c < 0.70	No
Westland Road/ Lamb Road	B	0.23	C	0.28	LOS E	Yes

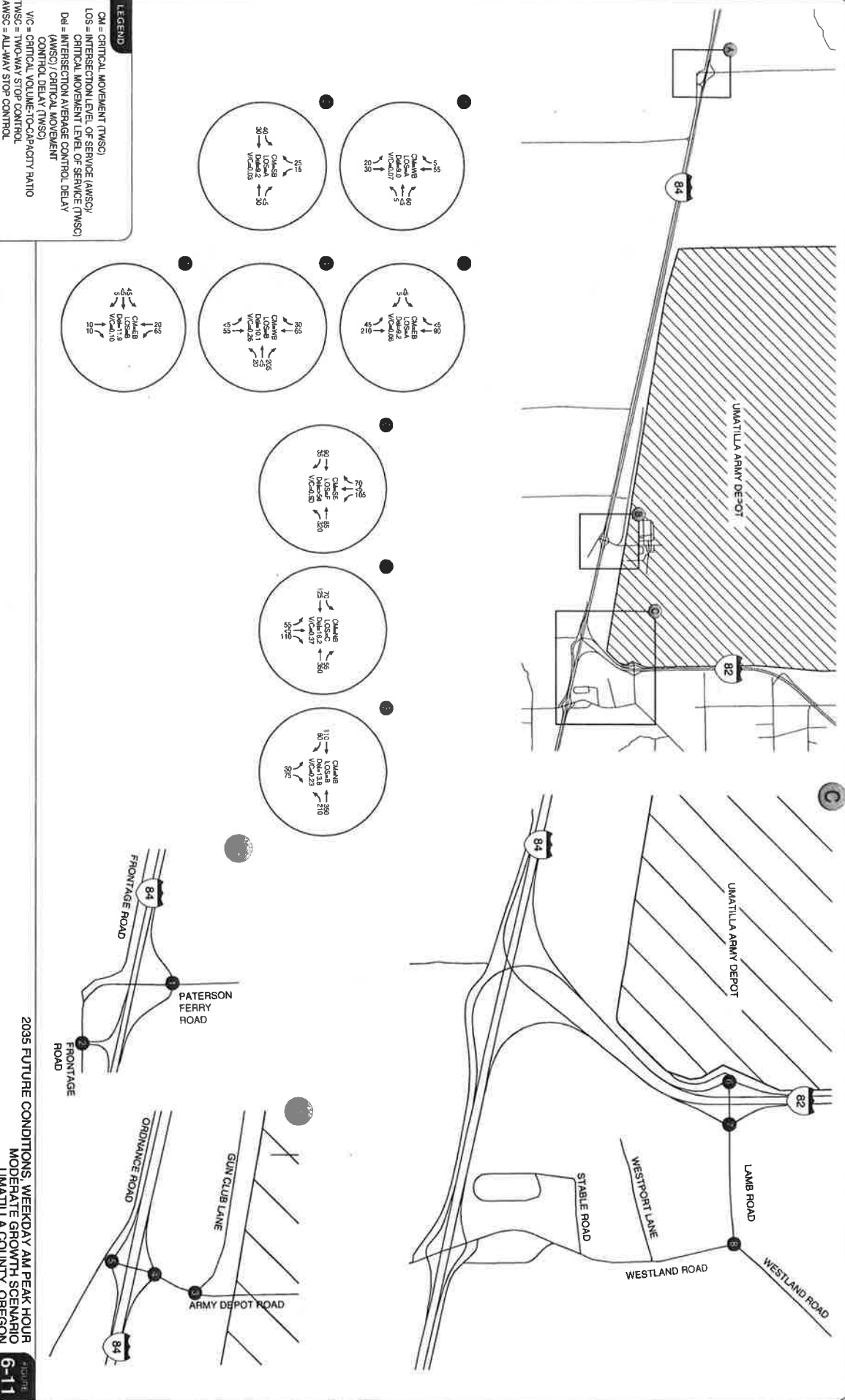
As shown in Table 6-7, the following intersections are forecast to operate with high levels of delay or operate above capacity:

- I-82 SB Ramp Terminal/Lamb Road
- I-82 NB Ramp Terminal/Lamb Road

These findings demonstrate that even with under a moderate growth scenario the Umatilla Army Depot, SB I-82/Lamb Road interchange ramp terminal is forecast to operate near or over capacity.

Year 2035 Interstate Operations

In addition to the operations at the ramp terminals, the operations on the interstate highways were analyzed. The section of I-82 between the Lamb Road interchange and I-84 interchange (Figure 6-13) is relatively short and any capacity issues would appear first in this area. A merging and diverging capacity analysis was performed for movements in this area. Table 6-8 displays the results of this analysis for the 2035 total traffic condition with strong growth assumptions; a 2012 analysis is included for comparison.



2035 FUTURE CONDITIONS WEEKDAY AM PEAK HOUR
 MODERATE GROWTH SCENARIO
 UMATILLA COUNTY, OREGON
 6-11

LEGEND

- CM = CRITICAL MOVEMENT (TVSC)
- LOS = INTERSECTION LEVEL OF SERVICE (AMSC)
- LOS = CRITICAL MOVEMENT LEVEL OF SERVICE (TVSC)
- DI = INTERSECTION AVERAGE CONTROL DELAY (AMSC) / CRITICAL MOVEMENT CONTROL DELAY (TVSC)
- TVSC = CRITICAL VOLUME-TO-CAPACITY RATIO
- VIC = TWO-WAY STOP CONTROL
- AVSC = ALL-WAY STOP CONTROL

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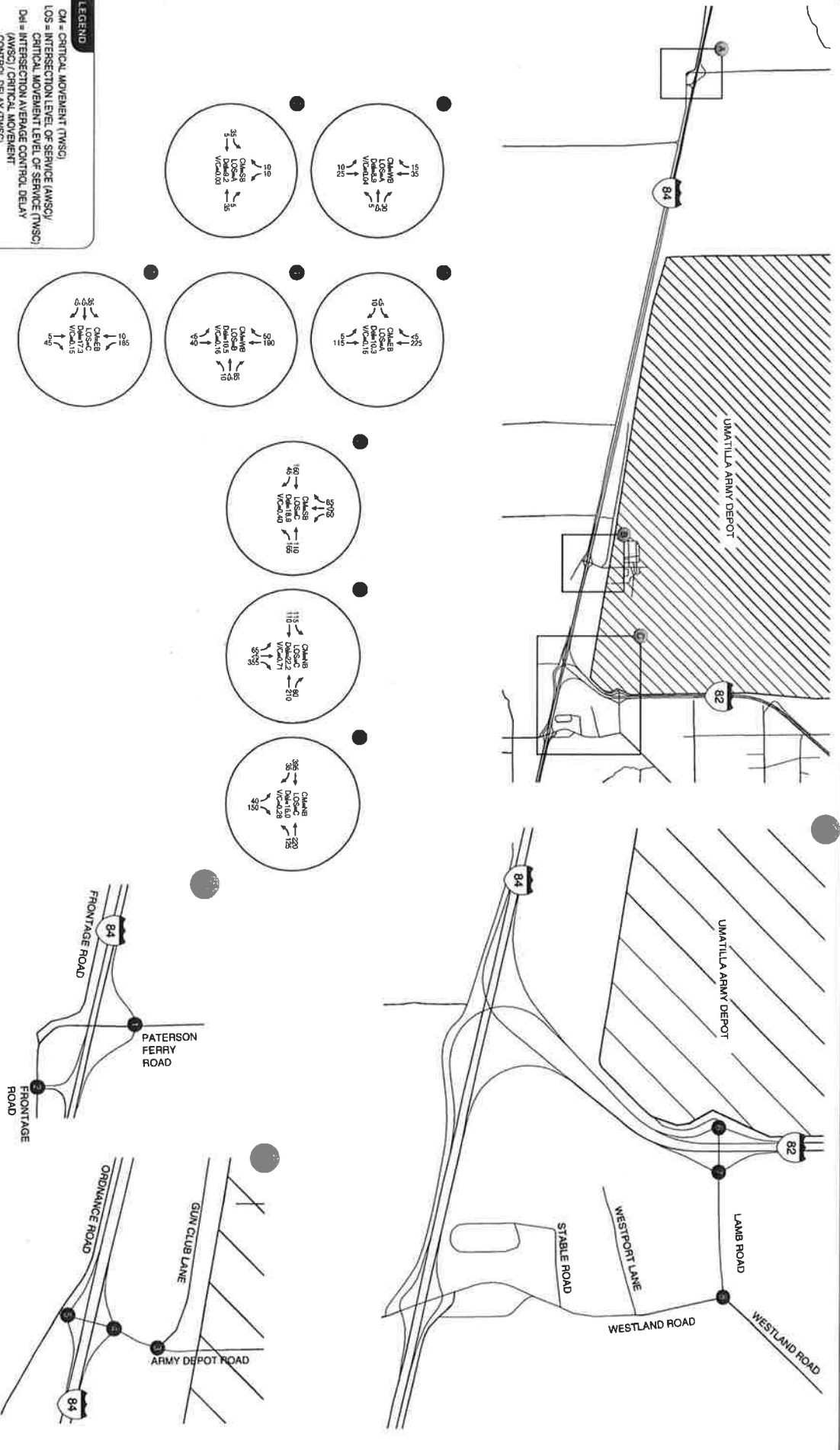


Figure 6-13: Merge/Diverge Analysis Area



Table 6-8 Merge/Diverge Analysis, 2035 Strong Growth Scenario

Area	2012 v/c	2035 v/c
NB I-82		
I-82 & Lamb Road Diverge	0.28	0.43
I-82 & I-84 Merge	0.27	0.49
SB I-82		
I-82 & Lamb Road Merge	0.28	0.47
I-82 & I-84 Diverge	0.28	0.49

As shown in Table 6-8 the segment of I-82 analyzed has adequate capacity under 2035 total traffic conditions with strong growth assumptions. The segment would also have has adequate capacity for less intensive growth scenarios.

Alternative Routing Scenario

The existing Army Depot interchange was not designed to accommodate large numbers of industrial trips. Specifically, the limited deceleration and acceleration distances on the westbound and eastbound ramps do not meet current design standards. This would inhibit the safe and efficient accommodation of many of today's larger trucks and trailers that would likely access some of the envisioned industrial/warehouse/storage-oriented land uses in the Morrow County Port Industrial Zone. In addition, the Army Depot Access Road passes under an existing railroad bridge with a 15 foot vertical clearance. This low clearance would restrict most oversized vehicles from accessing future reuse areas including some special Oregon National Guard vehicles.

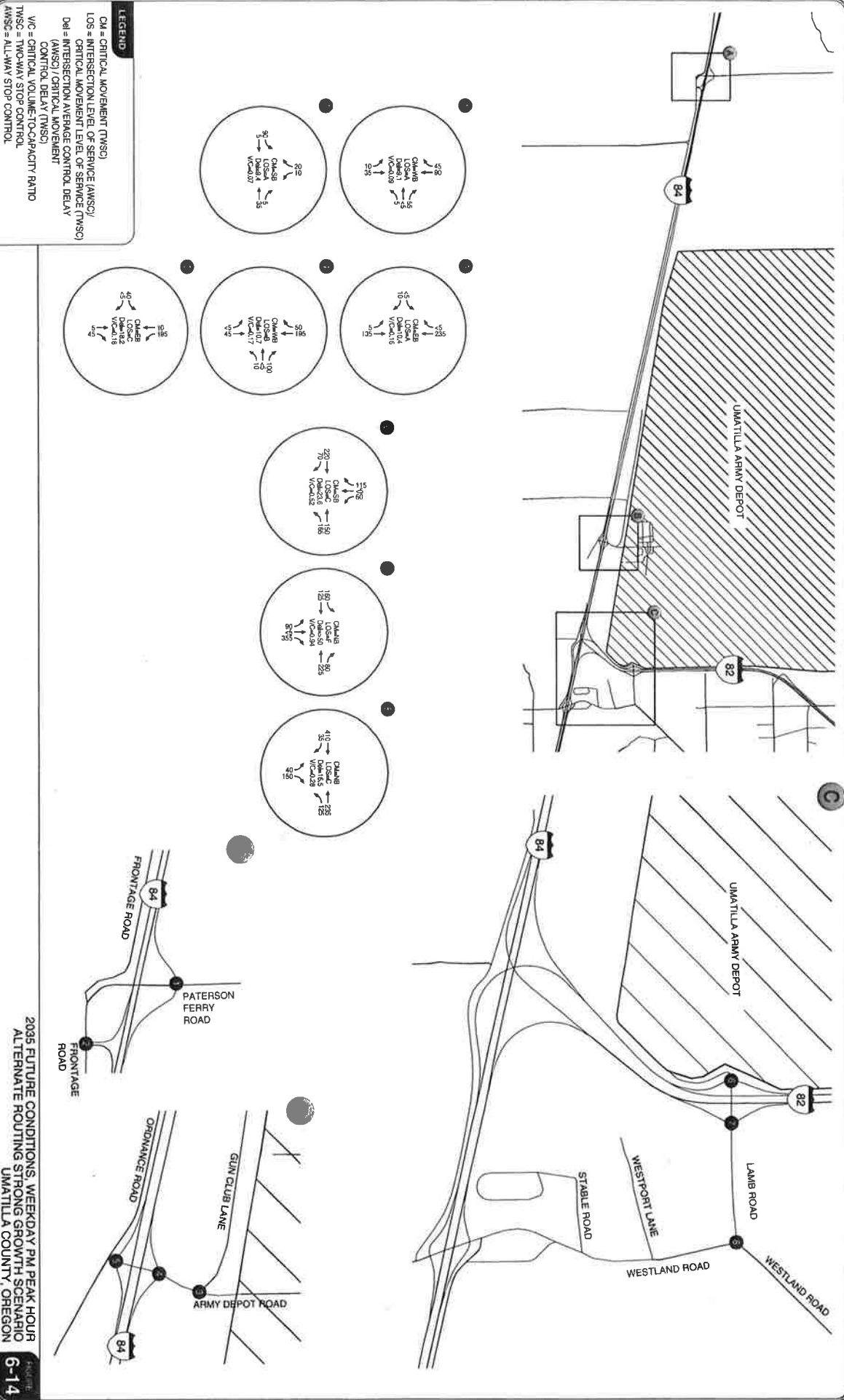
Based on these limitations, an alternative routing scenario was developed that assumes a secondary access to the Morrow County Port Industrial zone via a new roadway that would connect to Paterson Ferry Road. The development of such a roadway would require the acquisition of new right-of-way over the Exclusive Farm Use (EFU) land between Paterson Ferry Road and the western boundary of the UMCD site.

To test the operational impacts of such a scenario, the trips generated by the assumed Port Industrial zone under the strong growth scenario were rerouted to the I-84/Paterson Ferry Road interchange. The resulting 2035 weekday a.m. and p.m. peak hour traffic conditions are shown in Figures 6-14 and 6-15 for the strong growth build out scenario. Table 6-9 summarizes the operations at the interchange ramp terminals and study intersections.

Table 6-9 - 2035 Total Traffic Operations Summary (Alternative Routing - Strong Growth Scenario)

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.08	A	0.07	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.16	A	0.09	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Road	B	0.13	C	0.16	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Road	B	0.47	B	0.17	v/c < 0.70	Yes
Army Depot Road / Gun Club Lane	A	0.15	A	0.18	LOS E	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	1.13	C	0.52	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.56	F	0.94	v/c < 0.70	No
Westland Road/ Lamb Road	B	0.24	C	0.28	LOS E	Yes

As shown in Table 6-9, the Paterson Ferry Road and Army Depot Access Road intersections are forecast to operate acceptably under the alternative routing scenario. No trips were rerouted to or from the



LEGEND

- CM = CRITICAL MOVEMENT (TWSC)
- LOS = INTERSECTION LEVEL OF SERVICE (AWSC)
- Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT
- CONTROL DELAY (TWSC)
- V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
- TWSC = TWO-WAY STOP CONTROL
- AWSC = ALL-WAY STOP CONTROL

2035 FUTURE CONDITIONS, WEEKDAY PM PEAK HOUR
 ALTERNATE ROUTING STRONG GROWTH SCENARIO
 UMATILLA COUNTY, OREGON

KITTELSON & ASSOCIATES, INC.
 TRANSPORTATION ENGINEERING / PLANNING

Lamb Road interchange and the I-82 SB Ramp Terminal/Lamb Road and I-82 SB Ramp Terminal/Lamb Road intersections are forecast to operate with high levels of delay or operate above capacity.

If the alternate routing assumptions were applied to the moderate growth scenario the Paterson Ferry Road and Army Depot Access Road intersections would continue to operate acceptably and the I-82 SB Ramp Terminal/Lamb Road and I-82 SB Ramp Terminal/Lamb Road intersections would operate with high levels of delay or operate above capacity.

In addition to the operations at the ramp terminals and intersections a merging and diverging capacity analysis was performed for the I-84/Paterson Ferry Road Interchange under the alternative routing scenario. Table 6-10 displays the results of this analysis for the 2035 alternative routing scenario with strong growth assumptions.

**Table 6-10 Paterson Ferry Interchange Merge/Diverge Analysis,
Alternate Routing Scenario, 2035 Strong Growth Scenario**

Area	v/c
EB I-84 & Paterson Ferry Diverge	0.32
EB I-84 & Paterson Ferry Merge	0.27
WB I-84 & Paterson Ferry Diverge	0.26
WB I-84 & Paterson Ferry Merge	0.25

These findings demonstrate that the re-routing of the trips generated by the Morrow County Port Industrial Zone via an assumed new connection to Paterson Ferry Road would not require capacity improvements at the I-84/Paterson Ferry Road interchange.

Appendix A Detailed Land Use Calculations

Table A-1: Morrow County Depot Industrial Zone Future (2035) Development Summary

	Total Acres	Net Acres @ 0.8	FAR	Total SF	65% of Build Out	Employees / SF	Total Employees
2035 Build-Out Scenario							
Port Industrial	913	730.0	0.025	795,406	n/a	3000	265
Port Industrial - Restricted (No Employment Forecast)	959	n/a	n/a	n/a	n/a	n/a	n/a
Total:				795,406			265
65% of Build-Out Scenario							
Port Industrial	913	730.0	0.025	795,406	516,750	3000	172
Port Industrial - Restricted (No Employment Forecast)	959	n/a	n/a	n/a	n/a	n/a	n/a
Total:				795,406	516,750		172

Table A-2: Umatilla County Depot Industrial Zone Future (2035) Development Summary

	Total Acres	Net Acres @ 0.8	FAR	Total SF	65% of Build Out	Employees / SF	Total Employees
2035 Build-Out Scenario							
Depot Industrial 1 Employment	824	659	0.05	1,435,738	n/a	2000	718
Depot Industrial 1 Commercial	60	48	0.25	522,720	n/a	500	1045
Depot Industrial 2 Employment - (Red Cross Site - No Employment Forecast)	129	n/a	n/a	n/a		n/a	n/a
Depot Industrial 3 Employment - (Demil Site)	184	147	0.025	160,301	n/a	1000	160
Depot Industrial 3 - Restricted (No Employment Forecast)	81	n/a	n/a	n/a	n/a	n/a	n/a
Total:				2,223,303			1,923
65% of Build-Out Scenario							
Umatilla Co. - Depot Industrial Zone	Total Acres	Net Acres @ 0.8	FAR	Total SF	65% of Build Out	Employees / SF	Total Employees
Depot Industrial 1 Employment	824	659	0.05	1,435,738	933,229	2000	467
Depot Industrial 1 Commercial	60	48	0.25	522,720	339,768	500	680

Table A-2 continued...

Depot Industrial 2 Employment - (Red Cross Site - No Employment Forecast)	129	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Depot Industrial 3 Employment - (Demil Site)	184	147	0.025	160,301	104,196	1000	104	n/a
Depot Industrial 3 - Restricted (No Employment Forecast)	81	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total:				2,223,303	1,377,193			1,251

Table A-3: Umatilla County Westland Exception Area Build-Out (2035) Summary

	Total Acres	Net Acres @ 0.8	FAR	Total SF	Employees / SF	Total Employees
Limited Rural Light Industrial	30.0	24.0	0.1	104,544	3000	35
Light Industrial	64.2	51.0	0.1	223,724	2000	112
Rural Tourist Commercial Lodging/Restaurant (South of I-84)	14.1	11.0	0.25	122,839	1000	123
Rural Tourist Commercial Service (South of I-84)	7.4	6.0	0.25	64,469	1000	64
Retail and Service (North of I-84 @ Lamb Rd)	22.0	18.0	0.25	191,664	1000	192
Total:	137.7	110.0		707,240		526

Appendix B Detail Trip Generation
Calculations

Table B-1: Westland Exception Area Trip Generation

Land Use	ITE Code	Size	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
Westland Exception Area - Industrial								
Industrial and Warehouse Uses	Rate Base on Existing Developments ¹	137,000 Sq. Ft.	20	10	10	45	25	20
Westland Exception Area - Commercial								
Motel	320	134 Rooms	85	50	35	80	40	40
Gas Station with Convince Market	945	12 Pumps	120	60	60	160	80	80
Net New Trips			225	120	105	285	145	140

¹ A local industrial and warehouse trip generation rate was calculated based on the developed portion of the Westland Exception Area located north of I-84, south of the rail road tracks, east I-82, and west of Westland Road. Aerial photography was used to calculate the square footage of the buildings occupying this area. Using traffic counts obtained in October 2013, an a.m. peak hour trip generation rate of 0.14 trips per 1000 sq. ft. of buildings was calculated; a p.m. peak hour trip generation of 0.33 trips per 1000 sq. ft. of buildings was calculated.

Table B-2: Oregon National Guard Trip Generation¹

ORNG Use	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
	Total	In	Out	Total	In	Out
Training Site Detachment ORNG Joint Force Headquarter Training Site	55	50	5	55	5	50
Regional Training Institute	22	20	2	22	2	20
Tactical Unmanned System Platoon	16	15	1	16	1	15
Unit Equipment Training Site	27	25	2	27	2	25
Site Security Personal	10	5	5	10	5	5
Exchange Retail/Fuel Service	-	Internal	Internal	-	Internal	Internal
Net New Trips	130	115	15	130	15	115

Table B-3: Port Industrial Zone Trip Generation

Land Use	ITE Code	Size	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
High Cube Warehouse / Distribution Center (Unrestricted Port Industrial Zone)	152	477,243 Sq. Ft.	70	40	25	160	15	40
High Cube Warehouse / Distribution Center (Restricted Port Industrial Zone)	152	501,288 Sq. Ft.	70	45	30	60	20	40
Net New Trips			140	85	55	115	35	80

Table B-4: Depot Industrial Zone Trip Generation

Land Use	ITE Code	Size	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
Depot Industrial - Sub Area 1								
Depot Industrial - Sub Area 1	Rate Base on Existing Developments ¹	516,866 Sq. Ft.	80	50	30	190	100	90
Depot Commercial - Sub Area 1								
Motel	320	80 Rooms	50	30	20	50	25	25
Gas Station with Convince Market	945	8 Pumps	80	40	40	120	60	60
Truck Stop	950	11,400 Sq. Ft.	155	80	75	155	75	80
Factory Outlet Center	823	60,000 Sq. Ft.	40	30	10	135	60	75
1 Fast Food Restaurant W/ Drive Thru	934	3500 Sq. Ft.	115	60	55	185	90	95
Depot Industrial - Sub Area 2								
Restricted Use	--	--	--	--	--	--	--	--
Depot Industrial - Sub Area 3								
Data Center	Rate based on other data centers in Oregon and California ²	160,000 Sq. Ft.	40	20	20	40	10	30
Net New Trips			560	310	250	875	420	455

¹ A local industrial and warehouse trip generation rate was calculated based on the developed portion of the Westland Exception Area located north of I-84, south of the rail road tracks, east I-82, and west of Westland Road. Aerial photography was used to calculate the square footage of the buildings occupying this area. Using traffic counts obtained in October 2013, an a.m. peak hour trip generation rate of 0.14 trips per 1000 sq. ft. of buildings was calculated; a p.m. peak hour trip generation of 0.33 trips per 1000 sq. ft. of buildings was calculated.

²A trip generation rate and facility size for a data center was estimated based on prior work performed by Kittelson and Associates examining the trip generation of data centers in Oregon and California.

Appendix H
Technical Memorandum #7:
Interchange Area Concept
Development and Alternatives
Analysis



TECHNICAL MEMORANDUM #7

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Interchange Area Concept Development and Alternatives Analysis

Date: August 1, 2014

Project #:13848

To: TPAC

From: Matt Hughart, AICP, Pat Marnell, Marc Butorac, P.E., P.T.O.E.

This memorandum documents the development and evaluation of interchange form concepts for the Umatilla Army Depot IAMP study area interchanges. This memorandum includes:

- Review of 2035 Background and Total Traffic Operations
- Overview of the process used to develop initial concepts
- Qualitative assessment of initial concepts and preliminary recommendation for refinement

REVIEW OF 2035 BACKGROUND TRAFFIC CONDITIONS

As documented in Technical Memorandum #6, a future year 2035 "Background" traffic operations analysis was prepared for the three study interchanges. This forecast scenario assumes continued local and regional traffic growth (based on the currently adopted Morrow and Umatilla County comprehensive plans and traffic growth to/from the Westland Road Exception Area and surrounding population centers), but does not include traffic growth from assumed reuse/redevelopment of the Umatilla Army Depot. The results of this analysis are summarized in Table 7-1 and indicate that all of the study interchanges are forecast to continue to operate within acceptable mobility targets.

Table 7-1 - 2035 Background Traffic Operations Summary

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Mobility Target	Meets Standard?
	LOS	V/C	LOS	V/C		
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.04	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.08	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Road	A	0.02	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Road	A	0.07	A	0.02	v/c < 0.70	Yes
I-82 SB Ramp Terminal/ Lamb Road	E	0.59	B	0.11	v/c < 0.70	Yes
I-82 NB Ramp Terminal/ Lamb Road	B	0.29	C	0.54	v/c < 0.70	Yes

Based on the results of this analysis, all of the interchange ramp terminals are forecast to have sufficient long-term capacity (in their existing form) to accommodate local and regional traffic growth assuming the Umatilla Army Depot property experiences no reuse or intensification of current uses. Given that Morrow County, Umatilla County, and ODOT have no identified improvement projects at these interchanges, these findings suggest that all three interchanges can continue to provide adequate capacity for future “Background” traffic growth without any major operational improvements.

REVIEW OF 2035 TOTAL TRAFFIC CONDITIONS

Technical Memorandum #6 also summarizes Year 2035 “Total” traffic operations analyses for the study interchanges. This forecast scenario includes all of the traffic growth from the “Background” scenario and the estimated traffic growth from the anticipated reuse/redevelopment of the Umatilla Army Depot (Oregon National Guard, Morrow County Port Industrial zone, and Umatilla County Depot Industrial zones). Recognizing the potential for variability in long-term growth on the Umatilla Army Depot site, “Strong”, “Moderate”, and “Strong (w/alternative Morrow County Port Industrial routing to Paterson Ferry Road)” growth scenarios were analyzed as defined and documented in Technical Memorandum #6. The results of this analysis are summarized in Table 7-2.

Table 7-2 - 2035 Total Traffic Operations Summary

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
Strong Growth Scenario						
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.04	A	0.04	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.08	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Road	B	0.25	C	0.23	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Road	B	0.63	B	0.20	v/c < 0.70	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	1.13	C	0.52	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.56	F	0.94	v/c < 0.70	No
Moderate Growth Scenario						
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.03	A	0.03	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.07	A	0.04	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Road	B	0.10	C	0.15	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Road	B	0.26	B	0.16	v/c < 0.70	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	.90	C	0.40	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.37	C	0.71	v/c < 0.70	No

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour		Standard	Meets Standard?
	LOS	V/C	LOS	V/C		
Strong Growth Scenario (with alternative Morrow County Port Industrial routing to Paterson Ferry Road)						
I-84 EB Ramp Terminal/ Paterson Ferry Road/Frontage Road	A	0.08	A	0.07	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Paterson Ferry Road	A	0.16	A	0.09	v/c < 0.70	Yes
I-84 EB Ramp Terminal/ Army Depot Road	B	0.13	C	0.16	v/c < 0.70	Yes
I-84 WB Ramp Terminal/ Army Depot Road	B	0.47	B	0.17	v/c < 0.70	Yes
I-82 SB Ramp Terminal/ Lamb Road	F	1.13	C	0.52	v/c < 0.70	No
I-82 NB Ramp Terminal/ Lamb Road	C	0.56	F	0.94	v/c < 0.70	No

Review of I-84/Patterson Ferry Road Interchange Operations

As shown in Table 7-2, the I-84/Patterson Ferry Road interchange is forecast to operate with sufficient capacity under 2035 total traffic conditions, even when considering the potential increase in vehicle and truck trips from the alternative Port Industrial routing scenario. This is due to relatively minimal traffic volumes and the predominately rural character of the interchange service area. As such, no capacity-related improvements are likely to be needed at this interchange within the 2035 horizon year of the Umatilla Army Depot IAMP. Instead, any long-term improvement plans will need to focus primarily on geometric enhancements to the freeway ramps to potentially accommodate increased Port Industrial Zone generated truck trips. This includes lengthening the ramps to provide a longer deceleration zone on the westbound and eastbound off-ramps.

Review of I-82/Lamb Road Interchange Operations

As summarized in Table 7-2, both the northbound and southbound I-82/Lamb Road ramp terminals are forecast to operate either over capacity or exceed the 0.70 mobility target with inclusion of assumed traffic growth from either the "Strong" or "Moderate" growth scenarios. In addition, a 95th percentile queuing analysis found that estimated vehicle queues on the I-82/NB Lamb Road off-ramp are forecast to exceed the storage capacity under the "Strong" growth scenario.

Coupled with these long-term "Total" traffic operations findings, a review of the overall interchange form indicates that it has several substandard features that would need to be addressed before it could safely and efficiently accommodate any level of reuse/redevelopment on the Army Depot site. These features include:

- The access road that serves the Army Depot site from the interchange is a two-lane roadway with a tight geometry/layout that cannot adequately accommodate large trucks and significant increases in freeway-oriented traffic volumes. At any level of

reuse/redevelopment of the Army Depot site, this access road would need to be completely rebuilt and aligned to the interchange in a manner that would better meet the needs of freeway oriented industrial and commercial traffic.

- The NB and SB ramps all intersect the Lamb Road crossroad at large skew angles. These skew angles are not problematic under existing and “Background” traffic conditions given the orientation of traffic patterns and lack of conflicting traffic volumes to/from the Army Depot site. However, these large skew angles would need to be adjusted to accommodate the increased presence of freeway oriented truck and oversized vehicle traffic to/from the Army Depot site.
- Both the NB and SB ramp terminals have single-lane off-ramp approaches. These single-lane off-ramps are sufficient to accommodate existing and 2035 “Background” traffic conditions given the orientation of traffic patterns. However, the off-ramps would need to be widened to include separate left- and through/right-turn lanes at the ramp terminals to accommodate anticipated vehicle queues and turning movements.

Potential for Development /Land Use Phasing

Based on the I-82/Lamb Road interchange form review, it can be concluded that some basic interchange improvements (Army Depot access road reconstruction/realignment, interchange ramp skew angles, and off-ramp widening) would be needed to ensure that the I-82/Lamb Road interchange could safely and efficiently accommodate the various levels of traffic generated from the assumed reuse/redevelopment of the Army Depot site. In addition, the 2035 “Total” traffic operations findings indicate that the interchange ramp terminals will not have sufficient long-term capacity to handle the estimated increases in site-generated traffic under both the “Strong” and “Moderate” growth scenarios. As such, additional capacity-based enhancements will likely be needed at the ramp terminals.

Although physical improvements such as signalization, ramp terminal widening, and roundabouts are a few ways to mitigate the noted ramp terminal capacity deficiencies, development and land use phasing on the Army Depot site can also be used to keep traffic growth at levels that wouldn’t require some of these added forms of physical capacity-enhancing mitigation. In recognition that the I-82/Lamb Road interchange still has some additional capacity under the 2035 “Background” traffic scenario, an operations analysis was performed to roughly determine when either the mobility targets or vehicle queuing parameters would be exceeded at the I-82/Lamb Road interchange terminals when “phasing” reuse/redevelopment of the Army Depot site. As shown in Table 7-3, it was found that the I-82/Lamb Road interchange could roughly accommodate approximately 422,000 square feet of industrial/commercial development (or approximately 55% of the “Moderate” growth scenario) before

additional capacity-based mitigation at the ramp terminals would be needed¹. The traffic operations results are summarized in Figure 7-1.

Table 7-3 - Comparison of "Strong", "Moderate", and "Phased Land Use" Growth Scenarios

	Gross / Net Acres	Total Square Feet	Total Employees
2035 Strong Growth Scenario	3150/1687	1,525,471 SF	1,233
2035 Moderate Growth Scenario	3150/1687	768,050 SF	867
2035 Phased Land Use Growth Scenario	3150/1687	422,428 SF	476

As demonstrated by this analysis, there is additional capacity beyond the 2035 "Background" traffic conditions to allow some level of reuse/redevelopment on the Army Depot site without requiring the additional levels of capacity enhancing mitigation at the interchange ramp terminals¹. However, as documented in Table 7-3, this amount of development is significantly less than what the envisioned land use plans would allow.

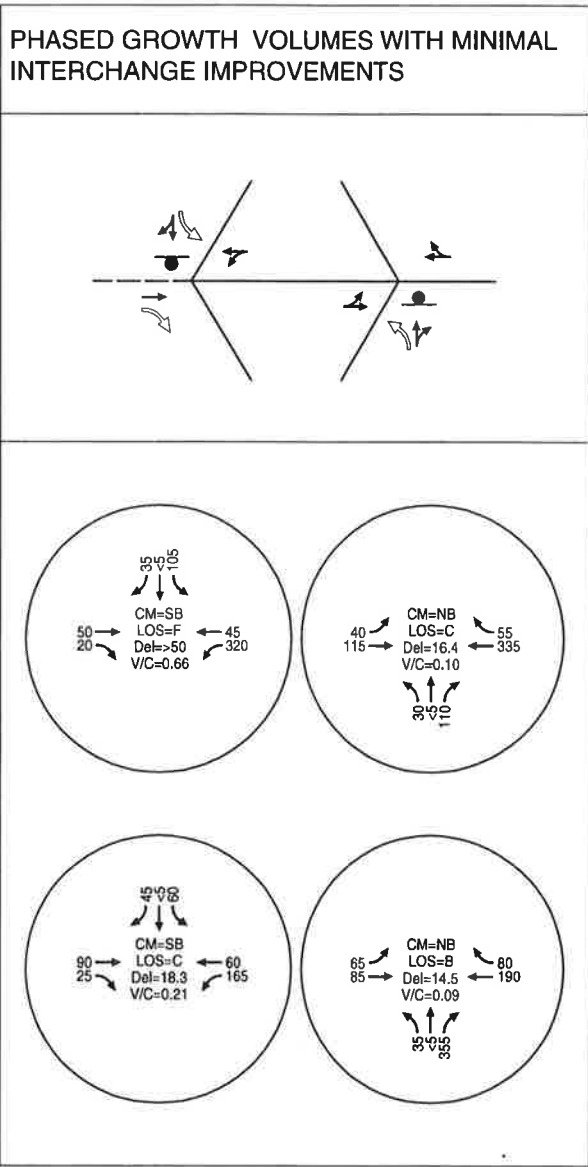
Review of I-84/Army Depot Access Road Operations

As summarized in Table 7-2, the I-84/Army Depot Access Road interchange is forecast to operate with sufficient capacity under 2035 total traffic conditions. As such, no capacity-related improvements are likely to be needed at this interchange within the 2035 horizon year of the Umatilla Army Depot IAMP.

A review of the overall interchange form indicates that it has several substandard features that may need to be addressed based on how the Army Depot site is reused and redeveloped. In particular, both the eastbound and westbound on/off ramps have substandard deceleration and acceleration lanes. These acceleration and deceleration lanes are not sufficient to safely and efficiently accommodate increased quantities of large industrial and freeway-oriented truck traffic. However, if the interchange was primarily limited to typical/daily Oregon National Guard (ORNG) use (primarily passenger cars but not including large trucks and oversized vehicles), the interchange ramps would likely not need to be modified. With the vertical clearance limitation of the adjacent Union Pacific Railroad underpass, most oversized vehicle and truck access will naturally have to utilize alternative access points such as the I-82/Lamb Road interchange or arrive via rail access. As such, any long-term improvement plans will need to focus primarily on local roadway connectivity and access management planning as it relates to the adjacent interchange property access points and county roadways such as Gun Club Lane.

¹ Assuming reconstruction/realignment of the Army Depot access road, realignment of the interchange ramps to eliminate the skew angles, and a widening of the NB and SB off-ramps to include separate left- and through/right-turn lanes.

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LEGEND		
CM = CRITICAL MOVEMENT (TWSC) LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC) Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC) V/C = CRITICAL VOLUME-TO-CAPACITY RATIO TWSC = TWO-WAY STOP CONTROL AWSC = ALL-WAY STOP CONTROL	EXISTING ROADWAY NEW/IMPROVED ROADWAY EXISTING MOVEMENT NEW/IMPROVED MOVMENT 	STOP SIGN SIGNAL ROUNDABOUT

LAMB ROAD OPERATIONS WITH PHASED GROWTH UMATILLA, OREGON FIGURE 7-1



CONCEPT DEVELOPMENT PROCESS AND INITIAL CONCEPTS




Based on the results of the 2035 "Total" traffic operations, the project team developed a number of interchange reconfiguration concepts that would potentially mitigate the noted interchange form, capacity, or queuing deficiencies at the interchanges. The following summarizes the respective concepts.




I-82/Lamb Road Interchange

To address these geometric concerns and the noted operational deficiencies, eight separate interchange improvement concepts were developed for the I-82/Lamb Road interchange. Simple single-line sketches of each concept are summarized in Table 7-4 along with a narrative that describes the various improvement components.

Table 7-4 - I-84/Lamb Road Interchange Improvement Concepts

Concept	Description of Improvements Included in Each Concept
<p>Concept L1 – No Interchange Improvements</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Maintains existing on- and off-ramp length and traffic control. <p>→With noted improvements, this concept can only reasonably accommodate 2035 Background traffic conditions.</p>
<p>Concept L2 – Minimally Improved Diamond</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Widens the northbound and southbound off-ramps to include separate left- and shared through/right-turn lanes. • Maintains the existing stop control at the ramp terminals. <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions and the Phased growth scenario.</p>

Concept	Description of Improvements Included in Each Concept
<p>Concept L3 – Minimally Improved Diamond with Partial Signalization</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Widens the northbound and southbound off-ramps to include separate left- and shared through/right-turn lanes. • Signalizes the southbound ramp terminal. <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.</p>
<p>Concept L4 – Improved Diamond with a Widened Lamb Road Cross Road</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Widens the northbound and southbound off-ramps to include separate left- and shared through/right-turn lanes. • Widens the Lamb Road cross road to three-lanes (includes a widened Lamb Road overpass). <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions and the Phased growth scenario.</p>
<p>Concept L5 - Improved Diamond with a Widened Lamb Road Cross Road and Partial Signalization</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Widens the northbound and southbound off-ramps to include separate left- and shared through/right-turn lanes. • Widens the Lamb Road cross road to three-lanes (includes a widened Lamb Road overpass). • Signalizes the southbound ramp terminal. <p>→With noted Improvements, this concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.</p>

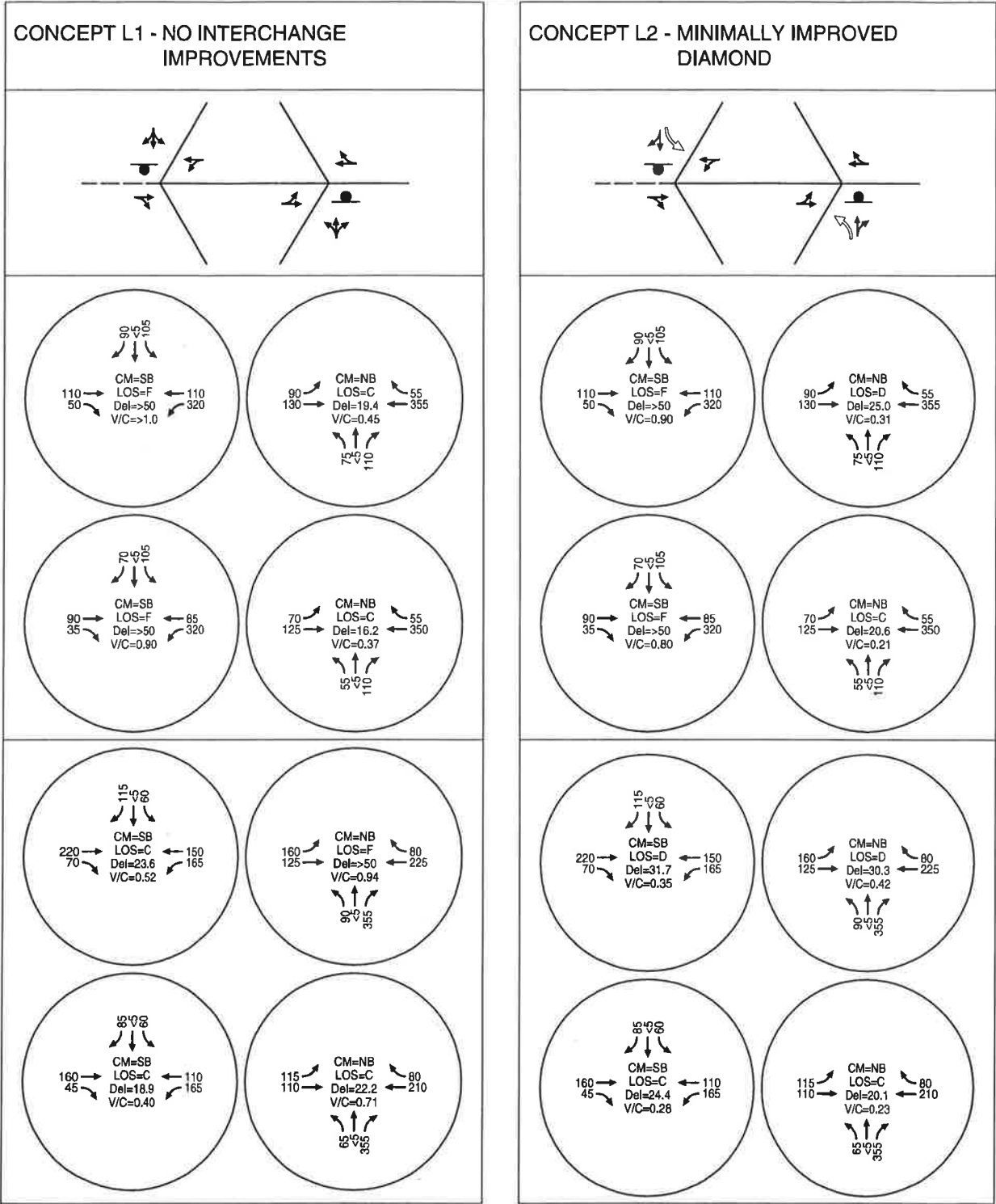
Concept	Description of Improvements Included in Each Concept
<p>Concept L6 - Improved Diamond with Roundabout at the SB Ramp Terminal</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Widens the northbound off-ramp to include separate left- and shared through/right-turn lanes. • Installs a roundabout at the southbound ramp terminal. <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.</p>
<p>Concept L7 – Improved Diamond with Roundabouts at both the SB and NB Ramp Terminals</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound and southbound off-ramps to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Installs a roundabout at the northbound and southbound ramp terminals. <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.</p>
<p>Concept L8 – Single Quadrant PARCLO A</p> 	<ul style="list-style-type: none"> • Realigns the cross road approach to/from the Army Depot site to better accommodate anticipated industrial and freeway oriented traffic growth. • Lengthens and improves the geometry of the northbound off-ramp to better accommodate a wider range of vehicle types and anticipated vehicle queues. • Installs a looping southbound on-ramp. • Realigns the southbound off-ramp with widening to include a separate left- and right-turn lane. <p>→With noted improvements, this concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.</p>

Traffic Operations Evaluation of Initial Concepts

As documented in Table 7-4, multiple interchange variations have been developed to accommodate the geometric deficiencies and better serve long-term forecast traffic volumes under the “Strong” and “Moderate” growth scenarios. Figures 7-2 through 7-5 illustrate the forecast traffic volumes and operational results associated with each concept. As shown in the figures, the following conclusions can be drawn:

- Both the NB and SB off-ramps will need to be squared up and widened to provide a separate left and through/right-turn lane at the Lamb Road interchange terminal under any assumed future reuse/redevelopment scenario.
- The NB ramp terminal can operate adequately (when widened as described in the above bullet) as an unsignalized intersection under any assumed future reuse/redevelopment scenario.
- The SB ramp terminal will require long-term traffic control (signalization) or a roundabout under the “Strong” and “Moderate” growth scenarios.
- A single-lane roundabout will provide sufficient long-term capacity at the SB ramp terminal.
- Lamb Road does not need to be widened to three lanes.

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LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

EXISTING ROADWAY
 NEW/IMPROVED ROADWAY
 EXISTING MOVEMENT
 NEW/IMPROVED MOVEMENT



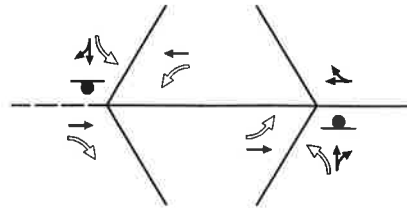
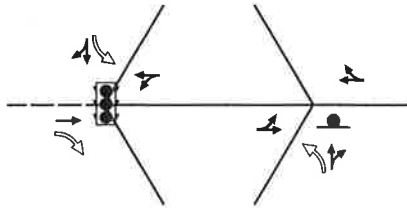
LAMB ROAD CONCEPTS L1 & L2 UMATILLA, OREGON **FIGURE 7-2**

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CONCEPT L3 - MINIMALLY IMPROVED DIAMOND WITH PARTIAL SIGNALIZATION

CONCEPT L4 - IMPROVED DIAMOND WITH A WIDENED LAMB ROAD CROSS ROAD

CONFIGURATION

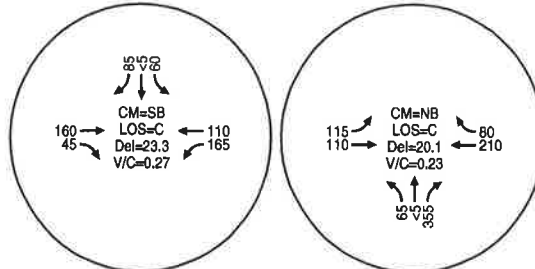
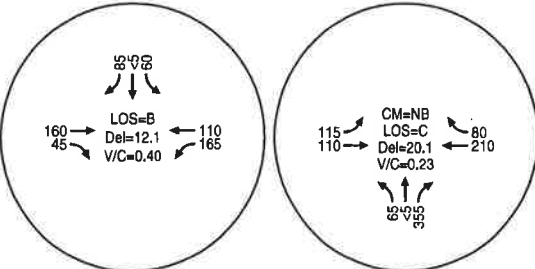
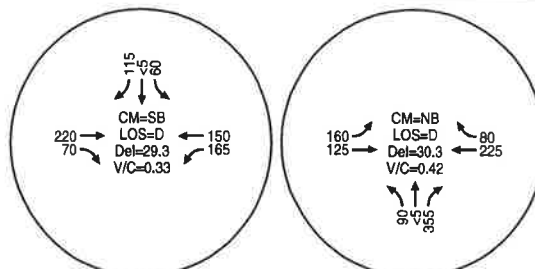
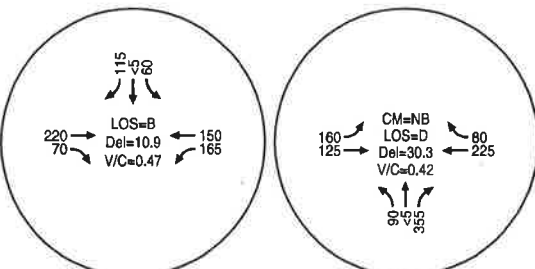
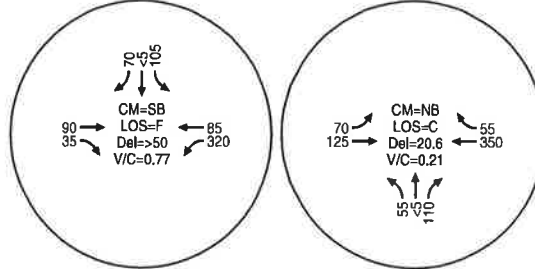
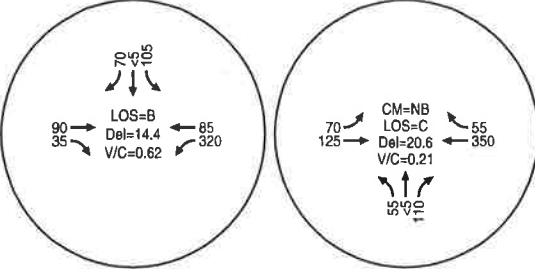
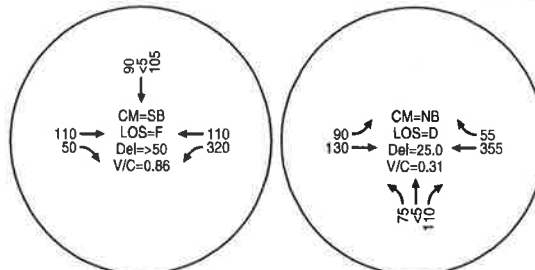
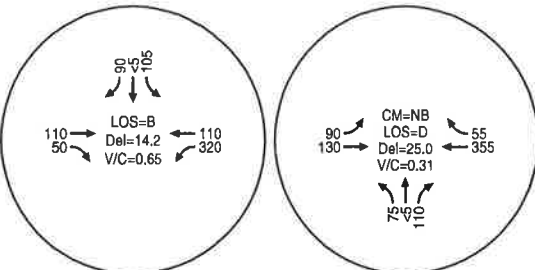


AM PEAK HOUR

MODERATE

PM PEAK HOUR

MODERATE



LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
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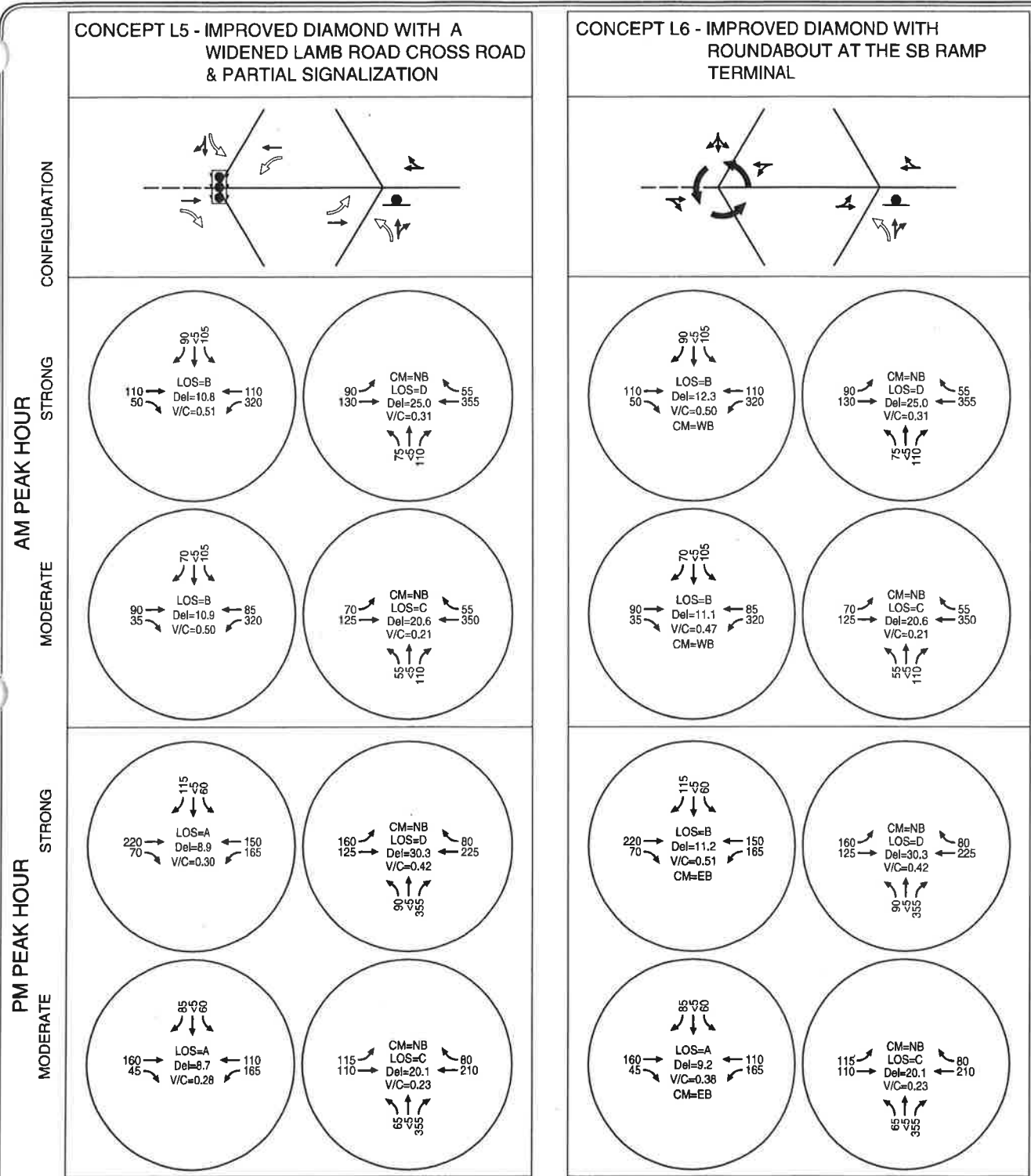
EXISTING ROADWAY
 NEW/IMPROVED ROADWAY
 EXISTING MOVEMENT
 NEW/IMPROVED MOVEMENT



LAMB ROAD CONCEPTS L3 & L4 UMATILLA, OREGON

FIGURE 7-3

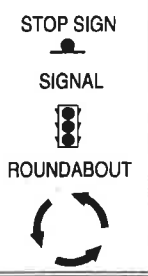
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LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

EXISTING ROADWAY
 NEW/IMPROVED ROADWAY
 EXISTING MOVEMENT
 NEW/IMPROVED MOVEMENT

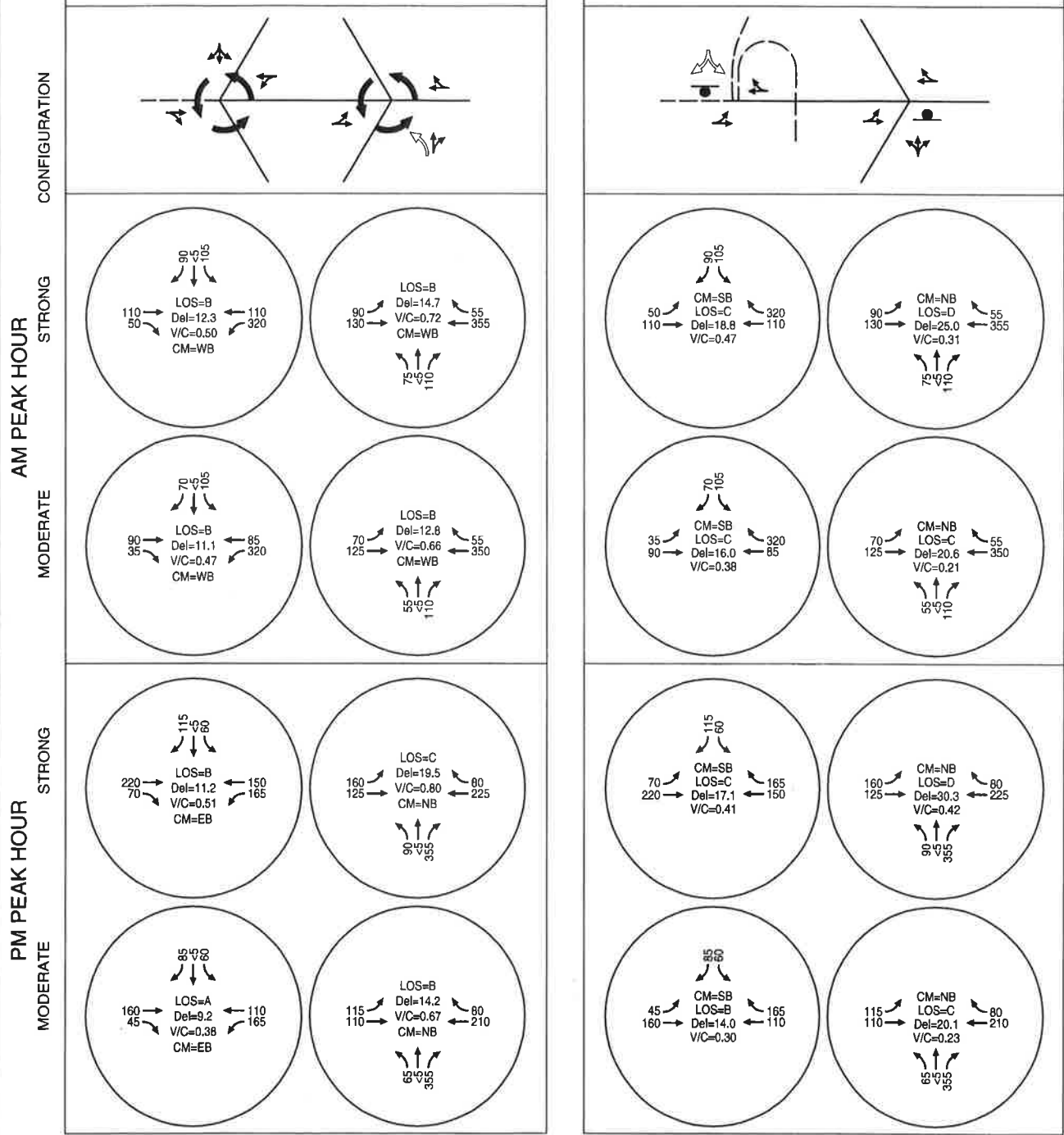


LAMB ROAD CONCEPTS L5 & L6 UMATILLA, OREGON **FIGURE 7-4**

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CONCEPT L6 - IMPROVED DIAMOND WITH ROUNDABOUT AT THE SB AND NB RAMP TERMINALS

CONCEPT L8 - SINGLE QUADRANT PARCLO A



LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

EXISTING ROADWAY
 NEW/IMPROVED ROADWAY
 EXISTING MOVEMENT
 NEW/IMPROVED MOVEMENT



STOP SIGN
 SIGNAL
 ROUNDABOUT

LAMB ROAD CONCEPTS L7 & L8 UMATILLA, OREGON **FIGURE 7-5**

I-84/ARMY DEPOT ACCESS INTERCHANGE

The I-84/Umatilla Army Depot Access Road interchange was constructed in 1967 to serve as the formal access to the Umatilla Army Depot. The interchange also provides access to Gun Club Lane and Ordnance/Frontage Road. Historically, the interchange has been a low-volume interchange. This is primarily due to fact that the Umatilla Army Depot has multiple points of access, the nearby Union Pacific Railroad underpass has a 15-foot vertical clearance limitation, and the surrounding land uses south of I-84 are rural in character. As such, some of the substandard interchange form characteristics (substandard on- and off-ramp lengths and close spacing of local roadways to the ramp terminals) have not been seen as a significant concern. However, reuse/redevelopment of the Army Depot site will result in changing traffic patterns at this interchange. To address these changing traffic patterns, several improvement concepts have been investigated as outlined in Table 7-5.

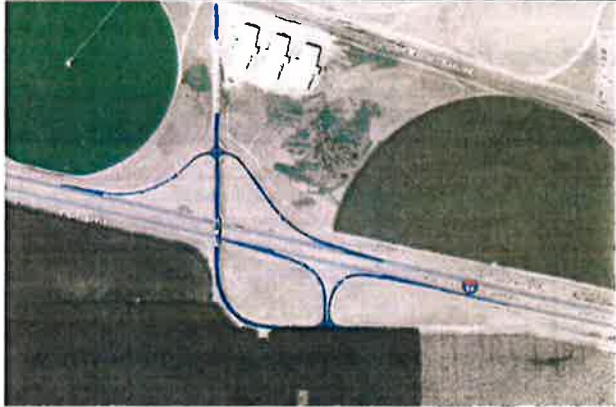
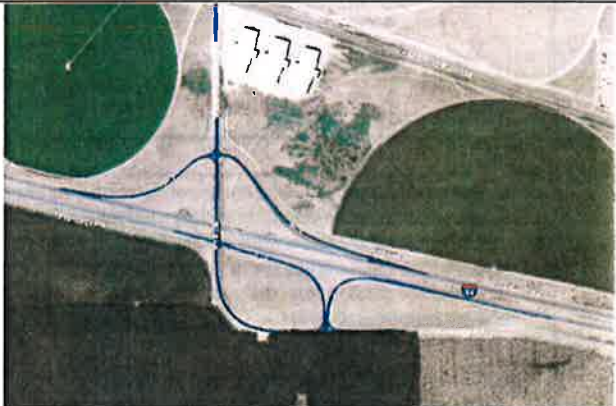
Table 7-5 – I-84/Umatilla Army Depot Access Road Interchange Improvement Concepts

Concept	Description
<p>Concept A1 – No Interchange Improvements</p> 	<ul style="list-style-type: none"> • Maintains the existing on- and off-ramps. • Realigns Gun Club Lane and the opposing farm access road to maximize the distance from the interchange ramp terminal and the railroad underpass. <p>→With noted improvements, this concept can accommodate continued use of the interchange by the ORNG and limited employment-related traffic to/from the reuse/redevelopment of the Army Depot site.</p>
<p>Concept A2 – Minimally Improved Diamond</p> 	<ul style="list-style-type: none"> • Lengthens and improves the geometry of the eastbound and westbound on- and off-ramps to address substandard layout and better accommodate a wider range of uses. • Realigns Gun Club Lane and the opposing farm access road to maximize the distance from the interchange ramp terminal and the railroad underpass. <p>→With noted improvements, this concept can accommodate continued use of the interchange by the ORNG and larger amounts of employment-related traffic to/from the reuse/redevelopment of the Army Depot site.</p>

I-84/Paterson Ferry Road Interchange

The I-84/Paterson Ferry Road interchange was developed into a full interchange in 2001. Since then, the interchange has been a low-volume interchange focusing on providing access to the area agriculture and farming uses. As such, the substandard off-ramp deceleration lengths have not been seen as a significant concern. However, the potential for Port Industrial zone access to Paterson Ferry Road could result in changing traffic patterns at this interchange. To address these changing traffic patterns, several improvement concepts have been investigated as outlined in Table 7-6.

Table 7-6 - I-84/Paterson Ferry Road Interchange Improvement Concepts

Concept	Description
<p>Concept P1 – No Interchange Improvements</p> 	<ul style="list-style-type: none"> • Maintains the existing interchange as is. <p>→ Can continue to accommodate projected traffic demand from existing land uses.</p>
<p>Concept P2 – Minimally Improved Diamond</p> 	<ul style="list-style-type: none"> • Lengthens and improves the geometry of the eastbound and westbound off-ramps to address substandard layout and better accommodate a wider range of uses. <p>→ With noted improvements, this concept can accommodate potential truck and vehicular traffic from the re-routed Port Industrial zone trips via a new connection to Paterson Ferry Road.</p>

PRELIMINARY QUALITATIVE EVALUATION OF INITIAL CONCEPTS

The consultant team conducted an evaluation and comparison of the initial concepts based on qualitative and quantitative measures. The comparison is intended to identify those concepts that do not have any “fatal flaws” and warrant a more detailed evaluation.

To help determine how 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, -2). The concept 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 list outlines the elements considered in the initial evaluation and aspects of each element that characterized the variations between concepts.

These evaluation criteria were originally documented in Technical Memorandum #1.

- Transportation Operations
 - Geometric Safety
 - Mobility
 - Freight mobility
- Multimodal Accessibility
 - Transit mobility
- Land Use
 - Right-of-way impacts
 - Compatibility with land use
- Economic Development
 - Near-term growth accommodation
 - Long-term growth accommodation
- Environmental, Social, and Equity Factors
 - Environmental impacts
 - Socio-economic impacts
- Accessibility and Connectivity
 - Local roadway connectivity
 - Future access to undeveloped properties
 - Access spacing requirements

- Cost
 - Cost relative to other improvement concepts
- Implementation
 - Impacts to existing and proposed developments
 - Ability to construct in phases

Table 7-7 provides a summary of the preliminary evaluation of initial concepts. Detailed notes regarding the associated scores are provided in Appendix "A".

Table 7-7 - Initial Concept Evaluation and Screening Matrix

Concept	Transportation Operations	Multimodal Accessibility	Land Use	Economic Development	Enviro., Social, and Equity Factors	Accessibility & Connectivity	Cost	Implementation	Average Score	Recommended for Additional Evaluation?
I-84/Army Depot Road Interchange										
A1	-1	0	0	-1	0	2	0	0	0.00	Yes
A2	1	0	0	1	0	2	-1	-1	0.25	Yes
I-82/Lamb Road Interchange										
L1	-2	0	0	-2	0	2	0	0	-0.25	No
L2	0	0	-1	1	0	2	-1	0	0.125	Yes
L3	2	0	-1	2	0	2	-1	0	0.50	Yes
L4	0	0	-2	1	0	2	-2	-1	-0.25	No
L5	2	0	-2	2	0	2	-2	-1	0.125	No
L6	2	0	-1	2	0	2	-1	-1	0.375	Yes
L7	2	0	-2	2	0	2	-2	-2	0.00	No
L8	2	0	-2	2	0	2	-2	-1	0.125	Yes
I-84/Paterson Ferry Road										
P1	-1	0	0	-1	0	2	0	0	0.00	Yes
P2	1	0	0	1	0	2	-1	0	0.375	Yes

Table 7-8 provides information on the primary reason a concept was recommended for elimination and not considered for further evaluation. More detailed notes regarding the associated scores and supplemental to the information provided in Table 7-8 are provided in Appendix "A".

Table 7-8 - Concept Elimination Discussion

Concept	Primary Reason for Concept Elimination
L1	Does not address the capacity and vehicle queuing limitations of the NB and SB ramp terminals.
L4	Does not address the capacity limitations at the SB ramp terminal. Widening of Lamb Road and the existing overpass structure to three travel lanes is expensive, impactful, and not necessary to address the capacity and geometric deficiencies of the interchange.
L5	Widening of Lamb Road and the existing overpass structure to three travel lanes is expensive, impactful, and not necessary to address the capacity and geometric deficiencies of the interchange.
L7	A roundabout is not necessary to mitigate forecast traffic conditions at the NB ramp terminal.

The findings and preliminary conclusions contained within this memorandum will be discussed in greater detail at the March 31, 2014 TPAC meeting.

DETAILED DEVELOPMENT OF SELECTED CONCEPTS

Based on the results of the screening process, more detailed drawings of each concept were prepared as documented in the figures below. Detailed drawings were not prepared for Concepts A-1 and P-1 as they represent No-Build scenarios.

I-84/Army Depot Access Road

As documented in the previous sections, the I-84/Army Depot Access Road interchange can accommodate anticipated growth from the Oregon National Guard and some limited reuse growth without major improvements. However, when considering the potential for accommodating traffic generated by the Port Industrial zone, the improvements shown in Exhibit 1 would be needed.

Exhibit 1 – Refined I-84/Army Depot Access Road Interchange Improvement Alternative



I-82/Lamb Road Interchange

Exhibit 2 - I-82/Lamb Road Interchange Improvements (Signalized SB Ramp Terminal)

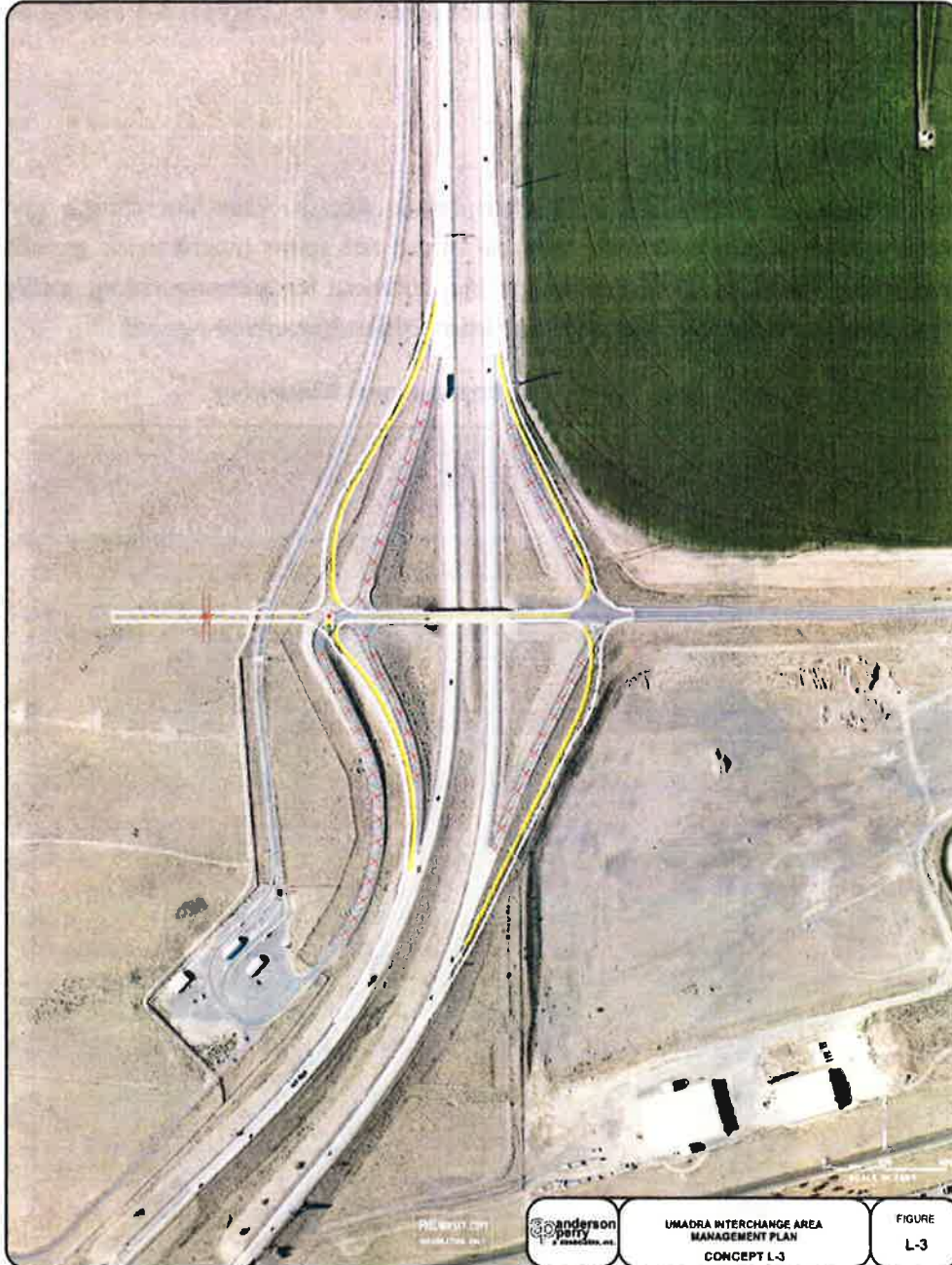


Exhibit 3 - I-82/Lamb Road Interchange Improvements (Roundabout SB Ramp Terminal)



Exhibit 4 - I-82/Lamb Road Interchange Improvements (Single Quadrant PARCLO A)

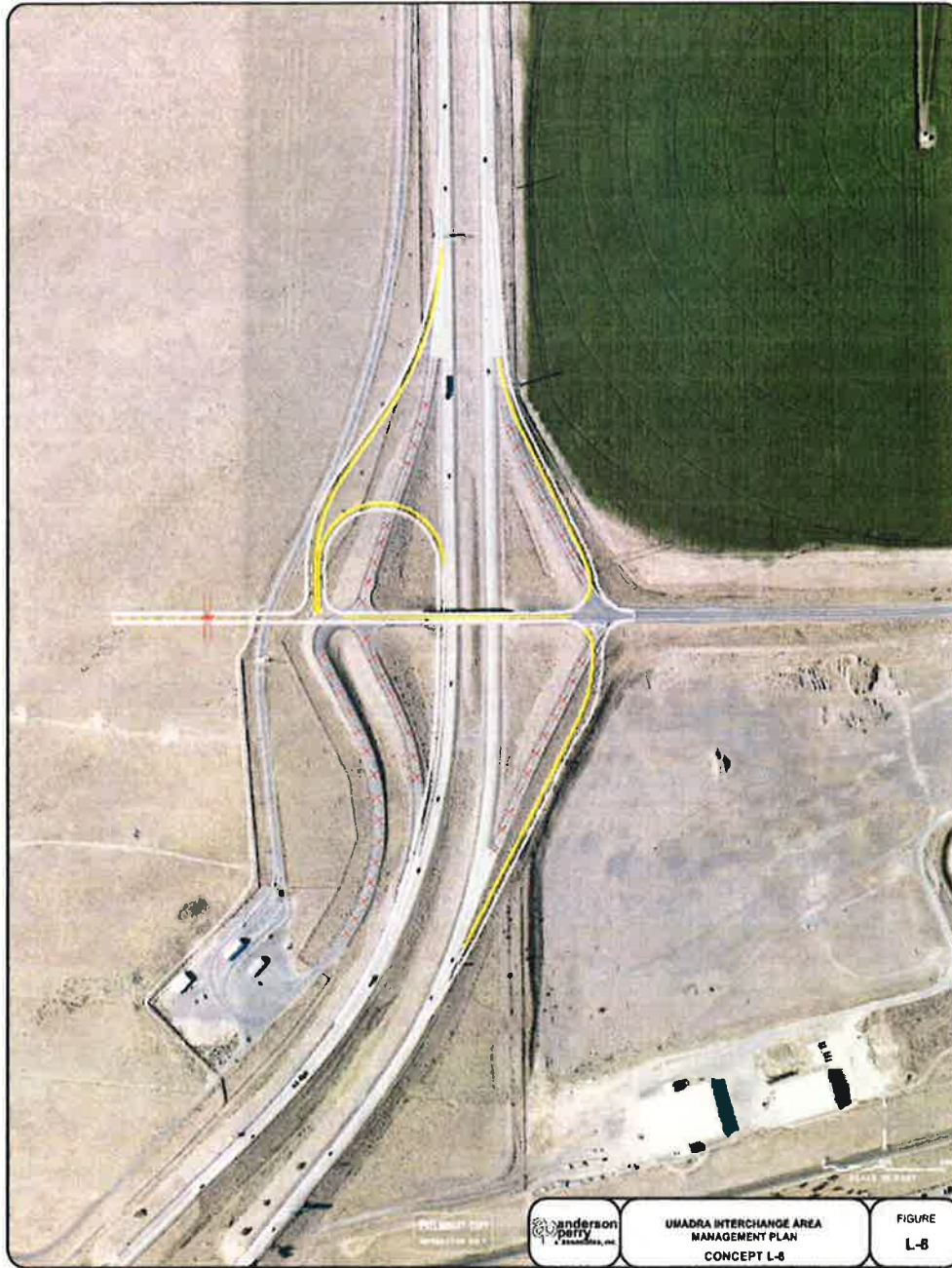


Exhibit 5 - I-84/Paterson Ferry Road Interchange Improvements (Lengthened EB and WB Off-Ramps)



Appendix A Detailed Concept Review

DETAILED CONCEPT REVIEW

This section details the quantitative analysis conducted to evaluate the concepts presented within this memorandum.

I-84/Army Depot Access Interchange

Concept A1 – No Interchange Improvements

Transportation Operations (-1)

- Does not address the substandard on- and off-ramp lengths (-). May not be an issue if truck and oversized vehicle traffic is restricted to other points of access such as the I-82/Lamb Road interchange.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot site.

Land Use (0)

- No right-of-way or property impacts to adjacent properties would occur with this concept.

Economic Development (-1)

- The overall interchange geometrics would not be improved, thereby minimizing the interchange's ability to safely and efficiently accommodate significant levels of long-term industrial and highway-oriented development.

Environmental, Social, and Equity Factors (0)

- The overall interchange geometrics would not be improved, so there would be no environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- A more formal access to Gun Club Lane would be created.

Cost (0)

- Least costly concept due to minimal geometric improvements and no property impacts.

Implementation (0)

- No implementation issues.

Concept A2 – Minimally Improved Diamond Interchange

Transportation Operations (+1)

- Lengthens the on- and off-ramps and brings them up to current design standards.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot site.

Land Use (0)

- No right-of-way or property impacts to adjacent properties would occur with this concept.

Economic Development (+1)

- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to safely and efficiently accommodate significant levels of long-term industrial and highway-oriented development.

Environmental, Social, and Equity Factors (0)

- The overall interchange geometrics would not be improved, so there would be no environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- A more formal access to Gun Club Lane would be created.

Cost (-1)

- More costly concept due to lengthening of the on- and off-ramps.

Implementation (-1)

- No implementation issues.

I-84/Paterson Ferry Road Access Interchange

Concept P1 – No Interchange Improvements

Transportation Operations (-1)

- Does not address the substandard off-ramp lengths (-). May not be an issue if there is no Port Industrial access via Paterson Ferry Road.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot site.

Land Use (0)

- No right-of-way or property impacts to adjacent properties would occur with this concept.

Economic Development (-1)

- The overall interchange geometrics would not be improved, thereby minimizing the interchange's ability to safely and efficiently accommodate Port Industrial traffic via the potential Paterson Ferry Road access.

Environmental, Social, and Equity Factors (0)

- The overall interchange geometrics would not be improved, so there would be no environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- Would have no accessibility/connectivity issues.

Cost (0)

- Least costly concept due to no geometric improvements and no property impacts.

Implementation (0)

- No implementation issues.

Concept P2 – Minimally Improved Diamond Interchange

Transportation Operations (+1)

- Lengthens the off-ramps and brings them up to current design standards.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot site.

Land Use (0)

- No right-of-way or property impacts to adjacent properties would occur with this concept.

Economic Development (+1)

- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to more safely and efficiently accommodate potential levels of vehicular and truck traffic generated by a Port Industrial connection to Paterson Ferry Road.

Environmental, Social, and Equity Factors (0)

- The overall interchange geometrics would not be improved, so there would be no environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- Would have no accessibility/connectivity issues.

Cost (-1)

- More costly concept due to lengthening of the off-ramps.

Implementation (0)

- No implementation issues.

I-82/Lamb Road Interchange

Concept L1 – No Interchange Improvements

Transportation Operations (-2)

- This concept can only reasonably accommodate 2035 Background traffic conditions.
- Interchange ramp terminals are forecast to operate over capacity with any significant level of Army Depot reuse/redevelopment. This will create long-term safety and capacity concerns, thereby inhibiting the ability to accommodate long-term traffic and freight growth.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Does not address of the large skew angles where the NB and SB off-ramps intersection Lamb Road. The skew angles make it difficult to accommodate large trucks without tracking into adjacent travel lanes.
- Does not address the tangential exit of the NB off-ramp from I-82.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (0)

- No right-of-way or property impacts to adjacent properties outside of the right-of-way needed to accommodate the new crossroad approach to/from Army Depot.

Economic Development (-2)

- The overall interchange geometrics would not be improved, thereby minimizing the interchange's ability to safely and efficiently accommodate significant levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would not be improved, thereby minimizing the ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- The overall interchange geometrics would not be improved, so there would be no environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (0)

- Least costly concept due to minimal geometric improvements and no property impacts.

Implementation (0)

- No implementation issues.

Concept L2 – Minimally Improved Diamond Interchange

Transportation Operations (0)

- The SB Interchange ramp terminal is forecast to operate with high levels of delay under the “Strong” and “Moderate” growth scenarios. This will inhibit the ability to accommodate long-term traffic growth and freight related traffic.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange’s ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-1)

- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

Economic Development (+1)

- The overall interchange geometrics would be improved, thereby furthering the interchange’s ability to accommodate increased levels of long-term industrial and highway-oriented development.

- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles (+).

Environmental, Social, and Equity Factors (0)

- Minor interchange improvements are not anticipated to have environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-1)

- Some costs associated with the geometric improvements to the ramps and crossroad.

Implementation (0)

- No significant implementation issues.

Concept L3 – Minimally Improved Diamond Interchange with Signalization

Transportation Operations (+2)

- This concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.
- Signalization of the SB ramp terminal will improve the safety and efficiency of the interchange and ensure long-term accommodation of traffic growth and freight.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-1)

- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

Economic Development (+2)

- The overall interchange geometrics and traffic control would be improved, thereby ensuring the interchange can adequately accommodate increased levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- Minor interchange improvements are not anticipated to have environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-1)

- Some costs associated with the geometric improvements to the ramps and crossroad.

Implementation (0)

- No significant implementation issues.

Concept L4 – Improved Diamond Interchange with a Widened Lamb Road Cross Road

Transportation Operations (0)

- The SB Interchange ramp terminal is forecast to operate with high levels of delay. This will inhibit the ability to accommodate long-term traffic growth and freight related traffic.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-2)

- A widened Lamb Road cross road to three lanes would may require some right-of-way acquisition to the adjacent undeveloped property to the south.
- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

Economic Development (+1)

- The overall interchange geometrics would be improved, thereby furthering the interchange's ability to accommodate increased levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- Minor interchange improvements are not anticipated to have environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-2)

- Off-ramp realignments, widening of Lamb Road, and a wider overpass bridge would increase the cost of this concept compared to other concepts.

Implementation (-1)

- Minor implementation issues associated with the Lamb Road and overpass widening.

L5 - Improved Diamond Interchange with a Widened Lamb Road Cross Road and Partial Signalization

Transportation Operations (+2)

- This concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.
- Signalization of the SB ramp terminal will improve the safety and efficiency of the interchange and ensure long-term accommodation of traffic growth and freight.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-2)

- A widened Lamb Road cross road to three lanes would may require some right-of-way acquisition to the adjacent undeveloped property to the south.
- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

Economic Development (+2)

- The overall interchange geometrics and traffic control would be improved, thereby ensuring the interchange can adequately accommodate increased levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-2)

- Off-ramp realignments, widening of Lamb Road, and a wider overpass bridge would increase the cost of this concept compared to other concepts.

Implementation (-1)

- Minor implementation issues associated with the Lamb Road and overpass widening.

L6 - Improved Diamond Interchange with a Roundabout at the SB Ramp Terminal

Transportation Operations (+2)

- This concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.
- A roundabout at the SB ramp terminal will improve the safety and efficiency of the interchange and ensure long-term accommodation of traffic growth and freight.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-1)

- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

Economic Development (+2)

- The overall interchange geometrics and traffic control would be improved, thereby ensuring the interchange can adequately accommodate increased levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- Interchange improvements are not anticipated to have environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-1)

- Roundabout cost would be higher than a comparable signalized ramp terminal.

Implementation (-1)

- A roundabout would be harder to construct while maintaining traffic flow through the interchange.

L7 - Improved Diamond Interchange with Roundabouts at both the SB and NB Ramp Terminals

Transportation Operations (+2)

- This concept can accommodate 2035 Background traffic conditions, the Phased, Strong, and Moderate growth scenarios.
- A roundabout at the SB and NB ramp terminal will improve the safety and efficiency of the interchange and ensure long-term accommodation of traffic growth and freight.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersection Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact or preclude potential future transit accessibility to/from or within the Umatilla Army Depot future industrial area.

Land Use (-2)

- A realignment of the northbound off-ramp may require a small amount of right-of-way acquisition to the adjacent undeveloped property in the southeast quadrant of the interchange.

- A roundabout at the NB ramp terminal would likely require some right-of-way acquisition south of Lamb Road and to the undeveloped property in the southeast quadrant of the interchange.

Economic Development (+2)

- The overall interchange geometrics and traffic control would be improved, thereby ensuring the interchange can adequately accommodate increased levels of long-term industrial and highway-oriented development.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- Interchange improvements are not anticipated to have environmental/social/equity impacts to adjacent properties or land uses.

Accessibility and Connectivity (+2)

- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-2)

- Roundabout cost would be higher than a comparable signalized ramp terminal.

Implementation (-2)

- Both roundabouts would be harder to construct while maintaining traffic flow through the interchange.

L8 – Single Quadrant PARCLO A

Transportation Operations (+2)

- The interchange configuration would have sufficient long-term capacity to fully meet the long-term mobility targets of the Highway Design Manual under all growth scenarios.
- New crossroad approach to/from Army Depot would better and more safely accommodate anticipated industrial and freeway oriented traffic growth.
- Addresses the skew angles where the NB and SB off-ramps intersect Lamb Road. This will improve the interchange's ability to safely and efficiently accommodate large trucks.
- Addresses the tangential exit of the NB off-ramp from I-82 and brings it up to existing ODOT guidelines.

- Would increase the length of the SB on-ramp merge.

Multimodal Accessibility (0)

- The interchange configuration does not have an impact on potential future transit accessibility.

Land Use (-2)

- The larger southbound off-ramp and looping on-ramp footprint in the northwest quadrant of the interchange would have a relatively minor impact on future development in the depot site.

Economic Development (+2)

- The economic viability of the future Umatilla Army Depot property and the surrounding Westland Exception Area would be significantly improved by providing reserve long-term capacity at the interchange terminals.
- The overall interchange geometrics would be improved, thereby enhancing the interchange's ability to accommodate the largest range of design vehicles.

Environmental, Social, and Equity Factors (0)

- A realignment of the southbound on/off ramps and northbound off-ramps would impact adjacent properties, but these properties have no known environmental, social, or equity issues associated with them.

Accessibility and Connectivity (+2)

- This concept would not inhibit local street connectivity or prohibit access to nearby properties.
- New crossroad approach to/from Army Depot would significantly enhance access for future industrial/highway oriented uses. This new crossroad approach would meet access spacing requirements.

Cost (-2)

- New SB on- and off-ramps would have a sizable cost compared to other alternatives.

Implementation (-1)

- The construction of this interchange would be a major project with many logistical difficulties.

Appendix I
Interchange Area Management
Plan Implementation

TECHNICAL MEMORANDUM # 7.c - DRAFT

Umatilla Army Depot Combined IAMP and Transportation System Subarea Plan

Interchange Area Management Plan Implementation

Date: May 1, 2014 **Last Revised 7/17/14**
To: TPAC
From: Frank Angelo, Angelo Planning Group
Darci Rudzinski, Angelo Planning Group

Project #:13848

This memorandum documents implementation steps to ensure that the recommendations of the Umatilla Army Depot Combined IAMP ("IAMP") are consistent with the locally adopted policies and land use development requirements for both Umatilla County and Morrow County. This memorandum includes:

- Overview of the State of Oregon regulatory framework governing IAMPs
- Overview of the elements that will need to be adopted as part of Umatilla County and Morrow County's long range planning documents and modifications necessary to the respective development ordinances to implement the IAMP
- Potential financing methods for constructing identified improvements at the I-82/Lamb Road Interchange

The original Technical Memorandum #7.c was developed for TPAC Meeting #4 held in May 2014. This memorandum reflects subsequent updates to possible system development charge (SDC) methodologies. The implementing policy elements of this memo have been updated further and are found in the respective IAMPs developed for the three interchanges.

OVERVIEW OF STATE REGULATORY FRAMEWORK

Development and implementation of IAMPs are guided by Oregon Administrative Rule (OAR) 734-051 and OAR 660-012. OAR 734-051-0155(7) requires that an IAMP be developed no later than the time that an interchange is designed or redesigned. The IAMP must be completed before project construction. OAR 734-051-0155(2) states "prior to adoption by the Oregon Transportation Commission, the Department will work with local governments on any amendments to local comprehensive plans and transportation system plans and local land use and subdivision codes to ensure the proposed... Interchange Area Management Plan is consistent with the local plan and codes."

The Transportation Planning Rule requires that local governments adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors, and sites for their identified functions (OAR 660-012-0045(2))."

To comply with OAR 734-051 and OAR 660-012 and ensure that local land use actions are consistent with the transportation facility planning, the Umatilla Army Depot Combined IAMP and Transportation Subarea Plan contains policy language and development assumptions that are intended to govern planning and future development within the IAMP Management Area. Morrow County and Umatilla County will need to acknowledge policies specific to IAMP Management Area through a formal adoption process. In addition to policy language that supports the objectives of the IAMPs, Morrow County and Umatilla County will need to adopt regulatory language that ensures that future permitted development is compatible with the improvements planned for the interchange. Following the local actions by Morrow County and Umatilla County the Oregon Transportation Commission (OTC) will adopt IAMP as a part of the Oregon Highway Plan (OHP).

PROPOSED IMPLEMENTATION ACTIONS

ODOT, Morrow County and Umatilla County will need to jointly adopt elements of the IAMP. Since the IAMP involves both State and local government authority, some policies will guide ODOT actions and others will guide local government decisions. The OAR governing IAMPs states that ODOT will work with local governments on any amendments to local comprehensive plans and transportation system plans and local land use and subdivision codes to ensure the proposed IAMP is consistent with the local plan and codes, prior to adoption by the Oregon Transportation Commission (OTC) (OAR 734-051-0155(2)).

It is expected that the IAMPs will be made part of the Morrow County and Umatilla County Comprehensive Plans by including them as an amendment to the local Transportation System Plans (TSP). This amendment process will require notification and public hearings pursuant to the local legislative process. Local jurisdictions can adopt the IAMP documents in their entirety by reference into acknowledged TSPs, can prepare an ordinance that more specifically identifies what parts of the IAMPs are being adopted locally and how local plans and ordinances are being modified, or can issue a statement that local plans and ordinances are consistent with the recommendations of the IAMP.

ODOT Region 5 will prepare findings to support adoption of the IAMP on the State's behalf, and the Oregon Transportation Commission (OTC) will deliberate and adopt the final documents as a facility plan and amendments to the Oregon Highway Plan (OHP). The following is a summary of the proposed actions to implement the IAMP.

ODOT:

- The IAMP shall be adopted by the Oregon Transportation Commission as part of the Oregon Highway Plan.

Morrow County:

- Will amend the Transportation System Plan to incorporate the interchange policy statement(s) and recommended transportation improvements.
- Will amend the Comprehensive Plan Map and Zoning Map to include an Interchange Management Area to identify where compliance with the IAMP will be a condition of future development approval.

Umatilla County:

- Will amend the Transportation System Plan to incorporate the interchange policy statement(s) and recommended transportation improvements.
- Will amend the Comprehensive Plan Map and Zoning Map to include an Interchange Management Area to identify where compliance with the IAMP will be a condition of future development approval.
- Will amend the Development Code to require that development and redevelopment proposals within the Interchange Management Area show consistency with the IAMP Access Management Plan (AMP) and recommended improvements as a condition of approval. Amendments will ensure that all proposals for new development within the Umatilla County Industrial Zone-portion of the Depot site area will be reviewed to determine if a need for different interchange improvement phases is triggered. May require amendments to the following:
 - Section 152.018 Access Management and Street Connectivity
 - Section 152.019 Traffic Impact Analysis

FINANCING

As shown in Technical Memorandum #7a, Interchange Area Concept Development and Alternatives Analysis, some basic interchange improvements (Army Depot access road reconstruction/realignment, interchange ramp skew angles, and off-ramp widening) would be needed to ensure that the I-82/Lamb Road interchange could safely and efficiently accommodate the various levels of traffic generated from the assumed reuse/redevelopment of the Army Depot site. In addition, the 2035 "Total" traffic operations findings indicate that the interchange ramp terminals will not have sufficient long-term capacity to handle the estimated increases in assumed site-generated traffic under both the "Strong" and "Moderate" growth scenarios. As such, additional capacity-based enhancements will be needed at the ramp terminals.

While the analysis demonstrates that there is additional capacity beyond the 2035 "Background" traffic conditions to allow some level of reuse/redevelopment on the Army Depot site without requiring the additional levels of capacity, this amount of development is significantly less than what the envisioned

land use plans would allow. Improvements to accommodate “Moderate” and “Strong” growth scenarios include lengthening, changing the geometry, and widening the northbound and southbound off-ramps. The TPAC has carried forward three separate improvement alternatives for the I-82/Lamb Road interchange. These alternatives are:

Concept L2: Minimally Improved Diamond Interchange

- Realigns the cross road approach.
- Lengthens the NB and SB off-ramps.
- Widens the NB and SB off-ramps.
- Maintains the existing stop control.
- Sufficient capacity for Phased Growth Scenario only
- Cost \$3,200,000

Concept L3: Minimally Improved Diamond Interchange with Signalization of the Southbound Ramp Terminal

- Realigns the cross road approach
- Lengthens the NB and SB off-ramps
- Widens the NB and SB off-ramps
- Signalizes the SB ramp terminal
- Sufficient capacity for Moderate and Strong Growth Scenarios
- Cost \$3,500,000

Concept L6: Improved Diamond with Roundabout at the Southbound Ramp Terminal

- Realigns the cross road approach
- Lengthens the NB and SB off-ramps
- Widens the NB off-ramp
- Installs a roundabout at the SB ramp terminal
- Sufficient capacity for Moderate and Strong Growth Scenarios
- Cost \$3,700,000

Based on the needed improvements at the I-82/Lamb Road interchange, local financing mechanisms could be developed that would allow future development to help pay for these needed improvements. Some mechanisms are dependent on securing funding from other public sources such as Federal or State programs. A system development charge (SDC) could also be considered and assigned to future industrial and commercial growth within the Army Depot planning area. The following provides a brief summary of these types of programs.

Grants and Loans

There are a variety of Federal and State grant and loan programs available for transportation financing in Umatilla County. Grants and loans are competitive statewide and many programs require a match from the local jurisdiction as a condition of approval. Most grant and loan programs available for transportation projects are funded and administered through ODOT; programs that have been identified as potentially relevant for Umatilla County are described under Revenue Source in the adopted 2002 Umatilla Transportation System Plan.¹ An update to the Transportation Enhancement Program is described below.

Transportation Enhancement Program

In July 2012, the US Congress passed a new transportation funding bill called Moving Ahead for Progress in the 21st Century or "MAP-21". The new bill took effect on October 1, 2012. MAP-21 did not reauthorize the Transportation Enhancement (TE) Program. Instead, it established a new program called Transportation Alternatives Program (TAP) that includes elements of the former TE program in combination with elements of other programs, and some new activities.

The TE Discretionary Account remains in place through 2015, with \$2 million per year for urgent needs that arise outside the statewide competitive selection process. It remains available for TE-eligible projects until those funds are exhausted, and will then continue for TAP-eligible projects using TAP funds instead of TE.

For 2016-2018, the Discretionary Account has \$1.5 million per year, shared with the Bicycle & Pedestrian "Quick Fix" program that provides funds for immediate needs along the State Highway system.²

System Development Charges

System Development Charges (SDCs) are impact fees charged to new development to help pay for the additional infrastructure capacity needed to serve the development. SDCs are regulated in Oregon by statute. Two types of fees are allowed under state law:

- Reimbursement fees, used to repay existing residents for extra capacity built in advance of growth that benefits future residents; and
- Improvement fees, designed to pay for planned capital improvements needed to serve future development.

¹ www.co.umatilla.or.us/planning/pdf/Umatilla_County_TSP_June_02.pdf

² This description of the changes occurring with the transition to the STIP-Enhance process was adapted from the State of Oregon website <http://www.oregon.gov/ODOT/HWY/LGS/pages/enhancement.aspx>.

SDCs are collected when new building permits are issued. The fees may be collected for transportation systems, as well as for water, sanitary sewer, storm water, and parks. Fees must be established using a rate-setting methodology adopted by the service provider (i.e. the city, county or special district responsible for the service). Fees may be increased periodically based on increases in project costs using procedures outlined in the local ordinance (see ORS 223.304). Transportation SDCs are based on the trip generation of the proposed development. Nonresidential use calculations are based on employee ratios for the type of business or industrial uses; in the case of the I-82/Lamb Road Interchange the trip generation has been determined for both “Moderate” and “Strong” growth scenarios.

A location-based fee, assessed by Umatilla County, is one option for the I-82/Lamb Road Interchange. This approach is particularly appropriate when proposed capital improvements are triggered by and benefit a limited area only and because this type of SDC provides a built-in mechanism for allocating revenues to specific interchange projects (i.e. revenue may only be spent on projects in the area where they are collected). A geographically differentiated sub-area fee is also appropriate where infrastructure costs are higher in newly developing areas, as is the case to the west of the interchange, as opposed to largely developed areas where infrastructure is already in place. This ensures that infill development in other parts of Umatilla County are not unfairly burdened with the cost of helping fund infrastructure on the Depot site.

SDC Methodology

Two examples of applying a SDC to future development on the Depot site were prepared. Both examples are based on trips generated from future development on the Depot site and do not include trips generated from development on surrounding properties such as the Westland Exception Area. Applying the SDC to future development in the Westland Exception Area would spread the costs of future improvements over more trips, thereby reducing the cost per trip. The following examples are provided for illustrative purposes and have relied on information developed at different points in the IAMP planning process. If Umatilla County wished to pursue a SDC as a funding option, additional research and evaluation should occur to fully define the area where the SDC would apply, the resulting number of trips and the level of interchange improvements used to determine the SDC rate.

SDC Based on Full I-82 / Lamb Road Interchange Improvements

The number of daily trips expected to be generated from new commercial and industrial growth from the Depot site at the I-82/Lamb Road Interchange has been determined for both “Moderate” and “Strong” growth scenarios. It is this growth that will trigger the need for additional improvements to the interchange, estimated at up to \$3.7 million, depending on the alternative. A SDC could be adopted that is based on a cost-per-trip basis. Table 7c-1 shows what the fee would be per trip to meet the total

estimated cost of proposed improvements to support the “Strong” growth scenario.³ As well the table shows the result if only a portion of the cost (50% or 25%) was met by the SCD. This “partial SCD” option would assume that other funding sources would pay a portion of the cost of needed improvements at the interchange.

Table 7c-1 – System Development Charge Estimates: Full Improvements

Growth Scenario	Number of Total Daily Trips	SDC Cost per Trip		
		100% of improvement costs (\$3.7 mil)	50% of improvement costs (\$1.85 mil)	25% of improvement costs (\$925,000)
Strong Growth	5,350	\$692	\$346	\$173

Table 7c-1 shows estimated total SDC fees for three different sample development types. This table is for illustration purposes only and is intended to give rough estimates of potential, per-user costs, for sample development types. The total SDC cost for each development is based on the total number of daily trips that each use would generate to/from the I-82/Lamb Road intersection from development on the Depot site. These trips are multiplied by the three different cost-per-trip estimates in Table 7c-2, depending on what percentage of the total improvement costs new growth (collectively) would be expected to pay.

Table 7c-2 – System Development Charge Estimates: Development Type Examples: Full Improvements

Proposed Use	Number of Total Daily Trips through I-82/Lamb Road Interchange	Total SDC Cost		
		100% of improvement costs (\$3.7 mil)	50% of improvement costs (\$1.85 mil)	25% of improvement costs (\$925,000)
Fast Food Restaurant (3,500 sf)	1,040	\$719,680	\$359,840	\$179,920
Data Center (160,000 sf)	230	\$159,160	\$79,580	\$39,790
Industrial (100,000 sf)	196	\$135,632	\$67,816	\$33,908

³ Since Concept L3: Minimally Improved Diamond Interchange with Signalization, will provide sufficient capacity for both the Moderate and Strong Growth Scenarios, the cost associated with Concept L3 has been used to illustrate a potential SDC.

Targeted SDC Based I-82 / Lamb Road Interchange Improvements

As noted in the Adoption Elements listed above, Umatilla County could consider adoption of a supplemental Transportation System Development Charge (SDC) to finance specific improvements to the I-82 / Lamb Road interchange. The SDC would apply to development on property within the Depot Industrial SDC Area as shown on Exhibit 1. The following provides an approach and methodology to a targeted or location-based SDC the County could consider as it moves forward on implementation of the I-82/Lamb Road IAMP.

As presented in the I-82/Lamb Road IAMP there are near-term improvements at the interchange that should be in place before any large scale development on the property zoned Depot Industrial can move forward on the Depot site. The near-term improvements related to vehicle access to the Depot employment area that will need to be in place to serve new uses are shown on Project A.

Once the reconstruction of the interchange access road is in place, the removal of the existing UMCD access road can take place. This is a critical improvement because the existing road configuration is not desirable or efficient to provide access to an industrial area that trucks and other large vehicles will frequent.

Because the need for the Lamb Road extension improvement projects noted above are the catalyst projects that will permit large scale industrial and employment development to occur on the Depot site, funding these projects is of primary importance. One method of financing the improvements is through a "targeted" or "location-based" System Development Charge (SDC). The SDC would apply to new development on property within the Depot Industrial SDC Area only. SDCs are collected when new building permits are issued. For funding transportation projects, SDCs are based on the trip generation of the proposed development. Fees must be established using a rate-setting methodology adopted by the service provider (i.e. the city, county or special district responsible for the service) and may be increased periodically based on increases in project costs using procedures outlined in the local ordinance (see ORS 223.304).

A location-based fee, assessed by Umatilla County, for the I-82/Lamb Road Interchange is one option. This approach is particularly appropriate because the proposed capital improvements (Lamb Road extension) are triggered by and benefit a limited area only (Depot Industrial property) and because this type of SDC provides a built-in mechanism for allocating revenues to specific interchange projects (i.e. revenue may only be spent on projects in the area where they are collected).

Methodology for Targeted SDC

The number of daily trips expected to be generated from new commercial and industrial growth in the Depot Industrial zone at the I-82/Lamb Road Interchange has been determined for both "Strong" and "Moderate" growth scenarios. It is this growth that will trigger the near-term need for the Lamb Road extension improvements at the interchange noted above. These improvements are estimated to cost \$500,000. A SDC could be adopted by Umatilla County that is based on a cost-per-trip basis from trips

generated from development in the Depot Industrial zone. Tables 2 and 3 below present what the SDC fee would be on a per trip basis to meet the total estimated cost of proposed improvements (\$500,000) to support the "Strong" and "Moderate" growth scenario respectively. The tables also show the result if only half of the cost (50%) was met through SDCs. This "partial SDC" option would assume that other funding sources would pay a portion of the cost of identified critical improvements at the interchange. The SDC methodology to establish the basis for the per trip rate is:

$$\text{Total Improvement Cost} / \text{Total Daily Trips} = \text{Cost Per Trip}$$

Table 2 provides estimates of total SDC fees for four different sample development types that could potentially locate on the Depot Industrial sites, assuming a "Strong" growth forecast. Similarly, Table 5 provides estimates of the application of the Moderate growth SDC on certain types of uses that could potentially locate on the Depot Industrial site. These tables are for illustration purposes only and are intended to give rough estimates of potential, per-user costs, for sample development types under the two different growth scenarios.

Table 2 - System Development Charge Estimates (Strong Growth Forecast): Targeted Improvements

	Gross / Net Acres	Total Square Feet	Total Daily Trips	Cost per trip 100% of improvement costs (\$500,000)	Cost per trip 50% of improvement costs (\$250,000)
Strong Growth – Umatilla County Depot Industrial Area	824 / 659 acres	574,295 sf / 718 jobs	8,340	\$60	\$30

Table 3 - System Development Charge Estimates (Strong Growth Forecast): Development Type Examples: Targeted Improvements

Proposed Use	Number of Total Daily Trips	Total SDC Cost	
		100% of improvement costs (\$500,000)	50% of improvement costs (\$250,000)
Depot Industrial (100,000 sf)	235	\$14,100	\$7,050
Fast Food Restaurant w/Drive-Thru (2,000 sf)	990	\$59,400	\$29,700
Gas Station w/Convenience Market (8 pumps)	1,300	\$78,000	\$39,000
Motel (80 rooms)	730	\$43,800	\$21,900

Table 4 - System Development Charge Estimates (Moderate Growth Forecast): Targeted Improvements

	Gross / Net Acres	Total Square Feet	Total Daily Trips	Cost per trip 100% of Improvement costs (\$500,000)	Cost per trip 50% of Improvement costs (\$250,000)
Strong Growth – Umatilla County Depot Industrial Area	824 / 659 acres	574,295 sf / 467 jobs ⁴	6,280	\$80	\$40

Table 5 - System Development Charge Estimates (Moderate Growth Forecast): Development Type Examples: Targeted Improvements

Proposed Use	Number of Total Daily Trips	Total SDC Cost	
		100% of Improvement costs (\$500,000)	50% of improvement costs (\$250,000)
Depot Industrial (100,000 sf)	153	\$12,240	\$6,120
Fast Food Restaurant w/Drive-Thru (2,000 sf)	990	\$79,400	\$39,600
Gas Station w/Convenience Market (5 pumps)	810	\$64,800	\$32,400
Motel (54 rooms)	490	\$39,400	\$19,600

⁴ Moderate Growth Forecasts assumes employment at 65% of Strong Growth Forecast for Depot Industrial Use