

FINAL

**CONFEDERATED TRIBES OF THE UMATILLA
INDIAN RESERVATION
TRANSPORTATION SYSTEM PLAN**

September 2001



Prepared for:

**CTUIR
PO Box 638
Pendleton, Oregon 97801**

Prepared by:

**David Evans and Associates, Inc.
2828 SW Corbett Avenue
Portland, Oregon 97201**

DEA Project No. CTUI0000-0001

*Outstanding Professionals . . .
Outstanding Quality*

DAVID EVANS AND ASSOCIATES, INC.



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Appendix I

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Appendix II

Tab 1 - Review of Plans, Studies, and Policies

Tab 2 - Summary of TAC Meeting Minutes

Tab 3 - Existing Land Uses

Tab 4 - Highway 331 Access Inventory

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CHAPTER 1: INTRODUCTION

The purpose of this document is to develop a long-range Transportation System Plan (TSP) for the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), including the development of a prioritized list of transportation improvements. This document addresses the transportation needs of the Umatilla Indian Reservation over the next 20 years, and considers key modes of travel including roadway, bicycle, pedestrian, transit, and rail.

The Transportation System Plan is located in Chapter 8 of this report. This plan shall be used as a tool for implementing transportation system improvements on the Umatilla Indian Reservation over the next 20 years. This plan shall also be used by the CTUIR when making decisions related to the classification of existing and future roadways on the Reservation, the implementation of roadway design standards when new roads are built or existing ones are improved, the needs of bicyclists and pedestrians and public transit, and the enforcement of access management policies.

The prioritized list of transportation improvements is located in Appendix I, Tab 1. Two maps showing the locations of all transportation improvements also accompany this list. The priority list of improvements was placed in an appendix to give the CTUIR added flexibility in updating this list periodically. Changes may be made to this list as new projects are identified or when existing projects need to be reprioritized. Every update to this list would need to be approved by a tribal resolution from the Board of Trustees (BOT).

It is the priority list of transportation improvements that will be used by the CTUIR to develop the tribe's Transportation Improvement Program (TIP). The tribal TIP is a multi-year, financially constrained, list of transportation improvement projects to be implemented within the next three or more years. For each of the projects earmarked for BIA funding, a formal application known as a "justification checklist" must be submitted to the Bureau of Indian Affairs (BIA). Upon approval by the BIA, the project is included in the Indian Reservation Roads TIP and a scoping report is issued to identify the improvements to be made. The BIA's TIP is a prioritized list (by year) of funded projects, which are programmed for construction within the next 3-5 years. Projects in the BIA's TIP are then included in the Statewide Transportation Improvement Program (STIP) without further action.

STUDY AREA

The study area covers the entire Umatilla Indian Reservation, which consists of 172,000 acres of land located in northeastern Oregon, just east of Pendleton. The study area is shown in Figure 1-1.

Since the automobile is the primary method of transportation on the Umatilla Indian Reservation, much of CTUIR TSP is devoted to the roadways that make up the Indian Reservation Roads (IRR) System. Therefore, the study area covers all the roadways on the Reservation including those roadways that provide direct access to the Reservation.

RELATIONSHIP OF TRANSPORTATION SYSTEM PLAN TO OTHER PLANNING DOCUMENTS

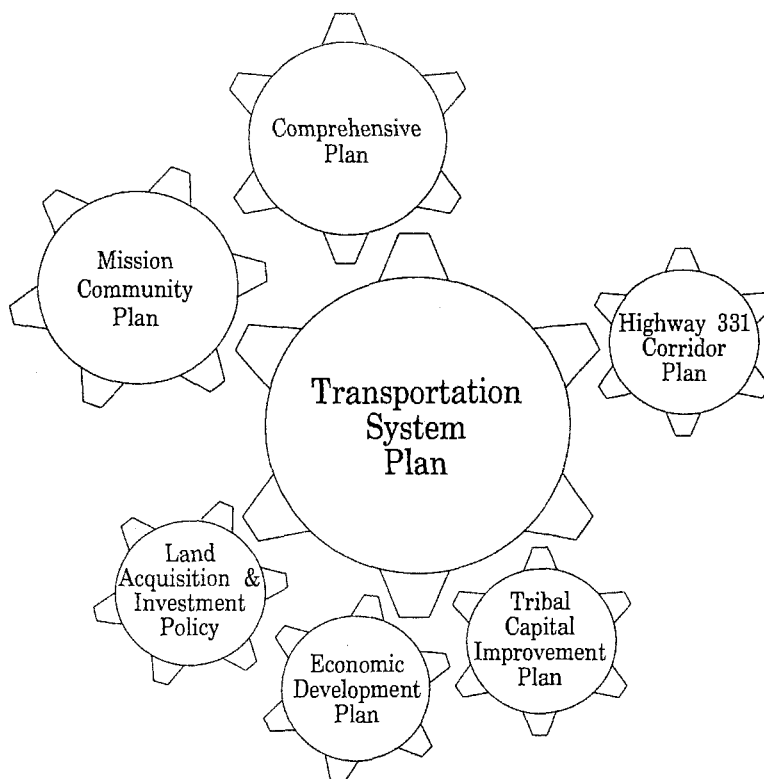
The CTUIR TSP considers other existing plans and policies of the CTUIR. This plan will also be used as a guide for creating new or changing existing policies of the CTUIR. Refer to Figure 1-2 for an illustration of the relationship between the Transportation System Plan and other CTUIR planning documents.

The CTUIR TSP was developed concurrently with the Highway 331 Corridor Plan. The Corridor Plan outlines detailed policies and transportation improvements for the Highway 331 corridor including the I-84 interchange. Since the study area of the Corridor Plan lies almost entirely within the Umatilla Indian Reservation Boundary, all

improvements recommended in the Corridor Plan are recommended here in this TSP. The *Comprehensive Plan*¹, sets forth the Transportation Goal and Objectives for the Umatilla Indian Reservation. The CTUIR TSP incorporates the same goal and objectives and is also considered to be an element of the overall Comprehensive Plan. Both the Corridor Plan and TSP are based on the needs identified in the *Four Corners Master Plan*² and the *Mission Community Plan*³ which are used to guide land use and development decisions of the Mission area. The "*Plan For Growth*"⁴ document was also used to identify the transportation needs for both plans.

The CTUIR TSP will be used as a guide for future policies to acquire and invest in land. The prioritized list of transportation system improvements outlined in this TSP will also be used to add projects to the Tribal Capital Improvement Plan.

FIGURE 1-2



The CTUIR TSP also considers other county and state planning documents such as the *Umatilla County TSP*⁵, the *Umatilla County Public Transportation Needs Assessment*⁶, the 1999 *Oregon Highway Plan (OHP)*, and the 1995

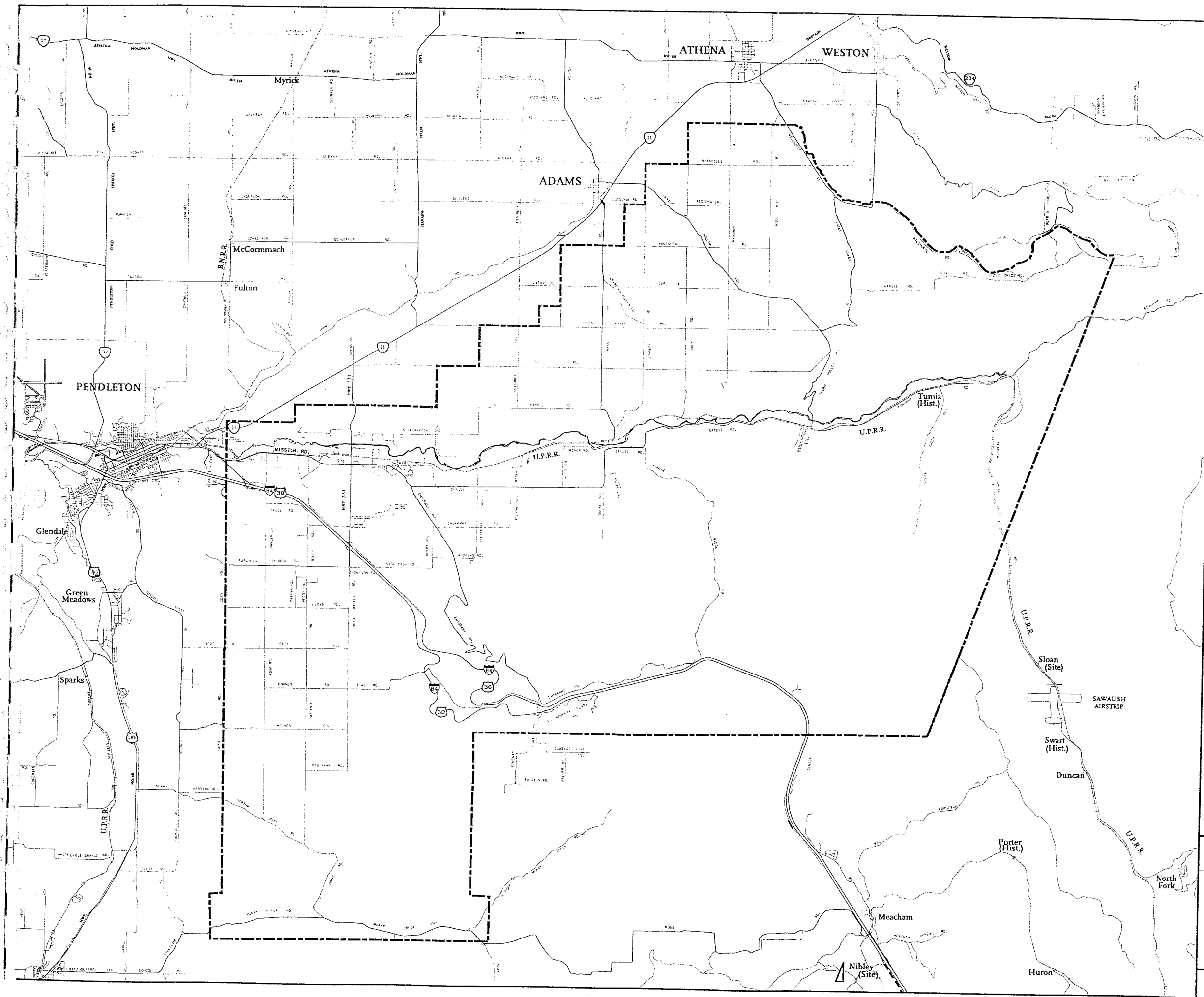
¹ *Comprehensive Plan*, Confederated Tribes of the Umatilla Indian Reservation, Adopted May 15, 1996.

² *Four Corners Master Plan*, Confederated Tribes of the Umatilla Indian Reservation, March 2000, Berryman & Henigar Property Counselors.

³ *Mission Community Plan*, Confederated Tribes of the Umatilla Indian Reservation, Adopted June 17, 1998, BOT Resolution #98-30.

⁴ *Plan For Growth*, Confederated Tribes of the Umatilla Indian Reservation, March 1999, CTUIR and Economic and Community Development Commission and Department of Economic and Community Development.

⁵ *Draft Umatilla County TSP*, Umatilla County, December 1999, David Evans and Associates, Inc. (on-going)



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NORTH

(Scale: 1" = 12,000')

LEGEND:

----- Reservation Boundary

FIGURE 1-1
Study Area

Oregon Bicycle and Pedestrian Plan. A review of all related transportation plans, policies, and studies is provided in the Appendix.

PLANNING PROCESS

The CTUIR TSP was developed through a series of technical analyses combined with systematic input and review by a Technical Advisory Committee (TAC). The TAC consisted of representatives from the CTUIR, BIA, the Oregon Department of Transportation (ODOT), and Umatilla County.

Key elements of the planning process included:

- Involving agencies related to this study and the community (Chapter 1)
- Review of related plans, studies, and policies (Appendix II, Tab 1)
- Defining goal and objectives (Chapter 2)
- Performing an inventory of the existing land uses and the transportation system (Chapter 3)
- Analysis of existing traffic conditions (Chapter 4)
- Developing a forecast and evaluating future traffic conditions (Chapter 5)
- Identification and evaluation of potential transportation improvement projects (Chapter 6)
- Developing the Transportation System Plan along with a prioritized list of transportation improvements (Chapter 7; Appendix I, Tab 1)
- Identifying funding sources (Chapter 8)

Community Involvement

The 12-member TAC included representatives from CTUIR (Tribal Planning Office and Department of Economic and Community Development), BIA (Agency and Regional Offices), ODOT (District and Regional Offices), and Umatilla County (Public Works and Department of Resources and Development). The team met a total of seven times to review work products produced by the consultant team and provide direction on technical tasks and policies. Summaries of the TAC meeting minutes are provided in Appendix II (Tab 2).

This plan will be presented for review to the various CTUIR Commissions (Natural Resources, Economic Development, and Tribal Emergency Response), the Board of Trustees (BOT), the General Council, and the general public. A public hearing will be held by the Natural Resources Commission for the purpose of taking testimony to make a recommendation to the BOT.

Review of Related Plans, Studies, and Policies

To begin the planning process, all applicable transportation and land use plans, studies, and policies produced by the CTUIR, BIA, the State of Oregon, and Umatilla County were reviewed. This was done to gain an understanding of the existing and projected land uses on the Reservation, the economic development plans of the CTUIR, any planned roadway improvements, and any rules or regulations, which govern the development of

⁶ *Umatilla County Public Transportation Needs Assessment*, Oregon Department of Transportation, June 1999, Nelson/Nygaard Consulting Associates.

transportation facilities on the Reservation. Related plans, studies, and policies are described in Appendix II, Tab 1 of this report.

Goal and Objectives

A transportation goal with objectives was defined for this Transportation System Plan. They were taken directly from the Goal and Objectives defined in the CTUIR Comprehensive Plan (Chapter 8- Section P. Transportation). The goal and objectives were used to formulate and evaluate improvements for the Umatilla Indian Reservation. They are defined in Chapter 2.

Existing Land Uses and the Transportation System

Existing land uses were investigated and an inventory was conducted of the facilities that make up the transportation system of the Umatilla Indian Reservation. Supporting graphics of the generalized land uses and land ownership in the Mission Community Area are provided in Appendix II (Tab 3). An inventory of the existing accesses along Highway 331 is located in Appendix II (Tab 4). An extensive inventory was conducted of the IRR System and is present in Appendix II (Tab 5).

Current Traffic Conditions

Existing traffic volumes were determined from traffic counts conducted by ODOT at six intersections along Highway 331. These counts captured traffic for a 24-hour period as well as the PM peak hour, which was determined to be the critical time period when traffic volumes reach their highest levels.

Existing volumes and an inventory of the existing lane configurations and traffic control were used to establish PM peak hour operations at the six intersections along Highway 331.

A five-year history of accidents along Highway 331 was obtained and evaluated. A summary of accidents on other reservation roads is also included.

Future Forecast and Traffic Conditions

Based on an estimate of future population and employment needs and the historical growth trend in traffic, a 20-year traffic forecast was conducted for the six intersections along Highway 331. The forecast was used to assess future PM peak hour traffic operations at these intersections and two new intersections proposed along the highway.

Potential Transportation Improvement Projects

Numerous transportation improvement projects are identified in this section to address specific operational, safety, and/or access concerns, to improve community livability, to encourage more bicycle and pedestrian activity, and to accommodate future growth in population and employment. These projects were also developed in an attempt to address the Goal and Objectives specified in Chapter 2.

Transportation System Plan

The Transportation System Plan highlights roadway classification and design standards, policies to ensure that the needs of bicyclists and pedestrians and public transit are met, an access management plan for Highway 331 and other roads on the Reservation, and a prioritized list of transportation improvements.

Funding Sources

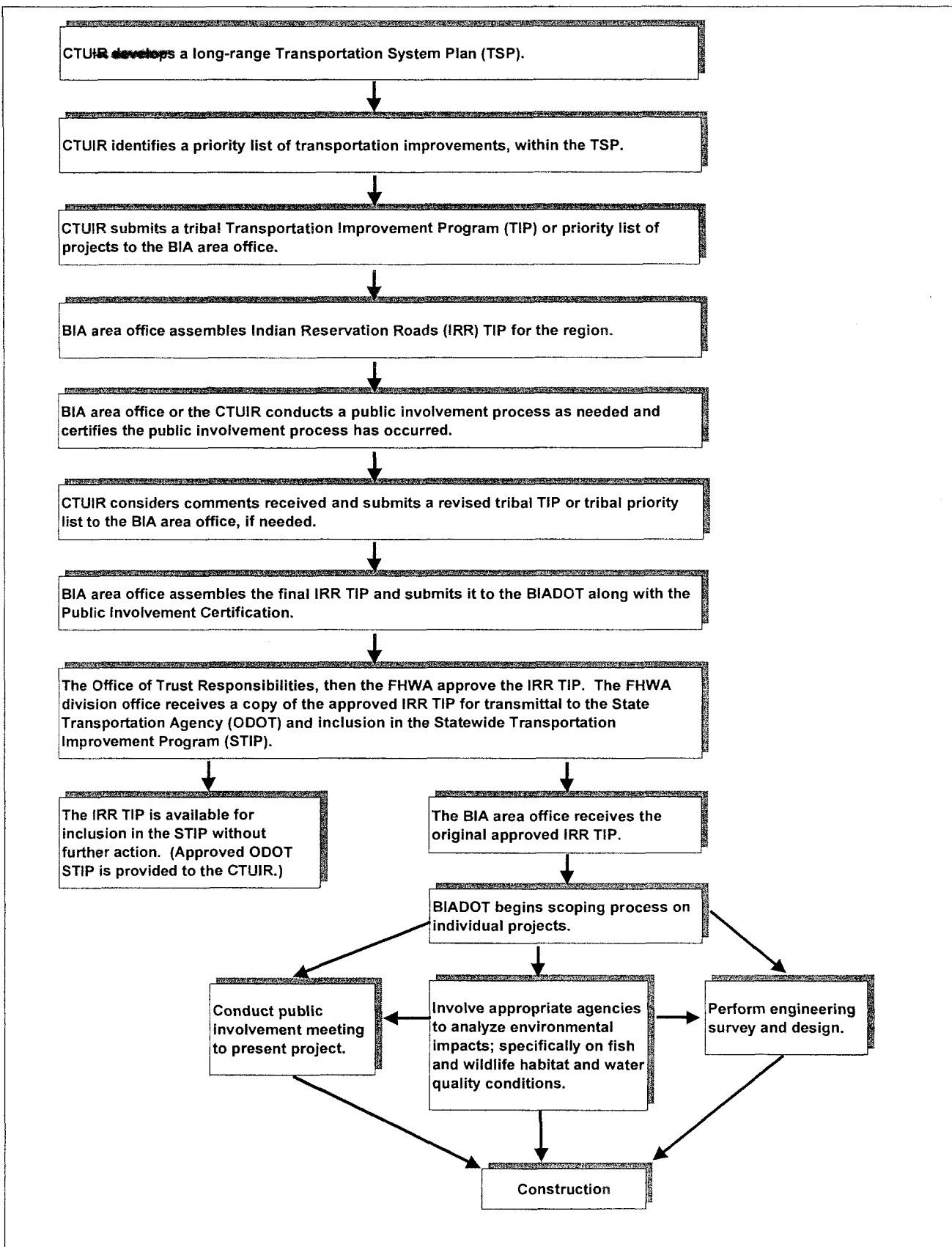
BIA, State, County, and CTUIR funding sources for transportation system improvements are identified in this section along with Federal and State program summaries.

PROCESS TO IMPLEMENT CTUIR TSP PROJECTS

Once the CTUIR TSP is adopted by the Board of Trustees, the priority list of transportation improvement projects identified in this plan will move through a formal approval process by the BIA area office and the Federal Highway Administration (FHWA), before ultimately being placed on ODOT's Statewide Transportation Improvement Program (STIP) list for eventual construction. The following flow chart illustrated in Figure 1-3 shows the general process used to implement transportation system planning projects. It should be noted as part of the implementation process, analyses of the impacts of individual transportation projects on environmental conditions such as fish and wildlife habitat and water quality will be performed with assistance from the CTUIR Department of Natural Resources and any other related agencies. Environmental analyses efforts should begin after the IRR TIP is approved by the FHWA, and at the time when the BIADOT begins the scoping process for individual projects.

FIGURE 1-3

Process to Implement CTUIR TSP Projects



CHAPTER 2: GOALS AND OBJECTIVES

The purpose of this TSP is to provide a guide for the CTUIR to fulfill its transportation goal and objectives. The following goal and objectives were developed from information contained in the transportation section of the CTUIR Comprehensive Plan. The overall mission of the CTUIR TSP is to develop a transportation system that enhances the livability of the Umatilla Indian Reservation and accommodates growth and development through careful planning and management of existing and future transportation facilities. The following Goal and Objectives were developed to achieve this mission.

OVERALL TRANSPORTATION GOAL

To provide an effective and economical transportation system on the Umatilla Indian Reservation.

OBJECTIVES

- A. Consider the needs of all segments of the Tribal community and all modes transportation in the transportation planning process.
- B. Ensure that projects involving land use, economic development, and transportation issues are coordinated at conception.
- C. Develop an effective relationship and process for working with the BIA, County, and State to identify, fund, and implement transportation projects.
- D. Develop and maintain effective lobbying efforts with Tribal organizations to assure adequate funding and political clout on transportation issues.
- E. Provide Tribal input into transportation improvements programs that will affect the Reservation road system.
- F. Adopt and maintain the Umatilla Indian Reservation Transportation Plan.
- G. Coordinate the location of public and private utilities with development planning for new roads and assure adequate right-of-ways and easements are secured at the time of development approval.
- H. Minimize the number and improve safety at railroad crossings by working closely with Umatilla County and the Union Pacific Railroad.
- I. Improve the intersection of stream channel crossings with the current transportation system of railroads, highways and utilities which will decrease damage caused by periodic flooding.
- J. Develop and adopt public and private road standards for new and unimproved roads on the Reservation acceptable to those responsible for maintenance and safety.
- K. Develop and maintain a public transportation system for the benefit of Tribal members and the Reservation residents.

CHAPTER 3: EXISTING LAND USES AND THE TRANSPORTATION SYSTEM

As part of the planning process, DEA investigated existing land uses and conducted an inventory of the facilities that make up the transportation system of the Umatilla Indian Reservation. The inventory covered the roadway system as well as pedestrian, bikeway, public transportation, and rail facilities. An inventory of public emergency services was also performed.

EXISTING LAND USES

Outside of the Mission Community Area, the Umatilla Indian Reservation is mostly rural in nature with large tracts of land that are either undeveloped or used for agricultural purposes. Within the Mission Community Area, most of the land is rural but a wide variety of land uses that have been developed. A map referring to the generalized land uses in the Mission Community Area was taken from the *Mission Community Plan (Figure #3)* and inserted in the Appendix II (Tab 3). Existing land uses are briefly described in the following sections. Existing land uses are described in the following sections. For more thorough summaries of existing land uses, refer to the *Mission Community Plan*.

Agricultural/Undeveloped Areas

Agricultural lands consist mainly of large parcels used for farming. In many areas, there are undeveloped parcels, where landowners are paid by the federal government not to produce.

Residential

Residential areas are broken down into three segments: medium density, low density, and scattered site residential. Medium density areas include the Tribal Housing developments/Short Mile Road, the Mission Road intersection, Theater/Goad Road, and the Riverside subdivision. The low density areas are located around Kirkpatrick Road and numerous areas along the north and south sides of Mission Road. Scattered site residential areas are located mainly in agricultural areas on individual allotments and fee properties.

Tribal/Government/Public Facilities

Most of the government facilities on the Reservation are owned and operated by the CTUIR. These include the maintenance building and well site located at the east end of Short Mile Road, the Senior Center south of Short Mile Road, the Indian Agency Headquarters near Mission Road and 'A' Street, the cemetery at the south end of 'A' Street, and the July Grounds area including the tribal offices and education facilities south of Mission Road and west of Confederated Way. The state owns and maintains the State Fish and Wildlife office located just east of the west Reservation boundary near Hall's Trailer Court. Also, there is the state's gravel shed southwest of the I-84 interchange. There are also tribal cemeteries and the city of Pendleton's water line building on Emmigrant Road.

Commercial

Tourist commercial uses are located north of I-84 along the east side of Highway 331 at the Arrowhead Truck Plaza/Cody's Restaurant and the Wildhorse Resort. The Resort consists of a casino, a hotel, and an RV park.

Semi-Public

Although semi-public facilities are scattered around the Mission Community Area, the most notable are the lands containing the Tamastlikt Cultural Institute and the Wildhorse Resort Golf Course, located at the east end of the Main Entrance Road to the Casino.

Industrial

Grain elevators are located on the north side of Mission Road just east of Highway 331 and adjacent to the railroad. There is also a sand and gravel operation near McKay Lane, a surface mining operation near Davis Lane, and the Pendleton Bus Barn located along Mission Road, all west of Highway 331.

LAND OWNERSHIP

There are three types of land ownership in the Mission Community Area: Deeded, Tribally owned, and Allotment. A map illustrating land ownership in the Mission Community Area was taken from the *Mission Community Plan* (Figure #4) and inserted in Appendix II (Tab 3).

Deeded lands in the area are mainly owned by ~~non-Indians~~ with some Indian ownership. Tribally owned lands consist of both fee and trust properties and are owned by the CTUIR for the members of the tribes. Primary uses of tribally owned lands include economic development, agriculture, and residential development projects. Allotment lands may be tribally owned (CTUIR) or Indian owned, but are administered by the Bureau of Indian Affairs to protect the allottee's interests.

ROADWAY SYSTEM

The most popular form of transportation within the Umatilla Indian Reservation is the automobile. This is because the automobile provides a high level of mobility where people can get from one place to another quickly and comfortably. Because the Reservation is mostly rural in nature, people rely on the automobile to make long distance trips that would otherwise be too far to walk or ride a bike.

There are many purposes for using the automobile. Local residents use their cars to drive to work, go shopping, or visit a friend. Buses pick up and drop off children from school. Trucks hauling freight use Highway 331 to get to Oregon Highway 11 or I-84. Agricultural trucks use the roads on the Reservation to transport crops from farms to the market during harvest season.

Since the automobile is the most widely used form of transportation, most transportation dollars are devoted to maintaining, building, and planning roads to carry automobiles and trucks. It also appears that the road system will continue to be the basis of the transportation system for the 20-year planning period; therefore, there is an emphasis in this plan to improve the existing road system for all users.

The existing roadway system on the Umatilla Indian Reservation is shown in Figure 1-1 at the beginning of this study.

Roadway Jurisdiction

The roads located within or providing access directly to the Umatilla Indian Reservation generally fall under four jurisdictions: state, county, BIA, and tribally-owned. The state highways generally function as principal arterials, providing regional access between cities and communities, and carrying higher traffic volumes. The county roads generally serve local uses but there are several, which function at a higher level, serving adjacent lands and local

access needs of neighborhoods. Roads under BIA or tribal jurisdiction are generally local access or neighborhood roads.

There are other roads on the Reservation known as "Public Use" roads, which do not have an official owner but are used by the public. Although the County may not maintain these roads, the agency will block any obstruction of these roads to protect public use. These roads are generally driveways providing access to one or a few homes or dirt roads used for farming.

The inventory of the existing roadway system (discussed later in the IRR System Inventory section) covers all state, county, BIA, and tribal roads on the Reservation. The inventory also addresses existing "Public Use" roads and any future roads proposed in this plan. In a few cases, these roads serve lots in a rural subdivision plat.

State Highways

Interstate 84 (Old Oregon Trail) traverses 18 miles across the heart of the Umatilla Indian Reservation. From Pendleton, the freeway runs southeast and up into the Blue Mountain Range towards La Grande. On the Reservation, I-84 is a four-lane divided highway with two lanes in each direction. The speed limit is 65 mph for standard vehicles and 55 mph for large trucks.

Oregon Highway 11 (Oregon-Washington Highway) extends northeast from Pendleton where it eventually passes by the cities of Adams, Athena, Weston, through Milton-Freewater and eventually crosses the Oregon-Washington border. A small section of the highway, 0.6 miles in length, is located within the boundaries of the Reservation. Generally, the highway has two lanes of travel and the posted speed is 55 mph.

Highway 331 (Umatilla-Mission Highway) is 4.6 miles in length and runs in a north-south direction connecting Oregon Highway 11 with Interstate 84. It is a two-lane highway with a 55-mph speed limit.

County Roads

County roads constitute the bulk of the roadway system on the Reservation. Of these roads, Mission Road (County Road #900) is the primary route used by most of the local residents. It runs parallel to the Umatilla River in an east-west direction. This road functions as a major collector as it provides a direct connection between the Mission Community and the city of Pendleton. It also provides access to more residences than any other road on the Reservation, several industrial developments, and the governmental offices (tribal and BIA) about one mile east of Highway 331. It is a paved two-lane road with a posted speed limit of 40 mph.

Most of the county roads on the Reservation are oriented in a north-south and east-west grid-like pattern and follow section lines. Most of them have gravel or dirt surfaces.

BIA Roads

The BIA owns and maintains almost eight miles of roads on the Reservation. BIA Route #0002 consists of 10 different streets, primarily serving the BIA and tribal agency offices and local area housing. These roads are paved and in good condition. A list of these roads follows:

- "A" Street
- "B" Street
- Alder Drive
- Cayuse Drive
- Confederated Way
- Cottonwood Lane

- Umatilla Loop Road
- Walla Walla Court
- Whirlwind Drive
- Willow Drive

There are five other roads on the Reservation that are maintained by the BIA but are owned by the tribe. These include:

- Kanine Ridge Road
- Little Johnson Road
- Fort Tank Road
- McKinley Lane/Lavadour Lane
- Indian Lake Road

Kanine Ridge Road (BIA Route #0001), Little Johnson Road (BIA Route #0003), and Fort Tank Road (BIA Route #0004) are rural special use roads, composed of dirt or gravel, that are rarely used by vehicles. McKinley Lane/Lavadour Lane (BIA Route #0005) are gravel roads providing access to residences off of Kirkpatrick Road. Indian Lake Road (BIA Route #0006) is a paved recreation road south of the Reservation. It proceeds around the perimeter of Lake Hum-Pe-Tin (Indian Lake).

Tribal Roads

The tribe owns and maintains four roads on the Reservation. Easy Street (IRR Route #0100) is a Tribal Housing Authority Street just off Short Mile Road, which serves several homes. Minthorn Lane (IRR Route #0010) is located south of Tutuilla Church Road just off of Patawa Road and also provides access to several homes. The tribe owns the main entrance road to the Wildhorse Resort. It intersects the east side of Highway 331 approximately three-quarters of a mile north of I-84. It is four lanes wide with a landscaped median in the middle. It provides access to a casino, a hotel, an RV park, a golf course, and the Tamastslikt Cultural Institute. The tribe also owns the Employee Entrance Road to the Casino. It also intersects the east side of Highway 331, approximately one-half mile north of I-84. This road is two lanes wide and provides access to an employee parking lot at the Casino.

Public Use Roads and Orphan Roads

There are various gravel or dirt roads scattered throughout the Reservation that are designated for "Public Use". These roads may or may not have a dedicated right-of-way and are not claimed or maintained by any government entity. Although Umatilla County may not maintain these roads, the agency has indicated it will block any obstruction of these roads to protect public use.

HIGHWAY 331 ACCESS INVENTORY

An inventory was conducted of all existing accesses along Highway 331. The inventory is summarized by a series of figures and a spreadsheet located in the Appendix II (Tab 4).

In the inventory, a unique identifier number was assigned to each access. These identifier numbers link the graphics with access information on the spreadsheet. The inventory indicates the location of each access on the west or east side of Highway 331, the highway milepost, whether the access is a driveway or road, jurisdictional owner, and access use. By calculating the distances between other accesses a check was made to determine whether each access complies with the 1999 OHP access spacing standards. Also, the figures indicate potential access areas along the highway where a new access(es) could be provided.

The information collected in the existing access inventory was instrumental in developing access management strategies for Highway 331 (Chapter 7) and ultimately defining an access management plan (Chapter 8).

IRR SYSTEM INVENTORY

Tribal representatives and the Consultant, together, conducted an inventory of the roads that make up the IRR System of the CTUIR. Indian Reservation Roads include all public roads that are located within or provide access directly to the Indian Reservation. For those roads providing access directly to the Reservation, only the portions that extend to and intersect with another facility of equal or greater classification, up to five miles in length, may be included in the IRR System.

A summary of the complete IRR inventory is located in Appendix II (Tab 5). Inventory elements include:

- Road name
- IRR route and section number¹
- Roadway classification
- Length of road (reservation and non-reservation miles)
- Existing and projected daily traffic volumes (if known)
- Roadway cross-sectional features (widths, surfacing, drainage, striping, signing)
- Right-of-way information
- Socioeconomic data (housing, school bus route, transit route, mail route, presence of churches and businesses)

The purpose of having a complete inventory of the IRR System is so the CTUIR has the information necessary for filling out the BIA 5704 Forms and strip maps, for those roads the CTUIR wishes to add to the BIA Road System. The BIA Road System is comprised of those existing and proposed IRR roads for which the BIA has or plans to obtain legal right-of-way. The BIA has the primary responsibility to improve and maintain the roads on this system. Any changes to this system shall be supported by a tribal resolution.

Another purpose for having a complete inventory of the roads on the Reservation was to help identify existing deficiencies in the system, such as locations where roads need to be overlaid with gravel or even asphalt pavement.

It should be noted that all of Highway 331 was added to the IRR System Inventory. It was anticipated that transportation improvements identified in this plan for this highway could involve the BIA as a financial partner. Also added to the IRR System inventory were the sections of I-84 and OR Highway 11 that lie within the Reservation boundary. The portions that provide access to the Reservation were excluded. It was anticipated that any future project needs along these facilities would be handled by the federal and state governments.

The IRR System inventory also accounts for all new roads and pathways proposed in the CTUIR TSP.

DEFICIENT BRIDGES

ODOT maintains a bridge inspection survey program for all the bridges in the state. In this program, there are three mutually exclusive elements used to rate the status, or condition, of bridges: structural deficiency, functional

¹ The IRR route number for existing roads corresponds to the county road number or the BIA route number, depending on which agency has jurisdiction. The IRR route number for a state highway is the highway name. IRR section numbers divide routes into segments where there is a major break in roadway characteristics (i.e. paved road becomes a dirt road).

obsolescence, and sufficiency rating. Structural deficiency is determined based on the condition rating for the deck, superstructure, substructure, or culvert and retaining walls. It may also be based on the appraisal rating of the structural condition or waterway adequacy. Functional obsolescence is determined based on the appraisal rating for the deck geometry, underclearances, approach roadway alignment, structural condition, or waterway adequacy. The sufficiency rating is a complex formula which takes into account four separate factors to obtain a numeric value rating the ability of a bridge to service demand. The scale ranges from zero to 100 with higher ratings indicating optimal conditions and lower ratings indicating insufficiency. Sufficiency ratings of 55 or less indicate an insufficiency. Bridges with ratings under 50 may be nearing a structurally deficient condition and may be eligible for replacement funding from ODOT.

The state bridge inspection survey indicates there are four bridges on the Reservation that have deficiencies in one of the three categories. These bridges include:

- Umatilla River Bridge (County Bridge #59C727) along Bingham Road (County Road #900) has a sufficiency rating of 42.4.
- Meacham Creek Bridge (County Bridge #59C726) along Bingham Road (County Road #900) has a sufficiency rating of 42.4.
- Wildhorse Creek Bridge (County Bridge #59C401) along Wildhorse Road (County Road #685) is structurally deficient.
- Thornhollow Cattle Pass Bridge (County Bridge #59C378) along Thorn Hollow Road (County Road #745) is structurally deficient.

The County, BIA, and CTUIR support the replacement of each of the above bridges. However, because the county and tribe operate under limited funds, the BIA may be the only source of funding for bridge replacements in the short term.

PEDESTRIAN SYSTEM

The most basic transportation option for people is walking. Walking is the most popular form of exercise in the United States and can be performed by people of all ages and all income levels. However, it is not often considered as a means of travel, mainly because pedestrian facilities are generally an afterthought and not planned as an essential component of the transportation system, or distances to major activity centers are too far to walk.

The majority of the Umatilla Indian Reservation is rural in nature and walking in the remote areas may not be the preferred mode of transportation. Since the Reservation is so large (covering 172,000 acres of land with its longest dimensions measuring 20 miles in the east-west direction and 15 miles in the north-south direction) people living in remote areas are more inclined to use an automobile.

Pedestrian activity on the Reservation is highest in the Mission Community area, particularly in the vicinity of the Tribal Community Complex along Mission Road, east of Highway 331. Currently, there are 569 workers currently employed here. Surrounding the complex are residential neighborhoods such as the Mission Creek Subdivision, HUD housing, and a senior housing center. Many people walk along the existing sidewalks or along streets to get to work or just for recreation.

A windshield survey was conducted of the existing pedestrian and bicycle facilities in the Mission Community. The survey focused mainly on the area around the Tribal Community Complex and adjacent neighborhoods but also covered any existing facilities along Mission Road and Highway 331. Table 3-1 and Figure 3-1 display the results of the facilities survey for the Mission Community Area.

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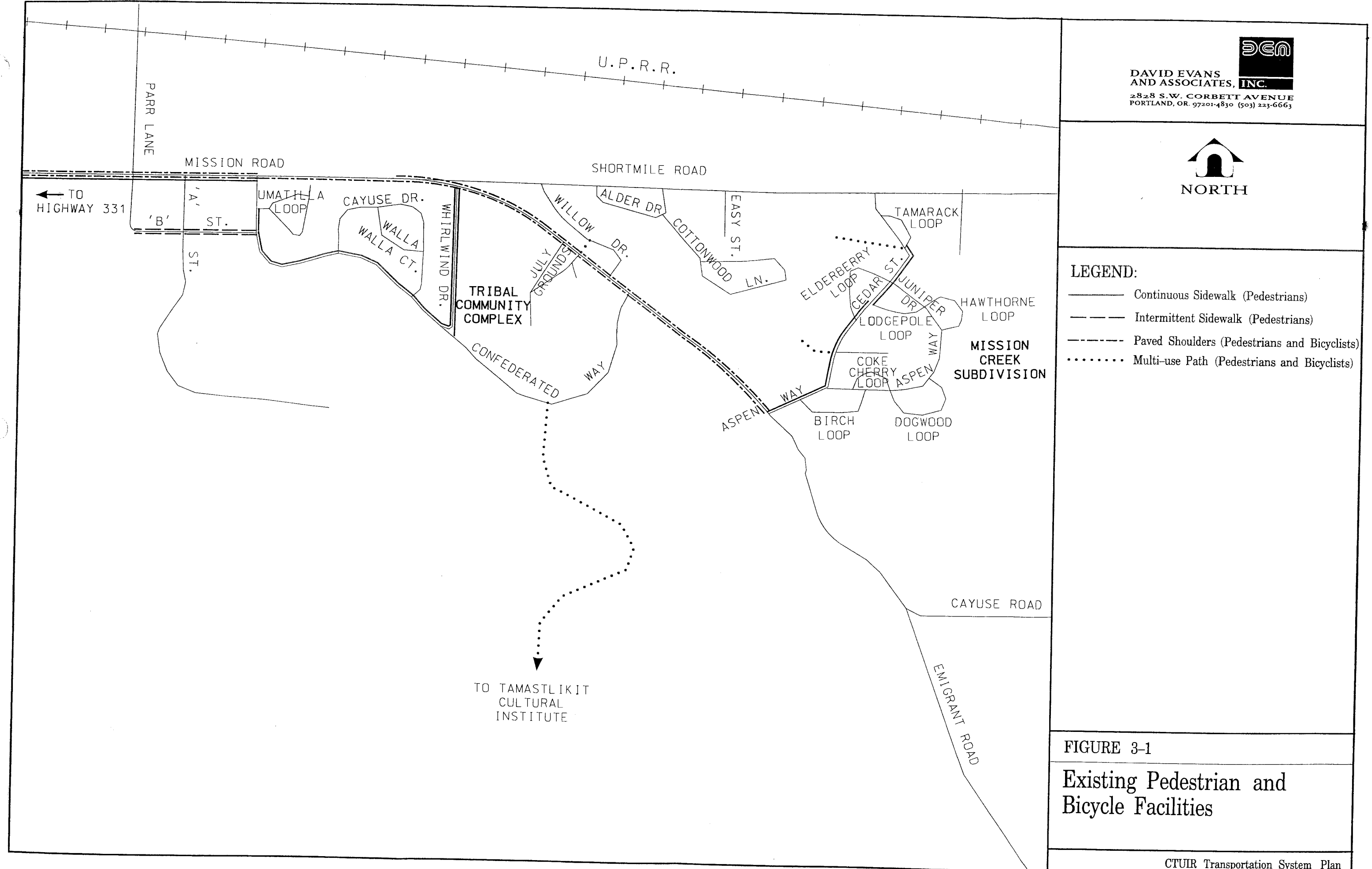


TABLE 3-1
EXISTING PEDESTRIAN FACILITIES

Type of Facility	Location	From/To
Sidewalks (pedestrians only) ¹	Mission Road (north side)	Highway 331 to industrial site
	Mission Road (south side)	Highway 331 to Confederated Way
	Confederated Way (north side)	Whirlwind Drive to Umatilla Loop
	Whirlwind Drive (both sides)	Confederated Way to dead end
	B Street (intermittent along both sides)	Confederated Way to dead end
	Aspen Way (west side)	Mission Road to Lodgepool
	Cedar Street (east side)	Lodgepool to Tamarack Loop South
Paved Shoulder (pedestrians and bicyclists) ¹	Mission Road (south side)	One-half mile west of Highway 331 to Highway 331
	Mission Road (south side)	Confederated Way to West of Short Mile Road
	Mission Road (both sides)	West of Short Mile Road to Aspen Way
Multi-Use Path (pedestrians and bicyclists)	Tamastlikt ²	Confederated Way to Tamastlikt Cultural Institute

¹ Sidewalks are designed for use by pedestrians only, but paved shoulders along roads or separate multi-use paths are designed for both pedestrians and bicyclists.

² The Tamastlikt Path was completed in the summer 2000.

The Tamastlikt Trail accommodates both bicyclists and pedestrians between the Tribal Community Complex area and the Tamastlikt Cultural Institute.

There are several sidewalks and paths on the Reservation that not shown in the previous table. Some are located between buildings on the grounds of the tribal government complex, around homes in adjacent neighborhoods, and others within the Wildhorse Resort such as the walking path that connects the RV park with the hotel and casino. These facilities provide short-distance connections between buildings and homes, but are not part of any continuous system.

The remaining section of Mission Road not shown in the previous table extends from US Highway 30 to approximately one-half mile west of Highway 331. This segment of road has insufficient shoulder width to be considered an existing bike or pedestrian facility. Highway 331, in the Mission Community area, also has insufficient shoulder width to be designated as either a bicycle and pedestrian route.

The resulting inventory was used to develop pedestrian needs for the Reservation as discussed in the Improvement Options Evaluation section (Chapter 6). Improvements proposed in the Transportation Improvement Plan section (Chapter 7) are designed to correct major problems in the pedestrian system and to encourage its use.

BIKEWAY SYSTEM

Bicycling is an efficient and inexpensive mode of transportation. Bicycles take up little space on the road or parked, they do not contribute to noise or air pollution, and offer relatively higher speeds than walking. A typical trip for a bicyclist is around two miles.

In the remote areas of the Reservation, bicycling is not the preferred mode of transportation. As is the case for walking, the distance to major activity centers such as the Mission Community area may be too far for a person riding a bike.

In the *1995 Oregon Bicycle and Pedestrian Plan*, rural highways and county roads are deemed suitable for cycling if they have at least 4-foot paved shoulders and traffic volumes less than 1,000 vehicles per day. Although shoulders are provided along Highway 331, daily traffic volumes reach up to 5,100 vehicles with traffic traveling at speeds in excess of 55 mph. These conditions are not conducive to bicycling along the highway. Auto-oriented businesses near the I-84 Interchange and low population densities along the highway limit bicycle activity.

As is the case for pedestrians, bicycle activity on the Reservation is highest along Mission Road and in the more densely populated area east of the highway near the Tribal Community Complex and adjacent neighborhoods. People use the street shoulders of Mission Road and local street to bike to work, school, or just for recreational purposes. As shown previously in Table 3-1 and Figure 4-1, Mission Road has paved shoulders that are wide enough for bicyclists to travel separate from the traffic lane. On-street parking is allowed in most areas but it is not often that cars park here, providing more room for bikes. Along all other roads, bicyclists must share the roadway with traffic.

Future needs for bicycling on the Reservation are addressed in the Improvement Options Evaluation section (Chapter 6). Improvements proposed in the Transportation Improvement Plan section (Chapter 7) are designed to correct major problems in the bicycle system and to encourage its use.

PUBLIC TRANSPORTATION

School Bus System

The safety and well being of children being picked up and dropped off by school buses and the travel routes these buses use are important concerns of the residents on the Reservation. To assess the transportation needs for school buses, an inventory was conducted of all school bus providers servicing the Reservation.

There are three school districts on the Reservation; Pendleton, Athena-Weston, and Pilot Rock. Each school district provides pick up/drop off service for school children.

Pendleton

The Mid-Columbia Bus Company provides bus service for the Pendleton School District, which serves the bulk of the Reservation. The bus takes children from the Reservation to the following schools in Pendleton: Hawthorne, Washington, Sherwood, McKay, Sun Ridge Middle School, and Pendleton High School. Mid-Columbia uses buses that hold up to 66-87 students depending on the bus. The buses currently carry about 45-85 students depending on the bus type. A representative of the Mid-Columbia Bus Company was contacted to determine what routes the buses use. Although no specific bus route information could be provided, the contact said that Highway 331 was the main route for all the buses, and that they use almost all the county roads on the Reservation (including some unpaved routes). The contact mentioned there is a need to provide lighted bus pullouts on all major roads, that Mission Road is in dire need of a bicycle/pedestrian facility from the Reservation boundary to Highway 331, and that students are missing the bus and not finding another public form of transportation.

Athena-Weston

The Athena-Weston School District supplies their own buses for picking up children on the Reservation. Buses travel along a series of four different routes. They are as follows:

- Cayuse Road/Bingham Road appears to be the east-west route through the Reservation,
- Mann Rd to Crawford Hollow Rd to Johnley Rd is one north-south route,
- Spring Hollow Rd to Thorn Hollow Road is a second north-south route, and
- Wildhorse Rd to Eagle Creek Rd is a third north-south route.

Pilot Rock

The Pilot Rock School District supplies one bus for picking up children on the Reservation and bringing them to Pilot Rock High School and the Elementary School. The bus has an average occupancy of 42 people and makes two trips per day along McKay Creek Road up to the North Fork McKay Creek Road.

Wildhorse Casino Shuttle Bus

The Wildhorse Casino currently provides dial-a-ride shuttle services to casino patrons. The Casino owns two buses and one van. Both buses have a 14-passenger capacity and one bus is wheelchair accessible. The van has an eight-person capacity.

In the beginning of the year 2000, the Casino cancelled its fixed-route operations where the two buses provided free transportation to and from the Casino via the city of Pendleton and the Mission Community area. One shuttle made six trips a day to Pendleton via I-84 stopping at K-mart and the Chamber of Commerce. The second shuttle made six trips a day to Mission Area stopping at several points along the way. The fixed-route shuttle service was for casino use only and not general transportation. Drivers, however, would allow the general public to ride the shuttle along the designated routes, but would not alter the route or make special trips for non-casino use. In 1999, the shuttle bus made 4,590 trips transporting 12,124 customers for the hotel, RV park, golf course, and Tamastlikt Cultural Center. For the entire Wildhorse Resort, the shuttle transported 221,645 people, most of which were customers using the shuttle to get from the parking lot to the casino entrance.

Before fixed-route services were cancelled, the Wildhorse Resort expressed an interest in obtaining another bus.

The shuttle buses are used for large public events to help transport people to and from the event. The biggest event every year is the Pendleton Roundup. During the four-day event in 1999, the shuttles transported 6,500 people. The shuttle buses and van are also available for on-call services to casino patrons at hotels and the airport in Pendleton. The shuttle makes monthly trips to and from retirement homes in the area. The trips are booked by the retirement homes several months in advance possibly indicating that demand is not being met by the current shuttle bus system.

CTUIR Dial-a-Ride

A Dial-a-Ride service for the general public is not provided at this time on the Umatilla Indian Reservation. There is, however, a dial-a-ride service for senior and disabled citizens. This service is described in the following section.

CTUIR Senior Center

On the Reservation, the Senior Center near the BIA offices provides a 24-hour dial-a-ride service for senior and disabled citizens. There is one van and a 14-passenger bus and both of the vehicles are handicap accessible. Normally just the bus is used due to the unreliability of the van. There is one full time and one part time driver. The Senior Center makes approximately 25-30 trips per month and trip destinations are based on passenger needs. The Senior Center provides home delivered meals five days a week. The Center will also pick up passengers

within a 5-7 mile radius to bring them to the Senior Center for meals. Two or three times a week the Senior Center bus travels into Pendleton for shopping.

Pendleton Welfare to Work Shuttle

The Welfare to Work Shuttle does not serve the Umatilla Indian Reservation but there is service in Pendleton.

Retired and Senior Volunteer Program (RSVP)-Pendleton

The Retired and Senior Volunteer Program (RSVP) located in Pendleton does not provide service on the Umatilla Indian Reservation.

Greyhound Bus Lines- Pendleton

Greyhound Bus Lines does not serve the Umatilla Indian Reservation but there is a terminal located in Pendleton, which provides a connection to other cities. There are three departures daily to the southeast along I-84 with stops in La Grande, Boise, and Salt Lake City. There are three departures daily to the west along I-84 to Portland. There are two departures daily to the north along OR Highway 11 with stops in Walla Walla, Pasco, Spokane, and continuing on to Seattle.

UNION PACIFIC RAILROAD

The Union Pacific Railroad (UPRR) passes through the heart of the Mission Community area. From Pendleton, the rail line runs due east and parallel to Mission, Short Mile, Cayuse, and Bingham Roads before turning south along Meacham Creek Road and on into the Blue Mountains towards La Grande.

The UPRR is a Class I line-haul freight railroad. Approximately 35 trains per day pass through Pendleton and the Reservation. These trains vary in size with the longest being up to 90 cars in length.

Currently, there is no passenger rail service provided along this rail line. Until 1997, the Amtrak Pioneer line provided passenger service between Portland and Denver with a stop in Pendleton four days a week.

Railroad Crossings

There are numerous at-grade railroad crossings to the UPRR on the Reservation. The intersecting roads at these crossings vary in use and jurisdictional owner. Table 3-2 below was taken from the ODOT Rail Division Crossing Log and summarizes most of the existing rail crossings on the Reservation. The table displays state and federal crossing I.D. numbers, location, the intersecting road name, crossing jurisdiction, number of tracks, traffic control device type, Average Daily Traffic volume, and the number of accidents within the last ten years. The ODOT Crossing Log does not account for the two local access crossings at Hart Lane (M.P. 219.12) and Williams Lane (M.P. 219.65).

TABLE 3-2
RAILROAD CROSSINGS ON THE UMATILLA INDIAN RESERVATION¹

Crossing ID	US DOT No.	Location	Road Name	Jurisdiction	No. Tracks	Device Type	AADT	10-Yr Acc.
2A-217.90	809029M	Near Pendleton	Mytinger Ln	Local Access	1	STOP	380	2
2A-218.43		Near Pendleton	Mission Frontage Rd	County ²	1	STOP	-	-
2A-218.70	809030G	Munra	Mckay Ln	Local Access	2	STOP	205	2
2A-219.90	809034J	Mission	Davis Ln	Federal	1	STOP		-
2A-221.00	809036X	Mission	Hwy 331	State	2	Active	2,250	1
2A-221.50	809037E	Mission	Parr Ln	Local Access	1	STOP	14	2
2A-224.10	809040M	Mission	Sampson Ln	Federal	1	STOP	12	2
2A-225.20	809041U	Minthorn	Old River Rd (#927)	County ¹	2	STOP	29	-
2A-226.20	809044P	Minthorn	Old River Rd (#918)	County ¹	1	STOP	98	-
2A-227.30	809046D	Cayuse	Cayuse Rd (#925)	County	1	STOP	116	-
2A-231.10	809048S	Thorn Hollow	Cayuse Rd (#900)	County	1	Active	243	-
2A-232.40	809051A	Thorn Hollow	Thorn Hollow Rd (#745)	County	1	STOP	375	-
2A-236.60-C	809211L	Gibbon	Bingham Rd (#900)	County	2	STOP	188	-
2A-237.30	809213A	Gibbon	Meacham Creek Rd (#911)	County	2	Active	226	-

¹ The ODOT Rail Division Crossing Log does not account for the local access crossings at Hart Lane (M.P. 219.12) and Williams Lane (M.P. 219.65). These crossings are local access controlled as well.

² The Umatilla County Roadway Department does not have jurisdiction over this railroad crossing. Therefore, it is assumed that the crossing is local access controlled.

POLICE AND FIRE SERVICES

The Tribal Police Department is responsible for crime prevention, law enforcement, patrolling, building checks, investigation and serving legal papers. The department maintains 24-hour dispatch services.

The Tribal Fire Department is responsible for fire prevention and suppression, public education, emergency medical services, and hazardous materials emergency response. The department currently has four fulltime personnel, including three certified paramedics, and 25 volunteer fire fighters.

CHAPTER 4: EXISTING TRAFFIC CONDITIONS

As part of the planning process, the current traffic conditions for the CTUIR transportation system plan were evaluated. Since traffic volumes are low along most roads on the Reservation, the analysis of existing traffic conditions was limited to the major roadways in the Mission Community area, where potential congestion issues may exist today or in the future. The primary focus was along Highway 331 and all the major crossroads along the highway.

INTERSECTION AND ROADWAY CONFIGURATIONS

Highway 331 runs in a north-south direction connecting Oregon Highway 11 with Interstate 84. It is a two-lane highway with a 55-mph speed limit. Figure 4-1 illustrates the existing lane configurations and traffic control devices at the six major intersections along Highway 331.

As shown in the figure, each intersection is stop-controlled on the minor road approaches. At the intersection of Highway 331 and Mission Road, stop signs are posted along the highway approaches since traffic volumes are higher along Mission Road in this area.

EXISTING TRAFFIC VOLUMES

Existing year 2000 traffic volumes were determined along Interstate 84, OR Highway 11, Highway 331, and other major roads in the Mission Community area. This was done through the collection of traffic volume information contained in the *ODOT Daily Traffic Volume Tables*, traffic counts performed by tribal personnel, but primarily from intersection turning movement counts performed by ODOT personnel. A total of six intersections were counted by ODOT at the following locations:

- Highway 331 at OR Highway 11
- Highway 331 at Mission Road
- Highway 331 at Wildhorse Resort entrance road
- Highway 331 at Kash Kash Road
- Highway 331 at Interstate 84 WB Ramps
- Highway 331 at Interstate 84 EB Ramps

ODOT personnel performed the traffic counts over a 12-hour period from 6:00 a.m. to 6:00 p.m. on weekdays in December 1999 and January 2000. Since the traffic counts were conducted during the winter season, the resulting traffic volumes were increased by 35% to reflect the peak seasonal period, which is around the month of July. This factor was determined through an interpolation of traffic data obtained at two ODOT permanent traffic recorder locations: one along OR Highway 11 (south of the Oregon-Washington State Line), and the other along Highway 395 (south of Pilot Rock). It was assumed that the December to July fluctuations in Average Weekday Traffic, as measured in terms of the relative difference in the percent of Average Daily Traffic (ADT), for these two highways would also apply to Highway 331. Table 4-1 shows the results of this analysis.

TABLE 4-1
HIGHWAY 331 SEASONAL ADJUSTMENT FACTOR
(APPLIED TO ODOT TRAFFIC COUNTS PERFORMED DECEMBER 1999/JANUARY 2000)

Location	Month	Average Weekday Traffic ¹	Percent of ADT ²	Adjustment Factor (December to July)
US Hwy 395 Permanent Recorder (South of Pilot Rock)	December	900	79%	
	July	1,342	117%	38%
OR Hwy 11 Permanent Recorder (South of OR-WA State Line)	December	14,598	102%	
	July	16,423	115%	13%
Highway 331 (From OR Hwy 11 to I-84)	December	2,432	NA	
	July	NA	NA	35% (interpolated)

¹ Average Weekday Traffic volumes shown for the two permanent recorder locations were obtained from the 1998 ODOT Traffic Volume Tables. The Average Weekday Traffic shown for Highway 331 in December represents the median for the traffic volumes recorded along the highway in December 1999/January 2000. (The minimum and maximum range of Average Weekday Traffic was 1,030 to 3,835 vehicles).

² The Average Daily Traffic (ADT) is for the average seasonal condition, which is typically during spring and fall months.

Average Weekday Traffic

The Average Weekday Traffic volumes along Interstate 84, OR Highway 11, Highway 331, and the major crossroads along Highway 331 are illustrated in Figure 4-2. As shown, traffic volumes are the highest along Interstate 84 and range between 11,710 and 16,570 vehicles per day (vpd). Along OR Highway 11, traffic volumes range between 6,740 and 7,930 vpd. Highway 331, which is the major north-south route on the Reservation, has volumes which steadily increase from 2,250 vpd south of OR Highway 11, to 3,370 vpd south of Mission Road, and up to 5,180 vpd just north of the I-84 interchange. Mission Road is a major east-west route used by most residents on the Reservation. The Average Weekday Traffic along this road ranges between 3,340 and 4,890 vpd.

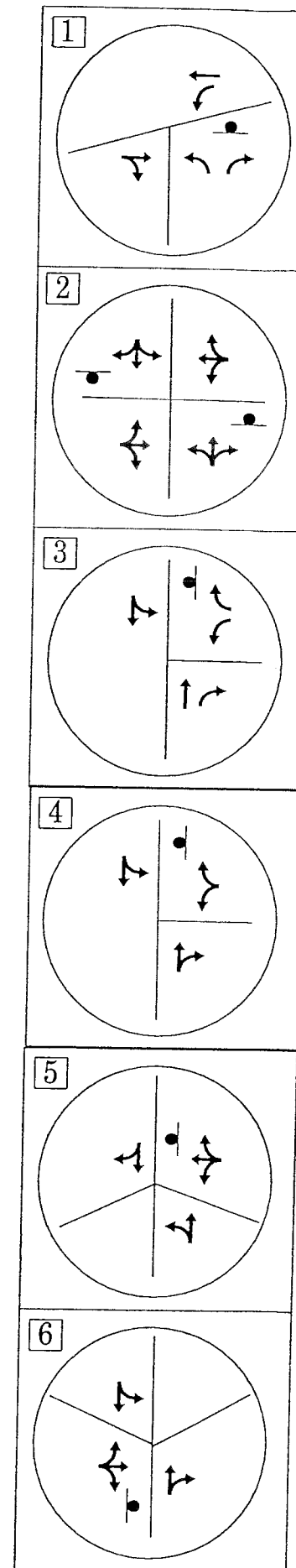
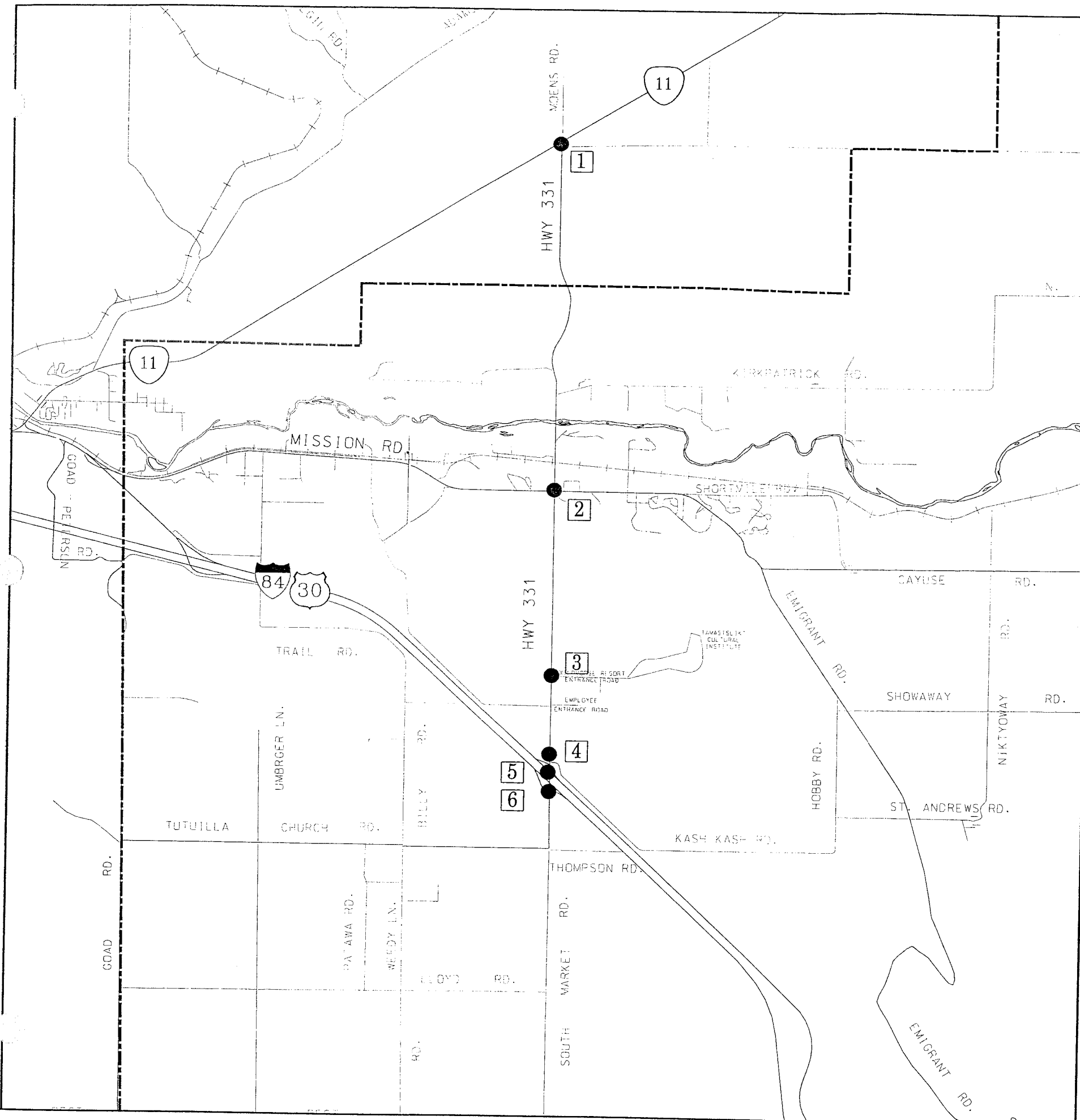
PM Peak Hour Traffic

ODOT traffic counts conducted along Highway 331 were also used to determine PM peak hour traffic volume for individual turning movements at the six intersections. The PM peak hour was established as the most critical time period when traffic volumes are at their highest levels. PM peak hour traffic volumes are also shown in Figure 4-2.

CAPACITY AND LEVEL-OF-SERVICE CRITERIA

Transportation engineers have established various standards for measuring the traffic operations of intersections and roadways. Each standard is associated with a particular Level-of-service (LOS) and/or the Volume-to-Capacity (V/C) ratio. Both the LOS and V/C ratio concepts are related and require consideration of factors that include traffic demand, capacity of the intersection or street, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort, convenience, and operating cost. Six standards have been established to define LOS. They range from LOS "A" where traffic flow is relatively free flowing to LOS "F" where the street or intersection is totally saturated with traffic and movement is very difficult. The minimum operating standards for streets and intersections enforced by most city jurisdictions in Oregon require a LOS D or better. This standard represents conditions where delays may be long, but not excessive, and only occur temporarily during peak periods. The V/C ratio is a measurement of traffic demand along a given roadway or at an intersection divided by that facility's capacity.

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(Scale: 1" = 4,000')

LEGEND:

- Lane Configurations
For Individual Approaches
- Stop Sign
- Reservation Boundary

FIGURE 4-1

Existing Lane Configurations
and Traffic Control Devices

CTUI000 0001/fig4-2.dgn/BUD/03-07-00

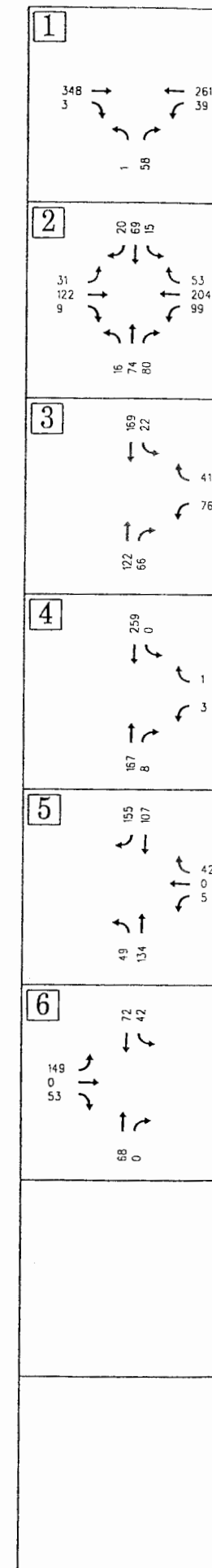
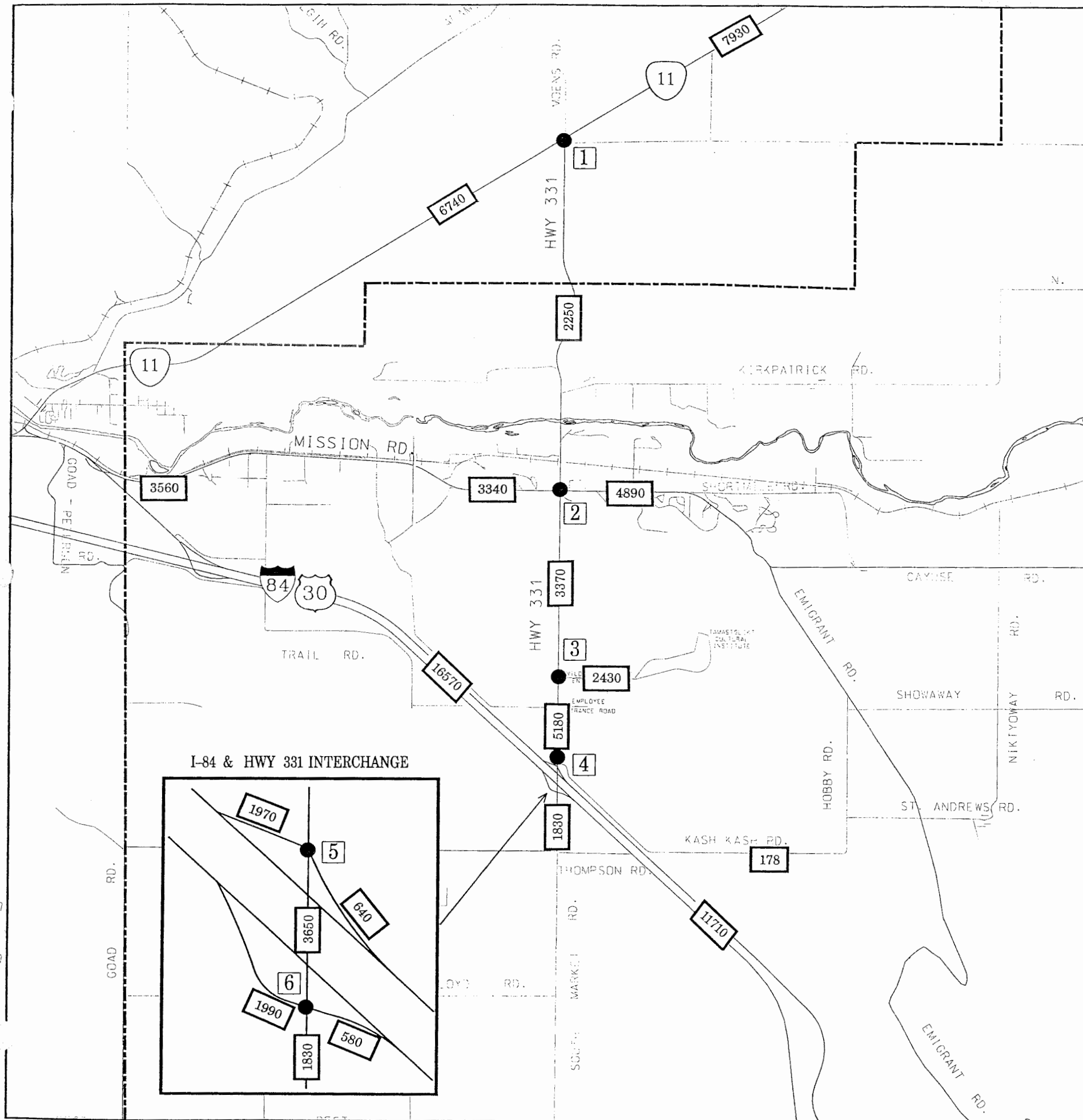


FIGURE 4-2

Existing Traffic Volumes

ODOT Highway Mobility Standards

ODOT has established several policies in the 1999 OHP which enforce general objectives and approaches for maintaining highway mobility. Of these policies, the Highway Mobility Standards (Policy 1F) establish maximum Volume-to-Capacity ratios for peak hour operating conditions for all types of highways in Oregon including Interstate, Statewide, Regional, District, and Local Interest Roads. These standards apply to the state highways that traverse across or are adjacent to the Reservation and include Interstate 84, OR Highway 11, and Highway 331.

The OHP Highway Mobility Standards that apply to the highways addressed in the CTUIR TSP are as follows:

- Along highway segments where there are no intersections and where there are unsignalized intersections and road approaches along the highway, the V/C ratio shall not exceed 0.70 along Interstate 84 and OR Highway 11, and 0.80 along Highway 331.
- At unsignalized intersections and road approaches where the Highway 331 approaches are stopped, the V/C ratio shall not exceed 0.80.
- At the freeway interchange between Interstate 84 and Highway 331, the maximum V/C ratio for the eastbound and westbound ramp terminals shall be the same as the crossroad, which is 0.80.

EXISTING OPERATIONS

Traffic operations were determined for the existing year 2000 at the six key intersections along Highway 331, using the existing lane configurations and PM peak hour traffic counts adjusted to peak seasonal conditions. The resulting traffic operations were then compared to the OHP Highway Mobility Standards.

All six intersections included in the existing operations analysis are currently unsignalized. Traffic operations at these intersections were analyzed using ODOT's UNSIG10 software. The criteria used by this program to estimate the Level-of-Service can be found in Appendix II (Tab 6). Table 4-2 displays the results of the analysis. The LOS and V/C ratios are shown for all critical movements.

TABLE 4-2
EXISTING PM PEAK HOUR TRAFFIC OPERATIONS

Highway 331 at	Critical Movement	V/C ¹	LOS
<i>Hwy 11</i>	Northbound; Left	0.02	C
	Northbound; Right	0.11	A
	Westbound; Left	0.06	A
<i>Mission Road</i>	Eastbound; Left, Through, Right	0.11	A
	Westbound; Left, Through, Right	0.04	A
	Southbound; Left, Through, Right	0.29	C
	Northbound; Left, Through, Right	0.37	B
<i>Wildhorse Resort</i>	Westbound; Left	0.16	A
	Westbound; Right	0.06	A
	Southbound; Left	0.03	A
<i>Kash Kash Road</i>	Westbound; Left, Right	0.02	A
	Southbound; Left, Through	0.01	A
<i>I-84 WB Ramps</i>	Westbound; Left, Through, Right	0.08	A
	Northbound; Left, Through	0.07	A
<i>I-84 EB Ramps</i>	Eastbound; Left, Through, Right	0.34	A
	Southbound; Left, Through	0.04	A

¹ ODOT's UNSIG10 program calculates LOS for unsignalized intersections based on the reserve capacity and not V/C ratios. The V/C ratios were calculated by dividing the demand by the potential capacity for all critical movements.

The results show that all of the critical movements at the six intersections are currently operating at a LOS C or better, and have V/C ratios that are in compliance with the OHP Highway Mobility Standards, indicating there are no congestion issues at this time.

ACCIDENT ANALYSIS

An accident analysis was conducted for the full length of Highway 331 between OR Highway 11 (MP 0.0) and the eastbound ramps of the I-84 interchange (MP 4.84). Accident information for Highway 331 was collected and evaluated using the ODOT Safety Priority Index System (SPIS) and detailed accident reports from the ODOT Crash Analysis and Reporting Unit.

The SPIS is a method of prioritizing locations where funding for highway safety improvements can be spent most efficiently. The SPIS is based on accident data covering a three-year period and is comprised of three components: accident frequency, accident rate, and accident severity. A SPIS value is calculated using these three components and then compared with the high SPIS locations in the state (top ten percent). According to the 1999 Accident Summary Report (which is based on 1996-1998 accident data), the highest SPIS value calculated for Highway 331 was 19.64, which does not exceed the 1999 SPIS cut-off value of 50.11. This indicates there is no need for further investigation and potential mitigation under the SPIS program.

Detailed accident information from the ODOT Crash Analysis and Reporting Unit was collected for a five-year period (1995-1999). An accident summary for this period is summarized in Table 4-3.

TABLE 4-3
ACCIDENT STATISTICS FOR HIGHWAY 331

Type of Accident	Number of Accidents
Turning	4
Angle	4
Rear End	3
Fixed Object	3
Non-Collision	3
Miscellaneous	1
Total	18

Source: Oregon Department of Transportation, 1995-1999.

During the five-year period, there were a total of 18 accidents along Highway 331. The highest number of accidents (four each) were turning-type and angle-type collisions.

Of all the accidents, there were no fatalities with six accidents resulting in injuries. Of the six injury accidents, a total of 11 people were injured. One of these injuries was a type A Injury (most severe), eight were a type B Injury (moderate); and two were a type C Injury (least severe).

Of the 18 accidents, three (17%) occurred at the highway's intersection with Mission Road. This intersection is stop controlled on Highway 331 while Mission Road is free flowing. All three accidents were the result of drivers on Highway 331 failing to yield right of way to traffic on Mission Road. The cause of these accidents seems unclear but may be due to the driver's perception that if a stop-sign is posted on the highway then stop-signs are also posted on the Mission Road approaches. In an attempt to eliminate these types of accidents, ODOT recently posted a signs stating, "Cross-Street Traffic Does Not Stop", just below the stop sign. However, a similar accident took place recently in June 2000. The accident report indicated that the driver at fault was on the Highway 331 approach and was expecting the vehicle traveling on Mission Road to stop.

An accident rate of 0.94 accidents per million vehicle miles traveled was calculated for Highway 331. The 1998 statewide average is 1.06 accidents per million vehicle miles traveled for the same type of roadway. The accident rate is based on the number of accidents, the highway length, and the ADT volume.

In addition to the 18 accidents recorded along Highway 331, one accident occurred on OR Highway 11 at its intersection with Highway 331. No injuries were reported.

A request was made to the Umatilla Tribal Police Department for accident information along all Reservation roads. The Department supplied a list of 63 accidents that took place during a two-year period (1998-1999). Most of these accidents occurred at sporadic locations around the Reservation. There were five accidents that occurred along Mission Road. Two of these accidents occurred at the intersection of Aspen Way, with major injuries sustained in one of these accidents.

CHAPTER 5: TRAFFIC FORECAST AND FUTURE CONDITIONS

The future traffic forecast for the CTUIR TSP focuses on a 20-year projection of ADT and PM peak hour traffic volumes along the major roads in the Mission Community area. The forecast is based on a "cumulative analysis", where traffic generated by planned or potential land uses combined with a through traffic component, are added to existing traffic count information. This level of analysis provides a means to analyze the effects of additional traffic generated by population and employment growth on the local street network, highlight potential problems, and develop alternative solutions. The forecasting process summarized below was coordinated with tribal and ODOT staff.

FORECASTING METHODOLOGY

The forecast methodology basically involved three parts:

1. The existing traffic counts conducted by ODOT in December 1999/January 2000 at the six intersections along Highway 331 were used as a base. All volumes were factored up by 35% to account for peak seasonal conditions.
2. A trip generation analysis was performed for all planned or potential land uses in the Mission Community area. These trips were then distributed and assigned to the major roadways. This step accounted for future increases in local traffic.
3. A through traffic component was added for I-84, Highway 331, and OR Highway 11, which was determined by a 20-year historical growth trend analysis.

Roadways included in the traffic forecast include I-84, OR Highway 11, Highway 331 (including the interchange with I-84), Mission Road, the road accessing the Wildhorse Resort, Kash Kash Road, and South Market Road. These roads are where future congestion issues are most likely to arise on the Reservation. All other roads having ADT volumes of less than 1,000 vehicles on the Reservation, particularly outside the Mission Community area, were not included in the forecast.

FUTURE LAND USES (POPULATION AND EMPLOYMENT NEEDS)

The following sections below describe planned or potential land uses identified for the Mission Community area based on meetings with tribal staff, and information contained in the *Mission Community Plan*, the "Plan For Growth" document, the *Four Corners Master Plan*, and articles posted in the Confederated Umatilla Journal (a local newspaper). These land uses are the basis of future increases in local traffic on the Reservation.

The location of planned or potential land uses coincides with the future land use map presented in the *Mission Community Plan* (Figure #5). This map is located in Appendix II (Tab 7).

Population and Housing Needs

Table 5-1 highlights the future population projection and housing needs for the Reservation based on information documented in the *Mission Community Plan*.

TABLE 5-1
FUTURE POPULATION PROJECTION AND HOUSING NEEDS

	Year 2000	Year 2020	20-Year Increase
Population- All Indians in the Area	3,044	4,125	1,081
Additional Dwelling Units	-	347	347
<i>(Scattered Sites)</i>	-	(160)	(160)
<i>(Mission Community)</i>	-	(187)	(187)

Upon further discussion with tribal planning staff it was decided that the projected number of additional dwelling units for the Mission Community area was too low. Therefore, at the tribe's discretion, the number of additional housing units was increased from 187 to 200.

Commercial Land Use Needs

The following is a summary of commercial land use needs for the Reservation.

- Construct a neighborhood grocery store on the northeast corner of the Mission Road intersection.
- Expand the Wildhorse Resort by increasing the floor space at the Casino by 50% and adding 100 additional hotel units. (Currently, the Wildhorse Resort employs between 382 and 411 workers at the casino, hotel, the RV Park, the golf course, and the Tamastslikt Cultural Institute.)
- Develop a multi-use indoor arena with a 5,000-seat capacity.
- Relocate the Arrowhead Truck Stop on east side of Highway 331 to the west side of the highway and add an 8,000 sq. ft truck business center, a 3,000 sq. ft convenience store, a 4,000 sq. ft restaurant, and a 2,000 sq. ft truck repair shop.
- Develop 7.5 acres of land into commercial and retail businesses along the east side of Highway 331 in the vicinity of the existing Arrowhead Truck Stop.
- Develop a tribally owned bank.

Industrial Land Use Needs

As stated in the *Mission Community Plan*, 110 acres of land should be set aside for industrial development over the next 20 years. With the guidance of tribal staff, it was assumed that 25 acres of storage and warehouse facilities and 85 acres of land zoned for light industrial uses would be developed south of the I-84/Highway 331 interchange and west of South Market Road, where the tribe has recently purchased land.

Government/Institutional Land Use Needs

As stated in the *Mission Community Plan*, a new government building is planned for a site located near the Mission Road/Highway 331 intersection. The *Mission Community Plan* identifies this site to be located south of the intersection and west of the highway. The proposed 120,000 sq. ft. building will house the majority of the government offices on the Reservation, with a total employment of around 500 employees.

School Needs

The *Mission Community Plan* recommends 10 to 20 acres be set aside to plan for the development of a tribal or public school on the Reservation. The Plan continues to say the prospect of developing or siting a school is remote at this time. Therefore, this potential land use was not considered in the 20-year traffic forecast.

FUTURE INCREASES IN LOCAL TRAFFIC

The local traffic component of the traffic forecast consists of all Internal-to-Internal (I-I) trips made within the Reservation and those trips that either begin or end on the Reservation, referred to as either Internal-to-External (I-E) or External-to-Internal (E-I) trips.

Future increases in local traffic were estimated through the assessment of planned or potential land uses (see previous section above), an estimate of the trips generated by these types of land uses, and the distribution and assignment of these trips to the major roads in the Mission Community area. Trips produced and attracted by new housing and employment in the area were based on the trip generation rates depicted in the *ITE Trip Generation Manual*¹. This information is provided in the Appendix (Tab 6) along with a summary of the trip distribution.

It was assumed in the trip distribution process that trips produced by new homes on the Reservation would only go to and from new businesses developed on the Reservation. These constitute the I-I trips. All remaining I-E and E-I trips attracted by new businesses were assumed to travel from or to the Reservation at four external locations. These locations include I-84 west of Highway 331 towards Pendleton, I-84 east of Highway 331 towards La Grande, OR Highway 11 towards Milton-Freewater and Walla Walla, and Mission Road at the west Reservation boundary near Pendleton. Trips were assigned to the major roads in the Mission Community area along the shortest and quickest routes.

Table 5-2 provides a detailed summary of the projected increases in local traffic for the PM peak hour.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 6th Edition, January 1997.

TABLE 5-2
FUTURE INCREASES IN LOCAL TRAFFIC

Future Land Use Needs	Location	PM Peak Hour Trips		
		Enter	Exit	Total
Housing				
100 units of single family homes	In the vicinity of the Mission Road/Cayuse Road intersection	64	36	100
50 units of single family homes	Southwest of the Mission Road/ Highway 331 intersection	32	18	50
50 units of single family homes	South of I-84 and west of South Market Road	32	18	50
Commercial				
3,000 sq. ft. neighborhood grocery store	Northeast corner of the Mission Road/Highway 331 intersection	51	53	104
50% expansion of floor space at the Casino	Wildhorse Casino	20	25	45
100 additional hotel units	Wildhorse Resort Hotel	32	29	61
Indoor arena with a 5,000 seat capacity	In the vicinity of the entrance road to the Wildhorse Resort	2	10	12
Construct a new truck stop and add an 8,000 sq. ft truck business center, a 3,000 sq. ft convenience store, a 4,000 sq. ft restaurant, and a 2,000 sq. ft truck repair shop	North of I-84 and west of Highway 331	222	216	438
Develop 7.5 acres of land into commercial and retail businesses	North of I-84 and east of Highway 331 (in vicinity of existing Arrowhead Truck Stop)	161	252	413
Tribally owned bank	Southwest corner of the Mission Road/Highway 331 intersection	8	8	16
Industrial				
Develop 25 acres of land for storage and warehouse facilities, and 85 acres of land for light industrial uses	South of I-84 and west of South Market Road	62	216	278
Government				
Construct new 120,000 sq. ft government building	South of Mission Road and either east or west of Highway 331	30	148	178
	Total :	716	1,029	1,745

FUTURE INCREASES IN THROUGH TRAFFIC

Future increases in through traffic were determined for I-84, Highway 331, and OR Highway 11 by establishing 20-year historical growth trends for all three highways and applying these trends to existing through traffic volumes (determined from traffic counts). The projected 20-year growth rates and average annual growth rates for all three highways are shown below in Table 5-3. It is important to note that a 20-year trend was established for each highway for the years 1974 to 1994. The construction of the Wildhorse Resort in 1995 resulted in a considerable increase in local trips along each highway; therefore, volume data available for the years 1995 through 1998 was not used.

TABLE 5-3
FUTURE GROWTH PROJECTIONS FOR HIGHWAY TRAFFIC
(APPLICABLE TO THROUGH TRAFFIC ONLY)

	20-Year Growth Rate	Average Annual Growth Rate
I-84		
<i>West of Highway 331</i>	35.6%	1.53%
<i>East of Highway 331</i>	38.7%	1.65%
Highway 331		
<i>North of Mission Road</i>	37.7%	1.61%
<i>South of Mission Road</i>	50.5%	2.06%
<i>South of Wildhorse Resort</i>	41.3%	1.74%
OR Highway 11		
<i>Northeast of Highway 331</i>	27.8% ⁽¹⁾	1.23% ¹

¹ A negative 20-year growth projection was determined for OR Highway 11, northeast of Highway 331. Therefore, to estimate a more conservative traffic forecast, the growth projections documented in the OR Highway 11 Corridor Plan were used. The projections shown in the table are based on a 20-year historical growth trend for the years 1976 to 1996 at a location northeast of the Havana-Helix Highway.

FUTURE NO BUILD TRAFFIC VOLUMES

As part of the planning process, traffic volumes were projected for the future year 2020. This constitutes a "No Build" condition, where the existing roadway network remains unchanged. The results of the forecast are shown in Figure 5-1.

The ADT and PM peak hour traffic volumes were projected for the same roads and intersections previously analyzed under existing traffic conditions. Two new intersections have been included in the future traffic volume forecast. The first intersection, identified as #7 in the figure, represents a potential new access to Highway 331 south of Mission Road. This intersection would serve new housing and the new government office building. The second potential intersection, identified as #8 in the figure, would provide access to planned or potential businesses on the west and east sides of Highway 331, such as a new truck stop facility.

Average Daily Traffic

Along most roads, it was assumed that ADT volumes would increase proportionally to the expected growth in PM peak hour traffic. For example, the future ADT volume of 4,230 vehicles along Mission Road just west of Highway 331 was calculated by increasing the existing ADT volume of 3,340 vehicles by 26.6%. This increase represents the expected growth in PM peak hour traffic for the combined flows entering and exiting this leg of the Mission Road/Highway 331 intersection. This correlation between ADT and PM peak hour volumes was used to project future ADT volumes along the major roads where traffic counts were conducted.

Future ADT volumes along the I-84 mainline were determined in a different fashion since the only information available was existing ADT volumes. East of Highway 331, the existing ADT volume of 11,710 was increased by the projected growth rate of 38.7%, assuming all traffic along this section of freeway is through traffic. Added to this traffic was the additional ADT volumes calculated for the Highway 331 westbound off-ramp and eastbound on-ramp. This yielded a conservative ADT estimate of 19,330 vehicles. West of Highway 331, the existing ADT volume along I-84 is considerably higher than the ADT along the freeway east of Highway 331. This indicates that there is some local and through traffic using Highway 331 interchange. An assumption was made that the 11,700 ADT east of Highway 331 comprises the through traffic component for I-84 west of Highway 331. This through traffic was then increased by the projected growth rate of 35.6% for I-84 west of Highway 331 (15,865 ADT). Projected through traffic was then added to the existing ADT west of Highway 331 that is considered to be local and through traffic related to the Highway 331 interchange (4,860 ADT), and the additional traffic projected for the Highway 331 eastbound off-ramp and the westbound on-ramp (7,660 ADT). This resulted in a conservative ADT estimate of 28,400 vehicles.

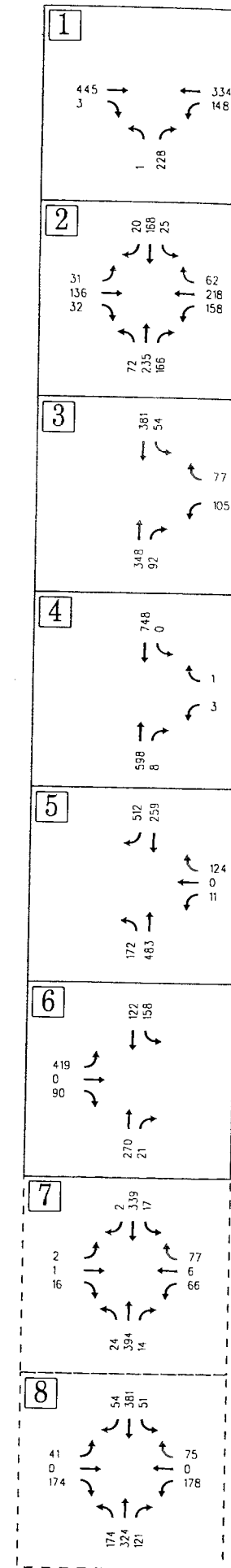
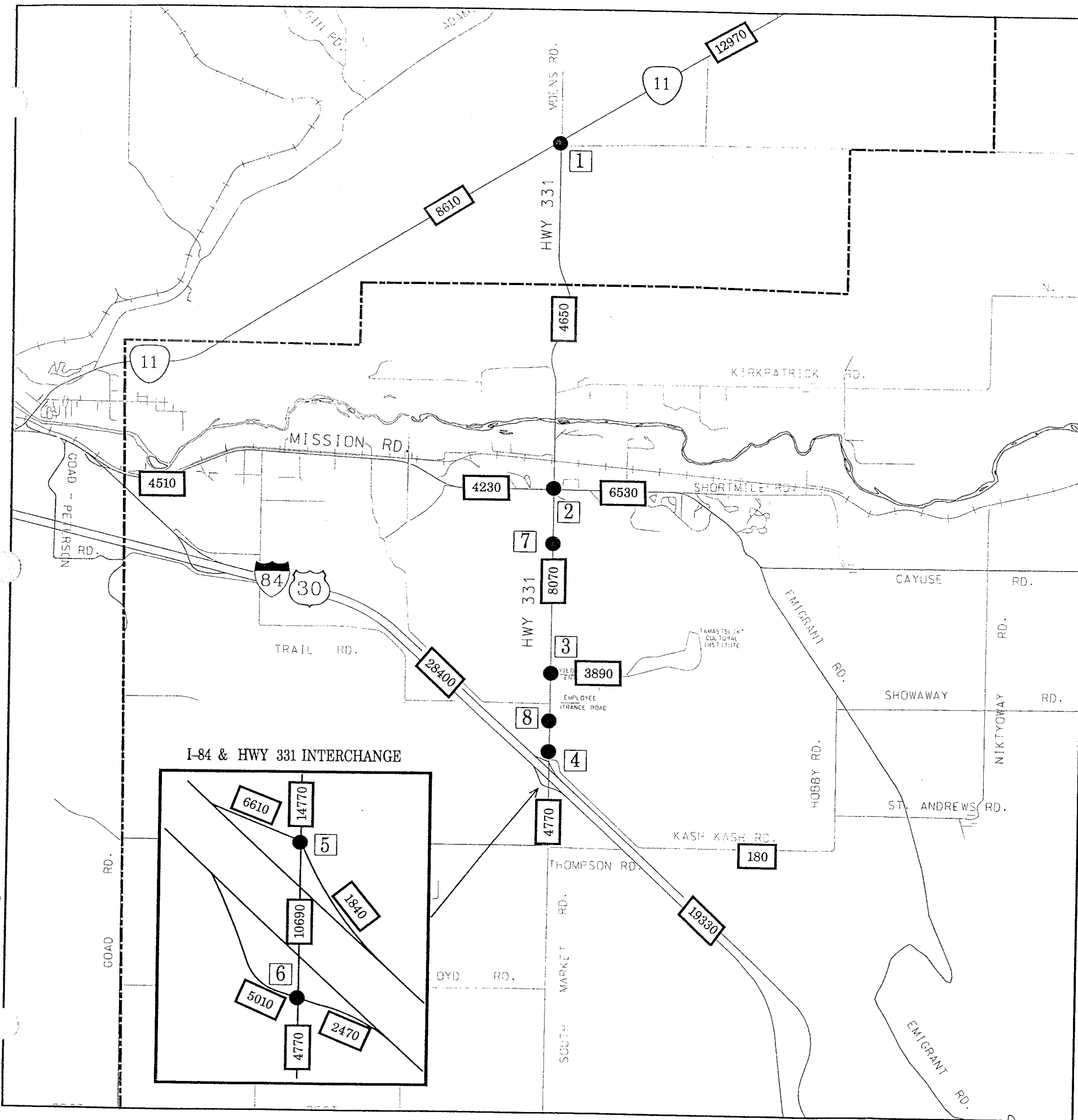
PM Peak Hour Traffic Volumes

Future PM peak hour turn movement volumes were estimated by adding future increases in local and through traffic to existing base count information. This process was summarized in the previous section.

FUTURE NO BUILD OPERATIONS

Future year 2020 No Build traffic operations at the six existing unsignalized intersections and two potentially new intersections (assumed to be unsignalized) are summarized below in Table 5-4. Traffic operations at all eight intersections were analyzed for the PM peak hour using ODOT's UNSIG10 software.

CTU10000-0001/rfig5-1.dgn/RSLP/3-12-01



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(Scale: 1" = 4,000')

LEGEND:

← 000 PM Peak Hour Traffic for Individual Turning Movements

0000 Average Daily Traffic

--- Reservation Boundary

* All volumes shown were adjusted to reflect peak summer condition.

1 Existing Intersection

7 Potentially New Intersection

FIGURE 5-1

Future Year 2020 Traffic Volumes

TABLE 5-4
FUTURE NO BUILD PM PEAK HOUR OPERATIONS

Highway 331 at	Critical Movement	Existing		Future No Build	
		V/C ¹	LOS	V/C ¹	LOS
<i>Hwy 11</i>	Northbound; Left	0.01	C	0.01	D
	Northbound; Right	0.11	A	0.48	C
	Westbound; Left	0.06	A	0.25	A
<i>Mission Road</i>	Eastbound; Left, Through, Right	0.04	A	0.04	A
	Westbound; Left, Through, Right	0.11	A	0.19	A
	Southbound; Left, Through, Right	0.29	C	1.64	F
	Northbound; Left, Through, Right	0.37	B	1.16	F
<i>Wildhorse Resort</i>	Westbound; Left	0.17	A	0.49	D
	Westbound; Right	0.05	A	0.14	A
	Southbound; Left	0.02	A	0.09	A
<i>Kash Kash Road</i>	Westbound; Left, Right	0.02	A	0.09	D
	Southbound; Left, Through	0.01	A	0.01	A
<i>I-84 WB Ramps</i>	Westbound; Left, Through, Right	0.08	A	0.56	D
	Northbound; Left, Through	0.06	A	0.43	C
<i>I-84 EB Ramps</i>	Eastbound; Left, Through, Right	0.34	A	1.73	F
	Southbound; Left, Through	0.04	A	0.22	A
<i>New Intersection South of Mission Road</i>	Eastbound; Left, Through, Right	-	-	0.05	A
	Westbound; Left, Through, Right	-	-	0.52	D
	Southbound; Left, Through, Right	-	-	0.02	A
	Northbound; Left, Through, Right	-	-	0.03	A
<i>New Intersection North of I-84</i>	Eastbound; Left, Through, Right	-	-	0.93	F
	Westbound; Left, Through, Right	-	-	3.62	F
	Southbound; Left, Through, Right	-	-	0.08	A
	Northbound; Left, Through, Right	-	-	0.29	A

¹ ODOT's UNSIG10 program calculates LOS for unsignalized intersections based on the reserve capacity and not V/C ratios. The V/C ratios were calculated by dividing the demand by the potential capacity for all critical movements.

Note: The LOS and V/C ratios shown in **bold** indicate operations are expected to exceed minimum operating standards.

POTENTIAL MITIGATION OF PROJECTED DEFICIENCIES

A total of three intersections along Highway 331 are expected to exceed minimum operating standards within the next 20 years. Operating deficiencies could be mitigated by the following improvements:

- I-84 EB Ramps- Provide separate left and right-turn lanes on the off-ramp and install a traffic signal when warranted.
- New Intersection North of I-84- Provide exclusive left-turn lanes along the highway, and install a traffic signal when warranted.
- Mission Road- Establish a four-way stop.

A potential safety hazard could exist at the I-84 WB Ramps, where traffic volumes in the southbound direction on Highway 331 are projected to be high for the right turn onto I-84 WB on ramp. This safety hazard could be mitigated by providing an exclusive turn lane that would separate right-turning traffic from through traffic. Other improvements include providing separate left and right-turn lanes on the WB off-ramp and installing a traffic signal when one becomes warranted.

CHAPTER 6: POTENTIAL TRANSPORTATION IMPROVEMENT PROJECTS

A number of improvement projects have been identified to address the needs of the Umatilla Indian Reservation transportation system over the next 20 years. These projects were developed from the analysis of existing and future conditions, through meetings with the TAC members, or address needs which were already established prior to the planning process. Each improvement project was developed to address specific operational, safety, and/or access concerns, to improve community livability, to encourage more bicycle and pedestrian activity on the Reservation, and to accommodate future growth in population and employment. These projects were also developed in an attempt to address the Goal and Objectives specified in Chapter 2.

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM PROJECTS

The Statewide Transportation Improvement Program (STIP) is the state's transportation capital improvement program, listing the schedule of transportation projects for a four-year period (currently 2000 to 2003). Projects in the STIP are funded mainly through federal and state gas tax revenues, but also include local government funding and other state and federal funding sources. It includes projects on the state, city, and county transportation systems as well as National Parks, National Forests, and Indian Reservations. This program is updated every two years.

The draft 2002-2005 STIP identifies two projects on the Umatilla Indian Reservation. The first project involves the installation of a variable message sign for traffic heading west on I-84. The sign will be located just west of Highway 331. The estimated cost for this project is \$540,000. The second project includes rockfall protection along I-84 in the vicinity of the Deadman's Pass interchange and rest area east of Highway 331. The estimated cost for this project is \$751,000.

The Tamastlikt Trail was a multi-use path that was completed in the summer of 2000. It now links the tribal agencies and adjacent neighborhoods near Mission Road with the Tamastlikt Cultural Institute. This project received STIP funding and was listed on the 1998-2001 STIP.

CTUIR PLANNED OR APPROVED PROJECTS

The CTUIR recently received a grant for \$350,000 to develop the Wetlands Community Park. The park will be located northeast of the Tribal Community Complex, west of the Mission Creek Subdivision and along the north side of Mission Road. As part of this project, a network of paths will be constructed connecting the various neighborhoods, the park, and the Tribal Community Complex together. This system would be used by both pedestrians and bicyclists. The park is expected to be developed within the next year.

BIA TRANSPORTATION PLANNING FUNDS

As stated by representatives of the BIA, up to \$50,000 in funds can be provided to the CTUIR for transportation planning purposes. In order to receive these funds, "Transportation Planning" must be identified as the first priority in the CTUIR TIP.

The tribe may use "Transportation Planning" funds for the following activities:

- Tribal representation at transportation planning meetings, conferences, and seminars.
- Preparation of applications for funds from other transportation funding sources.

- Planning related activities for other modes such as mass transit, air, etc., and intermodal connections.
- Development of a control schedule for the implementation of the IRR projects in the tribal TIP.
- Acquisition (rental or purchase) of equipment necessary to perform ongoing transportation planning.
- Development of rural addressing and street maps.
- Preparation of documents to nominate routes, or segments of routes for State and/or National Scenic Byways designation.
- Employment of a transportation planner to perform eligible transportation planning activities.
- Researching right-of-way records for transportation planning purposes.
- Other eligible activities identified in a proposal that is mutually agreeable to the Indian Tribal Government and the Secretary of the Interior.
- Other activities listed in Chapter 4 of the *Indian Reservation Roads Program Transportation Planning Procedures and Guidelines, Federal Highway Administration, October 1999*.

POTENTIAL IMPROVEMENT PROJECTS

The potential improvement projects developed for the CTUIR TSP are shown graphically in Figures 6-1 and 6-2 and summarized below. Each potential project was assigned a project number to establish a link between the graphics and project summary. The assigned project number does not represent any level of prioritization at this stage of the plan.

The project summaries below were grouped into five improvement categories: (1) Existing Roadways, (2) New Roadways, (3) Highway 331 Improvements, (4) Bridge Replacements, and (5) Bicycle/Pedestrian Improvements. For each project, the purpose or need is defined followed by an overview of improvements, and estimated cost. Costs reflect year 2001 dollars and are estimated from unit costs for similar facility improvements. Unit costs are provided in Appendix II (Tab 8). Some projects address multiple improvement options and were evaluated against one another.

Existing Roadways

River Road - Phase I (Project R1)

This project was initially identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR. The purpose of this project is to improve community livability and driver safety for the residents living along this local access road.

This project would improve River Road, from the west UPRR crossing to White Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of new gravel. This project would also include paving the two at-grade rail crossings along this section of road with asphalt. This would improve driver safety, particularly for the public school buses that use these crossings on a daily basis. Currently, both crossings have wooden rail ties stacked between the metal rails, which could be hazardous.

It should be noted that ODOT considers both rail crossings along River Road to be "private". Therefore, improvements to these crossings may be readily made by any interested party or agency.



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NORTH

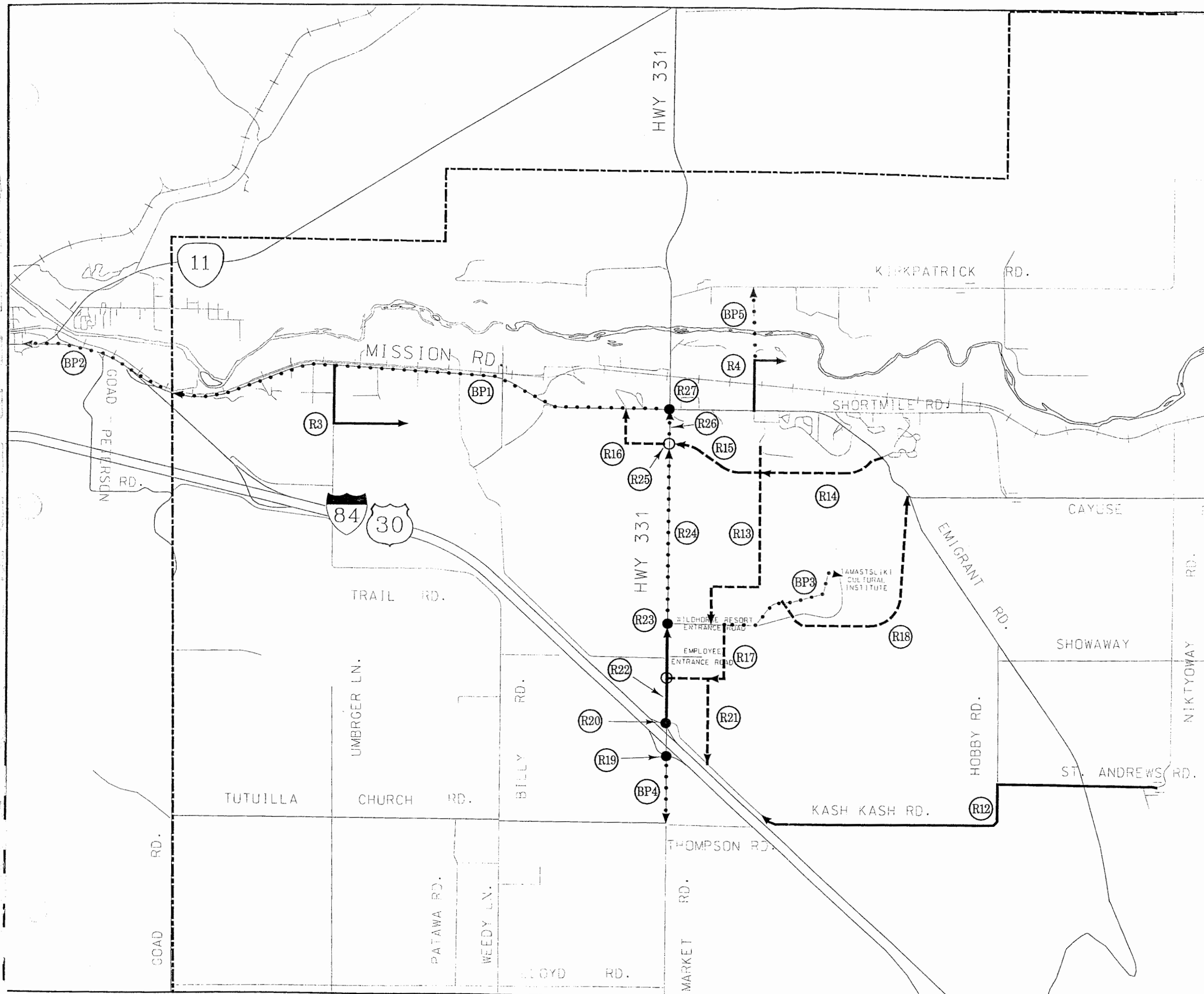
(Scale: 1" = 3,000')

LEGEND:

-  Improvement to an Existing Road or Intersection
-  New Roadway or Intersection Improvement
-  Bridge Replacement Project
-  Bicycle and/or Pedestrian Improvement
-  Transportation Improvement Project Number (See List of Projects for Description)
-  Reservation Boundary

FIGURE 6-1

Potential Improvement Projects (Mission Community)





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(Scale: 1" = 12,000')

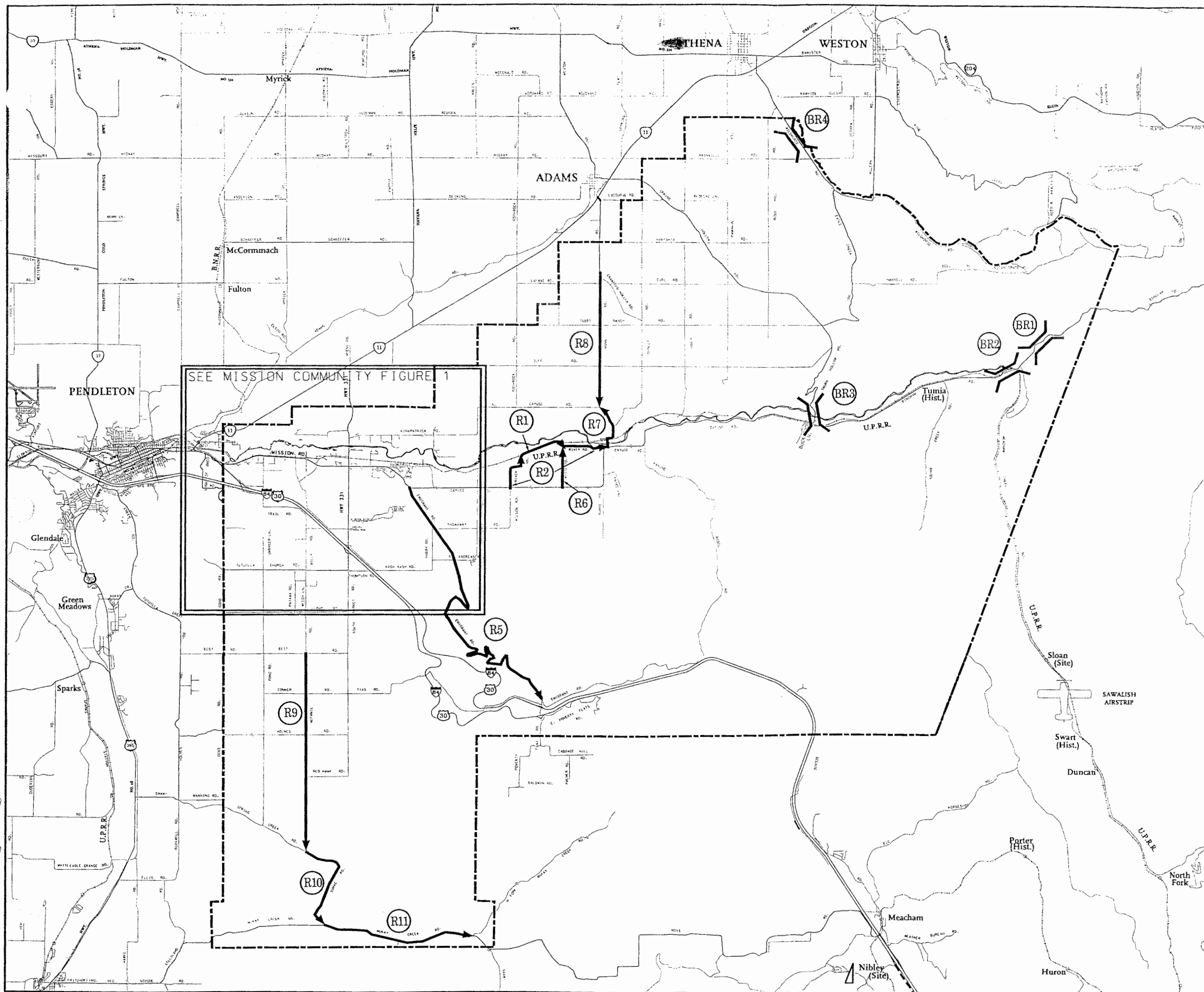
LEGEND:

- Improvement to an Existing Road or Intersection
- New Roadway or Intersection Improvement
- Bridge Replacement Project
- Bicycle and/or Pedestrian Improvement
- Transportation Improvement Project Number (See List of Projects for Description)
- Reservation Boundary

FIGURE 6-2

Potential Improvement Projects (Area Outside Mission Community)

CTUIR Transportation System Plan



This section of River Road is considered an orphan road, where no public agency has jurisdiction, but a public right-of-way does exist.

The estimated cost for this project follows below:

1 mile of road @ \$105,000/mile	\$105,000
2 at-grade railroad crossings @ \$2,500/crossing	\$5,000
Total	\$110,000

River Road - Phase II (Project R2)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. The purpose of this project is to improve community livability and driver safety for the residents living along this local access road.

This project would improve River Road (County Road #927) from Cayuse Road to the west UPRR crossing and along River Road (County Road #918) from White Road east to North Cayuse Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new gravel surface. This project is shown to be more expensive in the Umatilla County TSP since the plan calls for pavement. Because River Road is a local access road, serving few homes, a gravel surface would be more appropriate.

Both sections of River Road are under the jurisdiction of the county.

The estimated cost for this project follows below:

2.1 miles of road @ \$105,000/mile	\$221,000
Total	\$221,000

56th Street/Gopher Flat Lane (Project R3)

This project was identified in a roadway improvement-needs analysis performed by the previous transportation planner for the CTUIR. The purpose of this project is to improve community livability and driver safety for the residents living along these local access roads.

This project would improve 56th Street from Mission Road to Gopher Flat Lane, and all of Gopher Flat Lane. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new gravel surface.

Both 56th Street and Gopher Flat Road are orphan roads, where no public agency has jurisdiction, but a public right-of-way does exist.

The estimated cost for this project follows below:

0.85 miles of road @ \$105,000/mile	\$89,000
Total	\$89,000

Parr Lane (Project R4)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR. The purpose of this project is to improve community livability and driver safety for the residents living along this local access road.

This project would improve Parr Lane from Mission Road to the end of Parr Lane. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new gravel surface. This project would also include paving the at-grade rail crossing with asphalt. This would improve driver safety for those residents living along this road. Currently, both crossings have wooden rail ties stacked between the metal rails, which could be hazardous.

It should be noted that ODOT considers the Parr Lane crossing to be "private". Therefore, improvements to this crossing may be readily made by any interested party or agency.

Parr Lane is considered an orphan road, where no public agency has jurisdiction, but a public right-of-way does exist.

The estimated cost for this project follows below:

0.5 miles of road @ \$105,000/mile	\$52,500
1 at-grade railroad crossing @ \$2,500/crossing	\$2,500
Total	\$55,000

Emigrant Road (Project R5)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. The purpose of this project is to improve the deteriorating condition of this paved road. This road serves more than 20 homes and is used for farming and recreational purposes. It also provides access to the church and cemetery at St. Andrews.

This project consists of repaving and improving the shoulders of Emigrant Road (County Road #937) from Cayuse Road to Poverty Flat Road. The project length is 9.0 miles.

Emigrant Road is under the jurisdiction of the county.

The estimated cost for this project \$1,468,000. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

White Road (Project R6)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. The purpose of this project is to improve community livability and driver safety for the residents living in the eight homes along this local access road.

This project would improve White Road (County Road #918) from Cayuse Road to River Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new gravel surface. This project is shown to be more expensive in the

Umatilla County TSP since the plan calls for pavement. Because White Road is a local access road, serving just a few homes, a gravel surface would be more appropriate.

White Road is under the jurisdiction of the county.

The estimated cost for this project follows below:

1.1 miles of road @ \$105,000/mile	\$116,000
Total	\$116,000

North Cayuse Road (Project R7)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. This project in conjunction with the Mann Road project would provide a continuous paved roadway surface from Cayuse Road to OR Highway 11. This project would improve community livability and driver safety for the residents living along this road and those who use it to travel to and from Athena and OR Highway 11 to the north.

This project would improve North Cayuse Road (County Road #925) from River Road to Mann Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new paved surface. This project is 1.3 miles in length.

North Cayuse Road is under the jurisdiction of the county.

The estimated cost for this project is \$204,400. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

Mann Road (Project R8)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. This project in conjunction with the North Cayuse Road project would provide a continuous paved roadway surface from Cayuse Road to OR Highway 11. This project would improve community livability and driver safety for the residents living along this road and those who use it to travel to and from Athena and OR Highway 11 to the north.

This project would improve Mann Road (County Road #925) from North Cayuse Road to Crawford Hollow Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new paved surface. The project is 3.30 miles in length.

Mann Road is under the jurisdiction of the county.

The estimated cost for this project is \$518,800. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

Motanic Road (Project R9)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. This project would improve community livability and driver safety for the residents living along this road and for many who

use it to travel to and from the southern section of the Reservation. This road is also used frequently by trucks for agricultural purposes.

This project would improve Motanic Road (County Road #1031) from Best Road to Spring Creek Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new paved surface. The project is 4.80 miles in length.

Motanic Road is under the jurisdiction of the county.

The estimated cost for this project is \$755,800. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

Sumac Road (Project R10)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. This project would improve community livability and driver safety for the residents living in the seven homes along this road. This road is also used frequently by trucks for agricultural purposes.

This project would improve Sumac Road (County Road #1050) from Spring Creek Road to McKay Creek Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new paved surface. The project is 3.30 miles in length.

Sumac Road is under the jurisdiction of the county.

The estimated cost for this project is \$518,000. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

McKay Creek Road (Project R11)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. The purpose of this project is to improve community livability and driver safety for the residents living in the seven homes along this local access road.

This project would improve McKay Creek Road (County Road #1050) from Cayuse Road to River Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new gravel surface. This project is shown to be more expensive in the Umatilla County TSP since the plan calls for pavement. Because McKay Creek Road is a local access road, serving just a few homes, a gravel surface would be more appropriate.

McKay Creek Road is under the jurisdiction of the county.

The estimated cost for this project follows below:

4.1 miles of road @ \$105,000/mile	\$430,500
Total	\$430,500

Kash Kash Road/St. Andrews Road (Project R12)

This project was identified in a roadway improvement needs analysis performed by the previous transportation planner for the CTUIR and was also included as a planned project in the Umatilla County TSP. This project would improve community livability and driver safety for the residents living in the two homes along Kash Kash Road and the three homes along St. Andrews Road. St. Andrews Road also serves a school, church, and cemetery.

This project would improve Kash Kash Road (County Road #934) and St. Andrews Road (County Road #931) from the end of pavement on Kash Kash Road to Niktyoway Road. Improvements would consist of widening the roadbed, making minor alignment changes, and adding shoulders. This would be followed by the addition of a new paved surface. The project is 2.60 miles in length.

Both Kash Kash and St. Andrews Roads are under the jurisdiction of the county.

The estimated cost for this project is \$384,800. This was estimated by factoring the 1998 project cost shown in the Umatilla County TSP up to year 2000 dollars by applying a 2.4% annual inflationary rate.

New Roadways**North-South Connector Road (Project R13)**

This project was identified as a future roadway improvement in the *Mission Community Plan*. Oriented in a north-south fashion east of Highway 331, this new road would provide a faster and more direct travel route between the tribal government offices/neighborhoods and the Wildhorse Resort.

Improvements would include the construction of a new rural connector road beginning at the end of "A" Street and ending at the entrance road to the Wildhorse Resort.

The estimated cost for this project follows below:

1.38 miles of new rural road @ \$1,100,000/mile	\$1,518,000
ROW 2,640 ft x 50 ft @ \$1/square ft	\$132,000
Total	\$1,650,000

East-West Connector Road - Phase I (Project R14)

This project was identified as a future roadway improvement in the *Mission Community Plan*. Oriented in an east-west fashion, this new road would parallel Mission Road to the south. It would serve as a local access road for new homes that may be built in the area designated for a community residential land use.

This project is also the first of three phases to extend a new road west to a new access with Highway 331. Once connected, it will assist in removing some traffic from Mission Road and Highway 331 (south of Mission Road).

Improvements would include the construction of a new connector road beginning at Mission Road, across from Aspen Way, and ending at the proposed north-south connector road described previously. A portion of this project lies within a future Community Residential area, where an urban road design standard should be used including curb, gutter, and sidewalks, to accommodate future development. The remaining section is located in an Open Space area and should be constructed to a rural standard.

The estimated cost for this project follows below:

0.35 miles of new urban road @ \$2,000,000/mile	\$700,000
0.41 miles of new rural road @ \$1,100,000/mile	\$451,000
Total	\$1,151,000

East-West Connector Road - Phase II (Project R15)

This project is the second of three phases and would provide direct access to the east side of Highway 331 from the proposed North-South Connector Road.

Improvements would include the construction of a new rural road beginning at the proposed North-South Connector Road and ending at a new intersection with Highway 331.

The need for this project is driven by future plans to construct new homes along this road in the area east of Highway 331 that is designated for a community residential land use. The road would provide an alternative route to Mission Road between future homes and the proposed government office building on the west side of Highway 331.

The estimated cost for this project follows below:

0.59 miles of new rural road @ \$1,100,000/mile	\$649,000
Total	\$649,000

East-West Connector Road - Phase III (Project R16)

This project was identified from discussions with tribal officials and would serve developments planned for this area.

The project begins from a new intersection with Highway 331 across from the proposed East-West Connector Road (Phase II) and extends west and then north to a new intersection with Mission Road.

Improvements would include the construction of a new connector road, where urban road design standards should be used, such as providing curb, gutter, and sidewalks. This road would provide needed access to Mission Road and Highway 331 from the planned government building and planned housing developments.

The estimated cost for this project follows below:

0.47 miles of new urban road @ \$2,000,000/mile	\$940,000
Total	\$940,000

Connector Road Between Kash Kash Road and Wildhorse Resort (Project R17)

This project was identified as a future roadway improvement in the *Mission Community Plan*. Oriented in a north-south fashion east of Highway 331, this new road would provide a convenient connection between a realigned Kash Kash Road and the Wildhorse Resort. This connection would assist in reducing traffic demand along the highway.

Improvements would include the construction of a new connector road beginning at the entrance road to the Wildhorse Resort and ending at the realigned extension of Kash Kash Road. The proposed alignment will overlap the existing road fronting the west side of the RV park.

The estimated cost for this project follows below:

0.42 miles of new urban road @ \$2,000,000/mile	\$840,000
Total	\$840,000

Tamastlikt Cultural Institute Connector Road (Project R18)

This project was identified as a future roadway improvement in the *Mission Community Plan*. The road would provide a direct connection for those driving between Cayuse Road and the Tamastlikt Cultural Institute/Wildhorse Resort.

Improvements would include the construction of a new rural connector road beginning at the end of the proposed east-west connector road (Phase 1), near Cayuse Road, and ending at the one-way entrance roads to the Tamastlikt Cultural Institute.

The estimated cost for this project follows below:

1.38 miles of new rural road @ \$1,100,000/mile	\$1,518,000
Total	\$1,518,000

Highway 331 Improvements

I-84 EB Ramps at HWY 331 (Project R19)

The purpose of this project is to mitigate a capacity deficiency expected to occur at this intersection within the next 20 years. This project would also help establish a system of traffic signals that are spaced evenly and efficiently along Highway 331.

Improvements would include the construction of exclusive left and right-turn lanes on the eastbound off-ramp approach and the installation of a traffic signal. Improvements to this intersection would occur only when a signal becomes warranted.

As stated in the Traffic Forecast and Future Conditions section of this plan (Chapter 5), the No Build P.M. peak hour traffic operations are expected to deteriorate to LOS F and a V/C ratio of 1.73 for the off-ramp approach. With a traffic signal, operations are expected to improve to LOS B.

Once implemented, a traffic signal at this location could provide large enough gaps in mainstream traffic on the Highway 331 overpass to help delay or deter the need for a traffic signal at the westbound ramps.

A traffic signal installation at this location would help to provide the best possible traffic progression along Highway 331, assuming traffic signals are ultimately constructed at the proposed new intersection of Kash Kash Road (located ¼ mile north of the I-84 westbound ramps) and at the existing Wildhorse Casino Entrance Road. The approximate spacing between these three signals would be around 2,300 feet (around ½ mile).

According to the *Technical Guidelines for the Control of Direct Access to Arterial Highways*¹ traffic progression along the highway could be optimized under this spacing by maintaining highway speeds of 45-55 mph and cycle lengths of 60-70 seconds.

The estimated cost for this project follows below:

Install new Traffic Signal	\$150,000
Intersection Approach Improvements	\$50,000
Total	\$200,000

I-84 WB Ramps at HWY 331 (Project R20)

The purpose of this project is to mitigate any potential safety or capacity deficiency that may exist at this intersection within the next 20 years.

Improvements would include the construction of exclusive left and right-turn lanes on the westbound off-ramp approach and an exclusive right-turn lane on the north approach along Highway 331. An optional improvement would be to construct a traffic signal, if one becomes warranted.

The need for the exclusive right-turn lane on the north approach along Highway 331 is driven by the future traffic volume forecast, where over 500 vehicles are expected to make this turn during the P.M. peak hour compared to over 250 vehicles going straight through the intersection. This improvement would effectively separate turning traffic from through traffic and allow vehicles to access the westbound on-ramp more easily.

As shown in the Traffic Forecast and Future Conditions section of this plan (Chapter 5), the No Build P.M. peak hour traffic operations at the off-ramp approach to this unsignalized intersection are expected to remain at acceptable levels (LOS D and V/C ratio of 0.56). Although the traffic projection indicates a traffic signal will not be needed in the future, the need may arise due to unforeseen circumstances. If a traffic signal were installed, future P.M. peak hour operations are expected to be LOS B. It should be noted that the operational need for a traffic signal at this location may be delayed or deterred by first constructing a traffic signal at the I-84 eastbound ramps. A signal there could provide large enough gaps in mainstream traffic on the Highway 331 overpass to help vehicles on the westbound off ramp to access Highway 331 more freely.

The estimated cost for this project follows below:

Install new Traffic Signal	\$150,000
Intersection Approach Improvements	\$100,000
Total	\$250,000

Kash Kash Road at Highway 331 (Project R21)

The purpose of this project is to provide a safer access to Highway 331, and one that will accommodate future developments planned for the area. The improvements proposed are designed to provide safe access to adjacent land uses, preserve the integrity/capacity of the highway and I-84 interchange, and maintain acceptable highway operations.

¹ *Technical Guidelines for the Control of Direct Access to Arterial Highways* - Volumes I and II, Federal Highway Administration (FHWA-RD-76-86)

Improvements would include closing the existing Kash Kash Road access and rerouting this road north and west to a new intersection with Highway 331. Other improvements at the proposed intersection would include the addition of exclusive left-turn lanes along the north and south approaches along Highway 331 and a new driveway/street access on the west approach, opposite of Kash Kash Road. A traffic signal should also be installed at this intersection when warranted.

As shown in the Traffic Forecast and Future Conditions section of this plan (Chapter 5), the No Build P.M. peak hour traffic operations on the minor approaches of the proposed intersection would reach LOS E or worse over the next 20 years, if stop-control were used. If a traffic signal were installed, future operations are expected to reach LOS C.

A traffic signal installation at this location would help to provide the best possible traffic progression along Highway 331, assuming traffic signals are ultimately constructed at the I-84 eastbound ramps to the south and at the existing Wildhorse Casino Entrance Road to the north. The approximate spacing between these three signals would be around 2,300 feet (around ½ mile).

The estimated cost for this project follows below:

0.34 miles of road @ \$2,000,000/mile	\$681,800
Install new Traffic Signal	\$150,000
Intersection Approach Improvements	\$150,000
Total	\$981,800

Highway 331 Median (Project R22)

The purpose of this project is to preserve the capacity and maintain safety along Highway 331 north of the I-84 interchange, while providing safe and convenient access to adjacent land uses and creating an aesthetically pleasing environment. This project would also improve bicycle and pedestrian travel along the highway.

To plan for future development and increased traffic around the I-84 interchange, the tribe and ODOT support the construction of a non-traversable landscaped median along Highway 331 beginning at the Wildhorse Resort Entrance Road and ending at the I-84 westbound ramps. The design of the median would allow for left-turns to be made at major intersections. The project length is approximately 0.70 miles.

The tribe supports the construction of a landscaped median to create a visual gateway to the Wildhorse Resort and the Mission Community Area. ODOT supports this project as an access management tool that would improve driver safety by effectively limiting the number of conflicting turn movements along the highway.

Improvements would consist of widening the highway to include a 14-foot wide median with landscaping, maintaining two 12-foot travel lanes, and either the construction of bike lanes and sidewalks or a paved shoulder that is wide enough for bicycle and pedestrian travel. Figure 6-3 provides typical cross-sections of these two options.

The TAC agreed paved shoulders for bicycle and pedestrian travel should be provided from the I-84 westbound ramps to the proposed right-in/right-out driveway accesses north of the interchange. On the west and east sides of the highway, these right-in/right-out access points would be located 990 feet and 750 feet north of the I-84 westbound ramps, respectively. It is possible that a right-turn deceleration lane would be constructed in the northbound direction on the highway at the east access point.

The TAC supports a more urban cross-section consisting of bike lanes and sidewalks along the remaining section of Highway 331 from the proposed right-in/right-out accesses up to the Wildhorse Resort Entrance Road. The tribe considers this area to be urban because it lies within the future tourist commercial boundary.

Both types of cross-sectional improvements could be made within the existing right-of-way along the highway.

The estimated cost for this project follows below:

0.16 miles of Median Improvements @ \$700,000/mile	\$112,000
0.54 miles of Median Improvements @ \$1,800,000/mile	\$972,000
Total	\$1,084,000

Wildhorse Resort Entrance Road at Highway 331 (Project R23)

The purpose of this project is to improve driver safety and traffic progression along Highway 331.

Improvements would consist of adding an exclusive left-turn lane on the north approach along Highway 331 and adding a traffic signal when warranted.

The construction of an exclusive left-turn lane on the highway is driven by the need to improve driver safety. Cars and trucks reach speeds of over 55 mph in this area and there is potential conflict between vehicles decelerating to access the entrance road to the resort and through traffic on the highway. This improvement would effectively separate left-turning traffic from through traffic on the highway.

The installation of a traffic signal at this location is driven by the need to provide efficient traffic progression along the highway in the future. With traffic signals installed at the I-84 eastbound ramps and the proposed new intersection of Kash Kash Road, a traffic signal at the entrance road would allow traffic to be progressed efficiently. The approximate spacing between these three signals would be around 2,300 feet (around ½ mile).

The potential for further development along the Wildhorse Resort Entrance Road is high. Although the future traffic forecast and operations analysis does not indicate a traffic signal will be needed over the next 20 years, it is possible that a signal may become warranted due to unforeseen developments.

Right-of-way does not appear to be an issue at this intersection. The current right-of-way width is around 80 feet along the highway, which is sufficient for adding a left-turn lane on the north approach and a traffic signal.

The estimated cost for this project follows below:

Intersection Improvements	\$50,000
Install Traffic Signal	\$150,000
Total	\$200,000

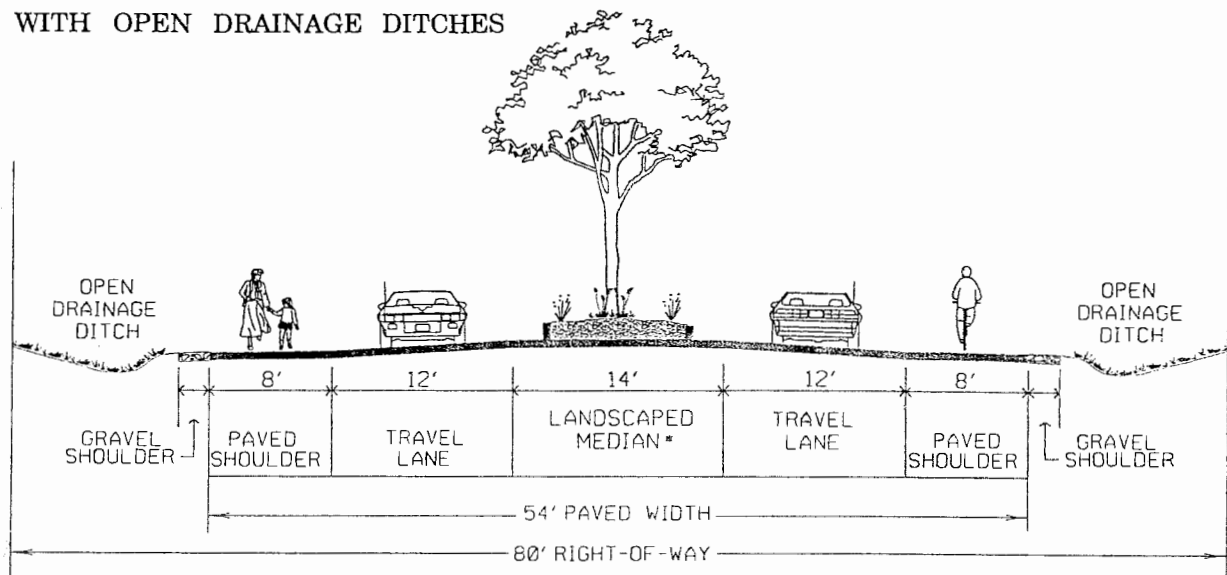
Highway 331 Shoulder Widening (Project R24)

The purpose of this project is to enhance pedestrian and bicycle safety along the highway and encourage more people to walk or ride between the Wildhorse Resort and Mission Road.

There are several areas along Highway 331 between the Resort and Mission Road where the existing shoulders lack sufficient pavement width to be conducive to bicycle and pedestrian use. As development densities increase around existing or future activity centers such as the Wildhorse Resort, Truck Stop area, and the Mission Road intersection, demand will rise to provide improved bicycle and pedestrian facilities along the

OPTION 1:

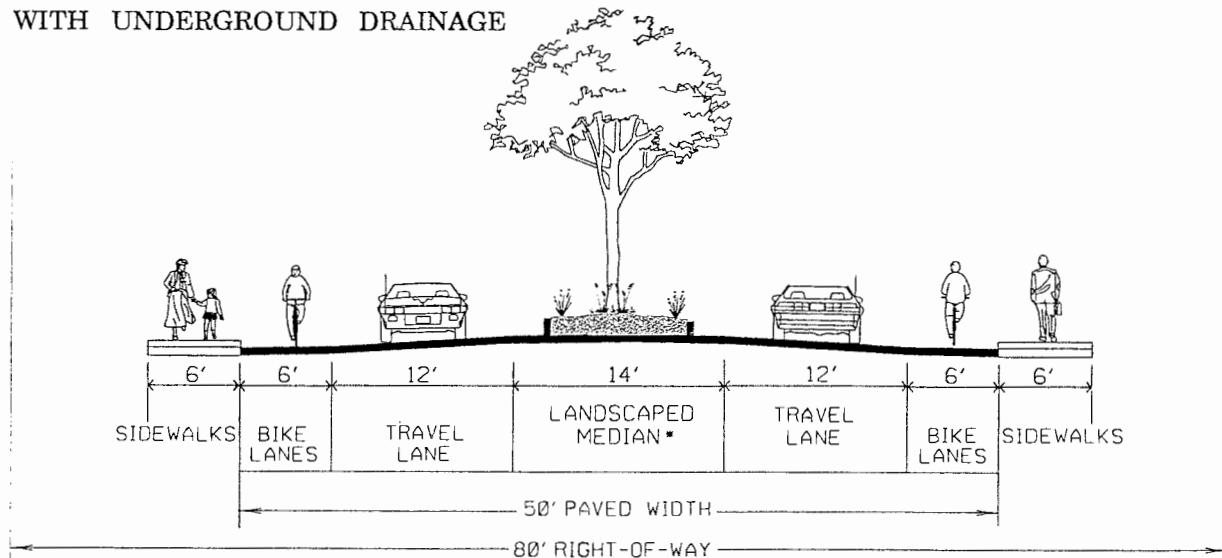
8-FOOT PAVED SHOULDERS ON BOTH SIDES OF THE ROAD
WITH OPEN DRAINAGE DITCHES



*- 14-foot left-turn lane provided at approaches to major intersections

OPTION 2:

6-FOOT SIDEWALKS WITH 6-FOOT BIKE LANES ON BOTH SIDES OF THE ROAD
WITH UNDERGROUND DRAINAGE



*- 14-foot left-turn lane provided at approaches to major intersections

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FIGURE 6-3

Highway 331 Median
Improvements

CTUIR Transportation System Plan

highway. Since the land uses adjacent to the highway between the Wildhorse Resort and the proposed new intersection south of Mission Road will remain generally rural in nature, urban improvements such as sidewalks and bike lanes may not be suitable.

This project would establish 8-foot wide paved shoulders along the highway between the Wildhorse Resort Entrance Road and the proposed new intersection just south of Mission Road. North of this project, sidewalks and bike lanes will ultimately be constructed up to the Mission Road intersection (see Highway 331 Sidewalk Improvements project). South of this project, sidewalks and bike lanes are proposed (see Highway 331 Median project).

The existing right-of-way along the highway is sufficient for shoulder widening.

The estimated cost for this project follows below:

1.00 miles of new pavement @ \$200,000/mile	\$200,000
Total	\$200,000

New Intersection South of Mission Road at Highway 331 (Project R25)

The purpose of this project is to provide a new intersection along Highway 331 to accommodate future development and street improvements planned for the area. The improvements proposed are designed to provide safe access to adjacent land uses, while preserving the integrity/capacity of the highway and maintaining acceptable highway operations.

The tribe has plans to develop a new government agency building on the west or east side of the highway, just south of the Mission Road intersection. This building would house most of the 500 employees currently working at the government offices along Mission Road. This development would have direct access to the highway via the proposed East-West Connector Road (Phases II and III). It is possible some residential development could occur in the area opposite of the new government building.

Intersection improvements would include the addition of exclusive left-turn lanes along the north and south approaches along Highway 331. It was assumed the minor road accesses on the west and east approaches would be constructed when the East-West Connector Road is built.

As shown in the Traffic Forecast and Future Conditions section of this plan (Chapter 5), the proposed intersection is expected to operate at an acceptable level (LOS D or better) with only stop-control on the minor street approaches.

The estimated cost for this project follows below:

Intersection Improvements	\$100,000
Total	\$100,000

Highway 331 Sidewalks and Bike Lanes (Project R26)

The purpose of this project is to provide urban pedestrian and bicycle improvements along Highway 331 that will encourage people, traveling from/to future developments planned for the immediate area, to walk or ride along Highway 331 instead of driving.

Improvements would include the construction of bike lanes with curb, gutter and sidewalks, from the Mission Road intersection to the proposed new intersection to the south at the East-West Connector Road, for a distance

of around 0.22 miles. This project is mainly driven by the tribe's plans to construct a tribally-owned community store at the Mission Road intersection and a new government headquarters to the south near the proposed intersection. The tribe has strategically planned for these developments to be close to each other to encourage some 500 workers to shop and eat at the proposed community store. Since the distance would be a relatively short walk (approximately six minutes) or bike ride (approximately three minutes) the need for sidewalks and bike lanes is high, but only when both developments are in place.

It is a State policy (OAR 660-012-0045- Section 1B) to provide sidewalks along arterials in urban areas, as these facilities are improved. Since Highway 331 is an arterial and the tribe has urban-type land uses planned for this area (Community Commercial, Community Residential, and Government), sidewalks should be provided along the highway when development occurs. Bikeways are also required by the same State policy. In this case, bike lanes would be an appropriate facility if sidewalks were built.

This project is also one of the first steps to providing a continuous bicycle/pedestrian connection along Highway 331 from Mission Road to the Wildhorse Casino and Truck Stop areas.

The estimated cost for this project follows below:

0.22 miles of bike lanes and sidewalks @ \$1,000,000/mile	\$220,000
Total	\$220,000

Mission Road at Highway 331 (Project R27)

This project was identified by the TAC to accommodate anticipated traffic congestion, to improve driver safety as well as pedestrian safety, and to improve community livability as commercial businesses are developed in the immediate area.

This project would include the addition of stop signs on all four approaches, the construction of sidewalks with curbing and wheelchair ramps on all four corners, and crosswalk striping for pedestrians.

Currently, there are stop signs posted only on the north and south approaches of Highway 331. There are flashing amber lights posted on the highway approaches and flashing yellow lights posted on the Mission Road approaches.

The CTUIR has plans to construct a neighborhood convenience store on the northeast corner of this intersection. According to the *Four Corners Master Plan*² the tribe plans to build the store close to the corner of the intersection to provide a more pedestrian friendly environment with parking located at the rear of the property. Since this development will draw more pedestrians to the area, sidewalks will be needed along and around all four corners of this intersection, including wheelchair ramps and crosswalk striping.

Two driveway accesses are proposed; one on Highway 331 and a second on Mission Road. Currently, there is a sidewalk flanking the south side of the lot along Mission Road and a continuous driveway along the west side of the lot along Highway 331. The development plans for the store show a single driveway accessing the highway at the north property line instead of maintaining the continuous driveway access that is there today. ODOT officials have stated that a single access will likely be permitted along Highway 331, pending a review.

² *Four Corners Master Plan*, CTUIR, Berryman & Henigar Property Counselors, March 2000.

No formal plans have been made for developing the commercially zoned parcel on the southwest corner of this intersection but tribal officials indicate the design would similar to the neighborhood store, where the building structure would be located close to the intersection.

As mentioned in the Existing Conditions section of this study (Chapter 4), P.M. peak hour traffic operations at this intersection are currently at LOS C or better for all critical movements. Without any changes, future operations are expected to reach LOS F. By providing stop-control on all four approaches to this intersection, future traffic operations are expected to improve to LOS D or better.

The current traffic control at this intersection was identified as a potential safety problem in the existing conditions section of this report (Chapter 4). All three accidents, which took place at this intersection over the past five years, involved vehicles on Highway 331 that did not yield right-of-way to free flowing traffic on Mission Road. The cause of these accidents seems unclear but may be due to the driver's perception that if a stop-sign is posted on the highway then stop-signs are posted on the Mission Road approaches as well. Tribal officials agreed that there are many "close encounters" between vehicles at this intersection. In an attempt to eliminate these types of accidents, ODOT recently posted signs stating "Cross-Street Traffic Does Not Stop", just below the stop sign. However, a similar accident recently took place in June 2000. The accident report indicated that the driver at fault was expecting the vehicle traveling on Mission Road to stop.

The estimated cost for this project follows below:

4 Stop Signs @ \$200/sign	\$800
600 ft of sidewalk and curbing @ \$30/linear ft	\$18,000
260 ft of crosswalk striping @ \$3/linear ft	\$800
Total	\$19,600

Bridge Replacements

Umatilla River Bridge (Project BR1)

The CTUIR is actively pursuing the replacement of the Umatilla River Bridge (County Bridge #59C727) to improve driver safety and comfort. The bridge is located approximately 16 miles east of the Mission area along Bingham Road (County Road #900). Bingham Road and the Umatilla River Bridge provide the only vehicular access for the residents living in Bingham Springs to the east. This road is also used to access the Umatilla National Forest.

The Umatilla River Bridge is 104 feet long and 22.5 feet wide and was built in 1955. It has steel I-beam supports and concrete decking.

A preliminary inspection of this bridge was performed recently by a representative of the BIA. The inspection revealed that the concrete has worn away in places leaving the re-bar exposed on the deck and edges. It was also noted that the bridge is unable to sustain two-way travel when trucks are crossing.

ODOT has also inspected this bridge within the last three years. The state bridge inspection survey indicates the Umatilla River Bridge is not structurally deficient or functionally obsolete, but does have a substandard sufficiency rating of 42.4.

The Umatilla County TSP identifies the need to replace this bridge over the next 20 years. However, the county may not be able to support its replacement because of limited finances. The CTUIR is currently working with the BIA to secure federal dollars for the design and replace this bridge.

The estimated cost to replace this bridge is \$198,300. This estimate is based on the bridge replacement cost stated in the Umatilla County TSP for the replacement of this bridge. The cost was factored up to year 2000 dollars from 1998 dollars, by applying a 2.4% annual inflationary rate.

Meacham Creek Bridge (Project BR2)

The CTUIR is also pursuing the replacement of the Meacham Creek Bridge (County Bridge #59C726) to improve driver safety and comfort. The bridge is located just west of the Umatilla River Bridge along Bingham Road (County Road #900). Bingham Road and the Meacham Creek Bridge provide the only vehicular access for the residents living in Bingham Springs to the east and vehicular access the Umatilla National Forest. This bridge also provides the only means for vehicles to access Meacham Creek Road (County Road #911), which follows the UPRR rail line to the south and provides access to fish hatcheries.

The Meachum Creek Bridge is 102 feet long and 22.5 feet wide and was built in 1955. It has steel I-beam supports and concrete decking.

A preliminary inspection of this bridge was also performed by a representative of the BIA, and revealed that the condition of this bridge is similar to the Umatilla River Bridge.

The state bridge inspection survey indicates the Meacham Creek Bridge is not structurally deficient or functionally obsolete, but does have a substandard sufficiency rating of 44.3, which is slightly better than the sufficiency rating for the Umatilla River Bridge.

The CTUIR has submitted a request through the BIA for federal dollars to design and replace this bridge. However, the request for design money was denied, as the federal government did not agree with the warrants for improvement. A more formal inspection of this bridge is expected in the near future to assess the need for replacement.

The estimated cost to replace this bridge is \$194,400. This estimate is based on 1998 unit costs supplied by ODOT, which were factored up to reflect year 2000 dollars. This estimate assumes a cost of \$6.30 per square foot for bridge removal and \$63 per square foot for bridge construction. It is also assumed that the deck width would be increased to at least 28 feet to account for a sidewalk on one side of the bridge.

Thornhollow Cattle Pass Bridge (Project BR3)

The Thornhollow Cattle Pass Bridge (County Bridge #59C378) is in need of replacement. The bridge is located approximately 11 miles east of the Mission area along Thorn Hollow Road (County Road #745). Thorn Hollow Road and all the bridges along this road provide vehicular access for more than 35 residences north of Bingham Road.

The Thornhollow Cattle Pass Bridge is 20 feet long and 24 feet wide and was built in 1965.

ODOT has also inspected this bridge within the last three years. The state bridge inspection survey indicates this bridge is structurally deficient.

The County, BIA, and CTUIR support the replacement of this bridge. The BIA may be the only source of funding for its replacement, due to the limited resources of the County and tribe.

The estimated cost to replace this bridge is \$36,000. This estimate is based on the bridge replacement cost stated in the Umatilla County TSP for the replacement of this bridge. The cost was factored up to year 2000 dollars from 1998 dollars, by applying a 2.4% annual inflationary rate.

Wildhorse Creek Bridge (Project BR4)

The Wildhorse Creek Bridge (County Bridge #59C401) is in need of replacement. The bridge is located approximately 2 miles south of Athena and Weston along Wildhorse Road (County Road #685).

The Thornhollow Cattle Pass Bridge is 26 feet long and 20 feet wide and was built in 1952.

ODOT has also inspected this bridge within the last three years. The state bridge inspection survey indicates this bridge is structurally deficient.

The County, BIA, and CTUIR support the replacement of this bridge. The BIA may be the only source of funding for its replacement, due to the limited resources of the County and tribe.

The estimated cost to replace this bridge is \$46,000. This estimate is based on the bridge replacement cost stated in the Umatilla County TSP for the replacement of this bridge. The cost was factored up to year 2000 dollars from 1998 dollars, by applying a 2.4% annual inflationary rate.

Bicycle and Pedestrian Improvements**Mission Road Bike/Pedestrian Facility - Phase I (Project BP1)**

The purpose of this project is to encourage those residents living along or adjacent to Mission Road to walk or ride a bicycle rather than use an automobile for short distance trips. This project is around 3 miles in length and extends from Highway 331 to the west Reservation boundary near Hal's Trailer Court.

The tribe is currently considering two different options (Options 1 and 2) to provide bicycle and pedestrian improvements along Mission Road. Although the BIA is now in the process of performing the engineering design for one of these options, it was determined in the TAC meetings that a second alternative should be evaluated to confirm whether or not the BIA is pursuing the best design. One of these options will ultimately be selected by the tribe and placed in the priority list of transportation improvements for the CTUIR Transportation System Plan. Typical cross-sections of each option are shown in Figure 6-4.

The evaluations of both options consist of an overview and addresses several factors including safety, socioeconomic impacts, land use impacts, and cost. Following this, are the transportation consultant's recommendations.

It should be noted that Phases I and II together address the immediate need to provide a safe and attractive bicycle and pedestrian connection linking the Reservation with the city of Pendleton.

Option 1: Widen Mission Road to Include Paved Shoulders

Overview: Over the past several months the BIA has been working on final design plans to widen Mission Road to provide bicycle lanes. Currently, the design is roughly 90% complete and construction could conceivably begin within the next one to two years. Design plans show two 11-foot travel lanes with 8-foot paved shoulders on both sides of the road. The paved shoulders would be striped for 6-foot bike lanes. The design also includes 2-foot gravel shoulders and open drainage ditches on both sides of the road, all within the existing 60-foot right-of-way.

Safety: Safety for bicyclists will be enhanced with the addition of bike lanes. Today, the narrow shoulders along Mission Road force bicyclists near or into the travel lanes, creating a potential conflict

with traffic. According to the ODOT Bicycle and Pedestrian Plan³, a shared roadway condition, where bicyclists share the travel lane with vehicles, is becomes less suitable in rural areas where traffic speeds and volumes increase. Currently, the posted speed along Mission Road is 40 mph and daily traffic volumes are projected to increase from around 3,500 to 4,500 vehicles. With 6-foot bike lanes established under this option, cyclists would be able to safely avoid conflicts with passing vehicles.

Pedestrian safety would also be improved with wider shoulders established along Mission Road. With six-foot bike lanes and an additional two-feet of paved shoulder, a pedestrian would have plenty of clearance from passing vehicles.

Currently, Mission Road is striped with 12-foot travel lanes, which is a desirable width for drivers. The design plan being prepared by the BIA shows a reduction to 11-foot travel lanes. The purpose of reducing the travel lane width is to limit the amount of shoulder widening needed to install bike lanes, thus reducing overall construction cost. However, narrower travel lanes will reduce the lateral clearance for drivers, increasing their chances of straying outside the designated travel lane. This may adversely affect the safety for bicyclists and pedestrians traveling along the shoulders.

With wider shoulders established along Mission Road, drivers making emergency stops will have sufficient room to pull completely off the road.

Another tool to consider when making improvements along Mission Road would be the addition of rumble strips between the travel lanes and bike lanes. By providing a continuous set of lateral grooves in the pavement, rumble strips can warn drivers when they travel outside the designated travel lane.

Socioeconomic Impacts: Widening the paved shoulders along Mission Road will make this facility more attractive to bicyclists and pedestrians alike. Potential users include residents living along Mission Road who work in Pendleton or in the government offices along the east end of Mission Road, children traveling to or from school in Pendleton, or even residents making a trip to the planned grocery store at the Highway 331 intersection. Residents could also use the shoulders for recreational uses, i.e. jogging, bicycling, and roller-blading. This option would also create safer conditions for hitchhiking, which is common along Mission Road

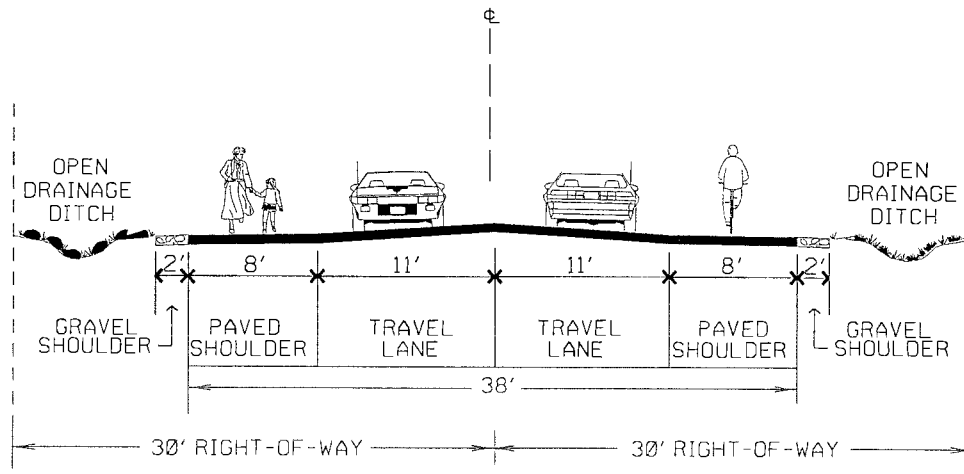
It should be noted that if striping is used to designate bike lanes along the paved shoulders of Mission Road, pedestrians might feel that walking within a designated bike lane is not appropriate and may choose to walk on the gravel shoulder. To eliminate confusion, it would be more appropriate to have only a painted stripe between the travel lane and outside shoulder. This would designate 8 feet of paved shoulder for both bicyclist and pedestrian use.

Land Use Impacts: According to the design plans being prepared by BIA, this option will require a small amount of right-of-way to be acquired. Right-of-way is generally 30 feet to each side of the roadway centerline for a total right-of-way width of 60 feet. A majority of the changes to the cross-sectional features of the roadway, shoulders, and drainage ditches should occur within the right-of-way.

Cost: The estimated cost for constructing bike lanes along Mission Road is around \$1,000,000. The BIA engineer in charge of the design has made an effort to minimize the construction cost by maintaining the existing roadway centerline in the design and widening the roadway from both sides. This will minimize the amount of fill and asphalt needed for construction.

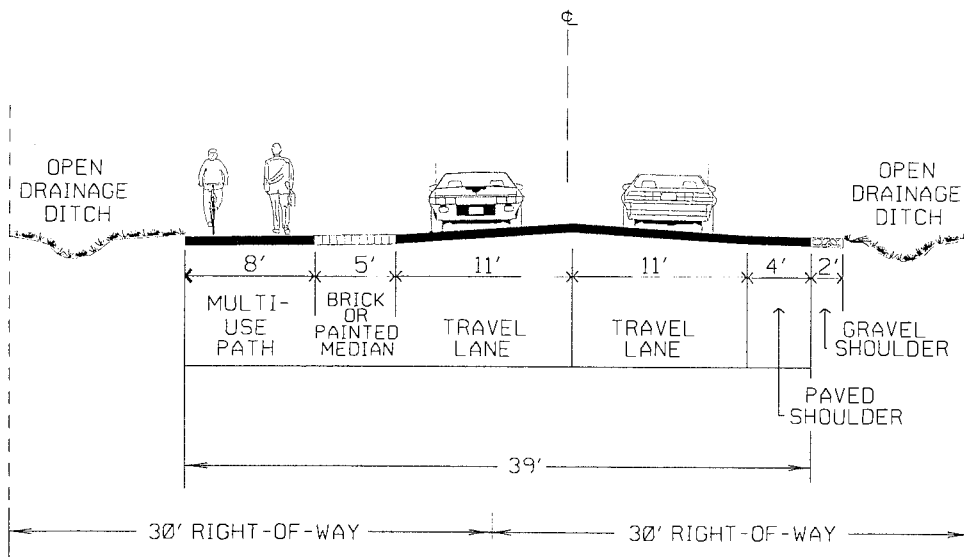
³ Oregon Bicycle and Pedestrian Plan, ODOT, 1995, pg. 66

OPTION 1:
8-FOOT PAVED SHOULDERS ON BOTH SIDES OF THE ROAD



*- This cross-section will maintain the existing roadway centerline.

OPTION 2:
MULTI-USE PATH ON SOUTH SIDE OF ROAD



*- This cross-section will cause the existing roadway centerline to move approximately 10 feet to the north.



**DAVID EVANS
AND ASSOCIATES, INC.**
2828 S.W. CORBETT AVENUE
PORTLAND, OR. 97201-4830 (503) 223-6663

(Not to Scale)

FIGURE 6-4

**Bicycle/Pedestrian Improvement
Options Along Mission Road**

CTUIR Transportation System Plan

Because the CTUIR has limited transportation finances, the tribe cannot afford to fund this project. If pursued, the CTUIR will need to borrow its future allocation of construction dollars from the BIA. This means all other CTUIR projects funded by the BIA will be delayed by approximately five to six years.

Option 2: Construct A Multi-Use Path Along Mission Road

Overview: This project would include the construction of an 8-foot wide multi-use path along Mission Road. From discussions with tribal and BIA staff, the most likely location for this path would be along the south side of the road separated from the eastbound travel lane by a 5-foot median. In order to install the path within the available right-of-way and maintain open drainage ditches, the existing centerline and crown of the road would have to move up to ten feet to the north. The width of the travel lanes would be restricted to 11 feet and the shoulder along the north side of the road to only 4 feet. The median separating the path and eastbound travel lane would have to be at-grade to provide some room for vehicles to make emergency stops. Also, an at-grade median would allow the path to be plowed during the winter months.

Safety: Safety for bicyclists and pedestrians would be greatly improved with the addition of a multi-use path. With a separate multi-use path, bicyclists and pedestrians would no longer have to ride or walk along the shoulder of the road. However, the proposed at-grade median separating the path and eastbound travel lane does not guarantee absolute protection from passing vehicles.

Driver comfort and safety may not necessarily be enhanced due to the proposed improvements of this option, since travel lanes will be restricted to 11 feet and shoulder widths will only be 4 to 5 feet. As mentioned previously, restricting travel lane widths can increase driver discomfort and the possibility of driving outside the designated lane and onto the shoulder. Also, the narrower shoulder widths will not allow drivers to pull completely off the road when making an emergency stop.

Socioeconomic Impacts: The socioeconomic impacts for this option are similar to Option 1.

Land Use Impacts: By moving the centerline of the road to accommodate a multi-use path, this option will require a small amount of right-of-way to be acquired. Adding a path and changing the cross-sectional features of the roadway, shoulders, and open drainage ditches could occur within the existing 60-foot right of way.

Cost: The estimated cost for constructing bike lanes along Mission Road is roughly three times the cost of Option 1, at around \$3,000,000. The BIA engineer in charge of the design for Option 1 states that an exceptional amount of asphalt material will be required to move the roadway centerline and crown. He also stated that the use of painted asphalt or brick to define the at-grade median separating the path and eastbound travel lane would add to the construction cost.

Again, if the CTUIR wishes to pursue this option, the tribe will need to borrow the construction dollars from the BIA. This means all other CTUIR projects funded by the BIA will be delayed by approximately fifteen years.

Transportation Planning Consultant's Recommendation

After evaluating the two options being considered, it is recommended that Option 1 be pursued by the CTUIR and added to the priority list of transportation improvements for the TSP. Option 1 will clearly cost much less in construction dollars and would allow the CTUIR to pursue other BIA funded projects in the near future. The wide shoulders proposed under this option focuses not only on the safety of bicyclists and pedestrians, but drivers as well.

There are also some recommended changes to the design plans currently being prepared by the BIA. These are to allow for 12-foot travel lanes along Mission Road, with the addition of 8-foot paved shoulders. Other options to consider are the addition of 8-inch wide painted stripe separating the travel lane and shoulder, and the installation of rumble strips. Signage should also be placed along the road to indicate the proper direction of bicycle travel.

Mission Road Bike/Pedestrian Facility - Phase II (Project BP2)

Together with Phase I, this project would complete the extension of a bicycle/pedestrian facility along Mission Road to the city of Pendleton. Once constructed, it would encourage residents living on the Reservation to walk or bike into Pendleton, instead of using an automobile. Residents could use such a facility to ride to work or school and for recreational uses.

Several options were addressed on how to extend a bike/pedestrian facility into Pendleton from Mission Road. The type of facility and location of improvements had to be weighed against various constraints, such as the topography of the land, natural and man-made physical barriers such as the Umatilla River and the UPRR line, and the existing development patterns along OR Highway 11 and US Highway 30. Other factors were considered such as minimizing construction costs, continuity with other existing or planned bike/pedestrian facilities, and minimizing out-of-direction travel.

Of the various options considered, the most viable alternative would be to construct a multi-use path along the north side of Mission Road and US Highway 30 beginning at the west Reservation boundary and terminating at Court Place in Pendleton. This distance is approximately one mile. At this time, it is uncertain whether at-grade or grade-separated improvements would be needed at the intersection of US Highway 30 and OR Highway 11, and how this path would connect with Court Place. There is also an uncertainty about how this path would transition into the bike/pedestrian facility planned under Phase I. These issues should be addressed at a later time when the CTUIR or other agency begins implementation.

It should be noted that there are several bicycle and pedestrian facilities in northeastern Pendleton that may provide useful and continuous connections for the Mission Road Bike/Pedestrian project. These facilities include:

- The River Pathway on the south side of the Umatilla River, just west of OR Highway 11, ending near the little league park (bike and pedestrian facility),
- A signed bike route along Court Place and 20th Street (bike facility),
- Bike lanes along OR Highway 11 from US Highway 30 to the east UGB line (bike facility), and
- Continuous and intermittent sidewalks along the north and south sides of US Highway 30, from the UPRR viaduct to the OR Highway 11 intersection (pedestrian facility).

According to the Pendleton TSP, the city has plans to establish bike lanes along Court Place, 20th Street, and a portion of US Highway 30 from 20th Street to the east UGB line. Striping bike lanes along Court Place and 20th Street should be relatively easy since they are low volume roads and are already signed as part of a bike route. However, the possibility of establishing bike lanes along US Highway 30 from 20th Street east through the OR Highway 11 intersection within the next 20 years is uncertain.

Representatives from ODOT and the City of Pendleton recently performed a study to look at various options for improving the OR Highway 11 connection with US Highway 30. No analysis was done to assess bicycle and pedestrian needs at this intersection since the main purpose of this study was to address traffic safety. No formal recommendation was made as part of the study for future improvements to this intersection. However, a traffic signal could conceivably be installed but it may be more than 20 years before this type of improvement

is warranted. If built, the type of geometric improvements necessary to install a traffic signal would then allow for the design of bicycle lanes along US Highway 30. Until then, the chances of constructing bike lanes or paved shoulders (at least six feet in width) along US Highway 30 are remote. There are other constraints along the highway that would hinder such an improvement. These include a limited right-of-way and pavement width contained within the businesses present along both sides of the highway. A representative from the CTUIR public works department stated that it would not be possible to construct a bike lane in the eastbound direction along the US Highway 30 off-ramp onto Mission Road because of limited clearance under the US Highway 30 overpass. He also mentioned that this area does not get much exposure to sunlight and that the road is often icy during the winter months and would not be safe for bicyclists.

Another option was explored to extend a path across the Umatilla River to connect with Riverside Avenue. It was thought that from Riverside Avenue, access could either be provided to the bicycle lane on Oregon Highway 11 or a new path extending west and back over the Umatilla River to connect with the Riverside Trail. Neither option would be feasible or practical as they would be expensive to build and would cause out-of-direction travel.

If the CTUIR wishes to pursue this project within the next 20 years, the best option at this point would be to construct a multi-use path along the north side of Mission Road and US Highway 30. Such a path would either continue at-grade through the intersection of Oregon Highway 11 and cross two roads, or cross over Oregon Highway 11 via a pedestrian bridge located just south of the UPRR overcrossing. A potential connection to Court Place could be made either through the parking lot of the adjacent Ford dealership along an easement or around the west side of the dealership along a widened sidewalk. The estimated cost for this project is \$329,200, assuming a pedestrian bridge is constructed.

Wildhorse Resort Entrance Road Path (Project BP3)

The purpose of this project is to provide a multi-use path linking the entire Wildhorse Resort (casino, hotel, RV park, and golf course) to the Tamastlikt Cultural Institute. This project was identified by the CTUIR Department of Economic and Community Development. It is needed to enhance connectivity between the various developments within the Wildhorse Resort and to the Tamastlikt Cultural Institute. Potential users of this facility are the patrons of the resort, visitors, workers, and recreationalists. This project would also complement the Mission Trail path recently constructed.

The location of this path is tentative, but would likely extend along the north side of the one-way loop road exiting the Tamastlikt Cultural Institute, pass by the golf course, cross the four-lane entrance road to the Wildhorse Resort, pass by the RV park and hotel, and end at the Casino.

The estimated cost for an 8-foot paved path is as follows:

5,500 ft of multi-use path @ \$15/linear ft	\$82,500
Total	\$82,500

South Market Road Path (Project BP4)

The purpose of this project is to provide a bicycle and pedestrian route along South Market Road, with access to Highway 331 via the overpass over I-84. Future developments along the west side of South Market Road could consist of industrial warehouse and storage facilities just south of I-84 and residential developments near Tutuilla Church Road. Once constructed, these developments would drive the need for improved bicycle and pedestrian access along South Market Road and north to Highway 331.

Improvements would include a multi-use path constructed along the west side of South Market Road, from Tutuilla Church Road to the I-84 interchange. The TAC decided that a multi-use path would be better than widening the paved shoulders along South Market Road. The main reason was the tribe already owns the land west of South Market Road and could build and maintain a path as the area develops. Shoulder widening along South Market Road would prove to be more expensive and require the County's assistance.

Connectivity to the Highway 331 overpass was not addressed in detail. This issue should be addressed once the tribe actively pursues design and construction.

The estimated cost for an 8-foot paved path is as follows:

2,200 ft of multi-use path @ \$15/linear ft	\$33,000
Total	\$33,000

Path Across Umatilla River (Project BP5)

The purpose of this project is to improve community livability and provide residents living along Kirkpatrick Road an alternative to driving or having to walk or ride a bike on the narrow shoulders along Highway 331 to Mission Road.

Improvements would consist of a new multi-use path connecting Mission Road with Kirkpatrick Road. This project would also consist of a new pedestrian bridge over the Umatilla River. The exact location of this path is unknown but could be in the vicinity of the baseball park and swimming hole. Potential connections could be provided along Kelly Lane to Kirkpatrick Road and Parr Lane to Mission Road.

Initially, the TAC explored the option to widen the shoulders along Highway 331 for bicycle and pedestrian travel, but this concept was dismissed. The improvements needed to do this would be expensive, particularly the retrofication of the Umatilla River Bridge and UPRR rail crossing.

The TAC agreed such a path located across from a major activity center such as the governmental offices would encourage people living on the north side of the river to walk or ride to work. This path would also attract recreational users as it would tie into the path recently constructed from the government offices to the Tamastlikt Cultural Institute.

Because much of the area lies within the Umatilla River floodplain, it is possible the pathway could be submerged under water during times of flooding.

The estimated cost for an 8-foot paved path and bridge are as follows::

2400 ft of Bike/Pedestrian Path @ \$15/linear ft	\$36,000
200 ft Bike/Pedestrian Bridge @ \$450/linear ft	\$90,000
Total	\$126,000

CHAPTER 7: ACCESS MANAGEMENT POLICIES AND STRATEGIES

Access management is an important tool for promoting safe and efficient travel for both local and long distance users along a roadway. Too many access points along busy roads lead to an increased number of potential conflict points between vehicles entering and exiting driveways and through vehicles on the road. This leads to not only increased vehicle delay and deterioration in the level of service, but may lead to a deterioration in safety.

The implementation of access management policies is essential if the safety, efficiency and investment of the existing highways like Highway 331 are to be protected. Access management guidelines are generally not intended to eliminate existing intersections or driveways. Rather, they should be applied as new development occurs. Over time, as land is developed and redeveloped, the access to roadways will meet these guidelines. However, where there is a recognized problem, such as an unusual number of collisions, these techniques and standards can be applied to retrofit existing roadways.

Prepared concurrently with the CTUIR TSP, the Highway 331 Corridor Plan identifies various access management techniques, policies, and strategies that are designed to enhance the integrity (capacity, safety, and level-of-service) of Highway 331 while providing safe and convenient access to adjacent land uses along this highway. Because Highway 331 is one of the principal routes on the Umatilla Reservation these techniques, policies, and strategies are summarized in this chapter of the TSP. An access management plan for the highway follows in the Transportation System Plan (Chapter 8).

ACCESS MANAGEMENT TECHNIQUES

The following techniques describe how the number of access points to a road can be restricted or reduced, and are the most applicable to the conditions along Highway 331:

- Restrictions on spacing between access points (driveways) and public/private roads based on the type of development and the speed along the road.
- Sharing of access points between adjacent properties.
- Providing driveway access via local roads where possible.
- Constructing frontage roads to separate local traffic from through-traffic.
- Providing service drives to prevent spill-over of vehicle queues onto the adjoining roadways.
- Providing deceleration and right-turn only lanes.
- Offsetting driveways at proper distances to produce T-intersections which minimize the number of conflict points between traffic using the driveways and through traffic.
- Installing median barriers to control conflicts associated with left-turn movements (in or out of driveway or roadway).
- Installing barriers to the property along the road to restrict access width to a minimum.

1999 OREGON HIGHWAY PLAN ACCESS MANAGEMENT STANDARDS

The 1999 OHP specifies an access management classification system for state facilities. It also establishes standards and guidelines to be applied when making access management assignments. Highway 331 is designated as a District highway in the 1999 OHP. District highways are described as facilities of county-wide significance and function largely as county and city arterials or collectors. In rural areas, their objective is to provide safe and efficient, moderate to high-speed continuous flow operation. The access spacing standards for a District level highway like Highway 331 are summarized in the following sections.

General Access Spacing Standard

The general access spacing standard is 700 feet for a District highway in rural and urban areas where the posted speed is greater than or equal to 55 mph. This standard applies to both streets and driveway approaches and is measured from the center of one access to the center of the next access on the same side of the road. This standard generally applies to unsignalized access points.

Deviations to Access Spacing Standard

Under some circumstances, deviations to the general access spacing standard are allowed. The two types of deviations are minor and major. A minor deviation to the access spacing standard allows for a spacing of 650 feet between driveways and 660 feet between public roads. A permit for an access under a minor deviation is allowed per the review of the district highway engineer. Any request for an access at less than the minor deviation spacing standard shall be considered a major deviation. Although there are no spacing standards for a major deviation, the process for state approval is lengthy and thorough. To process a major deviation application, a technical group must be established to assist the regional highway engineer with the review. Rejected applications for an access permit under a major and minor deviation can be appealed through a formal appeals process.

Access Spacing Standards for Freeway Interchange Areas

The access spacing standards for interchanges with two-lane crossroads, such as the interchange of Highway 331 with I-84, are listed below in Table 7-1 and shown graphically in Figure 7-1. It should be noted that the interchange access management standards displayed in the table supercede the general access management standards unless the latter standards are greater.

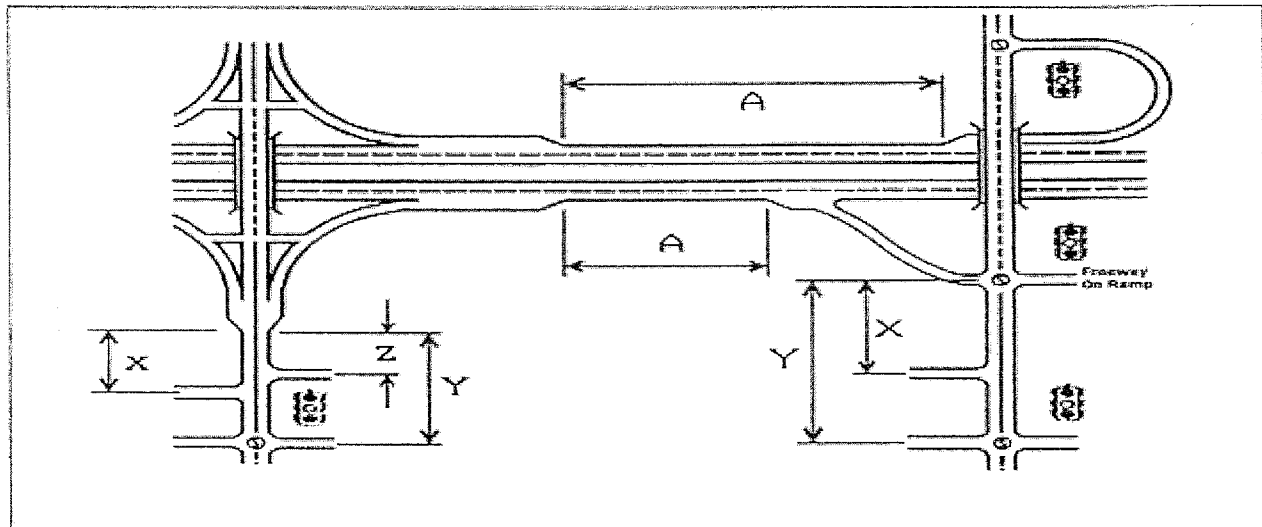
TABLE 7-1
MINIMUM SPACING STANDARDS APPLICABLE TO FREEWAY INTERCHANGES
WITH TWO-LANE CROSSROADS

Category of Mainline	Type of Area	Spacing Dimension			
		A	X	Y	Z
FREEWAY	Fully Developed Urban	1 mile	750 ft	1320 ft	750 ft
	Urban	1 mile	1320 ft	1320 ft	990 ft
	Rural	2 mile	1320 ft	1320 ft	1320 ft

Notes:

- 1) If the cross road is a state highway, these distances may be superceded by the Access Management Spacing Standards, providing the distances are greater than the distances listed in the above table.
 - 2) No four-legged intersections may be placed between ramp terminals and the first major intersection.
- A = Distance between the start and end of tapers along freeway between adjacent interchanges
X = Distance to the first approach on the right side of the two-lane crossroad; right in/ right out only
Y = Distance to first major intersection on the two-lane crossroad; no left turns allowed within this roadway section
Z = Distance between the last right in/ right out approach to the two-lane crossroad and the start of the taper for the on-ramp to the freeway

Figure 7-1
MINIMUM SPACING STANDARDS APPLICABLE TO FREEWAY INTERCHANGES
WITH TWO-LANE CROSSROADS



It should be noted there is no official urban growth boundary on the Reservation. However, the CTUIR considers the undeveloped land in the northwest and southwest quadrants of the I-84/Highway 331 interchange to be “urban” areas. The CTUIR also considers the developed land in the northeast quadrant of the interchange to be “fully developed urban”, since there is a truck stop (Arrow Head Truck Plaza) and a restaurant (Cody’s), and the Wildhorse Resort further to the north. The “urban” designation is supported by the *Mission Community Plan*, where the land immediately north of the interchange is zoned for future tourist commercial uses on the east and west sides of Highway 331. There are two areas along the east side of Highway 331 that are designated for rural uses. They are located between I-84 and the Arrowhead Truck Plaza, and between the truck stop and the Wildhorse Casino. The land immediately south and west of the interchange is zoned for future industrial land use. The tribe also has plans to extend water and sewer services to most of the area surrounding the interchange, except in the southeast quadrant, which will remain rural.

Given the above criteria, the following 1999 OHP access spacing requirements apply in the I-84 Interchange area:

- the distance to first approach on the right (right in/right out only) from a ramp terminal is 750 feet on Highway 331 and 1,320 feet on South Market Road,
- the distance to first major intersection from a ramp terminal is 1,320 feet on both Highway 331 and South Market Road,
- the distance between the last approach road and the start of the taper for the on-ramp is 990 feet along Highway 331, and

Signal Spacing Standard

In terms of signal spacing, a distance of a half-mile is desirable for Statewide and Regional Highways. Even though Highway 331 is classified as a District highway, ODOT’s policy is to support a half-mile signal spacing. Signal spacing standards supercede general access spacing standards at signalized intersections.

ACCESS MANAGEMENT STRATEGIES FOR HIGHWAY 331 AND I-84 INTERCHANGE

With the assistance of the TAC, access management strategies were developed for Highway 331 including the I-84 Interchange and South Market Road. The focus was primarily on three areas in the corridor, where land is zoned for future commercial uses (tourist and community) and growth potential is high or where the CTUIR has recently purchased land for future planned developments. These areas include:

- Area surrounding the Mission Road intersection,
- Area from Wildhorse Resort Entrance Road to I-84 Interchange
- South Market Road from I-84 Interchange to Tutuilla Church Road

The areas zoned for rural uses (agricultural and residential) as identified in the *Mission Community Plan*, will remain largely rural along the highway. Therefore, specific strategies for these areas were not seen as a critical need.

In the beginning stages of developing access strategies for the corridor, the TAC reviewed the general access spacing standards documented in the *1999 OHP* that are applicable to a District highway such as Highway 331. Also reviewed were the access standards for freeway interchange areas and signal spacing standards.

Mission Road Intersection (Four Corners Area)

The TAC developed an access management strategy for Highway 331 in the area of the Mission Road intersection.

Northeast Corner: From Mission Road intersection north to the UPRR crossing there are numerous driveways to homes on the east side of the highway that do not comply with the spacing standards of the *1999 OHP*. The future land use designation for this area is community commercial and it is a future goal of the CTUIR to consolidate or eliminate these driveways as homes become vacated and commercial development occurs. At this time there are no formal plans for redeveloping the individual parcels with homes. The tribe does have formal plans to construct a community grocery store on the northeast corner of the Mission Road intersection, as described in the *Four Corners Master Plan*. Currently, there is a long continuous driveway accessing the site along the east side of the highway. The tribe intends to provide a single driveway at the northern edge of the property boundary and install a continuous sidewalk with curbing to the Mission Road intersection. It is possible this single driveway would provide joint access to the adjacent property to the north, as it develops over time. Although this driveway would not meet the minimum access spacing of 700 feet along the highway, having a joint access with the adjacent property does move towards the spacing standards of the *1999 OHP*.

Northwest Corner: On the west side of the highway and north of Mission Road, there is a single driveway to a vacant site next to the UPRR tracks (900 feet north of Mission Road). This site is on a parcel of land zoned for a future community commercial land use. There is another vacant parcel to the south that is zoned for the same use, is much larger in size, and extends all the way to the Mission Road intersection. According to the *Four Corners Master Plan*, future development on this larger parcel is tentative but could include industrial storage facilities, a riding club/stable yard, and another shopping-type development on the street corner. Currently, there is no access to this parcel along the highway. The CTUIR intends to have at least two highway accesses to the parcel. A logical location for the first access would be to share the existing access to the adjacent parcel to the north. The second location would be roughly half way between the new joint access and Mission Road. This would create a spacing of 450 feet between accesses. If two accesses are provided to this parcel, the OHP spacing standard of 700 feet for a District Highway with a posted speed of 55 mph will not be met. However, the CTUIR feels the average speed of cars in the area is well below 55 mph due to the presence of stop signs on the highway approaches to the Mission Road intersection. If a speed study concludes the actual speed of cars is significantly lower than 55 mph, the CTUIR may pursue a second access to this parcel. If the posted speed were lowered, say to 35 mph, the required spacing between access points along the highway would decrease to 400 feet. It is also possible for the

CTUIR to apply for a deviation to the spacing standard. Additionally, the ODOT Regional Traffic Operations Manager stated that if the spacing standards cannot be met, special design features such as median control, a right-in/right-out access, or a deceleration lane may allow for a second access to be permitted. Another alternative would be to provide a new street accessing the parcel from Mission Road. Umatilla County roadway standards would permit a new access roughly 250 to 500 feet from the Highway 331 intersection. The TAC agreed that since a second access would not meet current OHP spacing standards, based on current conditions, it will not be shown as a planned access in the Access Management Plan of this corridor study.

Southwest and Southeast Corners: A new highway intersection to a proposed East-West Connector street would be located along Highway 331 approximately 1,160 feet south of Mission Road. The proposed street access on the west side of the highway would meet the access spacing requirements of the 1999 OHP. The access from the east would also meet the spacing standard if an existing agricultural access another 160 feet to the south is removed. Closer to the Mission Road intersection, there are single driveways on the west and east sides of the highway only 160 feet from the Mission Road intersection. According to the *Four Corners Master Plan*, future development on southwest corner could include a produce market with new housing on the southeast corner, but plans are still tentative at this time. Access to the existing driveway on the west and east sides of the highway would need to be revised during the development review process. Perhaps a speed survey to reduce the posted speed or the various access management measures discussed previously could be employed in this area to retain the highway accesses to these parcels when they are redeveloped.

Wildhorse Resort to I-84 Interchange

The TAC reviewed three different access management strategies prepared by the Consultant for a segment of Highway 331 extending from the Casino Employee Entrance Road to the I-84 Interchange. After reviewing these strategies, the TAC then developed and agreed to a fourth and "preferred" option. All four options including the "preferred" option are shown graphically in Figures 7-2 – 7-5.

Option 1 is a strategy that would be in full compliance with the 1999 OHP without any major or minor deviations from the spacing standards. It would consist of the removal of all existing driveways between the Casino Employee Entrance Road and the I-84 westbound ramps and the establishment of a single new intersection at 1,320 feet north of the westbound ramps. The highway access at Kash Kash Road would be removed and Kash Kash Road will be realigned to the east approach of this new intersection.

Option 2, is a strategy based on a proposed truck master plan for relocating the Arrowhead Truck Plaza to the west side of the highway. Similar to Option 1, this strategy would include the relocation of Kash Kash Road to a new intersection 1,320 feet north of the I-84 westbound ramps. All the existing driveways on the east side of the highway between the Casino Employee Entrance Road and I-84 would be removed, except at one location 750 feet north of the I-84 westbound ramps. A right-in access would be imposed upon this driveway. In the same location a right-out only access would be established at a new driveway on the west side of the highway. A new intersection with driveways on both sides of the highway would be constructed 665 feet north of the new Kash Kash Road intersection and approximately 175 feet south of the dirt road across from the Casino Employee Entrance Road. This option does not comply with the 1999 OHP access standards.

Option 3, is a variation of the first two options. This option would not meet 1999 OHP standards either.

A fourth alternative, known as the "preferred" option, was developed and agreed upon by the TAC. This option, if implemented, would comply with the 1999 OHP standards assuming the following criteria is true:

- The posted speed is 55 mph along the entire length of Highway 331 (even though traffic may be traveling at lower speeds near the interchange)

- The west side of the highway is considered to be in an urban area since it lies in a future tourist commercial zone, is located within the Mission Community, and the tribe has plans to extend water and sewer services to this area.
- A majority of the land on the east side of the highway is deemed for future tourist/commercial uses and is considered to fully developed urban in the vicinity of the Arrowhead Truck Plaza site.

The "preferred" option would have a right-in only access on the east side of the highway at 750 feet north of the I-84 westbound ramps. Also, a right-out only access would be installed on the west side of the highway at a distance of 990 feet from the I-84 westbound ramps. These distances meet the OHP access spacing standards for an interchange area assuming the land east of the highway is in a fully developed urban area and the land west of the highway is in an urban area. The first fully directional intersection would be located 1,320 feet from the I-84 westbound ramps. Kash Kash Road will be realigned to the east approach of this intersection. The second fully directional intersection would be located another 900 feet north. At this location, accesses are already provided on both sides of the highway. The east driveway to the Casino Employee Entrance Road will not be changed. The dirt road on the west side of the highway will be realigned to intersect directly across from the Casino Employee Entrance Road. About 270 feet north of the dirt road, trucks access several storage tanks on the west side of the highway. To meet OHP standards, the access to this area would need to be restricted along the highway and an alternate access would need to be provided along the dirt road when it is improved.

Under the "preferred" option the CTUIR is proposing the removal of five driveways accessing the existing truck stop and restaurant on the east side of the highway and one access on the west side of the highway which serves an abandoned home but is still being used by agricultural vehicles.

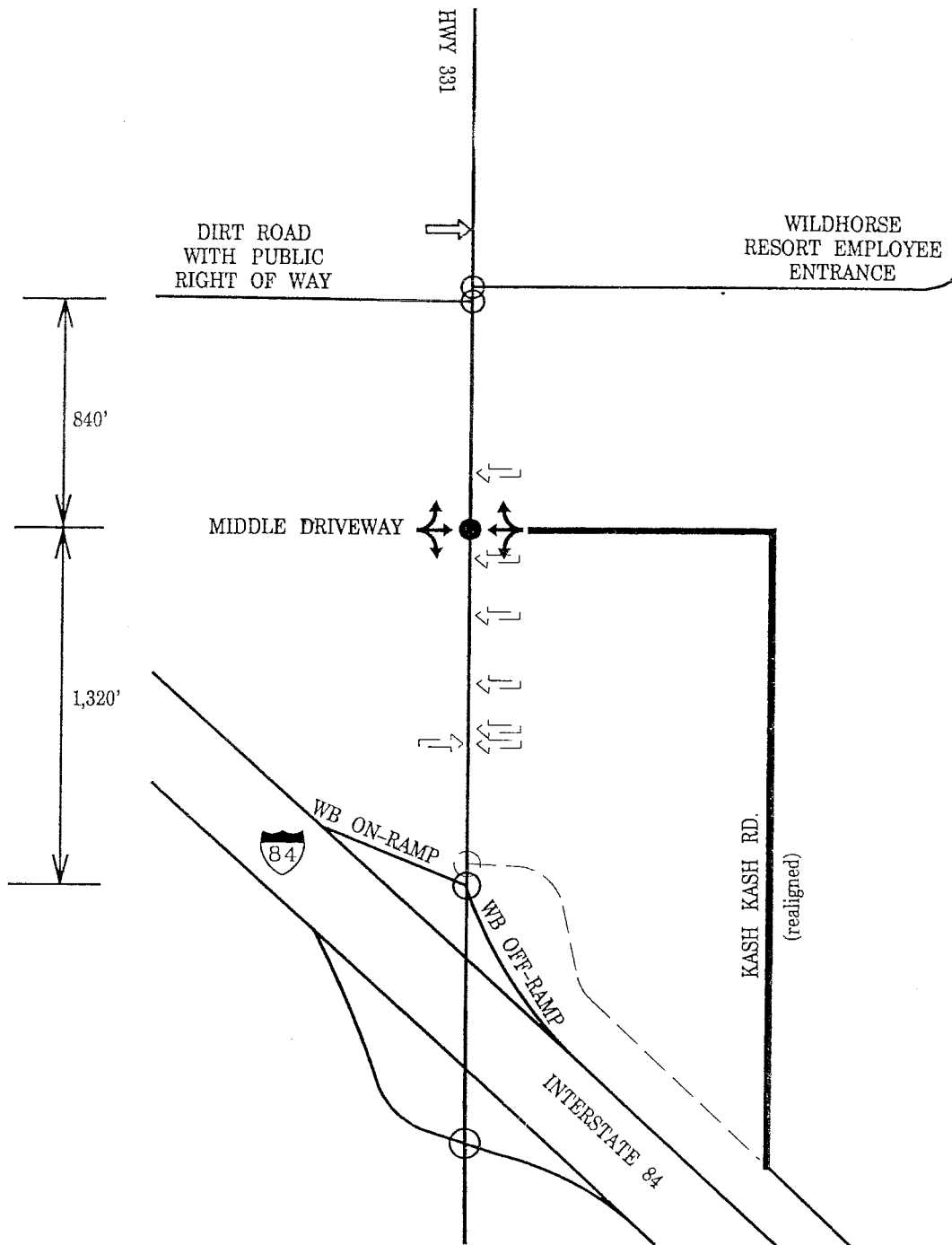
The "preferred" option would be implemented concurrently with the Mission Highway Median (Project R10 in Chapter 6). The construction of a landscaped median on the highway would effectively restrict left-turn movements, except at intersections where all movements would be allowed.

I-84 Interchange to Tutuilla Church Road (South Market Road)

The TAC reached a consensus on an access management strategy for South Market Road, beginning at the I-84 eastbound ramps down to Tutuilla Church Road. This includes a new intersection located on the west side of the road at 1,320 feet south of the I-84 eastbound ramps. The proposed intersection would serve both industrial and residential developments that are planned for the future. The existing intersection with the dead-end road to the waste transfer station would also be removed and realigned to the new intersection. However, it may be possible to construct a right-in right-out access at 750 feet south of the I-84 eastbound ramps. This access may be approved as a result of the removal of the existing access to the dead end road (located 475 feet from the interchange). The TAC agreed that the dead end road could be relocated to an internal network of streets leading to both a right-in/right-out access and the fully directional intersection. This realignment would be done as the area zoned for a future industrial land use is developed.

Officials from Umatilla County, which has jurisdiction over South Market Road, indicated any new accesses within the interchange area will be required to comply with the 1999 OHP access standards.

- LEGEND:**
- New Intersection /Driveway
 - Existing Intersection
 - Remove Existing Intersection
 - ↔ Turn Movements Allowed At New Intersection /Driveway
 - ➡ Existing Driveway
 - ↔ Remove Existing Driveway
 - Construct New Road
 - Remove Existing Road



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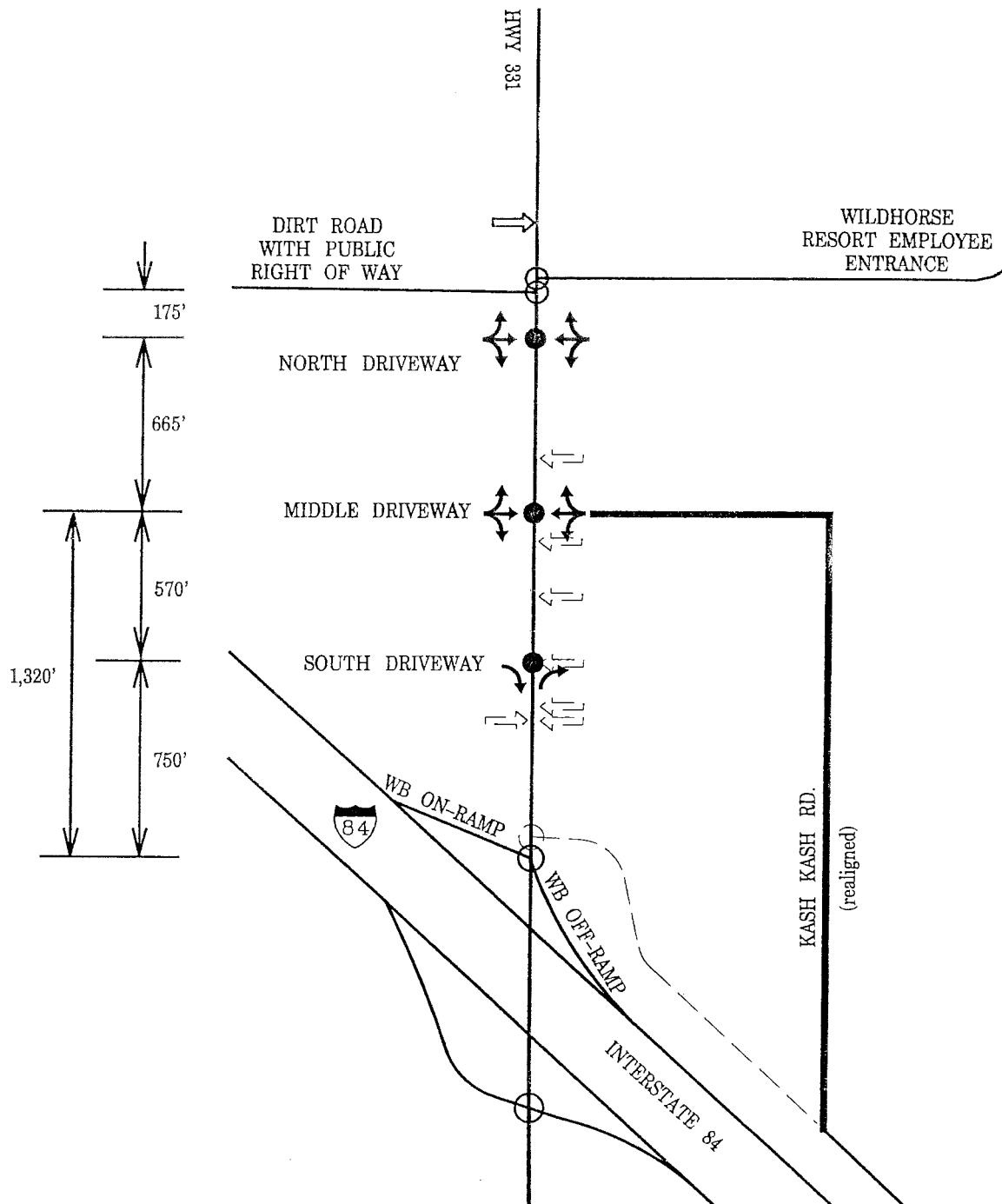


FIGURE 7-2

Highway 331 Access Strategy
Option 1: Comply With Oregon
Highway Plan Standards

CTUIR Transportation System Plan

- LEGEND:**
- New Intersection /Driveway
 - Existing Intersection
 - Remove Existing Intersection
 - ↔ Turn Movements Allowed At New Intersection /Driveway
 - ⇒ Existing Driveway
 - ⇨ Remove Existing Driveway
 - Construct New Road
 - Remove Existing Road



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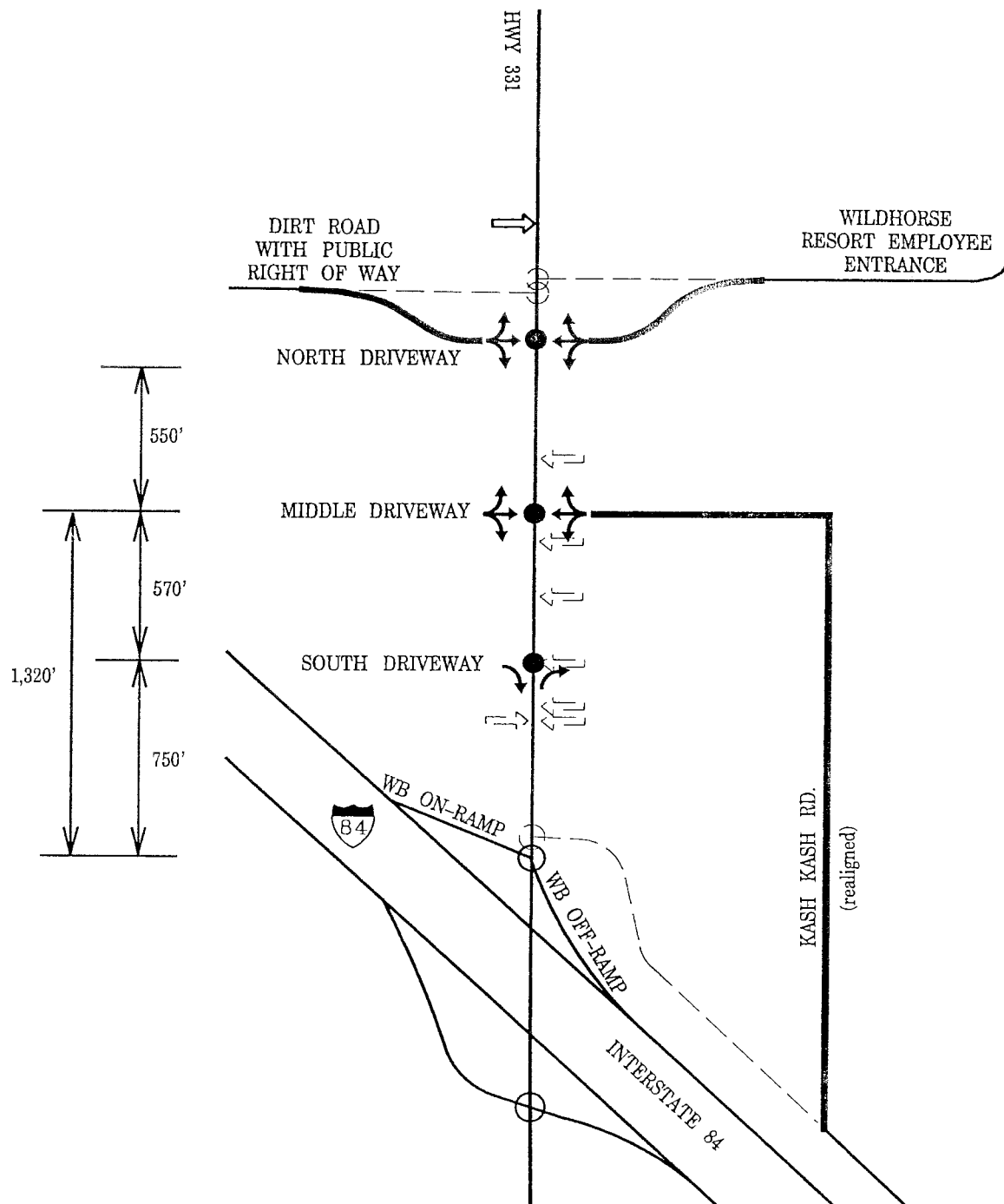
NORTH
 (NOT TO SCALE)

FIGURE 7-3

Highway 331 Access Strategy
 Option 2: As Proposed in
 Truck Stop Master Plan

CTUIR Transportation System Plan

- LEGEND:**
- New Intersection /Driveway
 - Existing Intersection
 - Remove Existing Intersection
 - ↔ Turn Movements Allowed At New Intersection /Driveway
 - ➡ Existing Driveway
 - ➡ Remove Existing Driveway
 - Construct New Road
 - Remove Existing Road



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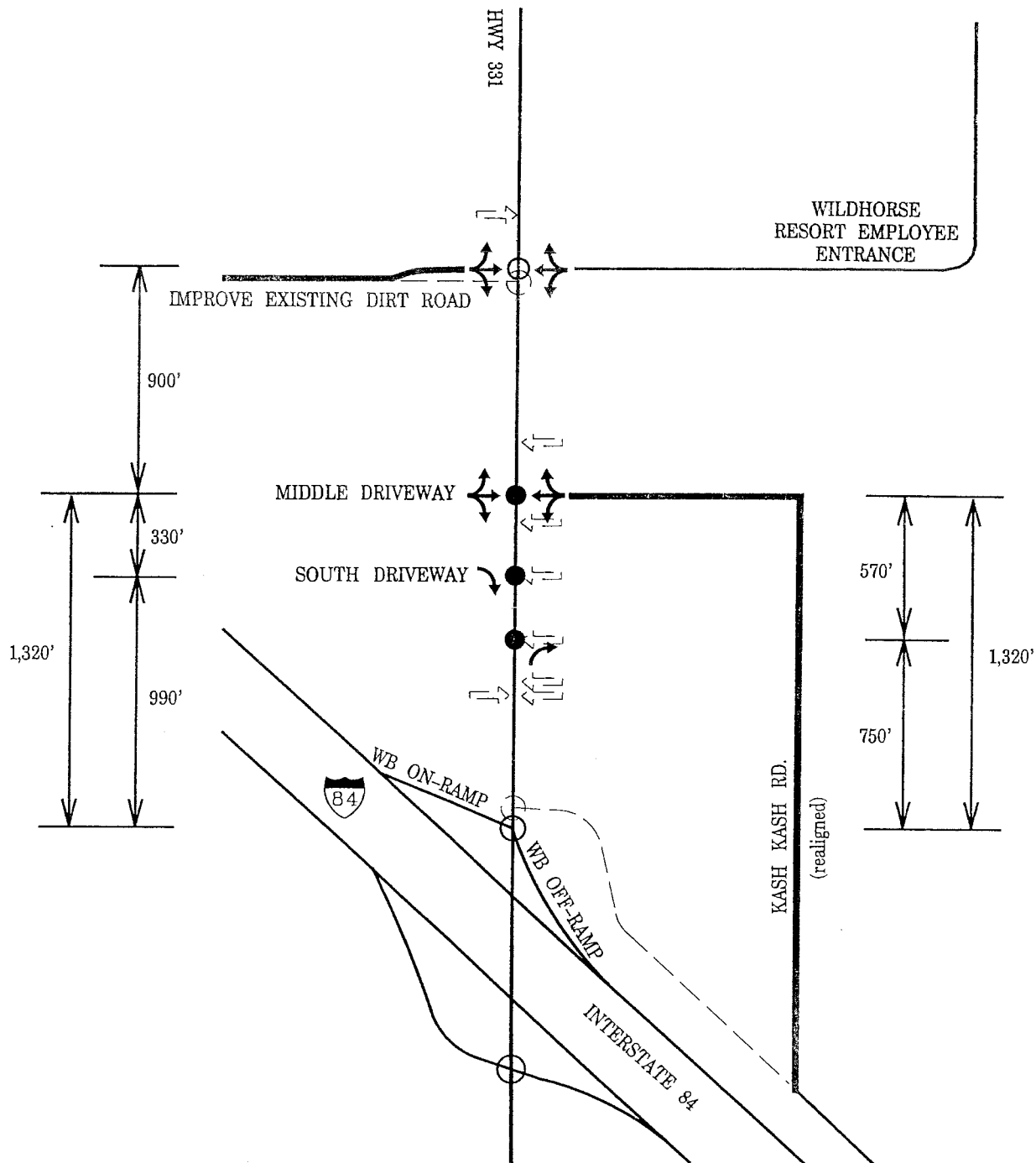

NORTH
(NOT TO SCALE)

FIGURE 7-4

**Highway 331 Access Strategy
Option 3: Variation of
Truck Stop Master Plan**

CTUIR Transportation System Plan

- LEGEND:**
- New Intersection /Driveway
 - Existing Intersection
 - Remove Existing Intersection
 - ↔ Turn Movements Allowed At New Intersection /Driveway
 - ⇒ Existing Driveway
 - ⇒ Remove Existing Driveway
 - Construct New Road
 - Remove Existing Road



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FIGURE 7-5

Highway 331 Access Strategy:
 Preferred Option

CTUIR Transportation System Plan

CHAPTER 8: TRANSPORTATION SYSTEM PLAN

The CTUIR Transportation System Plan addresses the transportation needs of the Umatilla Indian Reservation over the next 20 years. The plan consists of a priority list of improvement projects addressing the street, pedestrian, and bicycle systems. Other components of this plan include roadway functional classification and design standards, an access management plan for roads on the IRR system (including Highway 331), and policies to ensure that the needs of bicyclists, pedestrians, and public transportation are met.

CTUIR PRIORITY LIST OF TRANSPORTATION IMPROVEMENTS

As one of the main goals of developing a long-range plan that addresses all modes of transportation, a prioritized list of transportation improvement projects was developed for the Umatilla Indian Reservation. The list is located in Appendix I (Tab 1) and was developed from the potential improvement projects evaluated in Chapter 6. The placement of the priority list of improvements in an appendix allows the tribe the latitude to update this list periodically. This could occur as new projects are identified, and existing projects are reprioritized or taken off the list. Every update to this list would need to be approved by a tribal resolution from the General Council.

Projects in the list were prioritized by the TAC members based on expected time of development and relative need, and reviewed by the CTUIR Natural Resources Commission, the Department of Economic and Community Development, the Board Of Trustees, and the general public.

The priority list of transportation improvements assigns each project a number which reflects the level of prioritization, a project name, and includes a description of the improvements to be made, the agencies involved, and the estimated cost. Costs are expressed in year 2001 dollars. This list is not financially constrained which means that financing for individual projects has not been secured. The intent of the priority list of improvements is to implement each project beginning with the first listed when the opportunity of financing becomes available.

It is the priority list of transportation improvements that will be used by the tribe to develop the CTUIR Transportation Improvement Program (TIP). The tribal TIP is a multi-year, financially constrained, list of proposed transportation improvement projects to be implemented within the next 3 or more years. Once complete, the projects contained within the CTUIR TIP are submitted to the BIA for inclusion in the IRR TIP. The IRR TIP is a prioritized list (by year) of IRR funded projects, that are programmed for construction in the next 3-5 years. Projects in the IRR TIP are then included in the Statewide Transportation Improvement Program (STIP) developed by ODOT without further action.

Coordination of Transportation Related Projects

Coordination between appropriate agencies is essential for projects involving land use, economic development, and transportation issues. This is also one of the objectives of this Transportation System Plan (Objective B). It is the CTUIR's intent to cooperate and notify all appropriate local, county, state, and federal agencies when a land use proposal is submitted that could potentially impact another agency's transportation facility. Notification will help to identify agency standards, and provide an efficient and economical transportation system. Through cooperative efforts, the CTUIR can strive to achieve an effective relationship and process for working with agencies such as BIA, Umatilla County, and ODOT to identify, fund, and implement transportation projects (Objective C).

When properties develop or redevelop with access to a state highway, county, local, or federally maintained road, the owner/developer of the adjacent property shall notify and coordinate with the appropriate agency or agencies to ensure proper access management, consistent with the access management provisions of this Transportation System Plan and the 1999 OHP. This will be necessary to obtain the permits to construct, operate, and use accesses to state highways.

ROADWAY FUNCTIONAL CLASSIFICATIONS

Roadway classification standards relate the design of a roadway to its function. The function of a road is determined by operational characteristics such as traffic flow, capacity, operating speed, and safety. It is also determined by the type of adjacent land uses and connections to other roadways.

The development of the CTUIR TSP provides the tribes with the opportunity to review and revise the functional classification of streets and roadways that make up the local IRR system. The CTUIR has elected to continue the use of the BIA functional classification system of roads. This system includes four road classes: Class 2, Class 3, Class 4, and Class 5. Definitions of each class of roads are shown below in Table 8-1.

It should be noted that the BIA classification system does not necessarily coincide with how ODOT and Umatilla County classify roads. To prevent any disagreements between agencies, a correlation between the two classification systems is also defined in Table 8-1. Examples of key roads on the Reservation are also provided in this table to further define the classification of roadways. The IRR inventory is located in Appendix II (Tab 5) provides the classification of all existing and proposed roads and trails.

TABLE 8-1
IRR FUNCTIONAL CLASSIFICATIONS FOR THE UMATILLA INDIAN RESERVATION
(WITH COMPARISONS TO STATE AND COUNTY CLASSIFICATIONS AND EXAMPLES)

IRR Classification	State And County Classification	Examples
Class 2 Roads: Major or minor arterial roads providing an integrated network having the characteristics for serving traffic between large population centers, generally without stub connections. May also link smaller towns and communities to major resort areas which attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement. Generally provide for at least inter-county or interstate service and are spaced at intervals consistent with population density.	Principal Arterials: Form an integrated network of continuous routes which serve statewide or interstate travel. They link major cities and provide connections to urban areas outside the region.	I-84, OR Highway 11, Highway 331
	Minor Arterials: In conjunction with principal arterials, form an integrated network that link cities and significant traffic generators, and provide interstate and inter-county service.	--
	Major Collectors: Roads that connect with the arterials and provide intra-county service to towns and large traffic generators not served directly by an arterial.	Mission Rd., Cayuse Rd.
Class 4 Roads: Section line and/or stub type roads which collect traffic for arterial type roads, make connections within the grid of the IRR system. May serve areas around villages, into farming areas, to schools, tourist attractions, or various small enterprises. Also included are roads and vehicular trails for administration of forest, grazing, mining, oil, recreation, or other utilization purposes. This classification encompasses all those public roads not falling into Class 2 or 3 definitions above.	Minor Collectors: Distributes traffic from local roads of neighborhoods and abutting lands to major collectors or arterials.	South Market Rd., Tutuilla Church Rd.
Class 3 Roads: Street-roads, which are located within communities serving residential, and other urban type settings.	Local Roads: Provide access to adjoining land and short distance travel.	Confederated Way
Class 5 Roads: This classification encompasses all non-road type paths, trails, walkways, or other designated types of routes for public use by foot traffic, bicycles, trail bikes, or other uses to provide for general access of non-vehicular traffic.	No Classification (trails, etc.)	Tamastlikt Trail

ROADWAY DESIGN STANDARDS

Road design standards ensure the design of a roadway supports its intended use. Road standards consist of design parameters necessary to provide a community with roadways or streets, which are relatively safe, aesthetically pleasing, and easy to administer when new facilities are planned or constructed or existing facilities are reconstructed.

CTUIR and BIA Roads

The CTUIR has elected to use the roadway design standards employed by the BIA. These standards are documented in the *BIA Road Inventory and Project Request Guide*¹ and have been included in Appendix II (Tab 9). There are a total of 21 "Adequacy Design Standards" defined in this guide. Each standard is determined by the functional classification of the road, the 20-year Average Daily Traffic volume projection, and the type of terrain.

The CTUIR will enforce a 60-foot right-of-way width for all new roads constructed on the Reservation, and do not support the varying widths specified for the BIA "Adequacy Design Standards". A 60-foot right-of-way will be sufficient for all Class 2, Class 3, and Class 4 roads.

The tribes support the BIA "Adequacy Design Standards" for shoulder improvements (type and width) in rural areas. However, in urban or urbanizeable areas, the tribes will enforce the design of curb, gutter, and sidewalks with optional planting strips along all new or improved roadways. These areas are located within the Community Commercial, Community Residential, Government, Light Industrial/Manufacturing, and Tourist Commercial land use boundaries, as defined in the Future Land Use Map of the *Mission Community Plan*.

County Roads

Umatilla County has developed its own road design standards. They are documented in the Umatilla County TSP, and apply to the county roads that intersect Highway 331.

Highway 331

When roadway improvements are made to Highway 331, one of four design standards shall apply depending on the location of improvements. These standards are shown graphically in the Appendix II (Tab 9).

The first standard (Option 1) shall be applied in the area between the I-84 westbound ramps and the first proposed right-in right-out accesses north of the interchange. It consists of two 12-foot travel lanes separated by a 14-foot landscaped median, with 8-foot paved shoulders and open drainage ditches.

The second standard (Option 2) shall be applied between the first proposed right-in right-out accesses north of the interchange and the Wildhorse Resort Entrance Road. It consists of two 12-foot travel lanes separated by a 14-foot landscaped median, with 6-foot bike lanes, 6-foot sidewalks, and underground storm water drainage.

¹ *Road Inventory and Project Request Guide*, Bureau of Indian Affairs Portland Area, Road Construction and Maintenance Team, 1994

The third standard (Option 3) shall be applied along two sections of highway. The first section is between the Wildhorse Resort Entrance Road and the proposed intersection to the East-West Connector Road south of Mission Road. The second section is between Mission Road and OR Highway 11. The cross-sectional features will consist of two 12-foot travel lanes, with 8-foot paved shoulders, and open drainage ditches.

The fourth standard (Option 4) shall be applied between the proposed intersection to the East-West Connector Road and Mission Road. It consists of two 12-foot travel lanes, with 6-foot bike lanes, 6-foot sidewalks, and underground storm water drainage.

All four standards above have the flexibility to provide optional 14-foot left-turn lanes at major intersections. ODOT will also maintain the current right-of-way widths, which vary between 80 feet and 200 feet.

PAVEMENT DESIGN STANDARDS

Pavement design standards address the type of material and depth of layers that make up a roadbed. Pavement design is sensitive to key parameters such as heavy truck volumes, environmental conditions, soil conditions, the type of materials used, and the desired service life of the pavement.

As a planning document, the development of detailed pavement design standards is outside the scope of this TSP. Development of such standards constitutes a separate and detailed evaluation. Detailed pavement designs may follow the procedures outlined in the 1986 *AASHTO Guide for Design of Pavement Structures* published by the American Association of State Highway Transportation Officials. Since many of the roads on the Reservation are owned by the county, the pavement design standards used by the Umatilla County Roadway Department may serve as a good reference.

ACCESS MANAGEMENT PLAN

Highway 331

With the assistance of the TAC, a detailed access management plan was developed for Highway 331. The plan addresses existing or potential future conflicts between the highway traffic movements and the need for safe access to adjacent developing properties and intersections with the local road system. The access management plan in combination with recommended street improvements, promotes better connectivity of the street system. The location of new intersecting and parallel routes in the corridor can help reduce reliance on the highway for local use.

The access management plan covers all of Highway 331, from its intersection with OR Highway 11 down to Interstate 84, including the freeway interchange and a segment of South Market Road down to Tutuilla Church Road. This plan moves towards the access spacing standards outlined in the 1999 *OHP*, including the access standards for freeway interchange areas.

The access management plan is summarized in the Appendix (Tab 10). It is defined by five figures illustrating where existing access points will be maintained, relocated, or removed. It also illustrates the location of planned accesses (driveways and intersections) along Highway 331. Other pertinent information is shown on these figures such as the future land uses adjacent to the highway, parcel boundaries, right of way, and locations where there is a reservation of access or access control along the highway. All existing or proposed access points are assigned an access identifier number. These numbers are linked to an accompanying spreadsheet with specific details on each access (location, jurisdiction, use, and distance from other accesses).

It should be noted that existing developments and legal accesses along Highway 331 will not be affected by the recommended access management standards until either a land use action is proposed, a safety or capacity deficiency is identified that requires specific mitigation, redevelopment of existing properties along the highway occurs, or a major construction project is begun on the street. Under any of these circumstances the appropriate agencies (ODOT, CTUIR, BIA, and/or Umatilla County) shall be contacted to collectively revise existing and new accesses to the highway.

The resulting access management plan is a balanced, comprehensive program that provides reasonable access spacing standards while maintaining the safety and efficiency of traffic movements. The following sections outline specific details of the access management plan for Highway 331.

UPRR Crossing to Mission Road

- Establish a shared access between the existing driveway to the vacant site south of the railroad tracks (Access #15) and the adjacent property to the south on the northwest corner of the Mission Road intersection.
- Consolidate two existing driveways (Accesses #47 and #48) to establish a shared access (Access #47-A) between the proposed community store on the northwest corner of the Mission Road intersection and the adjacent property to the north.

Mission Road to Wildhorse Resort Entrance Road

- Construct a new intersection south of Mission Road (Access #18 on the west side and #44-A on the east side) to provide access for a planned east-west connector road. An access used for agricultural purposes will be removed (Access #44).
- Relocate the access on the east side of Highway 331 (Access #40) to the south so it is now located on land zoned for Tourist Commercial use (Access #39-A).

Wildhorse Resort Entrance Road to Casino Employee Entrance Road

- Restrict access to the farming equipment on the west side of Highway 331 (Access #21).
- Relocate the dirt road on the west side of Highway 331 (Access #22) to intersect opposite the Casino Employee Entrance Road (Access #21-A).

Casino Employee Entrance Road to I-84 Westbound Ramps

- Remove one access on the west side of Highway 331 (Access #23) and five accesses on the east side (Accesses #37, #36, #35, #33, and #32).
- Construct a new intersection providing access to Kash Kash Road on the east side of the highway (Access #36-A) and a driveway to a new Truck Stop on the west side (Access #22-A).
- Establish a new driveway to the proposed Truck Stop on the west side of the highway (Access #22-B). This driveway will have right-in right-out movements only.
- Modify an existing driveway on the east side of the highway (Access #34) for right-in right-out movements only.

- Construct a non-traversable landscaped median along the highway from the Casino Employee Entrance Road to the I-84 Westbound Ramps. Left-turns will be allowed at major intersections only.

I-84 Eastbound Ramps to Tutuilla Church Road (South Market Road)

- Remove the intersection providing access to the waste transfer station (Access #26).
- Construct a new intersection further south (Access #26-A).

Deviation From Highway 331 Access Management Plan

Any request for a new access or change in access along Highway 331, that results in a deviation from this access management plan, should intend to comply with the 1999 OHP access spacing guidelines (refer to Chapter 7).

Umatilla County Access Spacing Standards

Umatilla County has established access spacing standards along county roads and has documented these standards in the *Umatilla County Transportation System Plan*². According to the plan, roads classified as major and minor collectors are allowed a public road spacing of 500 feet and a private drive spacing of 250 feet. Local roads are allowed a public road spacing of 250 feet with private driveways allowed to access each lot. These standards are generally not intended to eliminate existing intersections or driveways, but should be applied as new development occurs.

According to the Umatilla County TSP, the following county roads within the study area are identified as major and minor collectors:

- Mission Road (County Road #900)
- South Market Road (County Roads #1025 and #1027)
- Tutuilla Church Road (County Road #932)

All remaining county roads within the Highway 331 Corridor study area are considered to be local roads in the plan.

It should be noted future revisions to the *Umatilla County TSP* will include interchange spacing standards that are consistent with the 1999 OHP. Therefore, the County's access spacing standards will apply to South Market Road in the I-84 interchange area. The access management plan developed for Highway 331, including the I-84 interchange and South Market Road, is also consistent with OHP.

CTUIR Access Spacing Standards

The CTUIR supports the access spacing standards for county roads on the Reservation. The tribe has also elected to apply these standards to the roads maintained and/or owned by the tribe or BIA. To handle any discrepancies between functional classifications, the county standards for major and minor collectors should

² Umatilla County Draft Transportation System Plan, November 1999, David Evans and Associates, Inc.

apply to all Class 2 and Class 4 roads (except state highways). The county standards for local roads should apply to all Class 3 roads.

PEDESTRIAN SYSTEM

Pedestrian facility improvement projects are shown graphically and summarized in the Transportation Priority List of Improvement Projects located in Appendix I. Besides pedestrian specific improvements, there are several proposed new roadways will also include some sort of pedestrian walkway.

Full implementation of all improvement projects would result in a safe and continuous pedestrian route along Highway 331 from Mission Road to South Market Road consisting of a combination of paved shoulders, sidewalks, and a multi-use path. A useful pedestrian connection would also be established to the City of Pendleton along Mission Road along either paved shoulders or a multi-use path. A new path would be extended across the Umatilla River connecting Mission Road with Kirkpatrick Road and another path constructed along the Wildhorse Resort Entrance Road connecting the Tamastlikt Path with the Casino. In the area of highest pedestrian activity, a figure was prepared to illustrate the future network of pedestrian facilities surrounding the Tribal Community Complex. Figure 8-1. shows where both pedestrian and bicycle facilities would be located in the future. The future multi-use path network shown would be from the Wetlands Community Park development.

The pedestrian system should provide direct and safe access to all areas of the Mission Community area. Properly configured, the system provides good circulation, encourages walking, and enables neighbors to know each other and to enjoy the community. The system comprises sidewalks, paths, shoulders in rural areas, crosswalks, curb ramps, signals, signing, and supporting facilities.

Sidewalks should be present along all roads located in the urban or urbanizeable areas of the Reservation. These areas are located within the Community Commercial, Community Residential, Government, Light Industrial/Manufacturing, and Tourist Commercial land use boundaries, as defined in the Future Land Use Map of the *Mission Community Plan*. Sidewalks should be added as new streets are constructed and when existing streets are reconstructed. New sidewalks should be at least five to six feet in width and should be placed adjacent to the curb but may also be separated from the street by landscaping. Sidewalks should have sufficient clearance from obstructions such as utility poles and mailboxes.

Another component to the pedestrian system is road crossings. In urban or urbanizeable areas, new intersections shall be designed to provide safe and comfortable crossing opportunities. This includes striping for crosswalks, adequate crossing time at traffic signals, and other enhancements such as curb extensions, which are used to decrease pedestrian crossing distances and as a traffic calming measure, and wheelchair ramps. Crosswalks at intersections along state highways will be in accordance with ODOT design standards.

Along the rural roads of the Reservation, sidewalks may not be necessary. However, paved shoulders should be provided for new or improved roads to a width that will safely accommodate pedestrians (see "Adequacy Design Standards" in Appendix II (Tab 9).

BICYCLE SYSTEM

There are several multi-use path projects shown graphically and summarized in the Transportation Priority List of Improvement Projects located in Appendix I that will improve the bicycle system and encourage its use. Besides these multi-use path projects, there are several proposed new roadways that will also include some sort of bicycle facility (bike lanes or paved shoulders). Again, Figure 8-1 illustrates where both pedestrian and bicycle facilities would be located in the future in the area of highest activity.

The bicycle system should provide direct and safe access to all areas of the Mission Community. In cases where bike lanes are proposed, five to six feet of roadway pavement should be provided between the curb and vehicle travel lane. Striping should also be provided to distinguish the bike lane from the travel lane. Where on-street parking is available (parking at curb), bike lanes should be provided between the travel lane and parking stalls. In some situations, curb parking may have to be removed to permit a bike lane.

Bike lanes should be added in urban areas when new roads are built or road improvements are made as part of the road system plan. Bike lanes would be most appropriate along Class 2 and Class 4 roads (arterials and major and minor collectors).

On existing Class 2 or Class 4 roads that are not scheduled to be improved as part of the road system plan, bike lanes may be added at any time to encourage cycling, or when forecast traffic volumes exceed 2,500 to 3,000 vehicles per day.

MULTI-USE PATHS

Because the CTUIR owns a vast amount of land in the Mission Community Area, the potential for developing multi-use paths is high. A good example is the Tamastlikt Trail which traverses tribal land and provides a useful connection between the Tamastlikt Cultural Institute and the government offices and adjacent neighborhoods. This path serves both bicyclists and pedestrians and is used for a multitude of purposes (i.e. travel to work, recreation).

Multi-use paths should be paved and have a minimum width of eight feet. Such a width would provide enough room to avoid the conflicts of two-way travel.

PUBLIC TRANSPORTATION

Currently there is no transit service available to the "general public" on the Umatilla Indian Reservation. There are, however, three types of transit services provided for specific users:

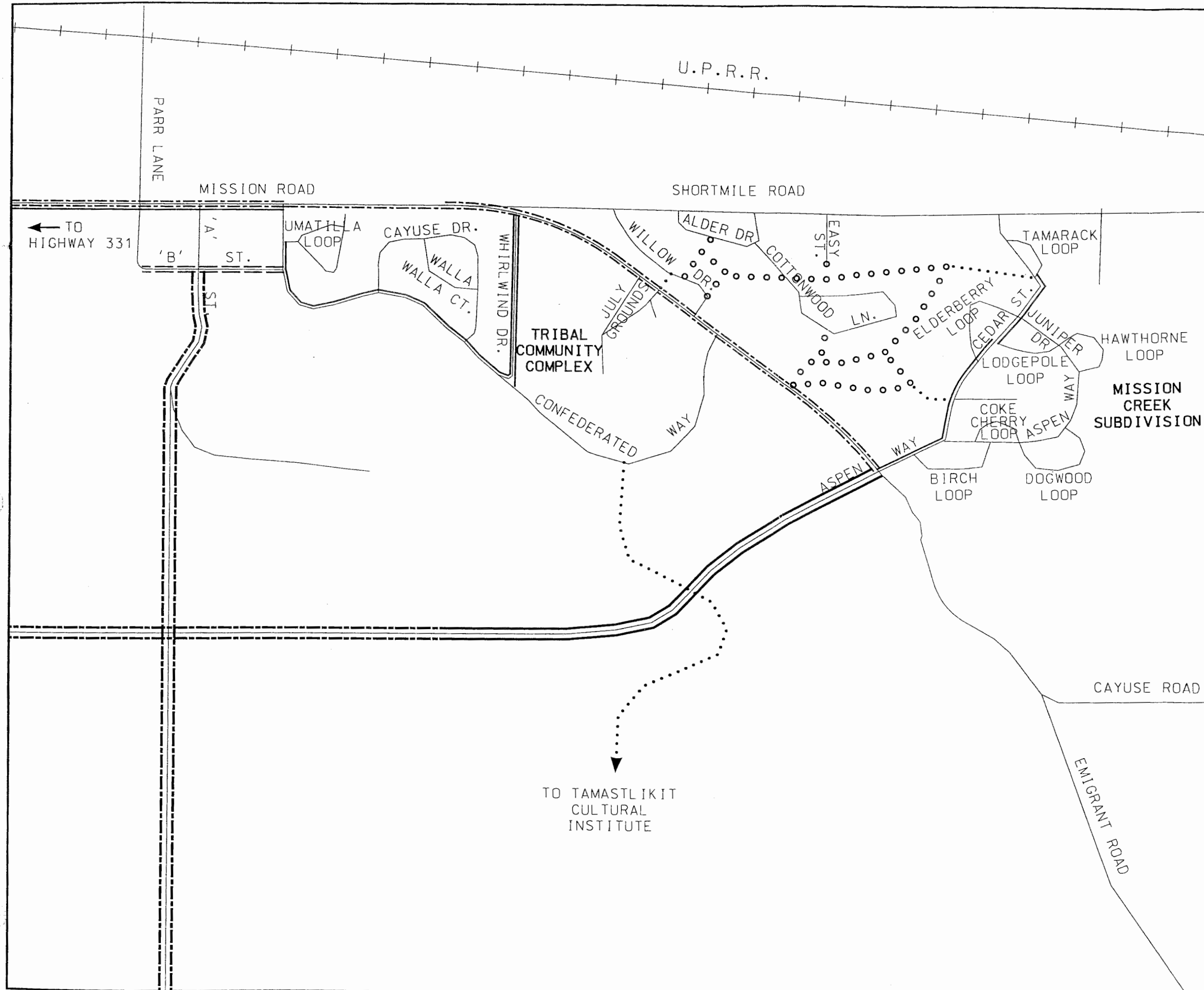
- School buses from the Pendleton, Athena-Weston, and Pilot Rock School Districts pick up and drop off children on the Reservation,
- The CTUIR Senior Center provides a dial-a-ride shuttle service for seniors only, and
- The Casino operates a dial-a-ride service for casino patrons only.

Public Transportation Needs

The need for public transportation to be available to all residents on the Reservation was discussed during the planning process of the CTUIR TSP. This topic was addressed at two of the TAC meetings. From these meetings, basic needs on the Reservation were identified such as a dial-a-ride program and/or fixed route bus service; both of which would be open to the "general public". Two reasons for having a dial-a-ride program would be to assist students who miss the school bus in the morning and for workers who need to travel to Pendleton for the Welfare-to-Work Program in the city. There were discussions but no general consensus from the TAC that this type of service could be linked with the dial-a-ride services already provided by the CTUIR Senior Center and the Wildhorse Casino.

The purpose for initiating a fixed route bus service would be so residents in the Mission Community Area would not have to rely solely on the automobile as a means of transportation. Also, a fixed-route service could assist the more than 1,000 employees working for the CTUIR, many of which live in Pendleton and

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LEGEND:

- Continuous Sidewalk (Pedestrians)
- - - - Intermittent Sidewalk (Pedestrians)
- - - - Paved Shoulders (Pedestrians and Bicyclists)
- Multi-use Path (Pedestrians and Bicyclists)
- Future Sidewalk (Pedestrians)
- - - - Future Paved Shoulders
- (Pedestrians and Bicyclists)
- o o o o Future Multi-use Path
- (Pedestrians and Bicyclists)

FIGURE 8-1

**Future Pedestrian and
Bicycle Facilities**

commute to their place of work. Increase energy efficiency and reduced environmental impacts are important considerations for the tribes.

A fixed route service could provide stops along Mission Road near or at the tribal government offices and adjacent neighborhoods, stops near or at major activity areas along Highway 331 such as the proposed Mission Community Store, the Wildhorse Resort, and the Arrowhead Truck Plaza. Potential connections could also be made to the city of Pendleton or even Milton-Freewater for residents who work or shop in those cities. Such a service may even encourage the design of a park-and-ride facility in the Mission Community Area.

The exact needs of the Reservation could not be assessed fully in this study. Tribal staff is now in the process of determining the feasibility of partnering with the city of Pendleton to provide transit service to the "general public" between the city and Reservation. Issues such as the type of service to be provided, securing the services of other providers in the area, capital and operating expenses, and establishing on-going funds to sustain this effort are being addressed. This effort coincides with one of the goals outlined in the *Umatilla County Public Transportation Needs Assessment*, June 1999, to establish intercity service between the CTUIR and Pendleton. Once the needs of the Reservation are fully assessed, then the CTUIR should incorporate identified transit-related projects into the Transportation System Plan and pursue available federal and state funding.

Programs and Available Funding

A representative from ODOT Public Transit Division in Salem spoke at one of the TAC meetings about the various programs and funds that are available for communities to establish public transit.

One source of funding is through the Federal Transit Administration (FTA) which sponsors a program for general transit services in small urban and rural areas. These funds are distributed through the ODOT Public Transit Division and can be used for capital and operation needs.

Another option is available through the establishment of the new Federal Transportation Efficiency Act for the 21st Century, or TEA 21 bill, where funding for public transit has been established through Surface Transportation Program (STP). Funds in this program have increased substantially, including the money available to rural areas. These funds are distributed to rural areas by the state and can be used for small communities that already have a public transit service or need a service. Funds are generally limited to capital projects, such as the purchase of vehicles and operating funds. Funds cannot be used for planning purposes.

Currently, there are two funds that have money obligated for establishing public transit on the Umatilla Indian Reservation. The first fund is through the FTA program, where the state has obligated around \$56,000. In order for the CTUIR to receive these funds, the tribe must provide matching funds up to 50% for operating uses and 20% for capital expenses. Additional information on this fund is provided in Appendix II (Tab 11), including funding available and the federal and state requirements. The second program is also through the federal government, where a small properties package program has set aside \$43,200 for the CTUIR. This money can only be used for capital investments.

ODOT has agreed to assist the tribe in meeting the federal requirements and regulations, with buying equipment, and with the public involvement process. Milton-Freewater and Pendleton are currently using FTA funds to establish transit services that are open to the public.

CHAPTER 9: FUNDING SOURCES

EXISTING BIA AND CTUIR PRACTICES

To assist the BIA and CTUIR in preparing a consistent and realistic approach to the construction, reconstruction, and maintenance of roads, an understanding of the funding sources and the potential application of these resources is necessary. Once the funding sources are identified, knowledge of their distribution method is also beneficial.

The Transportation Equity Act for the 21st Century (TEA-21) is the mechanism that provides funding for improvements of roads and bridges in the Indian Reservation Road System.

Capital Improvement Funds

Capital improvements include construction and reconstruction of the roads and bridges that are in the Indian Reservation Roads system. Capital improvements are generally funded with the federal Highway Trust Fund (HTF). Funds from the HTF are appropriated by Congress to the Federal Highway Administration and subsequently to the thirteen field offices of the BIA. Once the BIA Portland Area Office receives its portion of the available resources, the construction funds are further divided and allocated to the Indian tribes based on a relative need allocation formula. The construction funding allocated to the Umatilla Indian Reservation over the past eight years can be seen in Table 9-1.

TABLE 9-1
UMATILLA INDIAN RESERVATION CONSTRUCTION FUNDING

FY 1992	\$1,270,200
FY 1993	\$239,300
FY 1994	\$45,800
FY 1995	\$6,900
FY 1996	\$631,700
FY 1997	\$98,800
FY 1998	\$156,600
FY 1999	\$68,100

Source: Personal communication with BIA representative on 7/13/00

Within the BIA structure, the Agency Road Engineer contacts each of the tribes within his/her jurisdiction to determine the projects most needed by each tribal government. Since the socioeconomic needs of one tribe are difficult to weigh against the needs of another tribe, the BIA representatives selecting projects for inclusion in the 6-year construction plan can come under considerable political pressure, particularly since limited funding results in only a few construction projects each year. Additional constraints to achieving a constructed project are the remote locations of projects, the inability to fund the entire project, and the ability to maintain the new improvement once constructed.

The BIA has been exceeding its allocation of construction dollars to the Umatilla Reservation, placing the tribe in an indebted position. Therefore it is conceivable that the BIA will not be able to allocate any construction funds to the Umatilla Reservation over the next five years.

Maintenance Funds

The BIA is obligated by the Codified Federal Regulations (CFR 25- Section 170) to maintain the roads and bridges that are in the BIA's IRR System to a safe and satisfactory use based on the availability of funds and the road's as-built condition. The funds used to preserve BIA roads and bridges come from annual appropriations included in the budget for the BIA. These maintenance funds are allocated to the 13 field offices in the nation for use on the road systems within each agency's area of coverage.

While the funds allocated for maintenance may be reduced in the budgetary process, funds from the HTF are dedicated for road construction or reconstruction and cannot be used for maintenance of the Indian Reservation Road System.

The Agency Road Engineers work with the tribes in establishing the road maintenance priority to determine the type and level of maintenance to be performed within the budgetary constraints. Maintenance priorities are frequently determined by weather or road conditions necessary to provide safe access for the community to and from their facilities. Emergency road conditions have the highest priority. These conditions include washouts, snow and ice control. Roadway surface type and use determine secondary priorities.

If roadways funded and constructed with HTF moneys are not properly maintained, then future HTF road construction funds can be withheld. This situation might occur if maintenance funding is limited such that adequate repairs and upkeep of the highways is not possible. Or, if proportionately more maintenance funds were spent on one reservation over another. The inability to meet maintenance responsibility equally and adequately could endanger construction project funding in the Portland Area Field Office.

Table 9-2 provides a historical breakdown of the road maintenance funding allocated to the Umatilla Indian Reservation. Funds are separated into the different types of roads on the Umatilla Indian Reservation; paved roads, gravel roads, and dirt roads. Also included in the table is the funds allocated for snow removal.

TABLE 9-2
UMATILLA INDIAN RESERVATION
ROAD MAINTENANCE FUNDING
COST PER MILE (\$)

	Paved Road	Gravel Road	Dirt Road	Snow Removal
FY 1995	2,571	0	0	0
FY 1996	2,227	958	0	150
FY 1997	5,050	0	60	198
FY 1998	1,653	374	0	557
FY 1999	1,507	12,333	0	490

Source: Table provided by BIA representative

STATE FUNDS

The State of Oregon receives revenue from three primary sources. These include motor carrier transportation fees, motor vehicle fuels tax, and DMV license registrations and operator fees. As shown in Table 9-3, the revenue for the state for fiscal year 1999-2000 totaled over \$626 million with over 61 percent of the revenue coming from the motor vehicle fuels tax.

TABLE 9-3
STATE HIGHWAY REVENUE SOURCES
FY 1999-2000

Revenue Source	Amount (\$Millions)	Percent of Total
Motor Carrier Transportation Fees	218.9	35.0
Motor Vehicles Fuels Tax	385.0	61.5
DMV License Registrations and Operator Fees	22.0	3.5
Road Use Assessment Fees	0.2	-
Total	626.1	100.0

Source: ODOT 1998 Fiscal & Statistical Data Report, ODOT website.

The State of Oregon receives revenues from the federal Highway Trust Fund. Net revenues from the HTF are deposited into an account known as the State Highway Fund. With minor exceptions, state highway funds are dedicated for construction, improvement, maintenance, operation, and use of public highways, roads, streets, and roadside rest areas. The State Highway Fund is distributed to the State, cities, and counties based on the following distribution: 60.05% to the State, 15.57% to the cities, and 24.38% to the counties. Each city shall receive such share of the moneys as its population relates to the total population of the cities. A similar method is applied to the county moneys. Instead of population the measure is the amount of registered vehicles, trailers, semitrailers, pole trailers and pole or pipe trailers in each county to the total number of such vehicles registered in the state as of December 31 of the preceding year.

There are a number of programs available to provide financial assistance to local agencies like CTUIR for transportation projects and related activities. A summary of the various federal and state programs is located in the *1999 Transportation Funding Programs Report* located in the Appendix (Tab 12). Also included in this appendix a copy of the state's *Community Solutions Web Page*.

UMATILLA COUNTY TRANSPORTATION FUNDS

Historically, sources of road revenues for Umatilla County have come from various departments including local, state, federal, and other resources. The transportation revenues for these departments are shown in Table 9-4.

TABLE 9-4
UMATILLA COUNTY TRANSPORTATION REVENUES BY DEPARTMENTS

	1995-1996 Actual	1996-1997 Actual	1997-1998 Actual	1998-1999 Actual	1999-2000 Actual
Local Resources	\$2,039,574	\$1,991,961	\$1,908,677	\$1,573,990	\$1,458,834
State Resources	\$3,579,606	\$3,634,293	\$3,587,041	\$3,722,391	\$3,849,190
Federal Resources	\$267,708	\$674,190	\$533,519	\$150,897	\$216,415
Other Resources	\$0	\$19,426	\$0	\$0	\$0
Total Revenues	\$5,886,887	\$6,319,870	\$6,029,237	\$5,447,277	\$5,524,439

Source: Umatilla County

As shown in the table above, revenues remained relatively stable (between a low of just under \$5.5 million in 1998-1999 to a high slightly over \$6.3 million in 1996-1997). Approximately \$3.5 million of the annual revenues come from the State Highway Fund in 1995-1996, rising slightly to over \$3.8 million in 1999-2000. The annual revenue from the federal apportionment has lowered slightly over the last five years, rising to a high of \$675 thousand in 1996-1997 before dropping to a low of \$150 thousand in 1998-1999. The local revenues have also lowered consistently from slightly over \$2 million in 1995-1996 to just under \$1.5 million in 1999-2000.

Sources of revenue for Umatilla County are broken down further in Table 9-5.

TABLE 9-5
UMATILLA COUNTY TRANSPORTATION REVENUE SOURCES

	1995-1996 Actual	1996-1997 Actual	1997-1998 Actual	1998-1999 Actual	1999-2000 Actual
Beginning Balance	\$1,762,230	\$1,669,074	\$1,687,238	\$1,369,041	\$1,199,064
DMV License & Gas Tax Fees	\$3,356,616	\$3,259,924	\$3,219,156	\$3,379,790	\$3,538,368
Misc. State Receipts	\$222,990	\$374,369	\$367,885	\$342,600	\$310,822
National Forest Rental	\$189,902	\$334,860	\$512,338	\$144,777	\$199,801
Mineral Leasing 75%	\$125		\$135		
Misc. Federal Receipts	\$77,681	\$339,330	\$21,045	\$6,119	\$16,614
Interest on Invested Funds	\$92,220	\$70,519	\$69,117	\$54,016	\$76,206
Refunds & Reimbursements	\$338	\$71,543	\$22,256	\$4,967	\$15,093
Sale of Public Lands	\$102				
Rentals/Sale of Supplies	\$74,498	\$45,505	\$24,769	\$17,699	\$14,024
Outstanding Checks				11	
Misc. Receipts Local	\$48,997	\$56,696	\$45,453	\$68,715	\$154,447
Service Center	\$61,189	\$78,624	\$59,844	\$59,541	(1)
Rural Address Fund		\$19,426			
Total	\$5,886,887	\$6,319,870	\$6,029,237	\$5,447,277	\$5,524,439

¹ The Service Center revenue was combined with the Misc. Receipts Local.
Source: Umatilla County

APPENDIX I

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TAB 1 – PRIORITIZED LIST OF TRANSPORTATION IMPROVEMENTS



NORTH

(Scale: 1" = 3,000')

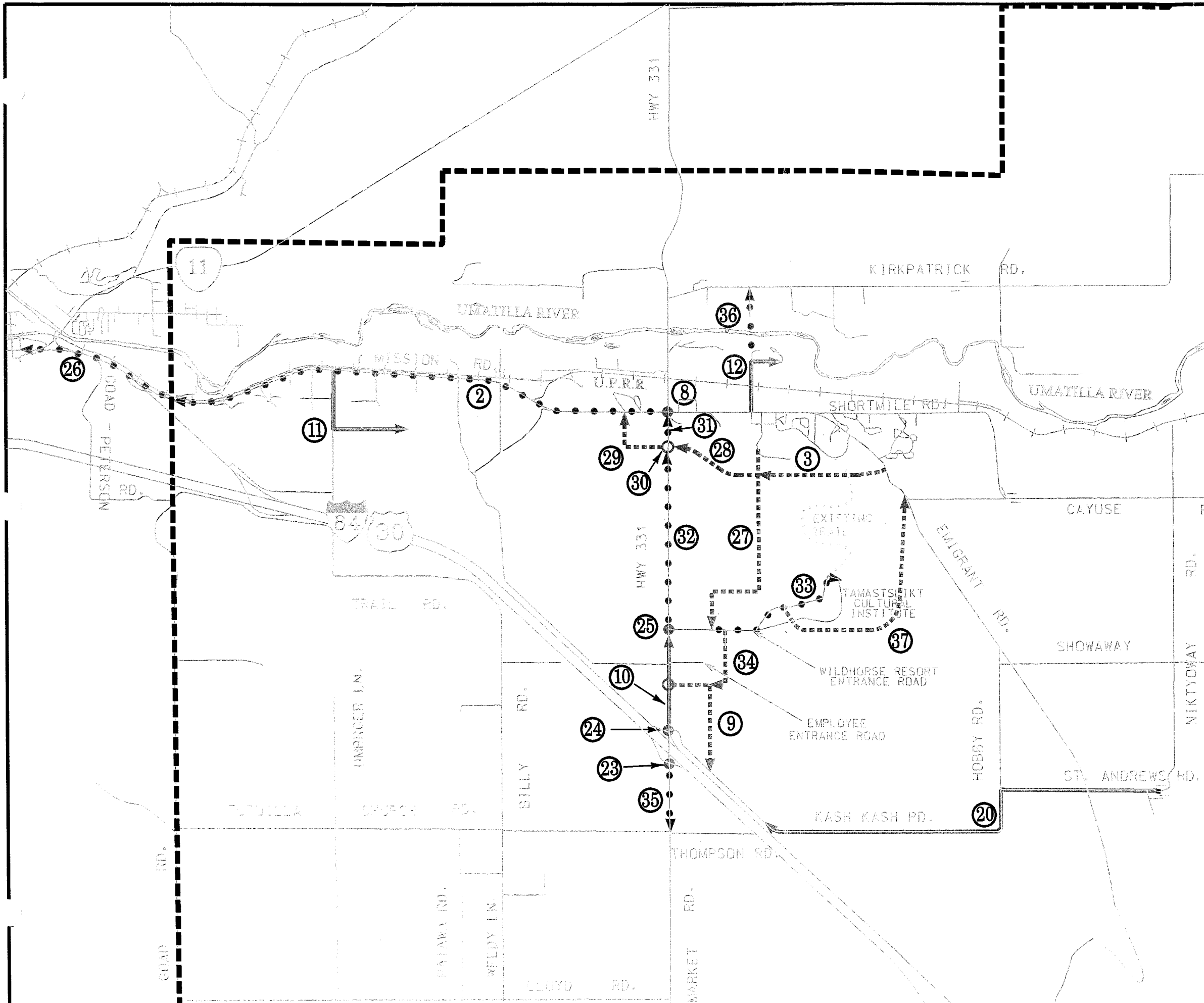
LEGEND:

-  Improvement to an Existing Road or Intersection
-  New Roadway or Intersection Improvement
-  Bridge Replacement Project
-  Bicycle and/or Pedestrian Improvement
-  Transportation Improvement Project Number (See List of Projects for Description)
-  Reservation Boundary

* Transportation Improvement Project Number ① is not shown.
 (Seek Transportation Planning Funds)

FIGURE 1

Transportation Improvement Projects (Mission Community)





NORTH

Not To Scale

LEGEND:

-  Improvement to an Existing Road or Intersection
-  New Roadway or Intersection Improvement
-  Bridge Replacement Project
-  Bicycle and/or Pedestrian Improvement
-  Transportation Improvement Project Number (See List of Projects for Description)
-  Reservation Boundary

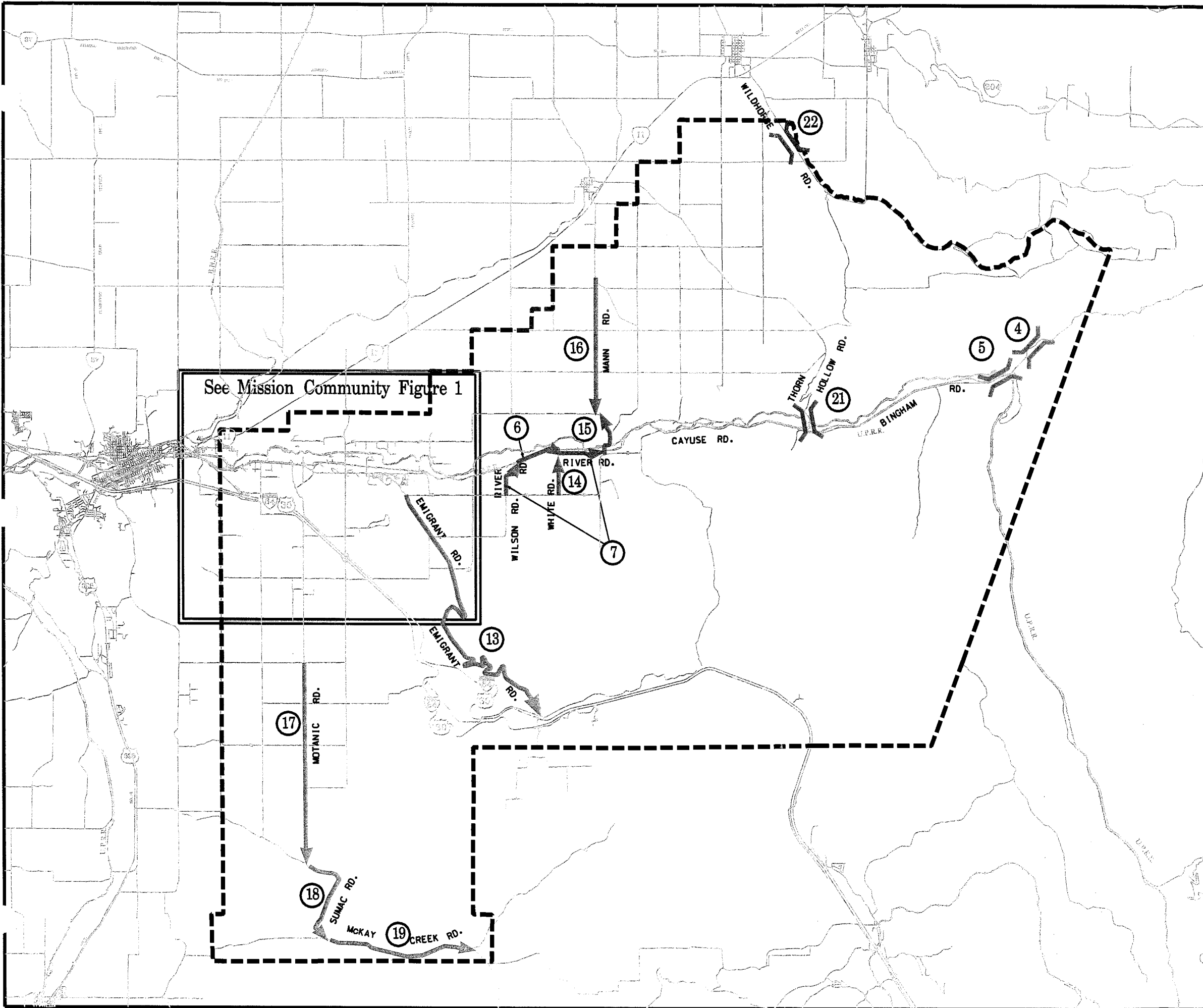


FIGURE 2

**Transportation Improvement
Projects (Area Outside
Mission Community)**

Final List of Prioritized Transportation Improvement Projects

Priority No.	Project Name	IRR Route Number	Project Description	Agencies Involved	Cost
1	Seek Transportation Planning Funds	NA	The BIA has stated that planning dollars are available for the CTUIR. In order to receive this money the CTUIR must identify planning to be the first priority above all other projects listed in the priority list of transportation improvements.	CTUIR, BIA	\$50,000
2	Mission Road Bike/Ped Facility (Phase I)	900	Provide bicycle/pedestrian facility along Mission Road (County Road #900) from Highway 331 to the west Reservation boundary near Hal's Trailer Park (Option 1: Construct a multi-use path along the south side of Mission Road. Option 2: Widen roadway to include paved shoulders.)	CTUIR, BIA	\$3,000,000 (Option 1) \$1,000,000 (Option 2)
3	East-West Connector Road (Phase I) ⁴	0012	Construct a new urban/rural connector road from near Aspen Way to proposed North-South Connector Road. Timing for this project will be dictated by planned developments in the area (East Bench Subdivision).	CTUIR	\$1,151,000
4	Umatilla River Bridge	900	Replace County Bridge #59C727 over the Umatilla River along Bingham Road (County Road #900).	CTUIR, BIA	\$198,300
5	Meacham Creek Bridge	900	Replace County Bridge #59C726 over Meacham Creek along Bingham Road (County Road #900).	CTUIR, BIA	\$194,400
6	River Road (Phase I) ¹	NA	Widen, align, shoulder, and add gravel from the railroad crossing east to White Road. Tribe to take over ownership of two at-grade railroad crossings and pave crossings with asphalt.	CTUIR, BIA, UPRR	\$110,000
7	River Road (Phase II) ²	927/918	Widen, align, add shoulders, and add gravel along River Road (County Road #927) from Cayuse Road north to the railroad crossing and along River Road (County Road #918) from White Road east to North Cayuse Road.	County, BIA, CTUIR	\$221,000
8	Mission Road at Highway 331	900/ Hwy 331	Modify intersection to include stop control at all four approaches, construct sidewalks and curbing with handicap ramps on all four corners, and provide striping for crosswalks. Must be reviewed by state traffic engineer.	CTUIR	\$19,600

Priority No.	Project Name	IRR Route Number	Project Description	Agencies Involved	Cost
9	Kash Kash Road at Highway 331 ³	934/ Hwy331	Close existing access to Highway 331 and reroute Kash Kash Road north to a new intersection with the highway. Add exclusive left-turn lanes on the highway approaches to new intersection. Also construct new driveway/street access on the west side of the intersection, opposite of Kash Kash Road. Install new traffic signal when warranted.	BIA, CTUIR, ODOT, Private Developer	\$981,800
10	Highway 331 Median ³	Hwy331	Construct a non-traversable landscaped median along Highway 331 from the I-84 westbound ramps to the Wildhorse Resort Entrance Road. This project also includes bicycle/pedestrian improvements.	ODOT, CTUIR	\$1,084,000
11	SE 56 th Street/Gopher Flat Lane ¹	NA	Widen, align, shoulder, and add gravel from Mission Road to the end of Gopher Flat Lane.	CTUIR, BIA	\$89,000
12	Parr Lane ¹	NA	Widen, align, shoulder, and add gravel from Mission Road to the end of Parr Lane. Pave one at-grade railroad crossing with asphalt.	CTUIR, BIA, UPRR	\$55,000
13	Emigrant Road ²	937	Add shoulders and repave Emigrant Road (County Road #937) from Mission Road to Poverty Flat	County, BIA, CTUIR	\$1,468,000
14	White Road ²	918	Widen, align, shoulder, and add gravel along White Road (County Road #918) from Cayuse Road north to River Road.	County, BIA, CTUIR	\$116,000
15	North Cayuse Road ²	925	Widen, align, shoulder, and pave North Cayuse Road (County Road #925) from River Road north to Mann Road.	County, BIA, CTUIR	\$204,400
16	Mann Road ²	925	Widen, align, shoulder, and pave Mann Road (County Road #925) from Crawford Hollow Road south to North Cayuse Road.	County, BIA, CTUIR	\$518,800
17	Motanic Road ²	1031	Widen, align, shoulder, and pave Motanic Road (County Road #1031) from Best Road south to Spring Creek Road.	County, BIA, CTUIR	\$755,800
18	Sumac Road ²	1050	Widen, align, shoulder, and pave Sumac Road (County Road #1050) from Spring Creek Road south to McKay Creek Road.	County, BIA, CTUIR	\$518,000
19	McKay Creek Road ²	1050	Widen, align, shoulder, and add gravel along McKay Creek Road (County Road #1050) from Sumac Road east to North Fork McKay Creek Road.	County, BIA, CTUIR	\$430,500

Priority No.	Project Name	IRR Route Number	Project Description	Agencies Involved	Cost
20	Kash Kash Road/St. Andrews Road ²	934/931	Widen, align, shoulder, and pave Kash Kash Road (County Road #934) and St. Andrews Road (County Road #931) from the end of pavement near I-84 to Niktyoway Road.	County, BIA, CTUIR	\$384,800
21	Thornhollow Cattle Pass Bridge ²	745	Replace County Bridge #59C378 along Thorn Hollow Road (County Road #745). This bridge is structurally deficient.	County, BIA, CTUIR	\$36,000
22	Wildhorse Creek Bridge ²	685	Replace County Bridge #59C401 along Wild Horse Road (County Road #685). This bridge is structurally deficient.	County, BIA, CTUIR	\$46,000
23	I-84 EB Ramps at Highway 331 ³	Hwy331	Construct exclusive left- and right-turn lanes on the off-ramp approach. Install a traffic signal when warranted.	ODOT, CTUIR	\$200,000
24	I-84 WB Ramps at Highway 331 ³	Hwy331	Construct exclusive left- and right-turn lanes on the off-ramp approach and an exclusive right-turn lane on the north approach. Install a traffic signal when warranted.	ODOT, CTUIR	\$250,000
25	Wildhorse Resort Entrance Road at Highway 331 ³	Hwy331	Add an exclusive left-turn lane on the north approach of the highway. Install a traffic signal when warranted.	ODOT, CTUIR, Private Developer	\$200,000
26	Mission Road Bike/ Ped Facility (Phase II)	900	Complete the extension of a bicycle/pedestrian facility to the City of Pendleton along Mission Road/US Highway 30.	CTUIR, BIA, ODOT	\$329,200
27	North-South Connector Road ⁴	0011	Construct a new north-south connector road from the Wildhorse Resort Entrance Road to "A" Street.	CTUIR	\$1,650,000
28	East-West Connector Road (Phase II) ⁴	0012	Extend rural connector road from proposed North-South Connector Road to Highway 331. Timing for this project will be dictated by planned developments in the area.	CTUIR	\$649,000
29	East-West Connector Road (Phase III) ⁴	0012	Extend urban connector road from the new intersection at Highway 331 to the west and then north to a new intersection with Mission Road. Timing for this project will be dictated by planned developments in the area.	CTUIR	\$940,000
30	New Intersection South of Mission Road at Highway 331 ³	Hwy331	Construct a new intersection to the East-West Connector Road. Establish stop control on the minor street approaches and construct left-turn lanes on the approaches of Highway 331.	ODOT, CTUIR, Private Developer	\$100,000

Priority No.	Project Name	IRR Route Number	Project Description	Agencies Involved	Cost
31	Highway 331 Sidewalks and Bike Lanes	Hwy331	Provide bike lanes, curb and gutter, and sidewalks along Highway 331 from Mission Road to proposed East-West Connector Road.	ODOT, CTUIR	\$220,000
32	Highway 331 Shoulder Widening	Hwy331	Provide 8-foot paved shoulders along Highway 331 from Wildhorse Resort Entrance Road to proposed East-West Connector Road.	ODOT, CTUIR	\$200,000
33	Wildhorse Resort Entrance Road Path	0013	Construct a multi-use path from Tamastslikt Cultural Institute to the Wildhorse Casino	CTUIR	\$82,500
34	Connector Road between Kash Kash Road and Wildhorse Resort	0014	Construct a two lane road connecting the realigned segment of Kash Kash Road to the Wildhorse Resort Entrance Road. The proposed alignment will overlap the existing road fronting the west side of the RV park.	CTUIR	\$840,000
35	South Market Road Path	0015	Construct a multi-use path along the west side of South Market Road from Tutuilla Church Road to the I-84 interchange.	CTUIR	\$33,000
36	Path Across Umatilla River ³	0016	Construct a multi-use path in the vicinity of Parr Lane and extending across the Umatilla River to connect with Kirkpatrick Road.	CTUIR	\$126,000
37	Tamastslikt Cultural Institute Connector Road ⁴	0017	Construct a new connector road from the Tamastslikt Cultural Institute to the proposed east-west connector road, near the Cayuse Road/Emigrant Road intersection.	CTUIR	\$1,518,000

- Notes:
- (1) This project was identified in a roadway improvement needs analysis performed by the CTUIR transportation planner during the development of the Umatilla County TSP.
 - (2) This project was identified as transportation need by the CTUIR transportation planner and was included as a planned project in the Umatilla County TSP, November 1999.
 - (3) This project was identified with the assistance of the Technical Advisory Committee during the CTUIR TSP planning process.
 - (4) This project was identified in the Mission Community Plan. Subsequent revisions have been made through further conversations with tribal planning staff.

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TAB 9 - ROADWAY DESIGN STANDARDS

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TAB 11 - FTA SECTION 5311 FUNDING FOR TRANSIT SERVICES

TAB 12 – FEDERAL AND STATE FUNDING SOURCES

REVIEW OF PLANS, STUDIES AND POLICIES

REVIEW OF PLANS, STUDIES AND POLICIES

CTUIR

Four Corners Master Plan

The Four Corners Master Plan was completed in March of 2000 and is a result of the Mission Community Plan policy to "Conduct a commercial needs study of the entire Mission Intersection to determine which types and mix of uses are most appropriate and developable." The CTUIR is committed to a plan that will transform the Four Corners area into an economic asset for the Reservation community and the property owners. The Master Plan includes a market analysis and land development study of the area. The study concluded that the demand for the area was verified and is suitable for most land uses.

CTUIR Comprehensive Plan

The CTUIR Comprehensive Plan was adopted in May of 1996 to establish the long-range goals of the CTUIR for reference by the Tribal officials and departments and the CTUIR members. The Tribal Planning Office in consultation with the Tribe's Natural Resources Commission and Board of Trustees prepared the Comprehensive Plan. The Plan sets out the history of the CTUIR, has a declaration of sovereignty, describes the tribal government, and has a comprehensive list of goals and objectives arranged by category. It was intended that the plan be used as a framework, and that plans would be developed addressing more specific topics. The Mission Community Plan, the Rural and Resource Lands Policy, and the Overall Economic Development Program are all plans that focus on sections of goals from the Comprehensive Plan. The transportation goals from the Comprehensive Plan have been incorporated into the CTUIR TSP.

Mission Community Plan

The Mission Community plan was adopted in June of 1998 and is considered an element of the CTUIR Comprehensive Plan. Its purpose is to provide a long range plan for the growth and development of the Mission Community as a distinct social, economic, and cultural Indian community which meets the needs of the CTUIR. It includes an outline of existing elements of the community, the projected needs of the community, and a community plan that consists of policies and recommendations for several aspects of the community.

Plan for Growth Document

The "Plan for Growth" Overall Economic Development Program (OEDP) Update document was completed in March of 1999. It is also considered to be an element of the CTUIR Comprehensive Plan. It draws its long-term goal from the Economic Development goal of the Comprehensive Plan, which is "to improve and diversify the overall economy of the Umatilla Tribes while respecting traditional cultural values." The purpose of the OEDP is to provide assistance and information in planning economic

development on the reservation, and to inform the general public of the Tribes' intentions for economic development on the Reservation.

Umatilla Reservation Transportation Plan

The Umatilla Reservation Transportation Plan, which was completed in September of 1987, is one of the Transportation Plans that the BIA had prepared for 10 reservations in the Northwestern United States. The plans determine and define the public transportation and road system needs of the reservations, and develop a need-based system to prioritize road improvement projects.

Indian Reservation Roads Program – Transportation Planning and Procedures Guidelines

The Indian Reservation Roads Program was completed in October of 1999, and is a reference for transportation planning. It defines procedures and provides guidelines to be used by the FHWA, the BIA, and Indian Tribal Governments for IRR transportation planning.

Roadway Inventory and Project Request Guide

The Road Inventory and Project Request Guide, completed in April of 1994, defines the BIA road system and construction need system. These definitions help create a verifiable system of roads for use in the allocation formula, and ensure an equitable distribution of IRR funds based on relative need. It includes an inventory of roads, sample forms and resolutions, and a draft of the "Formula B" rating method.

Traffic Impact Study for the Oregon Trail Interpretive Institute and the Wildhorse Resort

This Traffic Impact Study was finished in October of 1994 to determine the traffic impacts of two proposed developments, the Oregon Trail Interpretive Institute and the Wild Horse Gaming Facility, and whether the traffic generated to the developments make any mitigations necessary. Both of the proposed developments are located off of Highway 331. This study was necessary to obtain an access permit to gain access to Highway 331. The study concluded that the generated traffic does not have a significant impact on the highway facilities, and that such mitigations as turn lanes and traffic signals may be necessary in certain intersections.

Umatilla County

Umatilla County Draft Transportation System Plan

The Umatilla County Transportation System Plan, completed in November of 1999, focuses on the guides the management of existing transportation facilities and the design and implementation of future facilities for the next 20 years.

Umatilla County Public Transportation Needs Assessment

The Umatilla County Public Needs Assessment was prepared to present the results of an assessment of the public transportation needs of the general public and special needs mobility in Umatilla County. The Assessment identifies gaps in service and recommends strategies to meet those gaps.

Umatilla County Comprehensive Plan

The Umatilla County Comprehensive Plan was written in 1983 to meet the statewide requirements for planning. It was last amended in 1987. The plan is broken into three sections: the Introduction; Plan Elements – Findings, Recommended Policies; and the Plan Map. The Plan Elements section is broken into sections dealing with the fourteen goals. This includes a Transportation Element with findings and recommended policies.

Umatilla County Development Code

The Umatilla County Development Ordinance was adopted in 1983, and last amended in November of 1991. In 1997 this ordinance was recodified and retitled as Chapter 1528 Development Code. The portions of the code most relevant to the Transportation System Plan include sections on off-street parking requirements, driveways, and road standards. Amendments to the development code include road standards for county roads.

Umatilla Public Transportation Needs Assessment

This study was produced in June, 1999. The report presents an assessment of the public transportation needs in Umatilla County. It identifies where existing services are deficient and proposes strategies to meet the needs of the County. Recommendations in this report include the following:

- Communities and social service providers work together to coordinate and expand local intra-city programs. These services may expand to serve some of the rural unserved areas.
- Umatilla County work with its jurisdictions, the CTUIR, and Department of Human Resources to expand or establish general public intercity transit service.
- Umatilla County work with employers in Hermiston and Pendleton to establish rideshare service between both cities. This includes the development of a park-and-ride lot at each of the I-84 interchanges near Pendleton and Hermiston.

State of Oregon

The Highway 331 Corridor Refinement Plan (Developed with the CTUIR TSP)

The purpose of this study is to develop a long-range corridor plan to maintain the integrity/function of Highway 331 and the I-84 interchange, and to identify

improvements required within the corridor to maintain acceptable traffic operations and safety while providing safe access to adjacent land uses. This plan was developed concurrently with the CTUIR TSP. The main components of this plan are a detailed access management strategy for Highway 331 and the identification of improvements that address all modes of transportation within the corridor planning area. It is ODOT's intention to use this document as a Public Facilities Plan for the highway.

1999 Oregon Highway Plan

The purpose of the 1999 Oregon Highway Plan is to give policy and investment direction to the corridor plans and transportation system plans that are being prepared around the state while leaving the responsibility for identifying specific projects and modal alternatives to these plans. The Highway Plan has three main elements, the vision, the policy element, and the system element. The vision presents the existing conditions and the long-term goals of the state highway system, and describes the economic and demographic trends. The policy element contains the goals which have policies and actions to accomplish them. The system element contains an analysis of state highway needs, revenue forecasts, descriptions of investment policies and strategies, an implementation strategy, and performance measures. The two sections of this plan which are used are the highway mobility standards policy, and the access management goal.

The highway mobility standards are based on volume to capacity ratios, and were set forth with a 20-year planning horizon. The standards apply to all state highway sections to maintain acceptable and reliable levels of mobility by identifying performance expectations and guiding operations decisions to maintain acceptable performance. Corridor plans and mobility standards for routes that are important for through travel should be developed. Where a highway segment's volume to capacity ratio is substandard and cannot be brought up to standards, or improvements are not planned within the planning horizon, the performance of the highway segment should be improved as much as feasible. Where it would be infeasible to meet the standards in this policy, alternate highway mobility standards should be considered.

Access management strategies ensure safe and efficient highways consistent with their determined function. Safe and efficient operation is ensured through grade-separated interchange areas, the placement of medians and median openings, and the location and spacing of intersections and approach roads. Requests for deviations from adopted access management standards and policies and appeals of both denied requests for approach roads and denied requests for deviations from adopted access management standards and policies must be managed to ensure statewide consistency.

1995 Oregon Bicycle and Pedestrian Plan

The Oregon Bicycle and Pedestrian Plan's overall goal is to provide safe, accessible and convenient bicycling and walking facilities which encourage these alternate modes of transportation. The strategies that the Plan goes into in depth are design, signing and maintenance. Several types of bikeways are described, including bike lanes and shoulder bikeways. Bike lanes are recommended generally in urban areas to provide bicyclists with a safe space to travel. Standard proportions and recommended conditions are described for the bike lanes. Shoulder bikeways are more for rural areas where roads and

highways may already have paved shoulders which can be used, or may have gravel shoulders which can be paved to accommodate bicyclists.

City of Pendleton

Pendleton Transportation System Plan

The Pendleton Transportation System Plan was finished in December of 1996. It is a multimodal plan which includes strategies to manage the growth and transportation needs of the community over 20 years. It includes a comprehensive analysis of the existing transportation system. It has four general strategies and three alternatives based on those strategies.

The plan includes an evaluation of the impacts of growth on the transportation system, an identification of short-term and long-term improvement, financing plan, transportation and land use policy recommendations to assist the City in implementing the TSP, and a description of the plan's compliance with the TPR.

SUMMARY OF TAC MEETING MINUTES

CTUIR TRANSPORTATION PLAN

TAC MEETING

1:30-4:00 p.m.

Thursday, February 10, 2000

Tribal Planning Office / Large Conference Room

Umatilla Indian Reservation, Oregon

AGENDA

I. Status of IRR Inventory

II. Discuss Preliminary Transportation Needs

- **Proposed Mission Road Improvements, Bike / Pedestrian Path alignment options and connection to Pendleton bike path system**
- **Mission Road Intersection Needs**
- **Reservation Roadway Improvements Previously Identified**
- **Bicycle/Pedestrian Needs along Highway 331**

III. Items for Future Agenda

- **Functional Street Classification and Street Design Standards**
- **Traffic Forecast**
- **I-84 Interchange Needs**

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DAVID EVANS AND ASSOCIATES, INC.

MEMORANDUM

TO: All TAC Members
FROM: Brian Dunn
DATE: February 16, 2000
SUBJECT: **SUMMARY OF FEBRUARY 10 TAC MEETING MINUTES**

2828 SW Corbett Avenue

Portland, Oregon 97201

Tel: 503.223.6663

Fax: 503.223.2701

PROJ. #: CTUI0000-0001

COPIES:

SUMMARY OF FEB. 10 TAC MEETING MINUTES FOR CTUIR TRANSPORTATION SYSTEM PLAN

THOSE PRESENT:

1. George Ruby- ODOT District 12
2. Teresa Penninger- ODOT Region 5
3. Jonathon Pendleton- ODOT Region 5
4. Gary Roberts- Umatilla County Roadway Dept. (Substitute For Hal Phillups)
5. Jim Beard- CTUIR Tribal Planning Office
6. Tom Shuman- BIA Roads
7. Doug Dunlap- BIA Roads
8. Terry Parrish- CTUIR Public Works
9. Jack Davis- CTUIR Tribal Planning Office
10. Brian Dunn- David Evans And Associates, Inc.

STATUS OF IRR INVENTORY-

The Indian Reservation Roadway (IRR) System includes all roads on the reservation including those which access the reservation (up to five miles in length or where these roads access another facility of a higher classification). Terry Parrish has committed to finishing the IRR inventory before the next TAC meeting on March 16. The results will then be reviewed to identify roadway deficiencies. Attached to this document is a table summarizing the roadway inventory elements.

Once the road inventory is finished, Terry Parrish will have all the information he needs to fill out the BIA 5704 forms and corresponding strip maps for entry into the BIA's IRR system. This effort will be done concurrently with the development of the CTUIR TSP.

Tom Shuman stated that the current IRR system for the reservation is out of date. He expressed the importance of having a complete inventory, so that the BIA can allocate the maximum amount of construction dollars to the Umatilla Indian Reservation.



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MISSION ROAD PROJECT (BIKE LANES OR MULTI-USE PATH)

Jim Beard said that construction could take place within the next year to install 6-foot bike lanes along Mission Road, from Highway 331 to the western boundary of the Reservation. This project would be funded through BIA construction dollars. Because this project is estimated to cost \$1,000,000, the CTUIR will need to borrow roughly five years into the future, meaning BIA construction dollars for other projects will not be available until then.

Brian Dunn indicated that since the CTUIR TSP is scheduled for completion by June of 2000, that this project would need to be included in the TSP.

Tom Shuman, from BIA, has been working for several months on final design plans to provide bike lanes along Mission Road. Tom said the bike lanes will terminate near the western boundary of the Reservation, near the access road to Hal's Trailer Court. He stated that the design plans have undergone a 30% review by the state and will soon be going through a 90% review. The design currently shows two 11-foot travel lanes along Mission Road, with the addition of 6-foot bike lanes and 2-foot paved shoulders on both sides of the road. This design allows for an additional 2 feet of gravel shoulder and open drainage ditches on both sides of the road. Since the road will be widened from both sides, the centerline will only move by as much as two feet, thus, minimizing the amount of fill and asphalt needed. The design also maintains the existing right-of-way between the residential properties on the south side of the road and the UPRR boundary on the north side of the road. Right-of-way is generally 30 feet to each side of the roadway centerline for a total right-of-way width of 60 feet.

Teresa Penninger asked about the possibility of constructing sidewalks along Mission Road along with bike lanes. Jim Beard said the area is zoned for general rural use according to the Mission Community Plan and that sidewalks would not be needed.

Upon further discussion, it was determined that the construction of bike lanes may not be the best solution to improved bicycle and pedestrian mobility along Mission Road. Jack Davis proposed another option. This was to construct a two-way multi-use path along the south side of Mission Road, in place of bike lanes. Several TAC members agreed that a path would be more beneficial to the residents who live mostly along the south side of Mission Road. A general consensus was reached that it would be possible to construct an 8-foot wide path on the south side of Mission Road with a 5-foot median, separating the path and road. This would allow for two 11-foot travel lanes on Mission Road and 4-foot paved shoulders on both sides. Tom Shuman supported the use of a painted median made of flat brick or other material, located between the paved roadway shoulder and path, to give drivers a clear distinction between path and travel lane and that it would not be impacted by snow plowing.

Tom Shuman indicated that a multi-use path option was considered before, but ended up being dropped because of the high construction cost, right-of-way impacts to adjacent landowners, and driver safety issues. Tom said it would cost \$3,000,000 to construct a multi-use path, which is roughly three times more money than to construct bike lanes. The higher cost would come from the need to move the centerline, or crown, of the road further to the north by 6 to 8 feet. Moving the centerline of the road by such a large distance would require more fill and a significant amount of asphalt to resurface the road and add a new crown. This project would also require acquisition of some right-of-way on the south side, impacting the property lines of adjacent land owners. To add a multi-use path while maintaining a general right-of-way width of 60 feet along Mission Road, this project will only allow for 4-foot paved shoulders on Mission Road. Tom indicated this distance is not wide enough for disabled vehicles to pull safely off the road.

(This paragraph is from a phone conversation with Tom Shuman on February 15th). -Tom Shuman said that if the multi-use path option were pursued, efforts to secure funding, do the design, and contract the work could delay the



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Mission Road project by more than a year or two. If the CTUIR were to secure 100% funding through the BIA to build a path, the Reservation would be borrowing more than 15 years into their future BIA budget. He said the Reservation may secure funding through a federal Public Lands Discretionary program. However, funding would not be guaranteed as this project would need to compete with other agency projects.

Discussion of whether to build bike lanes or a multi-use path also focused on the needs of buses. Currently, buses pull off onto the shoulder of Mission Road in each direction to drop off or pick up students. In some areas where turn outs are provided, they are able to pull completely off the road. For safety reasons, bus drivers will not allow students to cross the road in front of opposing traffic. Students must wait until their stop is on the right side of the road. Assuming 6-foot bike lanes and 4-foot shoulders are provided along Mission Road, buses can pull over and out of the through travel lane. However, most of the bike lane would be blocked. If a multi-use path were constructed, the resulting shoulder widths on Mission Road would force buses to remain in the travel lane and block traffic. *(Question for Jim Beard- Do buses stop traffic in both directions when picking up or dropping off students?)*

The discussion ended with the possibility of implementing either option. Brian Dunn stated that an evaluation of both options will be considered in the development of the Transportation System Plan. These two options may need to be considered by the public.

BIKE/PED CONNECTION FROM RESERVATION TO CITY OF PENDLETON

Brian Dunn began the discussion of identifying a possible future bike/ped connection from the Reservation to the City of Pendleton. Such a connection would most likely start at the west end of the bike lane/multi-use path project along Mission Road, located at the western boundary of the Reservation. Brian provided background information on existing bike and ped facilities in northeastern Pendleton that may be good connecting points for such a facility. These facilities include:

- The River Pathway on the south side of the Umatilla River, just west of OR Highway 11, ending near the little league park (bike and pedestrian facility)
- A signed bike route along Court Avenue and 20th Street (bike facility),
- Bike lanes along OR Highway 11 from US Highway 30 to the east UGB line (bike facility), and
- Continuous and intermittent sidewalks along the north and south sides of US Highway 30, from the UPRR viaduct to the OR Highway 11 intersection (pedestrian facility).

Brian mentioned that City of Pendleton TSP recommends the River Pathway (already constructed) should extend along the south side of the Umatilla River and intersect OR Highway 11. However, in a phone conversation with Dave Lorenzen, the city engineer, Brian said that when the pathway was built a connection to the highway could not be made because of the topography of the area. The pathway currently ends at a rock cliff along the Umatilla River. A connection to this path would need to be made from the north side of the river or across the UPRR railroad and private property to the south. It was determined in the meeting that neither route would be a viable option.

Brian also stated that the Pendleton TSP shows bike lanes to be striped in the future along Court Avenue, 20th Street, and a portion of US Highway 30, from 20th Street to the east UGB line. Striping bike lanes along Court Avenue and 20th Street should not be an issue, since they are low volume roads and are already signed as part of a bike route. The future of establishing bike lanes along US Highway 30, east of 20th Street, is uncertain though.



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When considering the extension of bike lanes to Pendleton, Terry Parrish added that it would be possible to extend a bike lane from Mission Road to the OR Highway 11 intersection in the westbound direction, but not in the eastbound direction. The exit from US Highway 30 onto Mission Road in the eastbound direction currently goes under the US Highway 30 overpass. Terry said that the supporting structure is not wide enough to adequately accommodate a single travel lane and a bike lane. He also mentioned that this exit ramp does not get enough exposure to sunlight and that it is often icy during the winter months and would not be safe for bicyclists.

It was also determined that bicycle lanes cannot be established anytime soon along US Highway 30 through the intersection with OR Highway 11. George Ruby gave a summary of the general topography, type of businesses present along the highway, right-of-way constraints, and other traffic-related issues along US Highway 30 and at its intersection with OR Highway 11. He and other representatives from ODOT and the City of Pendleton recently performed a study to look at various options for improving the OR Highway 11 connection with US Highway 30. This main purpose of this effort was to address traffic safety at the intersection. No analysis was done to assess bicycle and pedestrian needs at this intersection, but George did state that bike lanes could not be striped along US Highway 30, given the existing pavement width. No formal recommendation was made as part of this study for future improvements to this intersection. George said that a traffic signal could conceivably be installed, but that it may be more than 20 years before this happened. If built, he said the type of geometric improvements necessary to install a traffic signal would then allow for the design of bicycle lanes along US Highway 30. In the meantime, he said that a more short-term goal for ODOT would be to acquire several businesses on the north side of US Highway 30 and obtain the necessary amount of right-of-way to extend the westbound merging lane from OR Highway 11. A general consensus was reached that bike lanes could not be striped along US Highway 30 through the intersection of OR Highway 11 within the next 20 years. Therefore, another option should be considered to move bicyclists and pedestrians through or around this intersection.

Brian Dunn raised the possibility of extending a path north from Mission Road and across the Umatilla River to connect with Riverside Avenue with another river crossing west of OR Highway 11 to connect with the Pendleton River Pathway. Terry Parrish said that there would be many environmental issues since the area lies within the floodplain. He also indicated that crossing OR Highway 11 would be difficult and that a route such as this would cause out-of-direction travel to Pendleton and few people would use it.

Conclusions: When considering the extension of a bike/ped facility to Pendleton, many factors were considered in the meeting, such as the topography of the land, the natural and man-made physical barriers such as the Umatilla River and the UPRR line, the existing development patterns along OR Highway 11 and US Highway 30, and other factors such as minimizing construction costs and out-of-direction travel. One possible conclusion reached by Brian Dunn would be to construct a multi-use path along the north side of Mission Road and US Highway 30, with an at-grade or grade-separated crossing at the OR Highway 11 intersection. Brian Dunn and George Ruby agreed to meet at this intersection before the next TAC meeting to discuss potential crossing points.

MISSION ROAD/HIGHWAY 331 INTERSECTION NEEDS

Jim Beard highlighted the tribe's plans to construct a neighborhood convenience store on the northeast corner of this intersection. Two driveway accesses are proposed; one on Highway 331 and a second on Mission Road. Currently, there is a sidewalk constructed on the south side along Mission Road with a continuous driveway along most of the west side along Highway 331. George Ruby said that access will likely be permitted by ODOT on the west side along Highway 331, pending a review. Jim Beard indicated the development plans for the store show a single driveway access located at the north property line instead of the continuous driveway access that is there today. Jim said the tribe plans to build the store close to the corner of the intersection to provide a more pedestrian friendly



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environment at the intersection and that parking would be located at the rear of the property. No specific plans have been made for developing the commercially zoned parcel on the southwest corner of this intersection but Jim indicated that the design would similar to the neighborhood store, where the building structure would be located close to the intersection.

Brian Dunn provided a description of the existing traffic control at this intersection. Currently, there are stop signs posted on the north and south approaches of Highway 331 with free flowing conditions along Mission Road. There are also flashing amber lights posted for Highway 331 traffic and flashing yellow lights for traffic on Mission Road. Brian also provided a three year accident summary for this intersection and identified a potential safety problem. Of the three accidents which took place during this time period, two involved vehicles on Highway 331 that did not yield right-of-way to free flowing traffic on Mission Road. Brian indicated there might be a perception problem where drivers traveling on Highway 331 believe vehicle on Mission Road must also come to a stop. Jack Davis agreed with this idea and added that there are many "close encounters" between vehicles at this intersection. He also added that the public wants to keep the existing traffic control so traffic can flow freely on Mission Road. Brian Dunn then gave a summary of the existing traffic operations at this intersection. According to traffic counts taken at this intersection in December 1999, traffic operations are at LOS A for all movements, meaning there is little or no delay. The intersection counts were also factored up by about 25% to account for peak seasonal conditions, which may exist in summer months like July. Traffic operations results were still at an acceptable level (LOS B). Assuming the intersection was to become a four-way stop, traffic operations would still remain at an acceptable level (LOS B). However, it should be mentioned that delay along Mission Road would increase slightly because of the four-way stop, but still within tolerable levels. Average delay would subsequently decrease along Highway 331.

Considering all of the above factors, the TAC agreed that a four-way stop should be established at this intersection once the convenience store is built. Brian also added that as part of this project, sidewalks should be constructed on all four corners, with the addition of handicap ramps and crosswalks. New sidewalks around 8-feet in width should also be constructed on west and south sides of the proposed convenience store along the entire property line. All of these improvements would create safer conditions for pedestrians who may crossing the street and a four-way stop would still provide an acceptable level of operation for traffic on all intersection approaches.

Jim Beard asked about financial assistance from ODOT to help fund intersection improvements. George Ruby said the developer of the property should incur costs, which would be the tribe. He said ODOT would work with the developer on access location issues along Highway 331. Teresa Penninger said that sidewalk improvements will not be funded by ODOT since they will not provide a continuous connection to nearby neighborhoods along Highway 331. This led into a discussion on bike/ped needs along Highway 331 north of this intersection.

BICYCLE/PEDESTRIAN NEEDS ALONG HIGHWAY 331

Jim Beard said residents need better access to the Umatilla River from Mission Road and that a bike/ped path would be good to have along Highway 331. Brian Dunn stated that there are shoulders along both sides of the highway at this time but that the railroad crossing is very narrow with little or no shoulders. There are also no sidewalks along the bridge over the Umatilla River. Teresa Penninger said that it would be unlikely the state would fund the construction of a multi-use path or sidewalks along the highway. Brian Dunn said the cost of building a path, modifying the existing railroad crossing, and retrofitting the bridge over the Umatilla River with sidewalks would be very expensive. These costly improvements may not be warranted given the small number of residents living north of the river and the generally rural land uses further to the north. Another option was then considered to build a path to the east of the highway with a direct connection to Mission Road and Kirkpatrick Road. This would require a



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pedestrian bridge over the river. With a path located in the Umatilla River floodplain it was explained that it could be submerged during a flood. Terry Parrish said the path could be located near the baseball park and a swimming hole. The idea of connecting such a path across from a major activity center such as the governmental offices and neighborhoods on Mission Road seemed reasonable. It would also allow bicyclists and pedestrians to access the new path now being constructed from this area to the Tumasklickt Cultural Institute and Gaming Resort.

RESERVATION ROADWAY PROJECTS PREVIOUSLY IDENTIFIED

A list of eleven roadway improvement projects previously identified by Naveen Chandra, the transportation planner formerly working for the CTUIR, was reviewed. Brian Dunn indicated this list should be considered when identifying roadway deficiencies at the next TAC meeting. He also stated that all projects along county roads were included in the Umatilla County TSP.

THE NEXT TAC MEETING IS SCHEDULED FOR MARCH 16

CTUIR TRANSPORTATION PLAN

TAC MEETING

**1:00-3:30 p.m.
Thursday, March 16, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon**

AGENDA

- I. Summary of IRR Inventory**
 - **Identify Roadway Deficiencies**
- II. Traffic Forecast Summary**
- III. Future Traffic Operations**
- IV. Future I-84 Interchange Needs**
- V. Functional Street Classification and Street Design Standards**
- VI. Transit Needs on Reservation**
- VII. Future Topics to Address at Next Meeting**
 - **Preliminary List of Transportation Needs**
 - **Highway 331 Corridor Refinement Plan**



DAVID EVANS AND ASSOCIATES, INC.

MEMORANDUM

2828 SW Corbett Avenue

TO: All TAC Members

FROM: Brian Dunn *BD*

Portland, Oregon 97201

DATE: March 28, 2000

Tel: 503.223.6663

SUBJECT: **CTUIR TSP- MARCH 16 TAC MEETING MINUTES**

Fax: 503.223.2701

PROJ. #: CTUI0000-0001

COPIES:

THOSE PRESENT AT MEETING:

1. George Ruby- ODOT District 12
2. Teresa Penninger- ODOT Region 5
3. Jonathon David- ODOT Region 5
4. Hal Phillips- Umatilla County Roadway Dept.
5. Jim Beard- CTUIR Tribal Planning Office
6. Tom Shuman- BIA Roads
7. Terry Parrish- CTUIR Public Works
8. Jack Davis- CTUIR Tribal Planning Office
9. Patty Perry- Umatilla County Planning Dept.
10. Ken Eddy- ODOT Hermiston Office
11. Kathy Straton- ODOT Public Transit Division
12. Brian Dunn- David Evans And Associates, Inc.

STATUS OF IRR INVENTORY

Terry Parrish stated that the IRR Inventory is complete. However, the results of the inventory could not be reviewed before this meeting to identify a preliminary list of roadway deficiencies.

EXISTING AND FUTURE TRAFFIC OPERATIONS & 20-YEAR TRAFFIC FORECAST

A packet was handed out containing a technical summary of the existing and projected future traffic conditions for the reservation. Also included was the methodology used to produce a 20-year traffic forecast.

The existing and future traffic operations for intersections along Highway 331 were identified by the Level-of-Service (LOS) and equivalent volume-to-capacity (V/C) ratios for the critical movements. George Ruby and Teresa Penninger said they would like to have a single V/C ratio shown for the critical movements at these intersections instead of an equivalent range of V/C ratios. Brian Dunn said he would address this topic and make the appropriate changes.

A discussion then began on what are acceptable standards for traffic operations. ODOT now follows a policy of maintaining specific highway mobility standards. George Ruby from ODOT said he would like the see the tribe adopt the same operating standards outlined in the 1999 Oregon Highway Plan, and apply them to reservation roads.

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These standards set minimum levels of operation for roadways and intersections based on volume-to-capacity (V/C) ratios instead of Level-of-Service. Jim Beard stated the tribe might adhere to a LOS D or even a LOS C or better policy for roads on the reservation. Brian Dunn indicated that if the tribe wants to mitigate a roadway deficiency because it does not meet a LOS C or better standard, and the said roadway or intersection approach is along a state highway, then the minimum standard automatically defaults to the 1999 Oregon Highway Plan standards.

The future 20-year traffic forecast prepared for the CTUIR TSP was developed with the assistance of the CTUIR Comprehensive Planning Manager and the ODOT Region 5 Traffic Operations Manager.

POSSIBLE MITIGATIONS TO PROJECTED CAPACITY DEFICIENCIES ALONG HIGHWAY 331

Based on the future traffic operations analysis, several projects were identified to mitigate future capacity deficiencies along Highway 331. These projects were included in the technical summary provided to the TAC members.

- Mission Road- Establish a four-way stop.
- I-84 EB Ramps- Install a traffic signal and provide exclusive left and right-turn lanes on the off-ramp approach.
- I-84 WB Ramps- Install a traffic signal and provide exclusive left and right-turn lanes on the off-ramp approach, and a right-turn lane on the north approach.
- New Intersection South of Mission Road- Install stop signs on the minor side-street approaches and exclusive left-turn lanes on the highway.
- New Intersection North of I-84- Install a traffic signal, provide exclusive left-turn lanes on the highway with exclusive left-turn phasing on the north and south approaches.

OTHER POTENTIAL IMPROVEMENTS

The proposed new intersection along Highway 331 north of I-84 (exact location unknown) led to a discussion of eliminating the existing Kash Kash Road access, which is only about 100 feet north of the I-84 WB ramps, and rerouting Kash Kash Road further to the north with a new access to Highway 331. This new access would constitute the east leg of the proposed new intersection. George Ruby said that the location of this new intersection should consider the access spacing requirements set forth in the new 1999 Oregon Highway Plan for highway interchange areas. He said the State would work with the tribe to find a location that is agreeable by both agencies.

George Ruby mentioned that a non-traversable median would need to be established along the highway between the I-84 WB ramps and the proposed new intersection if other driveway accesses are created in this area. A non-traversable median would extend down the middle of the highway and could either be in the form of 9-inch raised curbing or a taller barrier such as a concrete New Jersey barrier. Both types of medians would prevent vehicles from making left turns from driveways, forcing a right-in and right-out only situation. George mentioned that even with the appropriate signing and channelization at new right-in right-out accesses without a non-traversable median, drivers have been known to make illegal left turns.

Although no capacity deficiency was identified in the future traffic operations analysis, Brian Dunn stated it would improve driver safety if an exclusive left-turn lane was established at the highway's north approach to the road



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accessing the Wildhorse Gaming Resort and Tamastslikt Cultural Institute. Currently through traffic and vehicles making left-turns must share a single travel lane. Since the posted speed is 55 mph, it will become increasingly important to separate the slower vehicles making a left turn from the faster through traffic.

TRANSIT NEEDS ON RESERVATION

Kathryn Straton from ODOT Public Transit Division in Salem spoke about the various programs and funds that are available for communities to establish public transit. Kathryn deals with grants management and works with the FTA to get grants for small communities to establish public transit services.

She said that with the passage of the new Federal Transportation Efficiency Act for the 21st Century, or TEA 21 bill, funding for public transit through Surface Transportation Program (STP) Funds has increased substantially, including the money available to rural areas. In rural areas, these funds are distributed by the state and can be used for small communities that already have a public transit service or need a service. Funds are generally limited to capital projects, such as the purchase of vehicles and operating funds. Funds cannot be used for planning purposes.

Another source of funding is through the Federal Transit Administration (FTA) which sponsors a program for general transit services in small urban and rural areas. These funds are distributed through the ODOT Public Transit Division and can be used for capital and operation needs.

Kathryn stated that there are two funds that currently have money obligated for establishing public transit on the Umatilla Indian Reservation. The first fund is through the FTA program, where the state has obligated \$56,000. In order for the CTUIR to receive these funds, the tribe must provide matching funds up to 50% for operating uses and 20% for capital expenses. The second program is also through the federal government, where a small properties package program has set aside \$43,200 for the CTUIR. This money can only be used for capital investments.

Kathryn recommended that a transit component be placed in the CTUIR TSP. She said herself and another coworker from ODOT could assist the tribe in meeting the federal requirements and regulations, with buying equipment, and with the public involvement process. She said Milton-Freewater and Pendleton are currently using FTA funds to establish transit services that are open to the public.

Jim Beard said that a transit component should be placed in the TSP, with a recommendation for the CTUIR to perform a detailed assessment of what the public transit needs are in the community (i.e. fixed route service, use of Casino shuttles, establishing a park and ride at the Casino, public transit service integrated with nearby cities, dial-a-ride program). He said once these needs are fully assessed, then the CTUIR should incorporate identified transit-related projects into the Transportation System Plan and pursue available federal and state funding.

ROADWAY FUNCTIONAL CLASSIFICATION AND STREET DESIGN STANDARDS

The CTUIR TSP will classify all roads on the reservation according to roadway jurisdiction (State, County, BIA, Tribe, and private). The State, County, and BIA have their own street design standards, which will be applied when new roads are built or existing roads are improved. However, there are no design standards for Tribally owned and private roads. Jim Beard said the design standards for new roads built by the tribe should coincide with the BIA standards, since the tribe wishes to ultimately have all tribally owned roads turned over to the BIA. Tom Shuman said roads can qualify for inclusion into the BIA system if there are at least three homes along the road, and the road has an easement or right-of-way.



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Jim Beard would like to the TSP to address standards for privately owned roads built on the reservation. These standards should address requirements for easements, type of roadbed surface, roadway width, presence of curb and gutter, sidewalks, and number of homes required along the road. Brian Dunn said that the BIA and County have good ordinances to use as a base and would work with the tribe to develop these standards as part of the TSP.

AGENDA FOR NEXT MEETING (MAY BE REVISED)

- Preliminary list of transportation improvements
- Process to prioritize projects
- Kick-off meeting for the Highway 331 Corridor Refinement Plan



CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
PENDLETON, OREGON 97801
Phone: (541) 276-3099
Fax: (541) 278-5393



CTUIR TRANSPORTATION PLAN

TAC MEETING

1:00 p.m. - 3:00 p.m.
Wednesday, April 12, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon

AGENDA

- I. Summary of IRR Inventory
- II. Preliminary List of Transportation Improvements
- III. Project Prioritization
- IV. Kick-off Meeting for the Highway 331 Corridor Refinement Plan
- V. Future Topics to Address at Next Meeting
 - Finalize List of Transportation Improvement Projects (With Costs)
 - Sources of Funding



**CTUIR TRANSPORTATION PLAN
&
HIGHWAY 331 CORRIDOR REFINEMENT PLAN**

TAC MEETING

**1:00 p.m. - 3:00 p.m.
Wednesday, May 17, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon**

AGENDA

CTUIR TRANSPORTATION PLAN

- I. Summary of IRR Inventory**
- II. Go Over Preliminary List and Map of Prioritized Transportation Improvements
(WITH ADDITIONAL PROJECTS AND COSTS)**
- III. Set a Schedule for Producing a Draft TSP for TAC Review.**

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

- I. Establish Goals and Objectives**
- II. Spreadsheet Summary of Access Locations Along Highway 331**
- III. Go Over Maps Showing Highway Access Locations and Identify Where 1999 OHP
Standards Are Met and Not Met**
- IV. Potential Locations of New Access Points**



DAVID EVANS AND ASSOCIATES, INC.

MEMORANDUM

2828 SW Corbett Avenue

Portland, Oregon 97201

Tel: 503.223.6663

Fax: 503.223.2701

TO: All TAC Members
FROM: Brian Dunn *bjd*
DATE: June 1, 2000
SUBJECT: **CTUIR TSP/ HIGHWAY 331 CORRIDOR REFINEMENT PLAN
-MAY 17 TAC MEETING MINUTES**

PROJ. #: CTUI0000-0001/ ODOT 0000-0331.02

COPIES: CC: Ken Ratcliff

THOSE PRESENT AT MEETING:

1. George Ruby- ODOT District 12
2. Teresa Penninger- ODOT Region 5
3. Jonathon David- ODOT Region 5
4. Hal Phillips- Umatilla County Roadway Dept.
5. Ken Ratcliff- BIA Northwest Regional Office
6. Terry Parrish- CTUIR Public Works
7. Sandra Alexander- CTUIR Public Works
8. Jack Davis- CTUIR Tribal Planning Office
9. Patty Perry- Umatilla County Planning Dept.
10. Ken Eddy- ODOT Hermiston Office
11. Brian Dunn- David Evans And Associates, Inc.

CTUIR TRANSPORTATION SYSTEM PLAN

Summary Of Indian Reservation Roads (IRR) Inventory

Brian Dunn has completed a review of the IRR inventory created by Terry Parrish. At this time, there are numerous roads that have not yet been recorded (county, tribe, private, and other orphan roads with no public right-of-way). At the next meeting, Brian will supply a list of the remaining roads that are shown on the Umatilla County road maps. It should be noted that if the tribe plans to have the BIA improve an existing road in the future, construction dollars cannot be distributed by the BIA unless the roadway has been officially entered into the IRR system. This also applies to the construction of new roads. Brian will update the IRR inventory to include a section for proposed roadways (according to the preliminary list of transportation projects) along with supporting information that would allow the tribe to fill out the BIA-5704 forms and strip maps.



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Preliminary List And Maps Of Prioritized Transportation Improvements

A packet was handed out containing a preliminary list of transportation improvement projects along with two maps showing the locations of these projects. One map shows the projects within the Mission Community area and the other showing the remaining projects on the reservation.

The prioritization and descriptions of several projects have been changed based on the previous TAC meeting in April. In addition to these changes, planning level cost estimates have been provided for each project in terms of year 2000 dollars. A list of unit costs will be provided in an appendix of the draft TSP.

Brian mentioned that the list of projects is not final since the Highway 331 Corridor Refinement Plan could identify new project needs. This list will be refined as the Highway 331 plan progresses.

Projects #5 (River Road) and #9 (Parr Lane) involve railroad crossings that need improvement. It is unclear at this time if these crossings are open to the public, private, or illegal. Brian will be contacting ODOT's rail section to determine what processes are needed to make these crossings open to the public so that the tribe or BIA can make the necessary improvements.

Ken Ratcliff stated that the BIA route numbers should be shown in the list of prioritized improvements.

Set A Schedule For Producing A Draft TSP For TAC Review

At the meeting Brian stated that he would have a draft of the CTUIR TSP report ready for TAC review by the next meeting on June 15. *Since there are several tasks remaining on the Highway 331 Corridor Plan schedule that could result in changes or additions to the CTUIR TSP, this deadline will be pushed back to the next TAC meeting for the month of July.* Drafts will also be made available for review by the CTUIR Economic Development Commission (EDC) and the Tribal Emergency Response Commission (TERC). Once comments are received from the TAC, EDC, and TERC, DEA will work to produce a second draft that addresses these comments and encompasses the conclusions of the Highway 331 Corridor Plan. It is estimated that this second draft will be presented to the CTUIR Natural Resources Committee (NRC) in August.

According to the project schedule, there are to be two meetings scheduled with the NRC. Brian will contact the NRC to see if a meeting will be needed prior to presenting the committee with the second draft report. If needed, Brian will schedule the meeting around the time of the July TAC meeting.

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

Establish Goals and Objectives

The following goals and objectives were established for the Highway 331 Corridor Refinement Plan:

OVERALL TRANSPORTATION GOAL

Develop a long-range detailed plan to maintain the integrity/function of Highway 331 including the area around the I-84 interchange.



DAVID EVANS AND ASSOCIATES, INC.

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Goal 1

Preserve the function, capacity, level of service, and safety of Highway 331 and the I-84 interchange.

Objectives

- A. Develop an access management strategy that coincides with the Oregon Highway Plan standards.
- B. Provide access to adjacent land uses while maintaining acceptable traffic operations and safety. *(new)*
- C. Develop alternative, parallel routes.
- D. Promote alternative modes of transportation.
- E. Promote Transportation Demand Management (TDM) programs.
- F. Promote Transportation System Management (TSM).
- G. Evaluate areas where safety is a concern. *(new)*

Goal 2

Improve coordination between the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Umatilla County, the Bureau of Indian Affairs (BIA), and the Oregon Department of Transportation.

Objectives

- A. Develop site-access review guidelines, which address the CTUIR, county, BIA, and state interests.
- B. Provide notification to other interested parties so that they may participate in development review processes.
- C. Work collectively to protect and minimize the impacts to transportation facilities within the corridor.
- D. Cooperate with ODOT in the implementation of the Statewide Transportation Improvement Program (STIP).
- E. Take advantage of federal and state highway programs.
- F. Identify plan-adoption requirements and ordinance modifications needed to properly bind the Highway 331 Corridor Plan with the CTUIR and Umatilla County TSP's and the Highway 11 Corridor Plan.

Goal 3

Increase the use of alternative modes of transportation (walking, bicycling, and public transportation) through improved access, safety, and service.

Objectives

- A. Support existing public transit services and seek additional opportunities.
- B. Provide sidewalks or shoulders and safe crossings on collectors and arterials.

Goal 4

Continue to promote the use of Highway 331 as an alternative truck route to OR Highway 11 through Pendleton.

Objectives

- A. Provide safe and convenient access at the I-84 interchange.



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Maps Showing Existing and Potential Access Locations

Five figures were distributed to the TAC showing the locations of all existing access points (intersections and driveways) along Highway 331, from OR Highway 11 to south of the I-84 interchange. Also shown on these maps are highlighted areas where the Oregon Highway Plan access standards are currently being met and where they are not being met. These maps will be updated to show individual parcels and land use information.

AGENDA FOR NEXT MEETING (MAY BE REVISED)

- Using the updated access locations maps:
 1. Confirm what are existing and future land uses for the corridor.
 2. Identify specific future access locations
- Review existing and planned pedestrian and bicycle facilities.
- Identify alternative, parallel routes.
- Identify network of arterial, collector, and local roads required to accommodate future development within the corridor.

**HIGHWAY 331 CORRIDOR REFINEMENT PLAN
&
CTUIR TRANSPORTATION PLAN**

TAC MEETING

**1:00 p.m. - 3:00 p.m.
Thursday, June 15, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon**

AGENDA

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

- I. Review Existing Access and General Land Use Maps**
- II. Develop Access Management Strategy for Highway 331 (this will focus mainly on the area between the I-84 Interchange and the Casino Entrance)**
 - A. Identify future access locations and where existing ones will be closed**
 - B. Develop sequence of improvements**
- III. Identify Parallel Travel Routes (address all modes of transportation)**

CTUIR TRANSPORTATION PLAN

- I. IRR Inventory**
- II. Project #23: Highway 331 Median Improvement Options**
- III. Producing a Draft TSP for TAC Review.**



DAVID EVANS AND ASSOCIATES, INC.

DEA MEMORANDUM

TO: All TAC Members
FROM: Brian Dunn, P.E.
DATE: June 19, 2000
SUBJECT: **HIGHWAY 331 CORRIDOR REFINEMENT PLAN / CTUIR TSP
JUNE 15 TAC MEETING MINUTES**

2828 SW Corbett Avenue

Portland, Oregon 97201

Tel: 503.223.6663

Fax: 503.223.2701

PROJ. #: ODOT0000-0331.02/ CTUI0000-0001

COPIES: CC: Ken Ratcliff

THOSE PRESENT AT MEETING:

1. George Ruby- ODOT District 12
2. Teresa Penninger- ODOT Region 5
3. Jonathon David- ODOT Region 5
4. Tom Shuman- BIA Warm Springs Area
5. Ken Ratcliff- BIA Northwest Regional Office
6. Sandra Alexander- CTUIR Public Works
7. Jim Beard- CTUIR Tribal Planning Office
8. Jack Davis- CTUIR Tribal Planning Office
9. Patty Perry- Umatilla County Planning Dept.
10. Brian Dunn- David Evans And Associates, Inc.

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

Review Existing Access and General Land Use Maps

The TAC went over the five figures showing existing access locations, general land uses, and parcel (property line) data. Jim Beard said the general land uses shown in these figures represent future land uses. Brian Dunn said the figure titles will be adjusted to reflect this.

Teresa Penninger said she is having ODOT in Salem research current records for Highway 331 to confirm legal access locations and right-of-way.

There are several accesses along Highway 331 that were not captured in the initial survey. These locations will be pinpointed and added to the figures. A question was raised regarding how the State define's an existing access point. George Ruby said that when ODOT is processing applications for future access permits, the agency considers a location where vehicles enter or exit the highway to be an access, whether it's legally permitted or not. This includes the areas where farming vehicles access adjacent fields.

Access #25 and #26 are the first two driveways to the Arrowhead Truck Plaza. Even though the truck stop is located in an area zoned for a future tourist commercial land use, these accesses are located within a future



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rural/agricultural future land use. The truck stop owners secured an easement in the past to have these two driveways provide access to their site. This information will be noted in the access location summary.

Jim Beard asked about the current status of access #15. It is a dirt road opposite the casino employee entrance road. Jim said it has a public right of way, but does not know if anyone owns the road. Patty Perry said she would check the County's records. Patty Perry responded with a phone call on Monday, June 19, to say that it is a public road with a 60-foot right of way. There is no official owner of this public road. Patty said in order for the tribe to take over ownership of this road, it must be vacated and the adjacent landowners' deeds need to be revised. This involves a process through the County Board of Commissioners.

Develop Access Management Strategy for Highway 331 (this will focus mainly on the area between the I-84 Interchange and the Casino Entrance)

The TAC reviewed the general and minor deviation access spacing standards documented in the Oregon Highway Plan that are applicable to a district highway such as Highway 331. Also reviewed were the access standards for freeway interchange areas. The TAC then reviewed three different access management strategies prepared for the section of Highway 331 between the I-84 interchange and the employee entrance to the casino. The first, was a strategy that was in full compliance with the Oregon Highway Plan without any major or minor deviations from the minimum standards. The second, was a strategy based on a proposed truck master plan for relocating the Arrowhead Truck Plaza to the west side of the highway. The third option, was a variation of the first two options.

Before the TAC developed and agreed on a fourth and "preferred" option, several issues were discussed regarding the posted (or desirable) speed along Highway 331, and the type of area (fully developed urban, urban, or rural) surrounding the highway. These variables affect the minimum spacing dimensions specified in the Oregon Highway Plan. ODOT staff confirmed that the posted speed is 55 mph along the entire length of Highway 331 (even though traffic may be traveling at lower speeds near the interchange). There is no official urban growth boundary located on the reservation, but the TAC considers the west side of the highway to be in an urban area since it lies in a future tourist commercial zone, is located within the Mission Community, and the tribe has plans to extend water and sewer services to this area. There are two areas along the east side of the highway that have a rural land use designation but the majority of land adjacent to the highway has a tourist/commercial designation and is considered to be urban, or fully developed urban in the vicinity Arrowhead Truck Plaza site.

After evaluating three different options, the TAC reached a consensus on a fourth and "preferred" option. This would be to have a right-in only access on the east side of the highway 750 feet north of the I-84 westbound ramps. Also, a right-out only access is proposed on the west side of the highway at a distance of 990 feet from the I-84 westbound ramps. These distances meet the OHP access spacing standards for an interchange area assuming the land east of the highway is in a fully developed urban area and the land west of the highway is in an urban area. The first fully directional intersection is proposed to be 1,320 feet from the I-84 westbound ramps. This location meets the OHP standard, but may be considered a deviation in spacing since the distances from this access to the proposed right-out access on the west side of the highway and the right-in access on the east side of the highway are 330 feet and 550 feet, respectively. These distances do not meet the minimum access spacing standard of 700 feet or the minor deviation standard of 650 feet. The second fully directional intersection is located another 800 feet north of the first intersection. At this location, accesses are already provided on both sides of the highway. The east access is the employee entrance road to the casino and the west access is a dirt road with a public right-of-way. Both



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accesses are staggered by about 50 feet and would ultimately be realigned so they intersect the highway directly across from each other. About 270 feet north of the dirt road, trucks enter and leave the highway to access several storage tanks. To meet OHP standards, the access to this area would need to be restricted along the highway and an alternate access would need to be provided along the dirt road when it is improved.

Although the "preferred" option does have some deviations from the OHP spacing standards, the TAC agrees that it is a viable option when presented as a "packaged deal". The tribe is proposing to remove a total of five driveway accesses to the existing truck stop on the east side of the highway and one access on the west side of the highway which serves an abandoned home but is still being used by agricultural vehicles.

Identify Parallel Travel Routes (address all modes of transportation)

The TAC was not able to fully address this topic because of timing constraints. It will be discussed as a topic at the next meeting in July.

CTUIR TRANSPORTATION PLAN

IRR Inventory

Brian Dunn presented Jim Beard and Jack Davis with an updated spreadsheet summary of the IRR Inventory. A separate packet was distributed of all roadways on the reservation that have yet to be surveyed. Jack Davis has been assigned the duty to complete the inventory.

Project #23: Highway 331 Median Improvement Options

This topic was discussed by the TAC prior to developing an access management strategy for Highway 331 near the I-84 interchange. Initially, there were two options identified in the CTUIR TSP for adding a non-traversable median along Highway 331 between the I-84 westbound ramps and the proposed intersection located 1,320 feet north of the ramps. The limits of this project will now extend further north, extending up to the employee entrance road to the casino at a distance 2,160 feet north of the westbound ramps.

The tribe has expressed an interest in developing a landscaped median along the highway rather than raised curbing alone, as they wish to establish a "gateway" to the Mission Community area from I-84. Two typical highway cross-sections were evaluated in the meeting, each one incorporating a landscaped median. The first cross-section is designed for an urban environment where bicyclists and pedestrians have facilities that are separate from the highway traffic lanes. This cross-section involved two 12-foot travel lanes separated by a 14-foot landscaped median, with 6-foot bike lanes and 6-foot sidewalks along both sides of the highway. With sidewalks, underground storm drainage would be needed. The second option is for a more rural environment, where bicyclists and pedestrians may share the paved shoulder, which is separated from the highway traffic lane by striping. Under this option, the landscaped median and travel lanes are maintained, but 8-foot paved shoulders are provided along both sides of the highway. Exposed or open storm drainage may be provided under this option.



DAVID EVANS AND ASSOCIATES, INC.

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When evaluating which cross-section would be best for Highway 331 near the I-84 interchange, Teresa Penninger stated that the Transportation Planning Rule of Oregon mandates bikeway and sidewalk facilities for all arterial improvements located in urban areas. It was concluded, therefore, that the more urban cross section should be provided along both sides of the highway from the casino employee entrance road down to the proposed right-in access on the east side and the proposed right-out access on the west side. From these access points to the overpass over I-84, the TAC agreed that the rural cross section would suffice. Jim Beard said that when the proposed industrial and residential developments along the west side of South Market Road are constructed, a path could be constructed on the west side providing access to the freeway overpass. This may lead to the addition of another project in the CTUIR TSP. On the overpass itself, there are two travel lanes with wide shoulders on both sides. The potential need for improvements on the overpass will be discussed at the next meeting.

**HIGHWAY 331 CORRIDOR REFINEMENT PLAN
&
CTUIR TRANSPORTATION PLAN**

TAC MEETING

**1:00 p.m. - 3:00 p.m.
Wednesday, July 12, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon**

AGENDA

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

- I. Develop Access Management Strategy for Highway 331**
 - Area around Mission Road
 - South of I-84
- II. Identify Parallel and Connecting Travel Routes**
 - Address all modes of transportation
- III. Transportation Demand Management (TDM) Measures/ Transportation System Management (TSM) Measures**
- IV. Transit Needs**
 - Revisit tribal needs (kids to school, welfare program, fixed route service)

CTUIR TRANSPORTATION SYSTEM PLAN

- I. Bicycle and Pedestrian Needs Along Highway 331**
 - From Mission Road to I-84
 - Across the I-84 Overpass



DAVID EVANS AND ASSOCIATES, INC.

MEMORANDUM

TO: All TAC Members
FROM: Brian Dunn, P.E.
DATE: August 15, 2000
SUBJECT: **HIGHWAY 331 CORRIDOR REFINEMENT PLAN / CTUIR TSP**
JULY 12 TAC MEETING MINUTES
PROJ. #: ODOT0000-0331.02/ CTUI0000-0001
COPIES: CC:

2828 SW Corbett Avenue

Portland, Oregon 97201

Tel: 503.223.6663

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THOSE PRESENT AT MEETING:

1. George Ruby- ODOT District 12
2. Teresa Penninger- ODOT Region 5
3. Jonathon David- ODOT Region 5
4. Tom Kuhlman- ODOT Region 5 (Traffic Operations Manager)
5. Tom Shuman- BIA Warm Springs Area
6. Jim Beard- CTUIR Tribal Planning Office
7. Jack Davis- CTUIR Tribal Planning Office
8. Laura Kordatzky- CTUIR Administrator
9. Bill Tobey- CTUIR Department of Economic Development
10. Patty Perry- Umatilla County Planning Dept.
11. Hal Phillups- Umatilla County Roadway Dept.
12. Brian Dunn- David Evans and Associates, Inc.

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

Review Access Management Strategy Developed for Area North of the I-84 Interchange

The TAC revisited the access management strategy developed in the July 12 TAC meeting for Highway 331, for the area extending from the I-84 interchange to the Employee Entrance Road to the Casino. Tom Kuhlman, the Traffic Operations Manager for ODOT Region 5, reviewed the strategy for this area and confirmed that it was in compliance with the Access Management Standards in the Oregon Highway Plan. Also revisited were the proposed highway improvements related to the construction of a non-traversable median. No further changes were proposed for this area.

Develop Access Management Strategy for Area Around Mission Road

The TAC developed a strategy for the highway from Mission Road north to the UPRR crossing. In this area, there are numerous driveways to homes on the east side of the highway. Currently, these driveways do not comply with the spacing standards of the OHP. Jim Beard said that the future land use designation for this area is Community Commercial and that driveways would be consolidated or eliminated as commercial development occurs. At this time there are no formal plans for redevelopment of the parcels with homes. Therefore, there will be no specific access changes proposed in the plan.



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The tribe does have formal plans to construct a community grocery store on the northeast corner of the Mission Road intersection. Currently, there is a long continuous driveway accessing the site along the east side of the highway. The tribe plans to relocate the driveway to the northern edge of the property boundary and install a continuous sidewalk with curbing to the Mission Road intersection. It is possible the single driveway would provide joint access to the adjacent property to the north, as it develops over time.

On the west side of the highway, there is a single driveway to a vacant site next to the UPRR tracks (900 feet north of Mission Road). This site is on a parcel of land zoned for a future Community Commercial land use. There is another vacant parcel to the south that is zoned for the same land use, is much larger in size, and extends all the way to the Mission Road intersection. According to the 4 Corners Master Plan, future land uses on this larger parcel could include storage facilities, a riding club/stable yard, and another shopping-type development on the corner. Currently, there is no access to this parcel along the highway. Jim Beard said the tribe would seek to have at least two highway accesses to this parcel. The first would be the existing access to the adjacent parcel to the north which would become a joint access, and the second would be a new access roughly half way between the joint access and Mission Road. This would create a spacing of 450 feet between accesses. The location of the second access, however, would not meet the OHP spacing standard of 700 feet for a District Highway with a posted speed of 55 mph. The tribe feels the average speed of cars in the area is well below 55 mph due to the presence of stop signs on the highway approaches to the Mission Road intersection. Because the second access does not meet current OHP spacing standards, it will not be shown as a planned access in the Access Management Plan of the Corridor Study. The tribe may still wish to pursue a new access at this location as plans for developing this parcel become imminent. This could be done by having a speed study done in the area to determine if the actual posted speed should be lower than 55 mph. If the posted speed were lowered, the required spacing between access points along the highway would decrease as well. The tribe may also apply for a deviation to the spacing standard. Tom Kuhlman stated that if the spacing standards cannot be met, special design features such as median control, a right-in/right-out access, or a deceleration lane may allow for such an access to be permitted. Another alternative would be to provide a new street accessing the parcel at Mission Road. Umatilla County roadway standards would permit a new access roughly 250 to 500 feet from the Highway 331 intersection.

Develop Access Management Strategy South of the I-84 Interchange

The TAC reached a consensus on an access management strategy for South Market Road, beginning at the eastbound ramps of the I-84 interchange down to Tutuilla Church Road. Hal Phillips stated that Umatilla County, which has jurisdiction over this road, would comply with the OHP access standards for freeway interchange areas. Overall, the TAC agreed a new fully directional intersection would be located 1,320 feet from the I-84 eastbound ramps.

Although it will not be shown in the Access Management Strategy figures, language will be inserted in the plan regarding the possibility of a right-in/right-out access on the west side of South Market Road, approximately 750 feet from the I-84 eastbound ramps. This access may be approved as a result of the removal of the access to the dead end road leading to the waste transfer station (located 475 feet from the interchange). The TAC agreed that the dead end road could be relocated to an internal network of streets leading to both a right-in/right-out access and the fully directional intersection. This realignment would be done as the area zoned for a future industrial land use is developed.

Identify Parallel and Connecting Travel Routes (address all modes of transportation)

The TAC reviewed a figure that highlighted all the parallel and connecting travel routes proposed to date within the boundaries of the Highway 331 Corridor. This figure was developed to assist the TAC in working towards a "preferred alternative" of transportation system improvements and ensure that the needs of all roadway users (i.e. cars, bikes, peds) are addressed. A series of parallel roads and paths are proposed that would help reduce demand on the highway. Only two new roadway connections are proposed along the highway which meet the OHP access standards.



DAVID EVANS AND ASSOCIATES, INC.

All TAC Members
August 15, 2000
Page 3

The TAC supported a new project that would extend a multi-use path from the Tamastslikt Cultural Institute to the Wildhorse Casino. Currently, the entrance road to the Wildhorse Gaming Resort and Tamastslikt Cultural Institute provides the only access between these developments. The road is paved for traffic without any shoulders or sidewalks. Bill Tobey from the Department of Economic Development said there is a need for a path between these activity centers. The need for this project is also driven by the multi-use path being constructed from the Tribal offices to the Tamastslikt Cultural Institute. Once complete, this path is expected to draw many pedestrians and bicyclists to the area.

CTUIR TRANSPORTATION PLAN

Transit Needs

Several representatives from CTUIR presented an application for federal funds to provide "general public" transit services on the Reservation. Funds can be used for operating costs and capital improvements. Funding has been obligated to the CTUIR through FTA Section 5311 Funding. Details of the funds available, the Federal and State Requirements, and steps the CTUIR will need to take to secure these funds are attached to these minutes.

Bicycle and Pedestrian Needs Along Highway 331 (Wildhorse Casino to Mission Road)

At the previous meeting in June, the TAC already agreed to include provisions for bicycle and pedestrian improvements along Highway 331, from I-84 to the Employee Entrance Road to the Casino. These improvements would be made in conjunction with a non-traversable landscaped median.

The TAC now supports additional highway improvements that would meet the needs of any bicyclists or pedestrians traveling between the Wildhorse Gaming Resort and Mission Road. Alternative improvements have already been proposed to meet the needs of residents living east of the highway, but not the needs of those living west of the highway.

Two additional projects will be added to the list of prioritized improvements. The first would be to provide sidewalks along both sides of the highway from Mission Road south to the proposed new intersection where the new government offices will be located. *(It was realized after the meeting that if sidewalks are to be constructed along the highway, bike lanes should also be provided. This would effectively separate bikes from cars in the traffic lane.)* The second project would consist of widening the paved shoulders along the highway to a width that would be comfortable to bicyclists and pedestrians. This project would extend all the way to the Casino Entrance Road.

Other Needs

Representatives from ODOT mentioned that the State would support ½ mile spacings between signal installations along Highway 331 to maintain efficient traffic progression on the highway. Although the future traffic forecast and operations analysis do not indicate a traffic signal is needed in the future, a traffic signal installation at the Casino Entrance Road will be added to the project list. A signal at the I-84 eastbound ramps, the proposed intersection located 1,320 feet north of the westbound ramps, and the Casino Entrance Road would result in signal spacings close to ½ mile.

POTENTIAL DEVELOPMENTAL PROJECT CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION

Funding Available

\$56,538 in funding from FTA Section 5311 Funding has been obligated for the Umatilla Tribes for a developmental project.

- Funds can be used for operating expenses or capital expenses associated with a transit service.
- A 50% match is required if funds are used for operating. The total project amount would be \$114,076, with \$56,538 the local match and \$56,538 the federal amount.
- A 20% match is required if funds are used for capital. The total project amount would be \$70,672, with \$14,134 local match and \$56,538 the federal amount.
- The 5311 program funds "general public" transit services. Service design cannot be exclusive to a particular clientele, such as for elderly and disable persons only. There can be no "space available only" policies. It has to be open to all passengers on an equal basis.

Federal and State Requirements

Grant recipients must:

- demonstrate legal, fiscal and managerial capacity to receive, manage and account for federal funds;
- be involved in transportation coordination efforts with other transit providers in the area;
- notify the public of intent to make application for a grant, and allow opportunity for the public to comment;
- comply with Civil Rights/ADA requirements on first day of service; all vehicles must be ADA accessible and meet other service requirements; paratransit services are required for fixed route, and deviated or modified fixed route
- meet Drug and Alcohol testing requirements on the first day of service; the service provider must have an approved drug and alcohol policy and testing program (approval done by Public Transit Division).
- Other federal requirements include (but are not limited to) charter bus and school bus provisions, contracting, equipment management and safety systems, and labor protections.

Next Steps

- The Tribal Government should notify Public Transit Division if it wants to proceed with a project.
- Fill out an application for funding (new applications for 2000 will be out soon).
- Meet with Public Transit Division staff to discuss federal requirements and project implementation,

PTD 3/15/00

**HIGHWAY 331 CORRIDOR REFINEMENT PLAN
&
CTUIR TRANSPORTATION PLAN**

TAC MEETING

**1:00 p.m. - 3:00 p.m.
Wednesday, August 16, 2000
Tribal Planning Office
Umatilla Indian Reservation, Oregon**

AGENDA

CTUIR TRANSPORTATION SYSTEM PLAN

- I. Bicycle and Pedestrian Needs Along Highway 331**
- Across the I-84 Overpass
 - South Market Road

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

- I. Adoption of the Corridor Plan**
- Lay out process for adoption by CTUIR.
 - Lay out process for adoption by Oregon Transportation Council.
 - Will Department of Land Conservation and Development (DLCD) be involved?
 - Do these documents need to be linked by a Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA)?
- II. Develop Corridor Plan Implementation Strategies**
- Purpose is to link State, CTUIR, and County plans.
 - Identify guidelines to coordinate with CTUIR and Umatilla County TSP's and Highway 11 Corridor Plan
 - Prepare amendments to existing CTUIR and County policies and ordinances to implement the corridor plan



DAVID EVANS AND ASSOCIATES, INC.

MEMORANDUM

TO: All TAC Members
FROM: Brian Dunn, P.E.
DATE: August 18, 2000
SUBJECT: **HIGHWAY 331 CORRIDOR REFINEMENT PLAN / CTUIR TSP
AUGUST 16 TAC MEETING MINUTES**

2828 SW Corbett Avenue

Portland, Oregon 97201

Tel: 503.223.6663

Fax: 503.223.2701

PROJ. #: ODOT0000-0331.02/ CTUI0000-0001

COPIES: CC:

THOSE PRESENT AT MEETING:

1. Teresa Penninger- ODOT Region 5
2. Jonathon David- ODOT Region 5
3. Tom Shuman- BIA Warm Springs Area
4. Jim Beard- CTUIR Tribal Planning Office
5. Hal Phillups- Umatilla County Roadway Dept.
6. Brian Dunn- David Evans and Associates, Inc.

CTUIR TRANSPORTATION PLAN

Bicycle and Pedestrian Needs Along Highway 331 (South Market Road and I-84 Overpass)

Jim Beard outlined the tribe's future plans to develop homes on an 80-acre site along the west side of South Market Road, near Tutuilla Church Road. He said the tribe envisions a separated multi-use path along the west side of South Market Road up to the I-84 interchange. This path would handle bicyclists and pedestrians traveling to and from Highway 331 and the rest of the Mission Community area to the north. Jim said this would be the best option since the tribe owns the land adjacent to South Market Road and could construct a pathway as the land develops. Also, assistance from the County would not be needed. Brian Dunn stated that the tribe would need to address how this path would connect into the I-84 overpass. Currently, there are 6- to 8-foot shoulders along both sides of the overpass. These shoulders are wide enough for bike and ped travel. One connectivity issue would be how to get bicyclists and pedestrians heading north on the path to cross over onto the east side of South Market Road in a safe and effective manner. It was decided that connectivity issues such as this would be addressed at a later time.

Another option was considered at the meeting for bike/ped improvements along South Market Road. This was to widen the shoulders along both sides of the road with pavement. Hal Phillups said additional right-of-way might be required to do this near the interchange. Since the tribe feels a multi-use path would be the best alternative, this option was dropped.

HIGHWAY 331 CORRIDOR REFINEMENT PLAN

Adoption of the Corridor Plan

The CTUIR plans to adopt the Highway 331 Corridor Refinement Plan. Jim said he would like specific parts of the access management plan (policies, access management strategy) to also be included as a chapter in the CTUIR TSP, which the tribe also plans to adopt.



DAVID EVANS AND ASSOCIATES, INC.

All TAC Members
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Page 2

Teresa Penninger said the Corridor Plan, once complete, will be taken directly to the Oregon Transportation Council (OTC) for adoption around the time of adoption by the CTUIR. This plan will be used by the State as a public facility plan.

Teresa stated that local jurisdictions usually enter into an agreement with ODOT, commonly called a "resolution of support", to effectively implement a Corridor Plan. However, since the tribe is planning to adopt the Corridor Plan, a "resolution of support" would not be necessary. Adoption would be a guarantee of support.

The issue of involving DLCD was raised and whether the Corridor Plan or TSP would be reviewed by this agency or not. Jim said that since the tribe governs land use decisions on the Reservation and that the CTUIR is a sovereign nation, the tribe doesn't see any reason for involving DLCD. ODOT supported this decision.

It is unclear at this time what changes, if any, would be needed to the CTUIR Comprehensive Plan and other policies and ordinances to implement the Corridor Plan. It may be that adoption alone by the CTUIR would be enough. Teresa said that local jurisdictions typically change their policies and ordinances to implement Corridor Plans and TSP's regarding things like roadways standards, street spacing requirements, notification to other interested parties when making land use decisions and when projects will occur.

In Patty Perry's absence, Hal Phillips stated that the County would pursue co-adoption of both the CTUIR TSP and Highway 331 Corridor Plan. This is needed since both plans address improvements along county roads. Needed changes to county policies and ordinances are still unclear at this time.

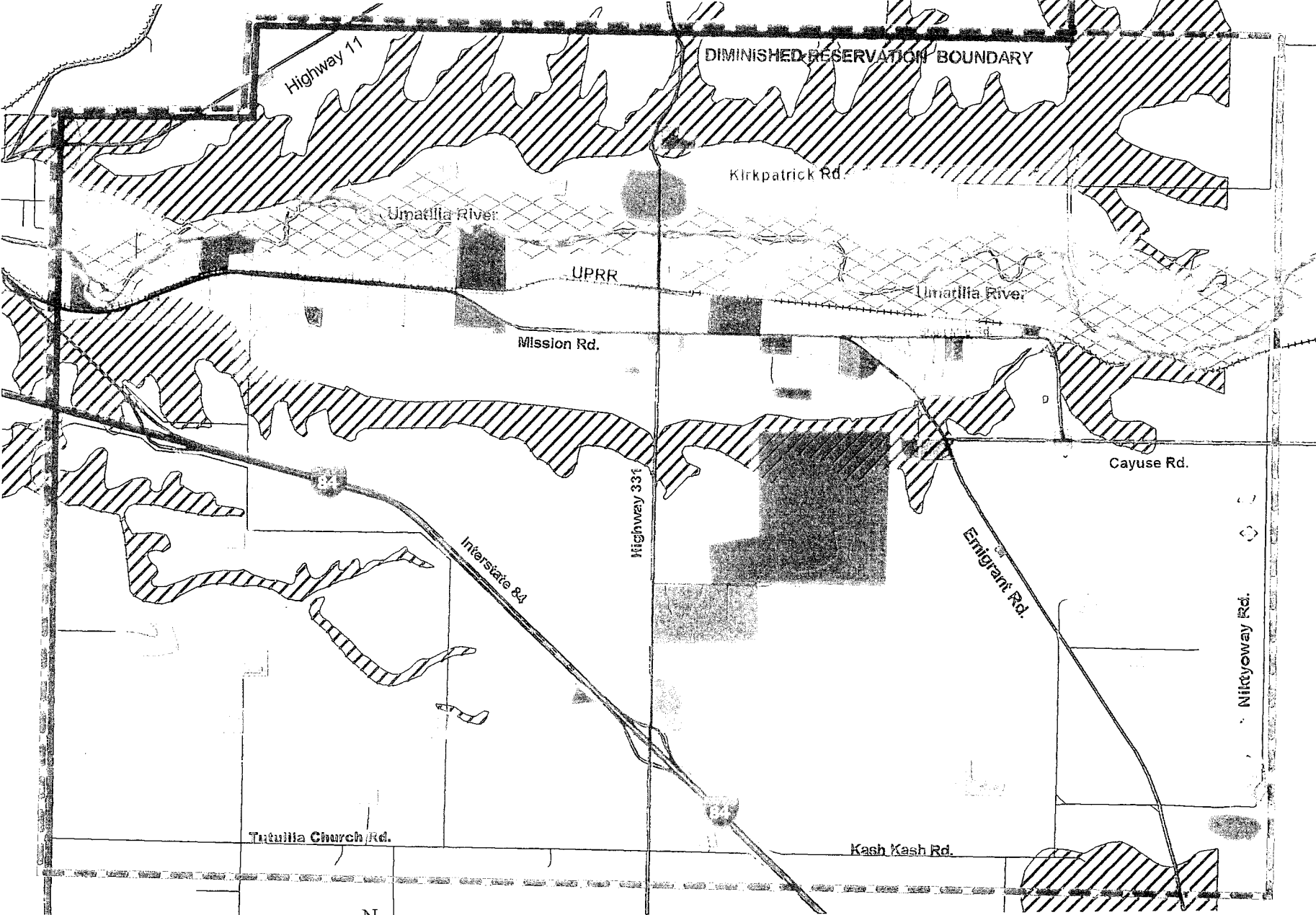
NEXT STEPS TOWARD FINALIZING THE TSP AND CORRIDOR PLAN

The following steps will be taken over the next month (08/17-09/14):

- Submit draft hardcopy of CTUIR TSP to Jim Beard for preliminary review.
- Once reviewed, send a list of prioritized projects, with maps, and summary of all projects to Tom Shuman.
- Submit draft copies of CTUIR TSP to remaining TAC members for review (ODOT and County)

After comments are received by all TAC members, work will begin on the production of a draft Corridor Plan, which will encompass a lot of what is contained in the tribe's transportation system plan. After the TAC has reviewed this document, two meetings will be set up to present both plans. One meeting will be with the CTUIR Natural Resources Commission and the other will be a public presentation.

GENERALIZED LAND USE - MISSION COMMUNITY PLAN



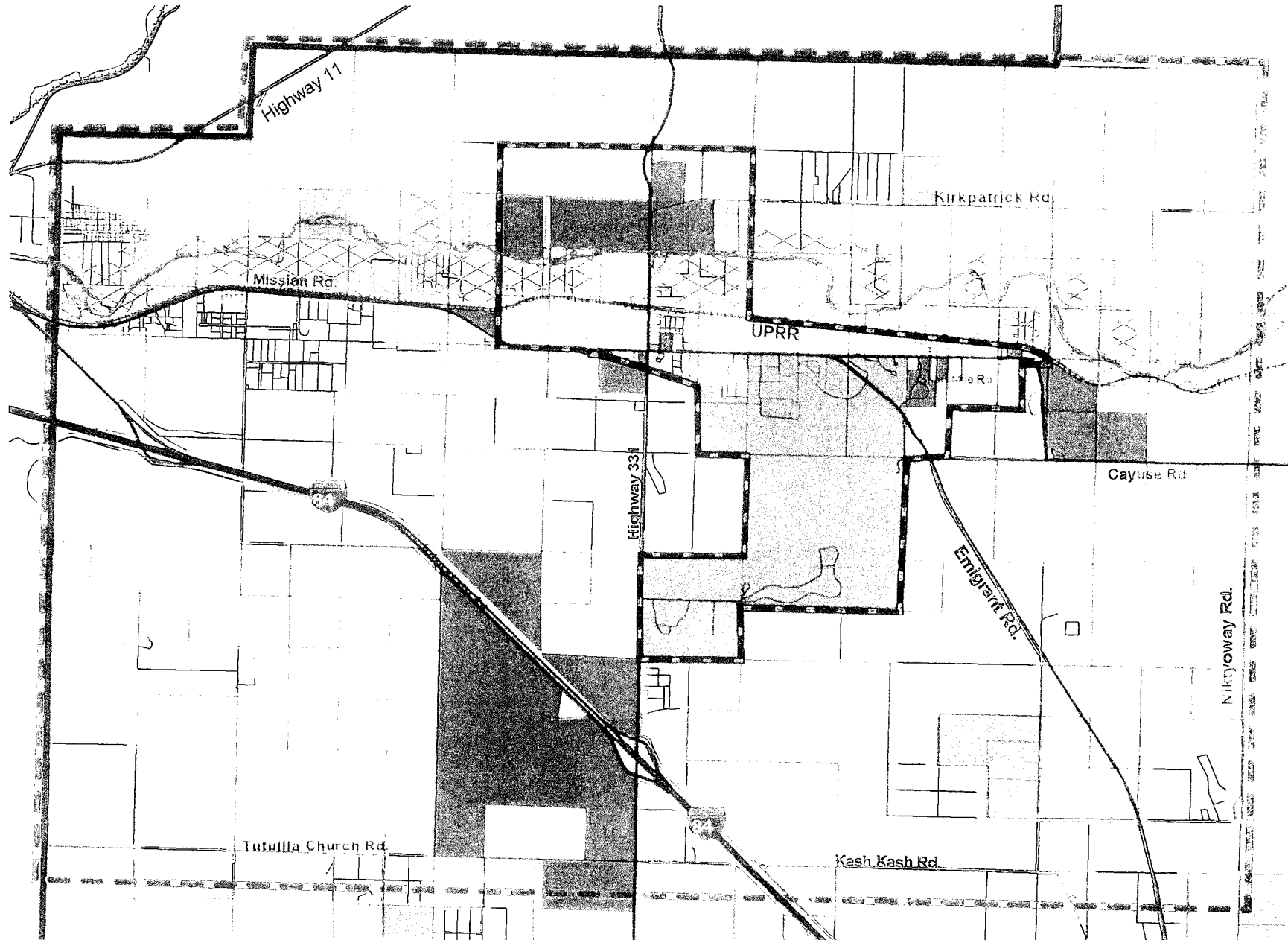
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- UMATILLA RIVER FLOODPLAIN
- MISSION COMMUNITY PLANNING AREA BOUNDARY
- STEEP SLOPES (10% +)
- DIMINISHED RESERVATION BOUNDARY

- LAND USE DESIGNATIONS
- AGRICULTURE/UNDEVELOPED
 - COMMERCIAL
 - INDUSTRIAL
 - SEMI-PUBLIC FACILITIES
 - RESIDENTIAL - MEDIUM DENSITY
 - RESIDENTIAL - LOW DENSITY
 - RESIDENTIAL - SCATTERED
 - TRIBAL/GOVT./PUBLIC FAC.

OWNERSHIP MAP -- MISSION COMMUNITY PLAN



0.5 0 0.5 Miles



UMATILLA RIVER FLOODPLAIN

TRIBAL WATER/SEWER SERVICE BOUNDARY

MISSION COMMUNITY PLANNING AREA BOUNDARY

UNFINISHED RESERVATION BOUNDARY

OWNERSHIP DESIGNATIONS

ALLOTMENT

DEEDED

RUST/TRIBAL ALLOTMENT

TRIBAL FEE

HIGHWAY 331 ACCESS INVENTORY

HWY 331 EXISTING ACCESS INVENTORY

Access Identifier Number	West Side/ East Side	Highway Milepost	Driveway	Road	Jurisdiction	Driveway Use or Road Name	Distance to Previous Access (ft)	Distance to Next Access (ft)	Meets OHP Spacing Standards
1	West	0.00		X	State	HWY 11		1,267	Y
2	West	0.24	X		None ¹	Agriculture	1,267	1,426	Y
3	West	0.51	X		None ¹	Agriculture	1,426	1,267	Y
4	West	0.75	X		None ¹	Agriculture	1,267	1,426	Y
5	West	1.02	X		None ¹	Agriculture	1,426	3,274	Y
6	West	1.64	X		Private	House	3,274	634	N
7	West	1.76	X		Private	House	634	422	N
8	West	1.84	X		Private	House	422	1,003	N
		2.02	~~~~~	~~~~~	~~~~~	Umatilla River			
9	West	2.03	X		Private	House	1,003	264	N
10	West	2.08	X		Private	House	264	211	N
11	West	2.12	X		Private	House	211	634	N
12	West	2.24	X		Private	House	634	106	N
13	West	2.26	X		Private	House	106	53	N
14	West	2.27		X	Private	Showaway Lane	53	264	N
		2.29	+++++	+++++	+++++	Railroad Crossing			
15	West	2.32	X		Private	Open industrial area	264	1,003	N
16	West	2.51		X	County	Mission Road	1,003	158	N
17	West	2.54	X		Private	Abandoned House/ Rest Stop	158	1,003	N
18	West	2.73	X		Private	House	1,003	1,848	Y
19	West	3.08	X		None ¹	Agriculture	1,848	1,637	Y
20	West	3.39	X		None ¹	Agriculture	1,637	3,062	Y
21	West	3.97	X		Private	Open Agricultural/ Industrial area	3,062	264	N
22	West	4.02		X	Public Use ²	Dirt Road (with Public ROW)	264	1,637	N
23	West	4.33	X		Private	Abandoned House	1,637	528	N
24	West	4.43		X	State	I-84 WB Ramps	528	950	N
25	West	4.61		X	State	I-84 EB Ramps	950	475	N
26	West	4.70		X	State	Dead End Road to Transfer Station	475	1,742	N
27	West	5.03		X	County	Tutuilla Church Road	1,742		Y
28	East	5.03		X	County	Tutuilla Church Road		2,218	Y
29	East	4.61		X	State	I-84 EB Ramps	2,218	950	Y
30	East	4.43		X	State	I-84 WB Ramps	950	106	N
31	East	4.41		X	County	Kash-Kash Road	106	422	N
32	East	4.33	X		Private	Texaco Gas Station/ Truck Stop	422	53	N
33	East	4.32	X		Private	Texaco Gas Station/ Truck Stop	53	158	N
34	East	4.29	X		Private	Texaco Gas Station/ Truck Stop	158	264	N
35	East	4.24	X		Private	Cody's Restaurant	264	211	N
36	East	4.20	X		Private	Cody's Restaurant/ Truck Parking Lot	211	317	N
37	East	4.14	X		Private	Truck Parking Lot	317	686	N
38	East	4.01		X	Private	Wild Horse Employee Entrance Road	686	1,478	Y
39	East	3.73		X	CTUIR	Wild Horse Resort Main Entrance Road	1,478	1,162	Y
40	East	3.51	X		None ¹	Agriculture	1,162	634	N
41	East	3.39	X		None ¹	Agriculture	634	1,478	N
42	East	3.11	X		None ¹	Agriculture	1,478	898	Y
43	East	2.94	X		None ¹	Agriculture	898	950	Y
44	East	2.76	X		None ¹	Agriculture	950	1,162	Y
45	East	2.54	X		Private	House	1,162	158	N
46	East	2.51		X	County	Mission Road	158	106	N
47	East	2.49	X		Private	Vacant Commercial Site	106	158	N
48	East	2.46	X		Private	Vacant Commercial Site	158	106	N
49	East	2.44	X		Private	House	106	106	N
50	East	2.42	X		Private	House	106	106	N
51	East	2.40	X		Private	House	106	53	N
52	East	2.39	X		Private	House	53	158	N
53	East	2.36	X		Private	House	158	53	N
54	East	2.35	X		Private	House	53	106	N
55	East	2.33	X		Private	House	106	106	N
56	East	2.31	X		Private	Railroad Industrial Site	106	158	N
		2.29	+++++	+++++	+++++	Railroad Crossing			
57	East	2.28	X		Private	House	158	264	N
58	East	2.23	X		Private	House	264	158	N
59	East	2.20	X		Private	House	158	211	N
60	East	2.16		X	County	Marlowe Road	211	1,531	N
		2.02	~~~~~	~~~~~	~~~~~	Umatilla River			
61	East	1.87	X		Private	House	1,531	264	N
62	East	1.82		X	County	Kirkpatrick Road	264	845	N
63	East	1.66	X		None ¹	Agricultural	845	898	Y
64	East	1.49	X		Private	House	898	2,640	Y
65	East	0.99	X		None ¹	Agriculture	2,640	1,267	Y
66	East	0.75	X		None ¹	Agriculture	1,267	1,267	Y
67	East	0.51	X		None ¹	Agriculture	1,267	1,426	Y
68	East	0.24	X		None ¹	Agriculture	1,426	1,267	Y
69	East	0.00		X	State	HWY 11/Duff Road	1,267		Y

Summary:

Total Access Points	69
Total Meeting OHP Spacing Standards	23 (33%)

Notes: 1- Access to adjacent property may not be legal.
2- Public use road with no right-of-way or jurisdictional owner.

ACCESS LEGEND:


 Existing Intersection


 Existing Driveway Approach


 Existing Road


 Milepoint Marker


 Right-of-Way Line


 Reservation of Access Points


 Access Control Line


 Access Identifier Number
(See Inventory Spreadsheet)


 Area Where Existing Accesses Do Not
Comply With Oregon Highway Plan


 Potential Access Area

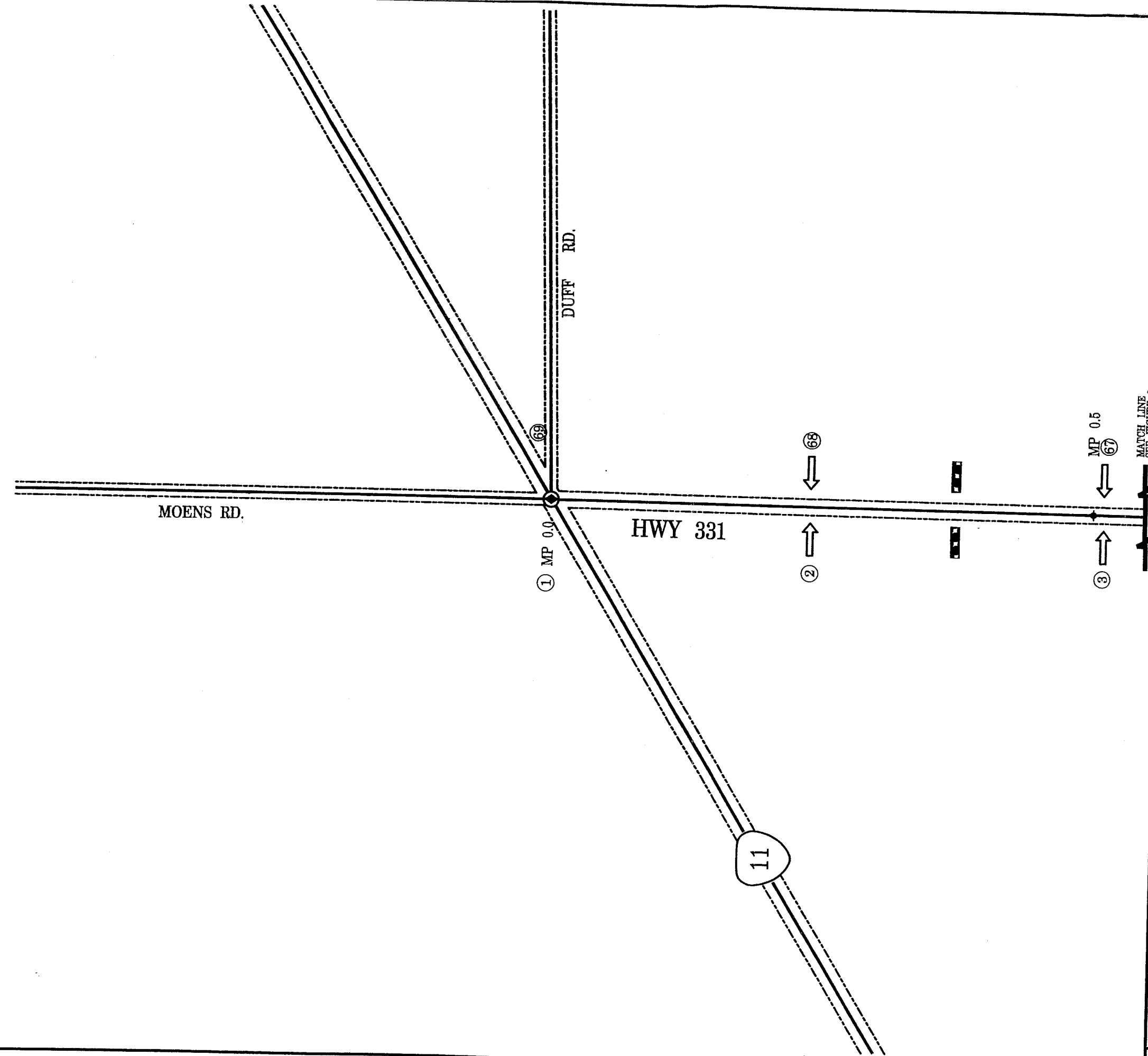


FIGURE 1
 Existing Accesses along
 the Highway 331 Corridor
 (Segment 1 of 5)



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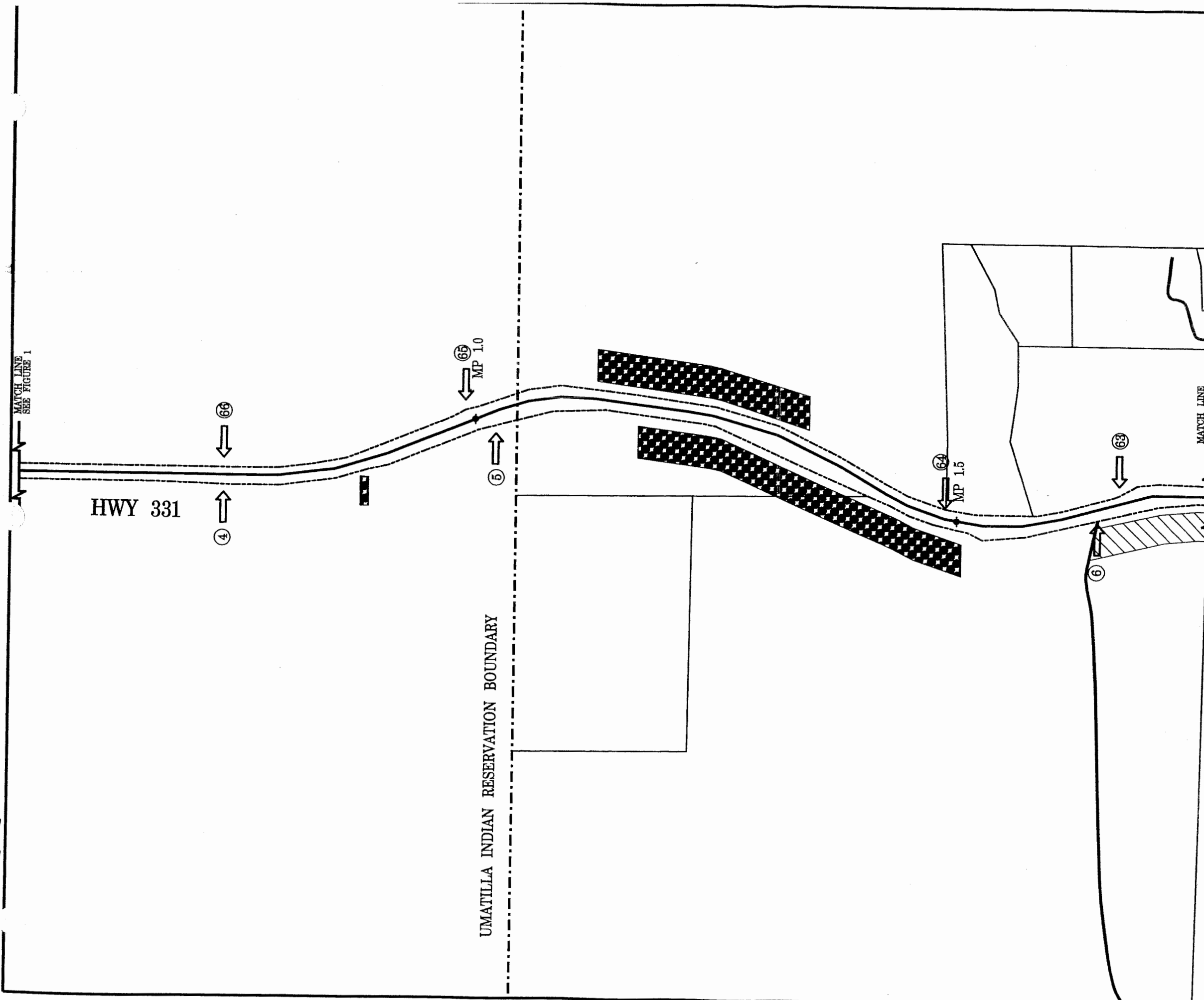
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ACCESS LEGEND:

- Existing Intersection
- Existing Driveway Approach
- Existing Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- Access Control Line
- Access Identifier Number
(See Inventory Spreadsheet)
- Area Where Existing Accesses Do Not
Comply With Oregon Highway Plan
- Potential Access Area

FIGURE 2

Existing Accesses along
the Highway 331 Corridor
(Segment 2 of 5)



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PORTLAND, OR 97201-4830 (503) 223-6663



(Scale: 1" = 500')

ACCESS LEGEND:

- Existing Intersection
- Existing Driveway Approach
- Existing Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- Access Control Line
- Access Identifier Number
(See Inventory Spreadsheet)
- Area Where Existing Accesses Do Not
Comply With Oregon Highway Plan
- Potential Access Area

FIGURE 3

Existing Accesses along
the Highway 331 Corridor
(Segment 3 of 5)



NORTH

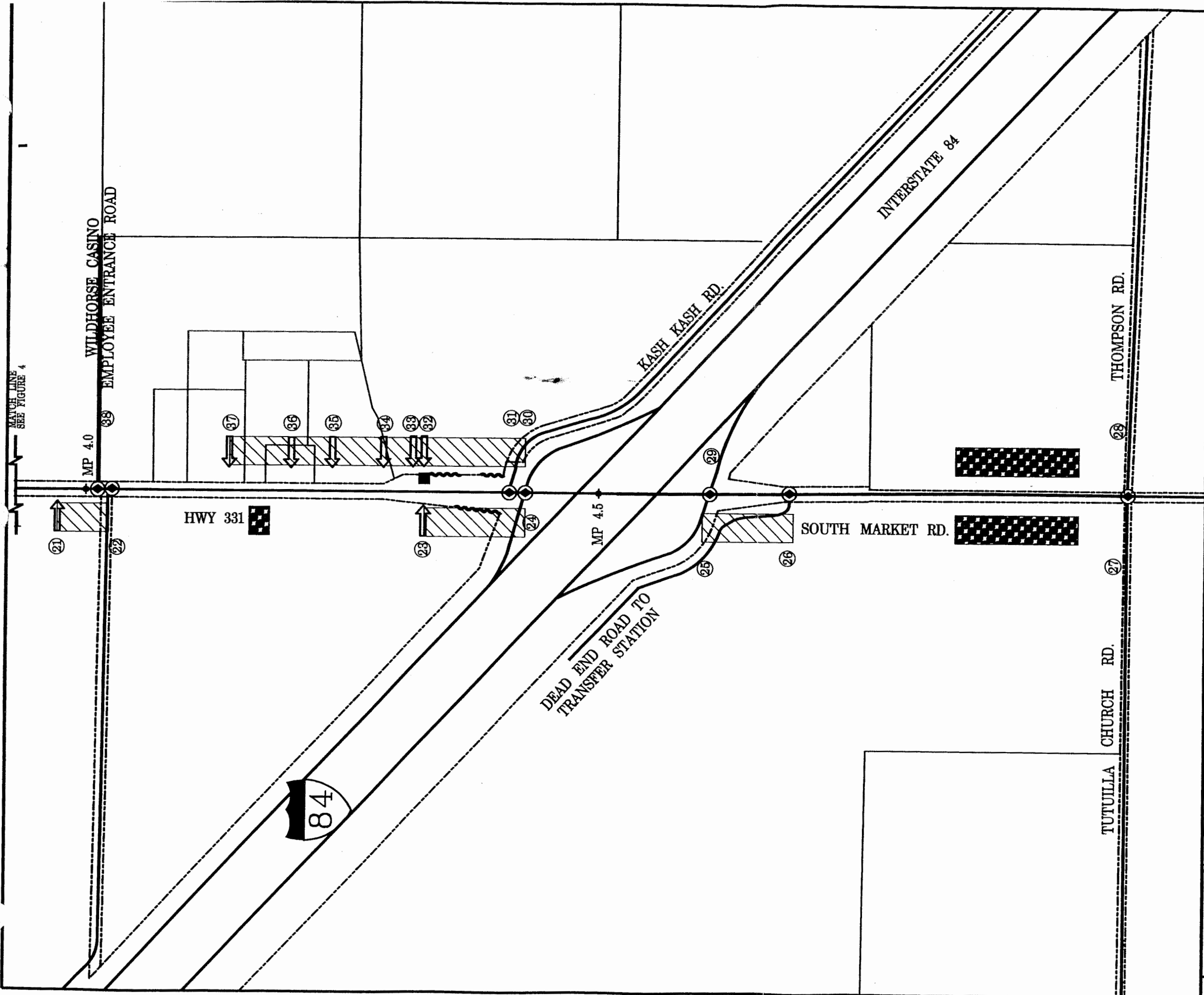
(Scale: 1" = 500')

ACCESS LEGEND:

-  Existing Intersection
-  Existing Driveway Approach
-  Existing Road
-  Milepoint Marker
-  Right-of-Way Line
-  Reservation of Access Points
-  Access Control Line
-  Access Identifier Number
(See Inventory Spreadsheet)
-  Area Where Existing Accesses Do Not Comply With Oregon Highway Plan
-  Potential Access Area

FIGURE 4

Existing Accesses along
the Highway 331 Corridor
(Segment 4 of 5)



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(Scale: 1" = 500')

ACCESS LEGEND:

- Existing Intersection
- Existing Driveway Approach
- Existing Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- Access Control Line
- Access Identifier Number
(See Inventory Spreadsheet)
- Area Where Existing Accesses Do Not
Comply With Oregon Highway Plan
- Potential Access Area

FIGURE 5

**Existing Accesses along
the Highway 331 Corridor
(Segment 5 of 5)**

INDIAN RESERVATION ROADS INVENTORY

UMATILLA RESERVATION								
2001 IRR SYSTEM INVENTORY								
	ROAD NAME	Wild Horse	Wild Horse	Hansell/Bell	Bell	Wild Horse	McLean	Wild Horse
	IRR ROUTE NUMBER	652	652	666	666	675	675	685
I.D.	IRR SECTION NUMBER	10	20	10	20	10	20	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	3.20		7.50		1.20		
	NON RESERVATION MILES		2.50		0.70		3.30	1.30
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)	-	-	-	-	1-2	1-2	1-2
	SHOULDER TYPE	-	-	-	-	3/4-	3/4-	3/4-
	SHOULDER CONDITION	-	-	-	-	Fair	Fair	Fair
	SURFACE WIDTH (feet)	18-20	18-20	14-16	14-16	20-22	20-22	22-24
ROAD	SURFACE TYPE	Crushed Rock	Crushed Rock	Dirt	Dirt	AC	AC	AC
SEC.	SURFACE CONDITION	Poor/Fair	Poor/Fair	Poor	Poor	Fair	Fair	Fair
&	FUTURE SURFACE TYPE	Crushed Rock	Crushed Rock	Dirt	Dirt	AC	AC	AC
COND.	ROADWAY WIDTH (feet)	18-20	18-20	14-16	14-16	18-20	18-20	20-22
	DRAINAGE	V-Ditch	V-Ditch	-	-	V-Ditch	V-Ditch	V-Ditch
	STRIPE CONDITION	N/A	N/A	-	-	Fair	Fair	Fair
	PVMT MARKING CONDITION	N/A	N/A	-	-	Fair	Fair	Fair
	SIGNING	Fair	Fair	-	-	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	2	2	0	0	?	20+	?
	TOTAL HOMES SERVED	2	2	0	0	?	20+	19+
	SCHOOL BUSES	No	No	No	No	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	No	No	No	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	Yes	No
	BUSINESSES	No	No	No	No	No	Yes	Ranch
	OTHER FACILITIES	Ranch	Ranch	-	-	-	Ranch	-
	PURPOSE	Res Boundary	Res Boundary	-	-	-	-	-

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Wild Horse	Eagle Creek	Eagle Creek	Rainville	Rainville	Rainsville	Wamishta	Ross Hill
	IRR ROUTE NUMBER	685	685	685	692	692	692	732	735
I.D.	IRR SECTION NUMBER	20	30	40	10	20	30	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	2.10	1.80	2.80		4.00		4.00	1.20
	NON RESERVATION MILES				0.50		1.00		
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	1-2	1-2	-	-	-	-	-	-
	SHOULDER TYPE	3/4-	3/4-	3/4-	-	-	-	Rock	-
	SHOULDER CONDITION	Fair	Fair	Fair	-	-	-	Fair	-
	SURFACE WIDTH (feet)	22-24	22-24	18-20	12-13	12-13	12-13	14-16	16-18
ROAD	SURFACE TYPE	AC	AC	Rock	Dirt	Dirt	Dirt	Gravel	Rock
SEC.	SURFACE CONDITION	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Fair
&	FUTURE SURFACE TYPE	AC	AC	Rock	Dirt	Dirt	Dirt	Rock	Rock
COND.	ROADWAY WIDTH (feet)	20-22	20-22	20-22	12-13	12-13	12-13	14-16	16-18
	DRAINAGE	V-Ditch	V-Ditch	V-Ditch	None	None	None	V-Ditch	V Ditch
	STRIPE CONDITION	Fair	Fair	-	-	-	-	-	-
	PVMT MARKING CONDITION	Fair	Fair	-	-	-	-	-	-
	SIGNING	Fair	Fair	Fair	-	-	-	-	-
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	?	?	?	0	0	0	3	2
	TOTAL HOMES SERVED	19+	19+	?	0	0	0	3	2
	SCHOOL BUSES	Yes	Yes	Yes	No	No	No	No	Maybe
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	Yes	No	No	No	No	No
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	Ranch	Ranch	-	No	No	No	No	No
	OTHER FACILITIES	-	-	-	No	No	No	No	No
	PURPOSE	-	-	-					-

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Ross Hill	Ross Hill	Curl Rd.	Pamburn	Pamburn	Pamburn	Spring Hollow	Spring Hollow/Thorn Hollow
	IRR ROUTE NUMBER	735	735	736	737	737	737	745	745
I.D.	IRR SECTION NUMBER	20	30	10	10	20	30	10	20
	IRR CLASSIFICATION	4	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	3.00		3.00	1.40	5.00		0.90	9.50
	NON RESERVATION MILES		0.40				1.00		
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	-	-	-	1-2	1-2	1-2	1-2
	SHOULDER TYPE	-	-	-	-	3/4-	3/4-	3/4-	3/4-
	SHOULDER CONDITION	-	-	-	-	Fair	Fair	Fair	Fair
	SURFACE WIDTH (feet)	14-16	14-16	12-14	20-22	22-24	22-24	22-24	22-24
ROAD	SURFACE TYPE	Dirt	Dirt	Dirt	Rock	AC	AC	AC	AC
SEC.	SURFACE CONDITION	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
&	FUTURE SURFACE TYPE	Rock	Rock	Dirt	Rock	AC	AC	AC	AC
COND.	ROADWAY WIDTH (feet)	14-16	14-16	12-14	18-20	20-22	20-22	20-22	20-22
	DRAINAGE	None	None	None	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch
	STRIPE CONDITION	-	-	-	-	Poor	Poor	Fair	Fair
	PVMT MARKING CONDITION	-	-	-	-	Poor	Poor	Fair	Fair
	SIGNING	-	-	-	-	Fair	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	0	0	0	0	5	?	0	20
	TOTAL HOMES SERVED	2	2	0	0	5	5	35	35
	SCHOOL BUSES	No	No	No	No	Yes	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	No	No	No	Yes	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	Crop duster airport	Crop duster airport	No	No
	OTHER FACILITIES	No	No	No	-	-	-	No	No
	PURPOSE	-	-	-	-	-	-	-	-

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Homly	Homly	Crawford Hollow	Johnley	Tubbs	Tubbs	Tubbs	Tubbs
	IRR ROUTE NUMBER	747	747	751	751	788	788	788	788
I.D.	IRR SECTION NUMBER	10	20	10	20	10	20	30	40
	IRR CLASSIFICATION	4	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	2.30	2.00	1.80	2.90		4.00	2.00	2.20
	NON RESERVATION MILES					1.40			
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	-	1-2		1-2	-	1-2	-
	SHOULDER TYPE	-	-	3/4-	3/4-	3/4-	3/4-	3/4-	3/4-
	SHOULDER CONDITION	-	-	Fair	Fair	Fair	Fair	Fair	Fair
	SURFACE WIDTH (feet)	14-16	12-14	22-24	22-24	20-22	18-20	20-22	18-20
ROAD	SURFACE TYPE	Rock	Dirt	AC	Rock	AC	Rock	AC	Rock
SEC.	SURFACE CONDITION	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
&	FUTURE SURFACE TYPE	Rock	Rock	AC	Rock	AC	Rock	AC	Rock
COND.	ROADWAY WIDTH (feet)	16-18	12-14	20-22	22-24	22-24	20-22	22-24	20-22
	DRAINAGE	V Ditch	None	V Ditch	V Ditch	V-Ditch	V Ditch	V Ditch	V Ditch
	STRIPE CONDITION	Fair	-	Fair	-	Fair	-	Fair	-
	PVMT MARKING CONDITION	-	-	Fair	-	Fair	-	Fair	-
	SIGNING	-	-	Fair	-	Fair	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	4	0	3	1	?	1	?	1
	TOTAL HOMES SERVED	4	0	7	7	7	7	7	7
	SCHOOL BUSES	No	No	Yes	Yes	Yes	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	No	Yes	Yes	Yes	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	No	Ranch	No/Ranch	-
	OTHER FACILITIES	Cemetery	No	No	No	No	OSH Experiment	OSU Experiment	-
	PURPOSE	No	No	No	No	-	-	-	-

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Duff	Duff	Kirk Patrick	N. Cayuse	Rothcock	Rothcock	LaCourse	LaCourse
	IRR ROUTE NUMBER	794	794	798	798	857	857	858	858
I.D.	IRR SECTION NUMBER	10	20	10	20	10	20	10	20
	IRR CLASSIFICATION	4	4	3	4	4	4	4	4
	LENGTH OF SECTION (miles)		9.80	2.00	4.70	2.00			1.00
	NON RESERVATION MILES	2.00					1.50	0.50	
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	1-2	1-2 (?)	1-2					
	SHOULDER TYPE	3/4	3/4- (?)	3/4-	-				
	SHOULDER CONDITION	Fair	Fair (?)	Fair	-				
	SURFACE WIDTH (feet)	22-24	22-24 (?)	18-20	18-20	16-18	16-18		
ROAD	SURFACE TYPE	AC	AC (?)	AC	Rock	Rock	Rock	Rock	Rock
SEC.	SURFACE CONDITION	Fair	Fair (?)	Fair	Fair	Fair	Fair	Poor	Poor
&	FUTURE SURFACE TYPE	AC	AC (?)	AC	Rock	Rock	Rock	Rock	Rock
COND.	ROADWAY WIDTH (feet)	20-22	20-22 (?)	16-18	18-20	16-18	16-18	14-16	14-16
	DRAINAGE	V Ditch	V Ditch (?)	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch
	STRIPE CONDITION	Fair	Fair (?)	Fair	-	-	-	-	-
	PVMT MARKING CONDITION	Fair	Fair (?)	Fair	-	-	-	-	-
	SIGNING	Fair	Fair (?)	Fair	-	-	-	-	-
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	2	1	46	2	3	3	1	1
	TOTAL HOMES SERVED	7	7	62	2	3	3	1	1
	SCHOOL BUSES	Yes	Yes	Yes	No	No	No	No	No
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	Yes	No	No	No	No	No
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	Ranch	Yes	No	No	No	No	No
	OTHER FACILITIES	No	-	No	No	No	No	No	No
	PURPOSE	No	-	-	-	-	-	-	-

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Mission/Cayuse	Jackson Rd.	Marlowe	Short Mile	Meacham Creek	Meacham Creek	Squaw Creek	White
	IRR ROUTE NUMBER	900	902	903	908	911	911	917	918
I.D.	IRR SECTION NUMBER	10	10	10	10	10	20	10	10
	IRR CLASSIFICATION	2	4	3	3	4	4	4	4
	LENGTH OF SECTION (miles)	42.50	0.60	0.20	1.00	4.50		3.30	1.10
	NON RESERVATION MILES						19.00		
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	2-4	-		1-2	-	-	-	-
	SHOULDER TYPE	3/4-	-		3/4-	-	-	-	-
	SHOULDER CONDITION	Fair	-		Fair	-	-	-	-
	SURFACE WIDTH (feet)	22-30	14-15	14-16	22-24	16-20	16-20	16-18	-
ROAD	SURFACE TYPE	AC	Rock	Rock	AC	Rock	Rock	Rock	Rock
SEC.	SURFACE CONDITION	Fair	Poor	Poor	Good	Poor	Poor	Fair	Fair
&	FUTURE SURFACE TYPE	AC	Rock	Rock	AC	Rock	Rock	Rock	Rock
COND.	ROADWAY WIDTH (feet)	22-24	14-15	14-16	20-22	16-18	16-18	16-18	16-18
	DRAINAGE	V Ditch	None	None	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch
	STRIPE CONDITION	Fair	-	-	Good	-	-	-	-
	PVMT MARKING CONDITION	Fair	-	-	Good	-	-	-	-
	SIGNING	Fair	-	-	Good	-	-	-	-
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	50+	2	5	100+	6	6	3	8
	TOTAL HOMES SERVED	50+	2	5	100+	6	6	3	8
	SCHOOL BUSES	Yes	No	Yes	Yes	No	No	No	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	Yes	Yes	No	No	No	No
DATA	BIKE ROUTE	Yes & No	No	No	No	No	No	No	No
	CHURCHES	Yes	No	No	Yes - 1	No	No	No	No
	BUSINESSES	Yes	No	No	No	No	No	No	No
	OTHER FACILITIES	Yes	No	No	No	Railroad	Railroad	No	No
	PURPOSE		-	-	-	-	-	No	No

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	River	Burke	Mann	Mann	Mann	N. Cayuse	Wilson	River
	IRR ROUTE NUMBER	918	921	925	925	925	925	927	927
I.D.	IRR SECTION NUMBER	20	10	10	20	30	40	10	20
	IRR CLASSIFICATION	4	4			4	4	4	4
	LENGTH OF SECTION (miles)	1.30	1.10	0.80		3.30	1.30	1.00	1.20
	NON RESERVATION MILES				1.00				
TRAF.	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	-	1-2	1-2	-	-	-	-
	SHOULDER TYPE	-	-	3/4-	3/4-	-	-	-	-
	SHOULDER CONDITION	-	-	Fair	Fair	-	-	-	-
	SURFACE WIDTH (feet)	-	14-16	22-24	22-24	20-22	20-22	16-18	16-18
ROAD	SURFACE TYPE	Rock	Rock	AC	AC	Rock	Rock	Rock	Rock
SEC.	SURFACE CONDITION	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
&	FUTURE SURFACE TYPE	Rock	Rock	AC	AC	AC	AC	AC	AC
COND.	ROADWAY WIDTH (feet)	16-18	14-16	20-22	20-22	20-22	20-22	16-18	16-18
	DRAINAGE	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch	V Ditch
	STRIPE CONDITION	-	-	Fair	Fair	-	-	-	-
	PVMT MARKING CONDITION	-	-	Fair	Fair	-	-	-	-
	SIGNING	-	-	Fair	Fair	-	-	-	-
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	8	1	2	2	6	6	4	8
	TOTAL HOMES SERVED	8	1	6	6	9	9	4	20
	SCHOOL BUSES	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	No	Yes	Yes	Yes	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	No	No	No	No
	OTHER FACILITIES	No	No	No	No	No	No	No	No
	PURPOSE	No	No	No	No	No	No	No	No

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Nameless	Pond Rd.	St. Andrews	St. Andrews	Niktyoway	Thompson Rd.	Tutuilla Church Rd.	Patawa Rd.
	IRR ROUTE NUMBER	928	929	931	931	931	932	932	933
I.D.	IRR SECTION NUMBER	10	10	10	20	30	10	20	10
	IRR CLASSIFICATION	4		4	4	4	4	4	4
	LENGTH OF SECTION (miles)	2.00	0.25	0.50	0.50	1.80	0.50	3.00	1.00
	NON RESERVATION MILES								
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	-	-	1-2	-	-	3	1-2
	SHOULDER TYPE	-	-	-	3/4-	-	-	3/4-	3/4-
	SHOULDER CONDITION	-	-	-	Poor	-	-	Fair	Fair
	SURFACE WIDTH (feet)	-	16-18	16-18	18-20	16-18	22-23	22-23	22-23
ROAD	SURFACE TYPE	Dirt	Crushed Rock	Rock	AC	Rock	Crushed Rock	AC	AC
SEC.	SURFACE CONDITION	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Fair/Good
&	FUTURE SURFACE TYPE	Dirt	Rock	Rock	AC	Rock	Rock	AC	AC
COND.	ROADWAY WIDTH (feet)	10-12	16-18	16-18	16-18	16-18	22-23	28-29	24-26
	DRAINAGE	None	Poor	V Ditch	V Ditch	V Ditch	V-Ditch	V-Ditch	V-Ditch
	STRIPE CONDITION	-	N/A	-	Fair	-	N/A	Fair	Fair
	PVMT MARKING CONDITION	-		-	Poor	-	N/A		
	SIGNING	-	Fair	-	Fair	-	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	?	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	0	2	0	3	5	6	6	18
	TOTAL HOMES SERVED	0	2	0	3	8	6	42	30
	SCHOOL BUSES	No	No	Yes	Yes	Yes	No	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	No	Yes	Yes	Yes	No	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	Yes - 1	No	No	Yes - 1	No
	BUSINESSES	No	No	No	No	No	No	No	No
	OTHER FACILITIES	No	No	No	School	No	No	1	No
	PURPOSE	No		No	No	No			

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Kash Kash	Kash Kash	Lloyd Rd.	Lloyd Rd.	Emigrant	Theater	Best Rd.	Best Rd.
	IRR ROUTE NUMBER	934	934	936	936	937	939	950	950
I.D.	IRR SECTION NUMBER	10	20	10	20	10	10	20	10
	IRR CLASSIFICATION	4	4	4	4	4	4	2	2
	LENGTH OF SECTION (miles)	1.00	2.50	1.70	1.30	9.00	0.80		
	NON RESERVATION MILES							3.00	1.00
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	1-2	-	-	1-2	1-2	1-2	2-4	2-4
	SHOULDER TYPE	3/4-	-	-	3/4-	3/4-	3/4-	3/4-	3/4-
	SHOULDER CONDITION	Poor	-	-	Fair	Poor	Poor	Fair	Fair
	SURFACE WIDTH (feet)	18-20	16-18	20	22-23	20-22	20-22	22-24	22-24
ROAD	SURFACE TYPE	AC	Rock	Crushed Rock	AC	AC	AC	AC	AC
SEC.	SURFACE CONDITION	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair
&	FUTURE SURFACE TYPE	AC	Rock	Rock	AC	AC	AC	AC	AC
COND.	ROADWAY WIDTH (feet)	20-22	16-18	20	24-28	20-22	18-20	24-28	26-30
	DRAINAGE	V Ditch	V Ditch	V-Ditch	V-Ditch	V Ditch	V Ditch	V-Ditch	V-Ditch
	STRIPE CONDITION	Poor	-	-	Fair	Poor	Poor	Fair	Fair
	PVMT MARKING CONDITION	Poor	-	-	-	Poor	Poor	-	-
	SIGNING	Fair	-	Fair	Fair	Poor	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	0	2	0	17	15	2	20	1
	TOTAL HOMES SERVED	6	6	0	69	20	20+	20+	11
	SCHOOL BUSES	Yes	Yes	Yes	Yes	Yes	?	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	No	No	No	No
	OTHER FACILITIES	No	No	No	No	No	No	No	No
	PURPOSE	No	No			No	-		

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Riverside	Riverside	Goad Rd.	Goad Rd.	Goad Rd.	Goad Rd.	Baldwin	Poverty Flat
	IRR ROUTE NUMBER	986	986	987	987	987	987	1019	1021
I.D.	IRR SECTION NUMBER	10	20	20	40	60	80	10	10
	IRR CLASSIFICATION	3	3	4	4	4	4	4	4
	LENGTH OF SECTION (miles)		0.30		4.00	0.70	1.20		0.50
	NON RESERVATION MILES	0.50		1.30				0.20	
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	1-2	1-2	-	-	1-2	-	-	1-2
	SHOULDER TYPE	3/4-	3/4-	-	-	3/4-	-	-	3/4-
	SHOULDER CONDITION	Good	Good	-	-	Good	-	-	Good
	SURFACE WIDTH (feet)	4	4	24-26	24-26	24-26	24-26	-	22-24
ROAD	SURFACE TYPE	AC	AC	Crushed rock	Crushed rock	AC	Crushed rock	Dirt	AC
SEC.	SURFACE CONDITION	Good	Good	Fair	Fair/Good	Fair (cracks)	Fair/Good	Fair	Good
&	FUTURE SURFACE TYPE	AC	AC	Rock	Rock	AC	Rock	Rock	AC
COND.	ROADWAY WIDTH (feet)	24-26	24-26	24-26	24-26	26-30	24-26	14-16	20-22
	DRAINAGE	V Ditch	V Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch	V Ditch	V Ditch
	STRIPE CONDITION	Good	Good	N/A	N/A	Fair	N/A	-	Fair
	PVMT MARKING CONDITION	Good	Good	N/A	N/A	Fair	N/A	-	Fair
	SIGNING	Good	Good	Fair	Fair	Fair	Fair	-	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	40+	40+	2+	7	1	1	2	0
	TOTAL HOMES SERVED	40+	40+	9+	7	1	1	12	12
	SCHOOL BUSES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	?	?	No	No	No	No	No	No
	BUSINESSES	Yes	Yes	1	No	No	No	No	No
	OTHER FACILITIES	Yes	Yes	No	No	No	No	No	No
	PURPOSE			Res Bound	Start of AC	End of AC	Holmes Rd.		

UMATILLA RESERVATION 2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Poverty Flat	E. Poverty Flat	Palmer	South Market Rd.	Conner/Tias Rd.	Red Hawk Rd.	South Market Rd.	South Market Rd.
	IRR ROUTE NUMBER	1021	1022	1023	1025	1026	1027	1027	1027
I.D.	IRR SECTION NUMBER	20	10	10	10	10	10	20	40
	IRR CLASSIFICATION	4	4	4	2	4	4	4	4
	LENGTH OF SECTION (miles)		2.50		2.20	3.25	1.00	2.00	1.00
	NON RESERVATION MILES	2.00		0.60					
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	-	-	6	-	-	-	6
	SHOULDER TYPE	-	-	-	3/4-	-	-	-	3/4-
	SHOULDER CONDITION	-	-	-	Fair	-	-	-	Fair
	SURFACE WIDTH (feet)	-	-	-	20-22	14-16	16-18	18-20	20-22
ROAD	SURFACE TYPE	Rock	Rock	Dirt	AC	Crushed Rock	Crushed rock	Crushed Rock	AC
SEC.	SURFACE CONDITION	Good	Fair	Poor	Fair/Good	Fair	Fair/Good	Fair/Good	Fair/Good
&	FUTURE SURFACE TYPE	Rock	Rock	Rock	AC	Rock	Rock	Rock	AC
COND.	ROADWAY WIDTH (feet)	18-20	18-20	14-16	32-34	14-16	16-18	18-20	32-34
	DRAINAGE	V Ditch	V Ditch	V Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch
	STRIPE CONDITION	-	-	-	Fair	N/A	N/A	N/A	Fair
	PVMT MARKING CONDITION	-	-	-	-	N/A	N/A	N/A	-
	SIGNING	-	-	-	Fair	Fair	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	10	5	2	8	6	2	6	1
	TOTAL HOMES SERVED	12	5	5	8	6	2	8	15
	SCHOOL BUSES	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	No	Yes	No	No	No	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	No	No	No	No
	OTHER FACILITIES	No	No	No	No	No	No	No	No
	PURPOSE			-	Hwy 331				

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Cabbage School Rd.	Montanic Rd.	Montanic Rd.	Holmes Rd.	Holmes Rd.	Trail Rd.	Billy Rd.	N. Fork/McKay Cr Rd.
	IRR ROUTE NUMBER	1028	1031	1031	1032	1032	1041	1043	1049
I.D.	IRR SECTION NUMBER	10	10	20	10	20	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)		1.00	4.80		3.00	2.80	1.00	0.80
	NON RESERVATION MILES	1.50			1.10				
TRAF	ADT (existing)								
DATA	ADT (estimate ADT year + 20)								
	SHOULDER WIDTH (feet)	-	1-2	-	-	-	-	-	-
	SHOULDER TYPE	-	3/4-	-	-	-	-	-	-
	SHOULDER CONDITION	-	Fair	-	-	-	-	-	-
	SURFACE WIDTH (feet)	-	22-24	22-24	20-22	18-20	30-34	14-16	14-16
ROAD	SURFACE TYPE	Rock	AC	Crushed Rock	Crushed rock	Crushed rock	Crushed Rock	Crushed Rock	Crushed Rock
SEC.	SURFACE CONDITION	Fair	Good	Poor/Fair	Fair/Good	Poor/Fair	Fair/Poor	Fair/Poor	Fair/Poor
&	FUTURE SURFACE TYPE	Rock	AC	Rock	Rock	Rock	Rock	Rock	Crushed Rock
COND.	ROADWAY WIDTH (feet)	16-18	22-24	26-30	20-22	18-20	30-34	14-16	14-16
	DRAINAGE	V Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch	V-Pitch	V-Pitch	V-Pitch
	STRIPE CONDITION	-	Fair	Fair	N/A	N/A	-	-	-
	PVMT MARKING CONDITION	-	-	-	N/A	N/A	-	-	-
	SIGNING	-	Fair	Fair	Fair	Fair	Fair	Fair	Fair
	MAINTAINED BY	County	County	County	County	County	County	County	County
R/W	OWNERSHIP	County	County	County	County	County	County	County	County
	R/W STATUS	County	County	County	County	County	County	County	County
	R/W WIDTH (feet)	60	60	60	60	60	60	60	60
	TOTAL HOMES (on section)	4	0	6	1	0	0	5	2
	TOTAL HOMES SERVED	6	0	37	1	0	5	5	2
	SCHOOL BUSES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	No	Yes	No	No	Yes	Yes	No
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	No
	BUSINESSES	No	No	No	No	No	No	No	Yes
	OTHER FACILITIES	No	No	No	No	No	No	No	No
	PURPOSE								

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Spring Cr Rd.	Spring Cr. Rd.	Sumac Rd.	McKay Creek Rd.	McKay Creek Rd.	McKay Creek Rd.	Kanine Ridge Rd.	"A" Street
	IRR ROUTE NUMBER	1050	1050	1050	1050	1052	1052	0001	0002
I.D.	IRR SECTION NUMBER	10	20	30	40	10	20	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4	3
	LENGTH OF SECTION (miles)		2.40	3.30	4.10	3.20		7.20	0.10
	NON RESERVATION MILES	2.10					0.60		
TRAF	ADT (existing)							20	200
DATA	ADT (estimate ADT year + 20)							20	400
	SHOULDER WIDTH (feet)	2-4	2-4	-	-	-	-	-	None
	SHOULDER TYPE	3/4-	3/4-	-	-	-	-	-	None
	SHOULDER CONDITION	Fair	Fair	-	-	-	-	-	None
	SURFACE WIDTH (feet)	24-26	24-26	22-24	24-26	22-24	22-24	10-12	26-34
ROAD	SURFACE TYPE	AC	AC	Crushed Rock	Crushed Rock	Crushed Rock	Crushed Rock	Dirt	AC
SEC.	SURFACE CONDITION	Good	Good	Fair/Good	Fair/Poor	Fair/Good	Fair/Good	Poor	Good
&	FUTURE SURFACE TYPE	AC	AC	Rock	Rock	Rock	Rock	Rock	AC
COND.	ROADWAY WIDTH (feet)	28-30	28-30	22-24	24-26	22-24	22-24	14-16	26-34
	DRAINAGE	V-Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch	V-Ditch	-	Good
	STRIPE CONDITION	Fair	Fair	-	-	-	-	-	None
	PVMT MARKING CONDITION	-	-	-	-	-	-	-	Good
	SIGNING	Fair	Fair	Fair	Fair	Fair	Fair	-	Stop. Speed
	MAINTAINED BY	County	County	County	County	County	County	BIA	BIA
R/W	OWNERSHIP	County	County	County	County	County	County	CTUIR	*BIA has only partial
	R/W STATUS	County	County	County	County	County	County	?	right of way varies fr
	R/W WIDTH (feet)	60	60	60	60	60	60	?	*
	TOTAL HOMES (on section)	1	7	7	7	9	?	2	2
	TOTAL HOMES SERVED	11	7	7	7	9	16	2	2
	SCHOOL BUSES	Yes	Yes	Yes	Yes	Yes	Yes	No	No
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	Yes	Yes	Yes	Yes	Yes	No	No
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	No	No	No	No	No	No	No	None
	BUSINESSES	No	No	No	No	No	No	No	
	OTHER FACILITIES	No	No	No	No	No	No	No	BIA Hqtrs
	PURPOSE							-	

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	"B" Street	Alder Drive	Cayuse Drive	Confederated Way	Cottonwood Lane	Umatilla Loop	Walla Walla Ct	Whirlwind Drive
	IRR ROUTE NUMBER	0002	0002	0002	0002	0002	0002	0002	0002
I.D.	IRR SECTION NUMBER	20	30	40	50	60	70	80	90
	IRR CLASSIFICATION	3	3	3	3	3	3	3	3
	LENGTH OF SECTION (miles)	0.15	0.10	0.10	0.65	0.20	0.25	0.15	0.15
	NON RESERVATION MILES								
TRAF	ADT (existing)	200	100	60	600	110	81	360	140
DATA	ADT (estimate ADT year + 20)	400	100	60	650	110	106	360	160
	SHOULDER WIDTH (feet)	0-4	None	None	None	None	None	None	None/4' sidewalk
	SHOULDER TYPE	Curb & Gravel	None	None	None	None	None	None	None
	SHOULDER CONDITION	Fair	None	None	None	None	None	None	None
	SURFACE WIDTH (feet)	22	32	24	26-28	32	28	24	34
ROAD	SURFACE TYPE	AC	AC	AC	AC	AC	AC	AC	AC
SEC.	SURFACE CONDITION	Good	Good	Good	Good	Good	Good	Good	Good
&	FUTURE SURFACE TYPE	AC	AC	AC	AC	AC	AC	AC	AC
COND.	ROADWAY WIDTH (feet)	22	32	24	26-28	32	28	24	34
	DRAINAGE	Good	Good	Good	Good	Good	Good	Good	Good
	STRIPE CONDITION	None	None	None	Good	None	None	None	None
	PVMT MARKING CONDITION	Good	Good	Good	Good	Good	Good	Good	Good
	SIGNING	Stop, Speed	Stop	Stop	Stop, Speed	Stop	Stop	Stop	Stop
	MAINTAINED BY	BIA	BIA	BIA	BIA	BIA	BIA	BIA	BIA
R/W	OWNERSHIP	right of way on BIA Route 2;				*	*	*	*
	R/W STATUS	from 20' to 60' for BIA Rt. 2.			*	*	*	*	*
	R/W WIDTH (feet)	*	*	*	*	*	*	*	*
	TOTAL HOMES (on section)	0	10	6	1	11	14	30	14
	TOTAL HOMES SERVED	1	10	6	52	11	14	36	14
	SCHOOL BUSES	No	No	No	Yes	No	No	No	No
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	No	Yes	No	Yes	Yes	No	No	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	No
	CHURCHES	None	None	None	None	None	None	None	None
	BUSINESSES								
	OTHER FACILITIES	BIA Hqtrs	None	None	Tribal Bldgs	None	Community Ctr	None	None
	PURPOSE								

UMATILLA RESERVATION									
2001 IRR SYSTEM INVENTORY									
	ROAD NAME	Willow Drive	Little Johnson	Fort Tank	McKinley/Lavadour	Indian Lake	Minthorne Ln.	Easy Street	Ore-Wash Highway
	IRR ROUTE NUMBER	0002	0003	0004	0005	0006	0010	0100	OR11
I.D.	IRR SECTION NUMBER	100	10	10	10	10	10	10	10
	IRR CLASSIFICATION	3	4	4	4	4	3	3	2
	LENGTH OF SECTION (miles)	0.15	4.60	2.00	0.30	1.00	0.50	0.05	0.60
	NON RESERVATION MILES								
TRAF	ADT (existing)	280							6,740
DATA	ADT (estimate ADT year + 20)	280							8,610
	SHOULDER WIDTH (feet)	None	-	-	-	1-2	-	-	6
	SHOULDER TYPE	None	-	-	-	3/4-	-	-	AC/Gravel
	SHOULDER CONDITION	None	-	-	-	Fair	-	-	Good
	SURFACE WIDTH (feet)	32	-	-	14-16	22-24	15-17	26	24
ROAD	SURFACE TYPE	AC	Rock	Rock	Rock	AC	Crushed Rock	AC	AC
SEC.	SURFACE CONDITION	Good	Poor	Poor	Poor	Fair	Poor	Good	Good
&	FUTURE SURFACE TYPE	AC	Rock	Rock	Rock	AC	Rock	AC	AC
COND.	ROADWAY WIDTH (feet)	32	14-16	14-16	14-16	20-22	15-17	26	36
	DRAINAGE	Good	V Ditch	V Ditch	None	V Ditch	Poor	?	Good
	STRIPE CONDITION	None	-	-	-	Fair	-	None	Good
	PVMT MARKING CONDITION	Good	-	-	-	Poor	-	Good	Fair
	SIGNING	Stop	-	-	-	Fair	Fair	Stop	Fair
	MAINTAINED BY	BIA	BIA	BIA	BIA	BIA	CTUIR	CTUIR	State
R/W	OWNERSHIP	*	CTUIR	CTUIR	CTUIR	CTUIR	CTUIR	CTUIR	State
	R/W STATUS	*	?	?	?	?	CTUIR	?	State
	R/W WIDTH (feet)	*	?	?	?	?	?	?	
	TOTAL HOMES (on section)	28	No	No	14	0	12	10	0
	TOTAL HOMES SERVED	28	No	No	14	0	12	10	0
	SCHOOL BUSES	No	No	No	?	No	No	No	Yes
SOCIO-	TRANSIT ROUTE	No	No	No	No	No	No	No	No
ECON.	MAIL ROUTE	Yes	No	No	No	No	No	Yes	Yes
DATA	BIKE ROUTE	No	No	No	No	No	No	No	Yes
	CHURCHES	None	No	No	No	No	No	No	None
	BUSINESSES		No	No	No	No	No	No	
	OTHER FACILITIES	None	No	No	No	Recreation	No	No	None
	PURPOSE		Fish & Hunt	Fish & Hunt	No	Fish & Hunt		No	

UMATILLA RESERVATION			
2001 IRR SYSTEM INVENTORY			
	ROAD NAME	Old Oregon Trail Hwy	Umatilla-Mission Hwy
	IRR ROUTE NUMBER	I-84	Hwy331
I.D.	IRR SECTION NUMBER	10	10
	IRR CLASSIFICATION	2	2
	LENGTH OF SECTION (miles)	18.00	3.60
	NON RESERVATION MILES		1.00
TRAF	ADT (existing)	11,700-16,570	2,250-5,180
DATA	ADT (estimate ADT year + 20)	19,860-25,910	4,650-8,070
	SHOULDER WIDTH (feet)	6 left, 10 right	4
	SHOULDER TYPE	AC	AC
	SHOULDER CONDITION	Good	Good
	SURFACE WIDTH (feet)	24	24
ROAD	SURFACE TYPE	AC	AC
SEC.	SURFACE CONDITION	Good	Good
&	FUTURE SURFACE TYPE	AC	AC
COND.	ROADWAY WIDTH (feet)	40	32
	DRAINAGE	Good	V-Ditch
	STRIPE CONDITION	Fair	Good
	PVMT MARKING CONDITION	Fair	Good
	SIGNING	Full	Full
	MAINTAINED BY	State	State
R/W	OWNERSHIP	State	State
	R/W STATUS	State	State
	R/W WIDTH (feet)		80+
	TOTAL HOMES (on section)	0	23
	TOTAL HOMES SERVED	0	
	SCHOOL BUSES	Yes	Yes
SOCIO-	TRANSIT ROUTE	Yes	No
ECON.	MAIL ROUTE	Yes	Yes
DATA	BIKE ROUTE	Yes	Yes
	CHURCHES	None	None
	BUSINESSES		
	OTHER FACILITIES	None	None
	PURPOSE		

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	McKay Creek Rd.	Fisher Rd.	LaFave Rd.	Huckleberry Ln.	Grey Ln.	Sheoship Ln.	Buckaroo Ln.
	IRR ROUTE NUMBER	1050	1026	784				
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)		5.0		0.5	0.2	0.2	0.7
	NON RESERVATION MILES	3.0		1.0				
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Hall Ln.	Deadman Pass Rd.	Evergreen Ln.	Popcorn Ln.	Nash Ln.	Marsh Hawk Ln.	Brahman Way
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)		0.5	1.5	0.2	0.4	0.7	0.3
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Angus Ave.	Charolais St.	Jackson Rd.	Durham Pl.	Meadowlark Ln.	Weedy	Umbarger
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.1	0.2		0.1	0.3	0.5	0.8
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Fowler Ln.	River Rd.	Price Ln.	Grey Ln.	Hudson Ln.	Tiger Ln.	Indian Grade
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	1.0		0.7	0.2	0.2	0.3	2.0
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Redford	NE 40th St.	NE 41st St.	NE 42nd St.	NE 43rd St.	NE 44th St.	NE 45th St.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	1.0	0.1	0.1	0.1	0.1	0.1	0.1
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Queen Ave.	Mytinger Ln.	Llama Ln.	Memory Ln.	McKay Ln.	SE 54th St.	Trail Dr.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.4	0.5	0.5	0.5	0.2	0.4	0.3
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	SE 56th St.	Gopher Flats Ln.	Hart Ln.	Bus Barn Ln.	Bowman Ln.	Williams Ln.	Purchase Ln.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.7	0.4	0.2	0.5	0.2	0.2	0.7
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Mustanger Ln.	Davis Ln.	Ishkit Ln.	Alexander	Showaway Ln.	Horseshoe Ln.	Parr Ln.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.3	0.2	0.4	0.3	0.5	0.4	0.5
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Kelly Ln.	Tauts Ln.	July Grounds	Choke Cherry Lp.	Birch Lp.	Elderberry	Cedar St.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.2	0.3	0.1	0.1	0.1	0.1	0.3
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION								
(ROADS NOT IN EXISTING INVENTORY)								
	ROAD NAME	Tamarack Lp.	Aspen Way	Juniper Dr.	Hawthorn Lp.	Lodgepole Lp.	Dogwood Lp.	Sampson Ln.
	IRR ROUTE NUMBER							
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	4	4
	LENGTH OF SECTION (miles)	0.1	0.2	0.1	0.1	0.1	0.1	0.3
	NON RESERVATION MILES							
TRAF	ADT (existing)							
DATA	ADT (estimate ADT year + 20)							
	SHOULDER WIDTH (feet)							
	SHOULDER TYPE							
	SHOULDER CONDITION							
	SURFACE WIDTH (feet)							
ROAD	SURFACE TYPE							
SEC.	SURFACE CONDITION							
&	FUTURE SURFACE TYPE							
COND.	ROADWAY WIDTH (feet)							
	DRAINAGE							
	STRIPE CONDITION							
	PVMT MARKING CONDITION							
	SIGNING							
	MAINTAINED BY							
R/W	OWNERSHIP							
	R/W STATUS							
	R/W WIDTH (feet)							
	TOTAL HOMES (on section)							
	TOTAL HOMES SERVED							
	SCHOOL BUSES							
SOCIO-	TRANSIT ROUTE							
ECON.	MAIL ROUTE							
DATA	BIKE ROUTE							
	CHURCHES							
	BUSINESSES							
	OTHER FACILITIES							
	PURPOSE							

UMATILLA RESERVATION							
(ROADS NOT IN EXISTING INVENTORY)							
	ROAD NAME	Wa-Wa-Ne Ln.	Wildhorse Resort Entrance Road	Tamastlikt Cultural Institute	Waste Transfer Station	Public Use Road Across From Casino Employee Entrance	U.S. 30
	IRR ROUTE NUMBER						
I.D.	IRR SECTION NUMBER	10	10	10	10	10	10
	IRR CLASSIFICATION	4	4	4	4	4	2
	LENGTH OF SECTION (miles)	0.3					
	NON RESERVATION MILES						
TRAF	ADT (existing)						
DATA	ADT (estimate ADT year + 20)						
	SHOULDER WIDTH (feet)						
	SHOULDER TYPE						
	SHOULDER CONDITION						
	SURFACE WIDTH (feet)						
ROAD	SURFACE TYPE						
SEC.	SURFACE CONDITION						
&	FUTURE SURFACE TYPE						
COND.	ROADWAY WIDTH (feet)						
	DRAINAGE						
	STRIPE CONDITION						
	PVMT MARKING CONDITION						
	SIGNING						
	MAINTAINED BY						
R/W	OWNERSHIP						
	R/W STATUS						
	R/W WIDTH (feet)						
	TOTAL HOMES (on section)						
	TOTAL HOMES SERVED						
	SCHOOL BUSES						
SOCIO-	TRANSIT ROUTE						
ECON.	MAIL ROUTE						
DATA	BIKE ROUTE						
	CHURCHES						
	BUSINESSES						
	OTHER FACILITIES						
	PURPOSE						

UMATILLA RESERVATION						
(NEW ROADS RECOMMENDED IN TSP)						
	ROAD NAME	North-South Connector Road	East-West Connector Road (Phase I)	East-West Connector Road (Phase II)	East-West Connector Road (Phase III)	Wildhorse Resort Entrance Road Path
	IRR ROUTE NUMBER	0011	0012	0012	0012	0013
I.D.	IRR SECTION NUMBER	10	10	20	30	10
	IRR CLASSIFICATION	4	4	4	4	5
	LENGTH OF SECTION (miles)	1.38	0.76	0.59	0.47	1.04
	NON RESERVATION MILES					
TRAF	ADT (existing)					
DATA	ADT (estimate ADT year + 20)					
	SHOULDER WIDTH (feet)	0-8	0-8	0-8	0-8	-
	SHOULDER TYPE	Earth, Stabilized, or Paved	Earth, Stabilized, or Paved	Earth, Stabilized, or Paved	Earth, Stabilized, or Paved	-
	SHOULDER CONDITION					
	SURFACE WIDTH (feet)	20-24	20-24	20-24	20-24	
ROAD	SURFACE TYPE	Earth, Gravel, or Paved	Earth, Gravel, or Paved	Earth, Gravel, or Paved	Earth, Gravel, or Paved	
SEC.	SURFACE CONDITION					
&	FUTURE SURFACE TYPE					
COND.	ROADWAY WIDTH (feet)	24-40	24-40	24-40	24-40	12
	DRAINAGE					
	STRIPE CONDITION					
	PVMT MARKING CONDITION					
	SIGNING					
	MAINTAINED BY	CTUIR	CTUIR	CTUIR	CTUIR	CTUIR
R/W	OWNERSHIP	CTUIR	CTUIR	CTUIR	CTUIR	CTUIR
	R/W STATUS					
	R/W WIDTH (feet)	60	60	60	60	-
	TOTAL HOMES (on section)					
	TOTAL HOMES SERVED					
	SCHOOL BUSES					
SOCIO-	TRANSIT ROUTE					
ECON.	MAIL ROUTE					
DATA	BIKE ROUTE					
	CHURCHES					
	BUSINESSES					
	OTHER FACILITIES					
	PURPOSE					

UMATILLA RESERVATION					
(NEW ROADS RECOMMENDED IN TSP)					
	ROAD NAME	Connector Road Between Kash Kash Road and Wildhorse Resort	South Market Road Path	Path Across Umatilla River	Tamastlikt Cultural Institute Connector Road
	IRR ROUTE NUMBER	0014	0015	0016	0017
I.D.	IRR SECTION NUMBER	10	10	10	10
	IRR CLASSIFICATION	4	5	5	4
	LENGTH OF SECTION (miles)	0.42	0.42	0.45	1.38
	NON RESERVATION MILES				
TRAF	ADT (existing)				
DATA	ADT (estimate ADT year + 20)				
	SHOULDER WIDTH (feet)	0-8	-	-	0-8
	SHOULDER TYPE	Earth, Stabilized, or Paved	-	-	Earth, Stabilized, or Paved
	SHOULDER CONDITION				
	SURFACE WIDTH (feet)	20-24			20-24
ROAD	SURFACE TYPE	Earth, Gravel, or Paved			Earth, Gravel, or Paved
SEC.	SURFACE CONDITION				
&	FUTURE SURFACE TYPE				
COND.	ROADWAY WIDTH (feet)	24-40	12	12	24-40
	DRAINAGE				
	STRIPE CONDITION				
	PVMT MARKING CONDITION				
	SIGNING				
	MAINTAINED BY	CTUIR	CTUIR	CTUIR	CTUIR
R/W	OWNERSHIP	CTUIR	CTUIR	CTUIR	CTUIR
	R/W STATUS				
	R/W WIDTH (feet)	60	-	-	60
	TOTAL HOMES (on section)				
	TOTAL HOMES SERVED				
	SCHOOL BUSES				
SOCIO-	TRANSIT ROUTE				
ECON.	MAIL ROUTE				
DATA	BIKE ROUTE				
	CHURCHES				
	BUSINESSES				
	OTHER FACILITIES				
	PURPOSE				

**LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED AND
SIGNALIZED INTERSECTIONS**

DESCRIPTION OF LEVEL OF SERVICE METHODOLOGY

LEVEL OF SERVICE CONCEPT

Various intersections within the CTUIR study area were selected and analyzed for their operational character based on the traffic volumes found to occur during the PM peak hour for existing and future conditions. Intersections to be signalized in the future are evaluated based on the overall average delay to all vehicles entering the intersection and the volume-to-capacity ratio. The unsignalized intersections are evaluated based on the availability of adequate gaps in the main street flow of traffic to safely accommodate the most critical movement from the side street approach.

Signalized Intersections

Regarding signalized intersections, the concept of level-of-service is a quantitative measure of the ratio between the existing or projected volumes and the capacity of the roadway at a given location. This ratio is known as Volume to Capacity (v/c). The v/c ratios are broken down further into the six LOS descriptions ranging for A to F, for operations identification purposes. The six LOS grades are described qualitatively for signalized intersections in Table 1 below. Additionally, Table 2 identifies the relationship between level of service and the v/c ratio. Under these criteria, a LOS D is generally considered to represent the minimum acceptable design standard.

Unsignalized Intersections

The operational characteristics of selected unsignalized intersections throughout the study area were assessed using ODOT's UNSIG-10 program. This program calculates delay and level-of-service for the critical movements of an intersection, based on the reserve capacity. Unsignalized intersections include Two-Way Stop-Controlled (TWSC) and All-Way Stop Controlled (AWSC) intersections. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table 3. Using the criteria in this table, LOS D is generally considered to represent the minimum acceptable design standard.

It should be noted that the LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less onerous than at unsignalized intersections.

For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the total delay threshold for any given LOS is less for an unsignalized intersection than for a signalized intersection. While overall intersection LOS is calculated for AWSC intersections, LOS is only calculated for the minor approaches and the major street left turn movements at TWSC intersections. No delay is assumed for the major street through movements. For TWSC intersections, the overall intersection LOS is defined by the movement having the worst LOS (typically a minor street left turn).

TABLE 1
LEVEL-OF-SERVICE DESCRIPTIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Traffic Flow	Comments	Maneuverability
A Desirable	Free	Traffic flows freely with no delays.	Drivers can maneuver easily and find freedom in operation
B Desirable	Stable	Traffic still flows smoothly with few delays.	Some drivers feel somewhat restricted within groups of vehicles.
C Desirable	Stable	Traffic generally flows smoothly but occasionally vehicles may be delayed through one signal cycle. Desired urban area design level.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D Acceptable	Approaching Unstable	Traffic delays may be more than one signal cycle during peak hours but excessive back-ups do not occur. Considered acceptable urban area design level.	Maneuverability is limited during short peak periods due to temporary backups.
E Unsatisfactory	Unstable	Delays may be great and up to several signal cycles. Short periods of this level may be tolerated during peak hours in lieu of the cost and disruption of providing a higher level of service.	There are typically long queues of vehicles waiting upstream of the intersections.
F Unsatisfactory	Forced	Excessive delay causes reduced capacity. Always considered unsatisfactory. May be tolerated in recreational areas where occurrence is rare.	Traffic is backed up from other locations and may restrict or prevent movement of vehicles at the intersection.

Source: ODOT, Transportation Development Branch, SIGCAP2 Users Manual, Page B-3.

TABLE 2
LEVEL-OF-SERVICE CRITERIA
FOR A SIGNALIZED INTERSECTION

Level of Service	V/C Ratio
A	0.00-0.48
B	0.49-0.59
C	0.60-0.69
C-D	0.70-0.73
D	0.74-0.83
D-E	0.84-0.87
E	0.88-0.97
E-F	0.98-0.99
F	>1.00

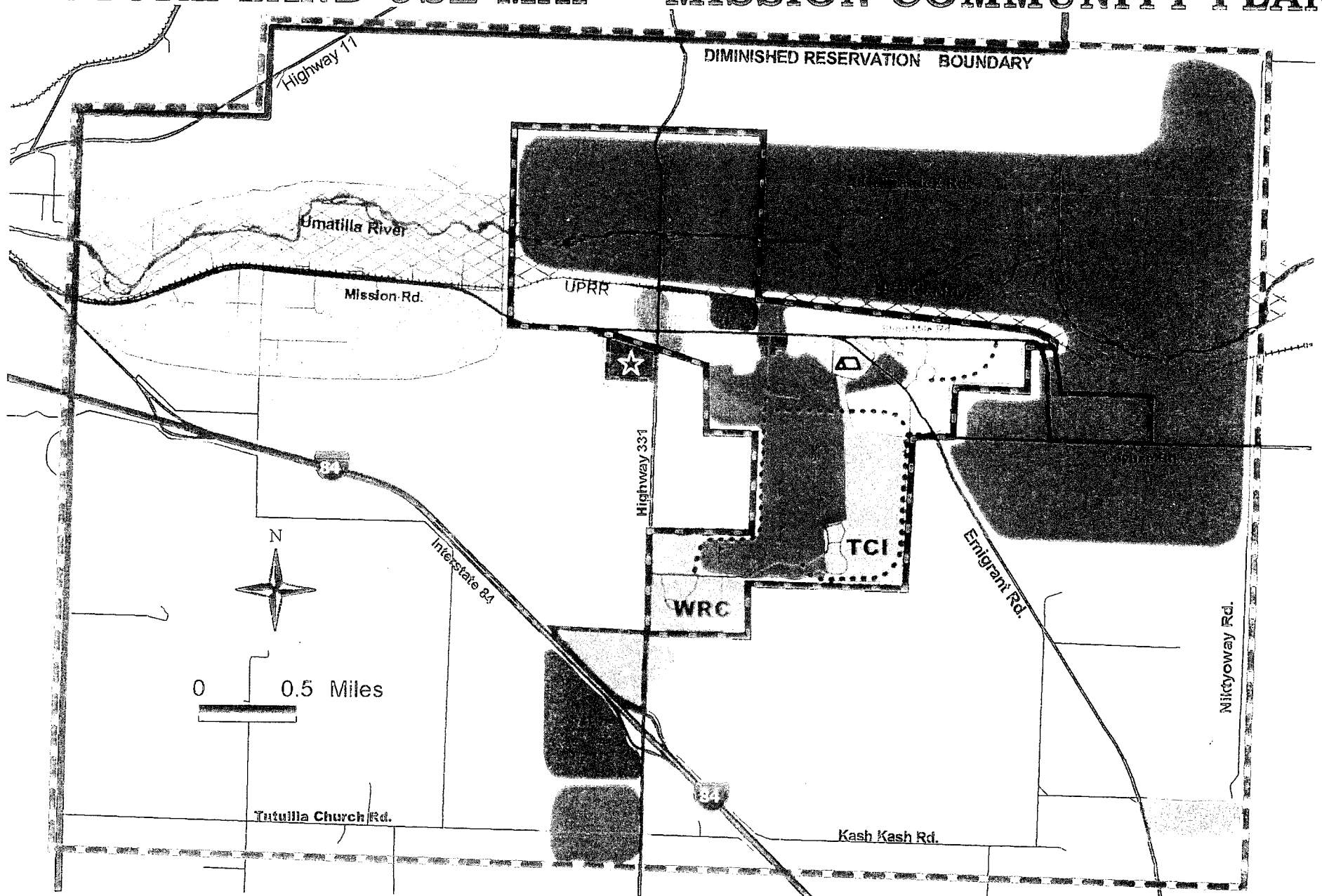
*Source: ODOT, Transportation Development Branch,
SIGCAP2 Users Manual, page B-2*

TABLE 3
LEVEL-OF-SERVICE DESCRIPTIONS
FOR AN UNSIGNALIZED INTERSECTION

Level of Service	Reserve Capacity (vehicles/hour)	Delay Range (seconds/vehicle)
A	Greater than 400	- Nearly all drivers find freedom of operation. - Very seldom is there more than one vehicle in the queue.
B	300-399	- Some drivers begin to consider the delay an inconvenience. - Occasionally there is more than one vehicle in the queue.
C	200-299	- Most drivers feel restricted, but not objectionably so. - Many times there is more than one vehicle in the queue.
D	100-199	- Drivers feel quite restricted. - Often there is more than one vehicle in the queue.
E	1-99	- Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. - Drivers find the delays to be approaching intolerable levels. - There is almost always more than one vehicle in the queue.
F	Less than 0	- Forced flow. - Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

FUTURE LAND USES

FUTURE LAND USE MAP -- MISSION COMMUNITY PLAN



FUTURE LAND USE DESIGNATIONS

- | | |
|-----------------------|--------------------------------|
| AGRICULTURE/RURAL | HEALTH/EDUCATION/CULTURE |
| COMMUNITY COMMERCIAL | LIGHT INDUSTRIAL/MANUFACTURING |
| COMMUNITY RESIDENTIAL | OPEN SPACE |
| GENERAL RURAL | RURAL RESIDENTIAL |
| GOVERNMENT | TOURIST COMMERCIAL |

- | |
|--|
| MISSION COMMUNITY PLANNING AREA BOUNDARY |
| TRIBAL WATER/SEWER SERVICE BOUNDARY |
| FUTURE W/SEWER BOUNDARY EXPANSION |

- | | |
|----------------------------------|-----------------------|
| DIMINISHED RESERVATION BOUNDARY | WILDHORSE GOLF COURSE |
| UMATILLA RIVER FLOODPLAIN | FUTURE ROADS |
| TRIBAL CAPITAL BUILDING LOCATION | |

**UNIT COSTS FOR TRANSPORTATION FACILITY
IMPROVEMENTS**

Unit Costs for Transportation Facility Improvements

Improvement Type

Pedestrian

Sidewalks (One side of road at 6-foot width)	\$30/ linear foot
Striping for Crosswalks	\$3/ linear foot
Pedestrian/bicycle Bridge (8-feet wide)	\$450/ linear foot
Multi-use Path (Paved at 8-foot width)	\$15/linear foot

Bicycle

Widen Road to Provide Shoulder Bikeway (Both sides)	\$300,000/ mile
---	-----------------

Roadway

Sign	\$200/ sign
New Traffic Signal	\$150,000/ signal
Intersection Improvements (additional lanes, new access)	\$50,000/ approach
Pave at-grade railroad crossing with asphalt	\$2,500/ crossing
Add gravel to existing roadway with minor widening, alignment, and shoulder improvements	\$105,000/ mile
Add pavement to existing gravel roadway with minor widening, alignment, and shoulder improvements	\$200,000/ mile
Repave roadway with minor widening, alignment, and shoulder improvements	\$157,000/ mile
Widen to two 12-foot lanes including a 14-foot center median and 8-foot paved shoulders.	\$700,000/ mile
Widen to two 12-foot lanes including a 14-foot center median, 6-foot bike lanes, curb and gutter, and sidewalks	\$1,800,000/ mile
Construct new rural two-lane road with paved shoulders	\$1,100,000/ mile
Construct new urban two-lane road with curb, gutter, and sidewalks.	\$2,000,000/ mile

Note: Costs do not include special engineering problems such as steep grades, retaining walls, extensive drainage, and impacts to adjacent roads that increase costs. Land acquisition is not included.

ROADWAY DESIGN STANDARDS

BIA, CTUIR

B. SELECTION CHART FOR CLASS 4 ROUTES.

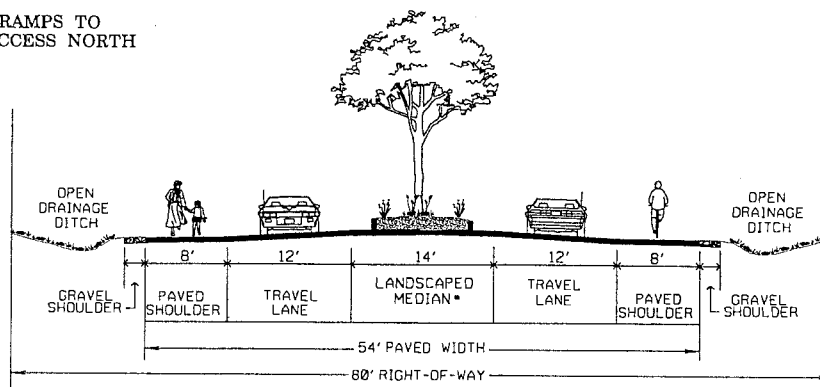
ADEQUACY DESIGN STANDARD NO.	10	11	12	13	14	15
FUNCTIONAL CLASSIFICATION	4	4	4	4	4	4
AVERAGE DAILY TRAFFIC (ADT YR + 20)	OVER 400			100 - 400		
TERRAIN	(1) FLAT	(2) ROLL	(3) MTN	(1) FLAT	(2) ROLL	(3) MTN
DESIGN.....(MPH)	60	50	40	60	50	40
MAXIMUM GRADE.....(%)	4	6	7	4	7	9
MAXIMUM CURVATURE.....(°)	5	7	12	6	8	14
STOPPING SIGHT DISTANCE...(FT)	475	350	275	475	350	275
PASSING SIGHT DISTANCE...(FT)	2100	1800	1500	2100	1800	1500
NUMBER OF LANES.....(NO)	2	2	2	2	2	2
SURFACE TYPE.....	PAVED			PAVED		
SURFACE WIDTH.....(FT)	24	24	24	24	24	24
SHOULDER TYPE.....	PAVED			STABILIZED		
SHOULDER WIDTH.....(FT)	8	8	8	4	4	4
ROADWAY WIDTH.....(FT)	40	40	40	32	32	32
RIGHT-OF-WAY WIDTH.....(FT)	100	120	150	100	100	100
INTERSECTION TREATMENT.....	AT GRADE					
RAILROAD CROSSING PROTECTION.	AT GRADE-AUTOMATIC PROTECTION					
ADEQUACY DESIGN STANDARD NO.	16	17	18	19	20	21
FUNCTIONAL CLASSIFICATION	4	4	4	4	4	4
AVERAGE DAILY TRAFFIC (ADT YR + 20)	50 - 99			UNDER 50		
TERRAIN	(1) FLAT	(2) ROLL	(3) MTN	(1) FLAT	(2) ROLL	(3) MTN
DESIGN SPEED.....(MPH)	50	45	35	40	35	30
MAXIMUM GRADE.....(%)	4	7	9	6	8	10
MAXIMUM CURVATURE.....(°)	8	12	20	15	20	23
STOPPING SIGHT DISTANCE...(FT)	350	325	200	275	200	200
PASSING SIGHT DISTANCE...(FT)	1800	1600	1200	1500	1200	1100
NUMBER OF LANES.....(NO)	2	2	2	2	2	2
SURFACE TYPE.....	GRAVEL or EARTH			GRAVEL or EARTH		
SURFACE WIDTH.....(FT)	22	22	22	20	20	20
SHOULDER TYPE.....	EARTH			EARTH		
SHOULDER WIDTH.....(FT)						
ROADWAY WIDTH.....(FT)	26	26	26	24	24	24
RIGHT-OF-WAY WIDTH.....(FT)	80	100	100	80	80	100
INTERSECTION TREATMENT.....	AT GRADE					
RAILROAD CROSSING PROTECTION.	AT GRADE AUTO. PROT., X-BUCK & AUDIBLE SIGNAL					

A. SELECTION CHART FOR CLASS 2 ROUTES.

ADEQUACY DESIGN STANDARD NO.	1	2	3	4	5	6
FUNCTIONAL CLASSIFICATION	2	2	2	2	2	2
AVERAGE DAILY TRAFFIC (ADT YR + 20)	OVER 1,000			400 - 1,000		
TERRAIN	(1) FLAT	(2) ROLL	(3) MTN	(1) FLAT	(2) ROLL	(3) MTN
DESIGN SPEED.....(MPH)	70	60	50	60	50	45
MAXIMUM GRADE.....(%)	2	4	6	3	5	7
MAXIMUM CURVATURE.....(°)	3	4	7	4	6	10
STOPPING SIGHT DISTANCE...(FT)	600	475	350	475	350	325
PASSING SIGHT DISTANCE...(FT)	2500	2100	1800	2100	1800	1700
NUMBER OF LANES.....(NO)	2	2	2	2	2	2
SURFACE TYPE.....		HIGH			HIGH	
SURFACE WIDTH.....(FT)	24	24	24	24	24	24
SHOULDER TYPE.....		PAVED			PAVED	
SHOULDER WIDTH.....(FT)	10	10	10	8	8	8
ROADWAY WIDTH.....(FT)	44	44	44	40	40	40
RIGHT-OF-WAY WIDTH.....(FT)	120	150	200	100	150	200
INTERSECTION TREATMENT.....		AT GRADE				
RAILROAD CROSSING PROTECTION.		AT GRADE-AUTOMATIC PROTECTION				

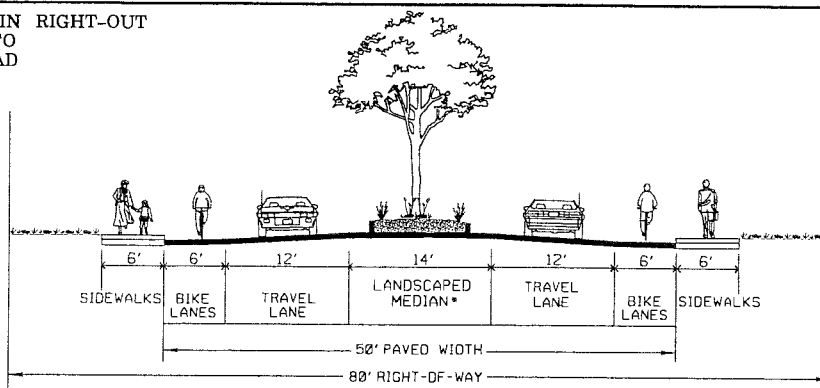
ADEQUACY DESIGN STANDARD NO.	7	8	9
FUNCTIONAL CLASSIFICATION	2	2	2
AVERAGE DAILY TRAFFIC (ADT YR + 20)	UNDER 400		
TERRAIN	(1) FLAT	(2) ROLL	(3) MTN
DESIGN SPEED.....(MPH)	55	50	45
MAXIMUM GRADE.....(%)	4	6	8
MAXIMUM CURVATURE.....(°)	6	7	12
STOPPING SIGHT DISTANCE...(FT)	425	350	325
PASSING SIGHT DISTANCE...(FT)	2000	1800	1700
NUMBER OF LANES.....(NO)	2	2	2
SURFACE TYPE.....		HIGH	
SURFACE WIDTH.....(FT)	24	24	24
SHOULDER TYPE.....		PAVED	
SHOULDER WIDTH.....(FT)	4	4	4
ROADWAY WIDTH.....(FT)	32	32	32
RIGHT-OF-WAY WIDTH.....(FT)	100	120	150
INTERSECTION TREATMENT.....		AT GRADE	
RAILROAD CROSSING PROTECTION.		(SEE ABOVE)	

OPTION 1: FROM I-84 WESTBOUND RAMPS TO
PROPOSED RIGHT-IN RIGHT-OUT ACCESS NORTH
OF INTERCHANGE



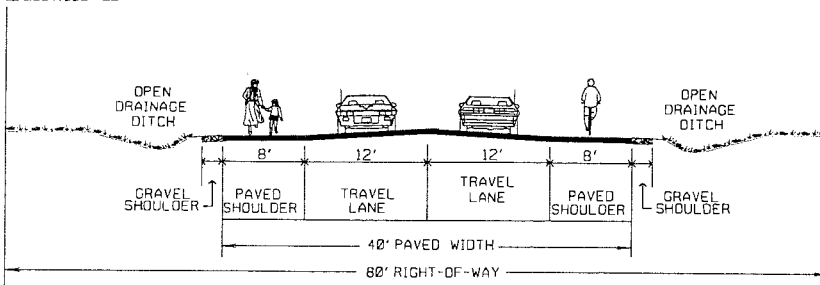
-- 14-foot left-turn lane provided at approaches to major intersections

OPTION 2: FROM PROPOSED RIGHT-IN RIGHT-OUT
ACCESS NORTH OF INTERCHANGE TO
WILDHORSE RESORT ENTRANCE ROAD



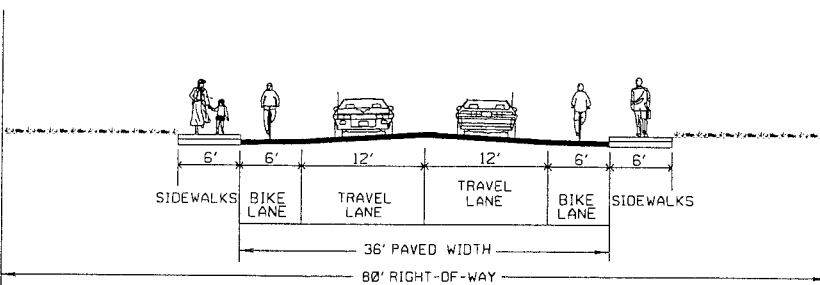
-- 14-foot left-turn lane provided at approaches to major intersections

OPTION 3: FROM WILDHORSE RESORT ENTRANCE ROAD
TO PROPOSED INTERSECTION SOUTH OF MISSION ROAD
AND FROM MISSION ROAD TO OR HIGHWAY 11



-- 14-foot left-turn lane provided at approaches to major intersections

OPTION 4: FROM THE PROPOSED INTERSECTION SOUTH OF
MISSION ROAD TO MISSION ROAD



-- 14-foot left-turn lane provided at approaches to major intersections



DAVID EVANS
AND ASSOCIATES, INC.
2828 S.W. CORBETT AVENUE
PORTLAND, OR. 97201-4830 (503) 223-6663

FIGURE 1

Highway 331 Design Standards

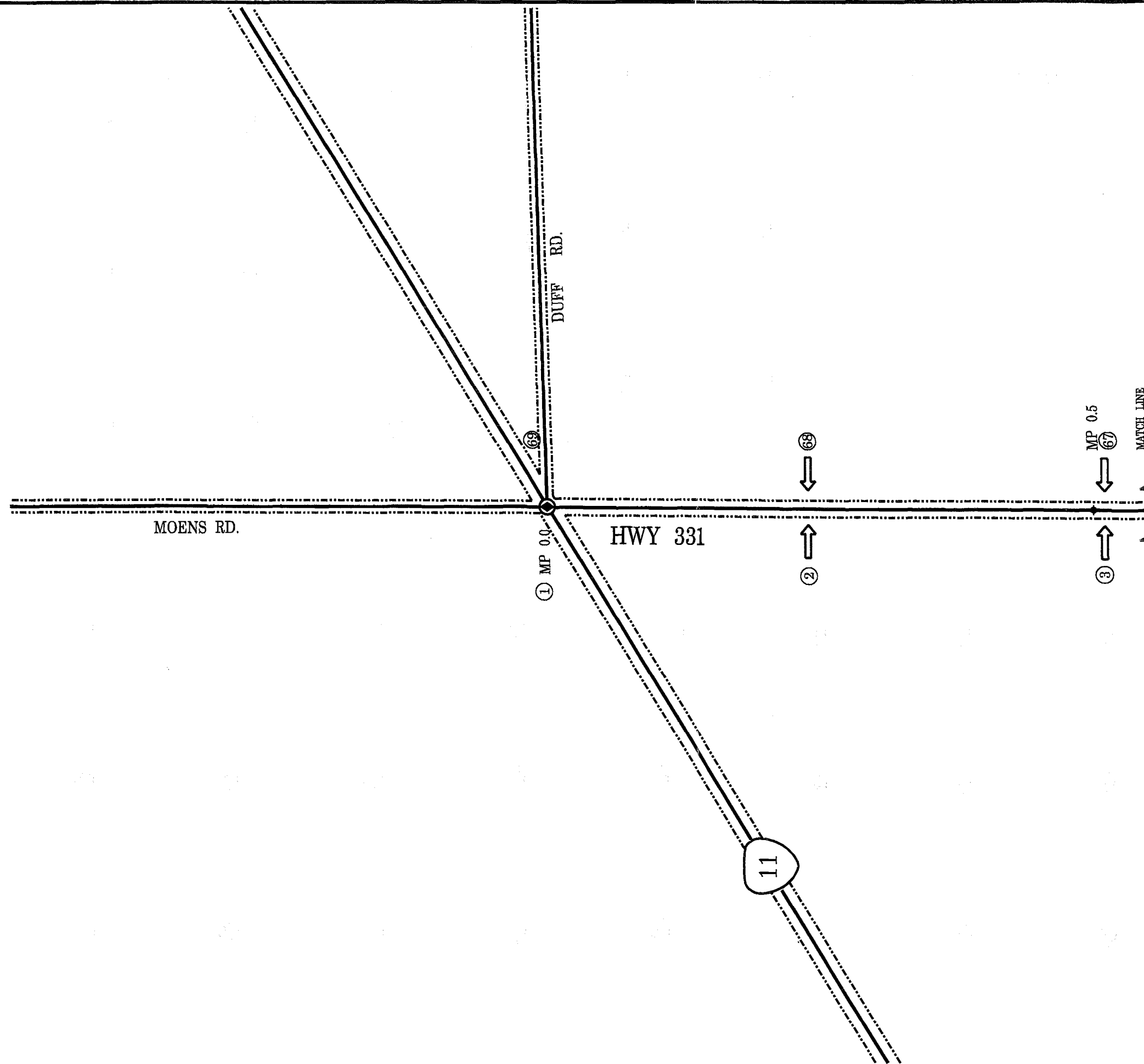
HIGHWAY 331 ACCESS MANAGEMENT PLAN

HWY 331 FUTURE ACCESS INVENTORY

Access Identifier Number	Direction	Highway Milepost	Driveway	Road	Driveway Use or Road Name	Distance to Previous Access (ft)	Distance to Next Access (ft)	Meets OHP Spacing Standards	Comments
1	SB	0.00		X	HWY 11		1,267	Y	
2	SB	0.24	X		Agriculture	1,267	1,426	Y	
3	SB	0.51	X		Agriculture	1,426	1,267	Y	
4	SB	0.75	X		Agriculture	1,267	1,426	Y	
5	SB	1.02	X		Agriculture	1,426	3,274	Y	
6	SB	1.64	X		House	3,274	634	N	
7	SB	1.76	X		House	634	422	N	
8	SB	1.84	X		House	422	1,003	N	
9	SB	2.02			Umatilla River				
10	SB	2.03	X		House	1,003	264	N	
11	SB	2.08	X		House	264	211	N	
12	SB	2.12	X		House	211	634	N	
13	SB	2.24	X		House	634	106	N	
14	SB	2.26	X		House	106	53	N	
15	SB	2.27		X	Showaway Lane	53	264	N	
16	SB	2.29			Railroad Crossing				
17	SB	2.32	X		Open industrial area	264	1,003	N	-Shared Access
18	SB	2.51		X	Mission Road	1,003	158	N	
19	SB	2.54	X		Abandoned House/ Rest Stop	158	1,003	N	
20	SB	2.73		X	Future East-West Connector Road	1,003	1,848	Y	-New
21	SB	3.08	X		Agriculture	1,848	1,637	Y	
22	SB	3.39	X		Agriculture	1,637	3,274	Y	
23	SB	3.97	X		Open Agricultural/ Industrial area				-Removed
24	SB	4.01		X	Future Road Opposite Employee Entrance	3,274	900	Y	-New
25	SB	4.02		X	Dirt Road (with Public ROW)				-Removed
26	SB	4.18	X		Future Tourist Commercial Use	900	330	Y	-New
27	SB	4.24	X		Future Tourist Commercial Use	330	990	Y	-New (right in/right out)
28	SB	4.33	X		Abandoned House				-Removed
29	SB	4.43		X	I-84 WB Ramps	990	950	Y	
30	SB	4.61		X	I-84 EB Ramps	950	1,373	Y	
31	SB	4.70		X	Dead End Road to Transfer Station				-Removed
32	SB	4.87		X	Dead End Road to Transfer Station	1,373	845	Y	-New
33	SB	5.03		X	Tutuilla Church Road	845		Y	
34	NB	5.03		X	Tutuilla Church Road		2,218	Y	
35	NB	4.61		X	I-84 EB Ramps	2,218	950	Y	
36	NB	4.43		X	I-84 WB Ramps	950	750	Y	
37	NB	4.41		X	Kash-Kash Road				-Removed
38	NB	4.33	X		Texaco Gas Station/ Truck Stop				-Removed
39	NB	4.32	X		Texaco Gas Station/ Truck Stop				-Removed
40	NB	4.29	X		Future Tourist Commercial Use	750	570	Y	-Modified (right in/right out)
41	NB	4.24	X		Cody's Restaurant				-Removed
42	NB	4.20	X		Cody's Restaurant/ Truck Parking Lot				-Removed
43	NB	4.18		X	Kash-Kash Road (realigned)	570	900	Y	-New
44	NB	4.14	X		Truck Parking Lot				-Removed
45	NB	4.01		X	Wild Horse Employee Entrance Road	900	1,478	Y	
46	NB	3.73		X	Wild Horse Resort Main Entrance Road	1,478	1,056	Y	
47	NB	3.53	X		Future Tourist Commercial Use	1,056	739	Y	-New
48	NB	3.51	X		Agriculture				-Removed
49	NB	3.39	X		Agriculture	739	1,478	Y	
50	NB	3.11	X		Agriculture	1,478	898	Y	
51	NB	2.94	X		Agriculture	898	1,109	Y	
52	NB	2.76	X		Agriculture				-Removed
53	NB	2.73		X	Future East-West Connector Road	1,109	1,003	Y	-New
54	NB	2.54	X		House	1,003	158	N	
55	NB	2.51		X	Mission Road	158	211	N	
56	NB	2.49	X		Vacant Commercial Site				-Removed
57	NB	2.47	X		Future Community Commercial Use	211	158	N	-New
58	NB	2.46	X		Vacant Commercial Site				-Removed
59	NB	2.44	X		House	158	106	N	
60	NB	2.42	X		House	106	106	N	
61	NB	2.40	X		House	106	53	N	
62	NB	2.39	X		House	53	158	N	
63	NB	2.36	X		House	158	53	N	
64	NB	2.35	X		House	53	106	N	
65	NB	2.33	X		House	106	106	N	
66	NB	2.31	X		Railroad Industrial Site	106	158	N	
67	NB	2.29			Railroad Crossing				
68	NB	2.28	X		House	158	264	N	
69	NB	2.23	X		House	264	158	N	
70	NB	2.20	X		House	158	211	N	
71	NB	2.16		X	Marlowe Road	211	1,531	N	
72	NB	2.02			Umatilla River				
73	NB	1.87	X		House	1,531	264	N	
74	NB	1.82		X	Kirkpatrick Road	264	845	N	
75	NB	1.66	X		Agricultural	845	898	Y	
76	NB	1.49	X		House	898	2,640	Y	
77	NB	0.99	X		Agriculture	2,640	1,267	Y	
78	NB	0.75	X		Agriculture	1,267	1,267	Y	
79	NB	0.51	X		Agriculture	1,267	1,426	Y	
80	NB	0.24	X		Agriculture	1,426	1,267	Y	
81	NB	0.00		X	HWY 11/Duff Road	1,267		Y	

Summary:

Total Access Points	63
Total Meeting OHP Spacing Standards	34 (54%)



**DAVID EVANS
AND ASSOCIATES, INC.**
2828 S.W. CORBETT AVENUE
PORTLAND, OR 97201-4830 (503) 243-6663



(Scale: 1" = 500')

ACCESS LEGEND:

- ⊙ Remove Existing Intersection
- ⊙ Existing Intersection
- New Intersection
- ↔ Remove Existing Driveway Approach
- ↔ Existing Driveway Approach
- ↔ New Driveway Approach
- Remove Existing Road
- Existing Road
- New Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- ~ Access Control Line
- ② Access Identifier Number (See Inventory Spreadsheet)

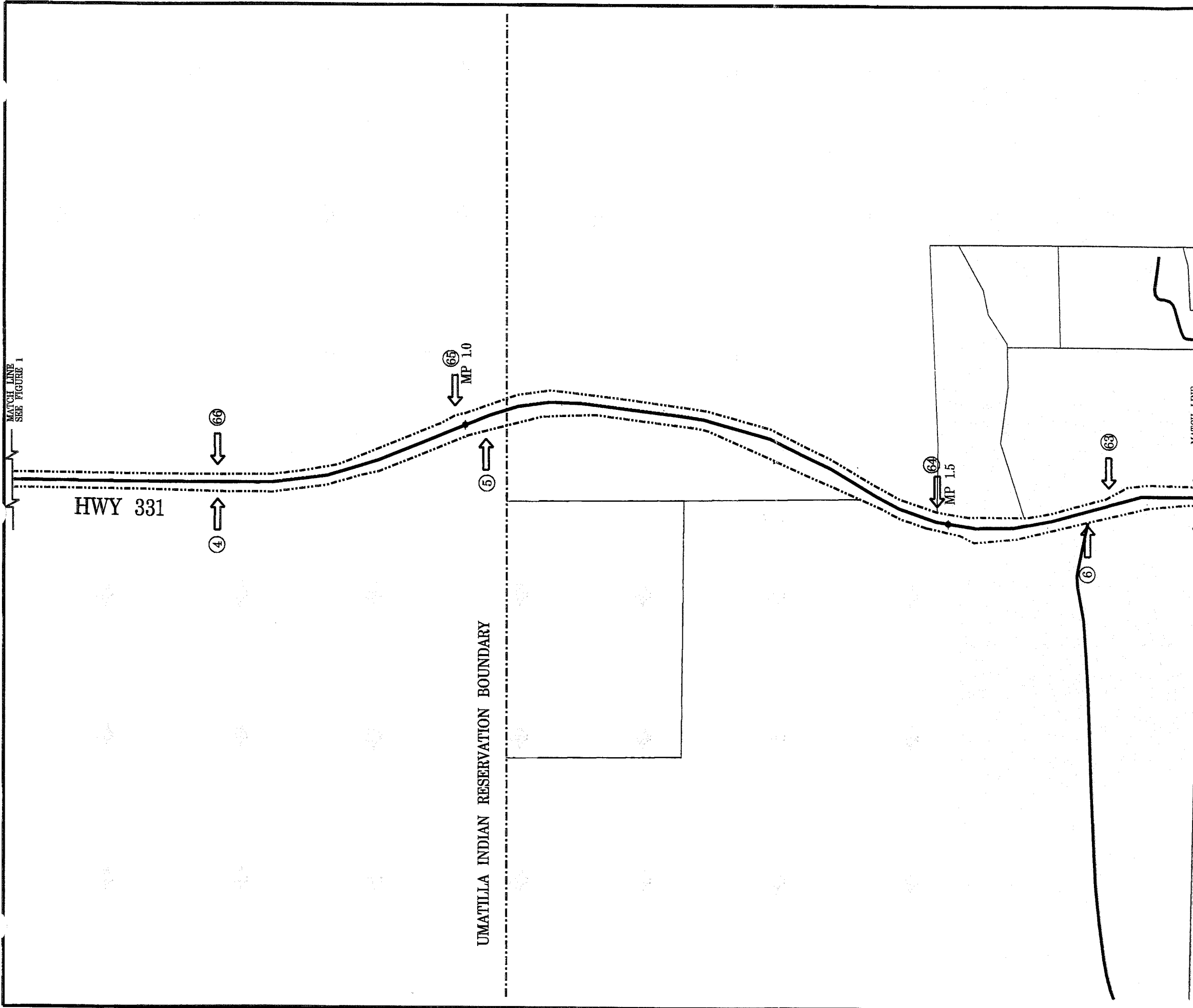
FUTURE LAND USE LEGEND:

- Rural/Agricultural
- Rural Residential
- Community Commercial
- Community Residential
- Government
- Tourist Commercial
- Open Space
- Light Industrial/Manufacturing
- ▭ Parcel Boundary

FIGURE 1

Access Management Plan and
Future Land Use for
the Highway 331 Corridor
(Segment 1 of 5)

CTU100C 1001/rutrig2.dgn/RSLP/08-29-00



**DAVID EVANS
AND ASSOCIATES,**
2323 S.W. CORBETT AVENUE
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(Scale: 1" = 500')

ACCESS LEGEND:

-  Remove Existing Intersection
-  Existing Intersection
-  New Intersection
-  Remove Existing Driveway Approach
-  Existing Driveway Approach
-  New Driveway Approach
-  Remove Existing Road
-  Existing Road
-  New Road
-  Milepoint Marker
-  Right-of-Way Line
-  Reservation of Access Points
-  Access Control Line
-  Access Identifier Number
(See Inventory Spreadsheet)

LAND USE LEGEND:

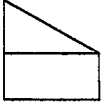
-  Rural/Agricultural
-  Rural Residential
-  Community Commercial
-  Community Residential
-  Government
-  Tourist Commercial
-  Open Space
-  Light Industrial/Manufacturing
-  Parcel Boundary

FIGURE 2

Access Management Plan and
Future Land Use for
the Highway 331 Corridor
(Segment 2 of 5)



**DAVID EVANS
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(Scale: 1" = 500')

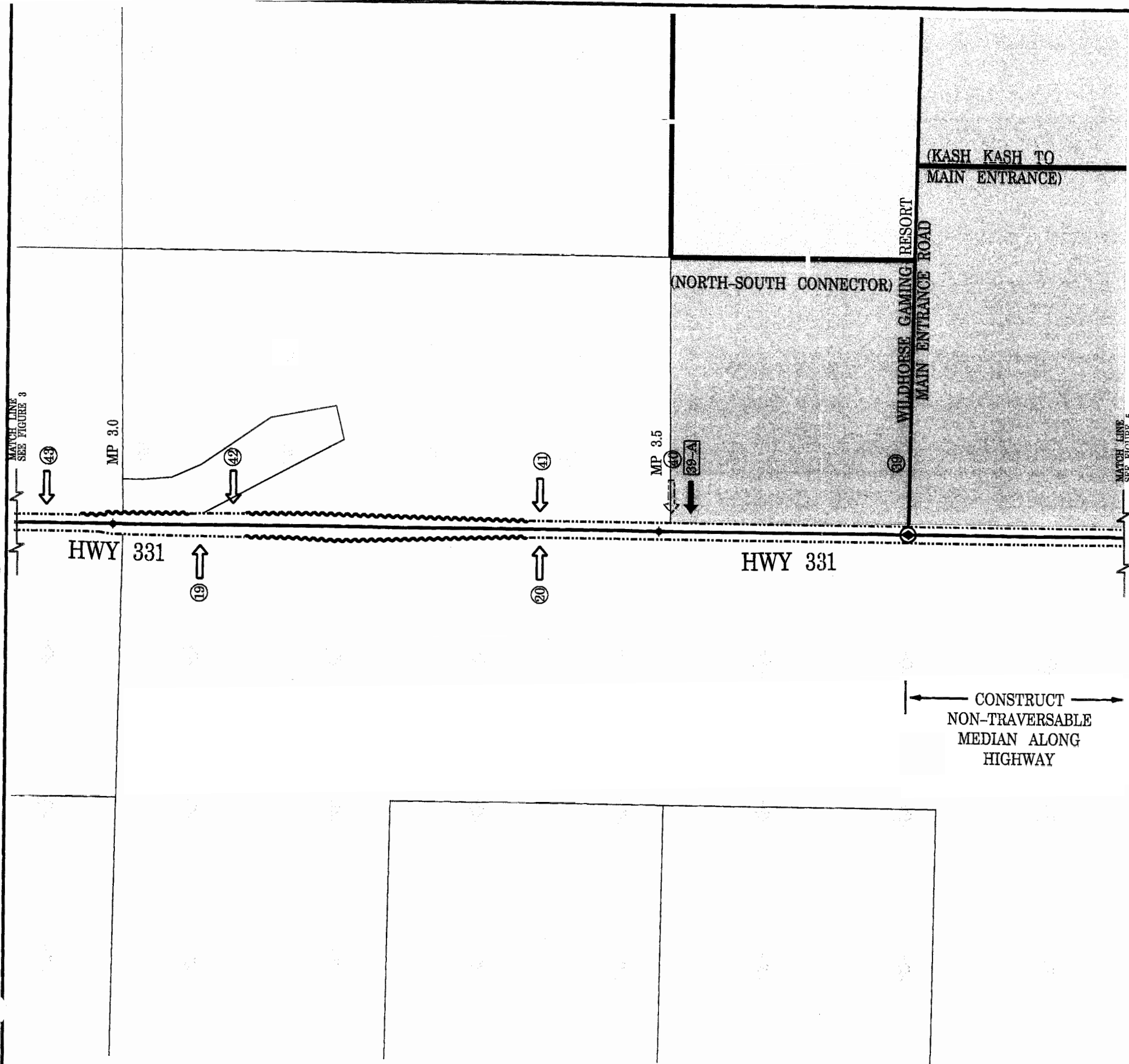
ACCESS LEGEND:

- Remove Existing Intersection
- Existing Intersection
- New Intersection
- Remove Existing Driveway Approach
- Existing Driveway Approach
- New Driveway Approach
- Remove Existing Road
- Existing Road
- New Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- Access Control Line
- Access Identifier Number
(See Inventory Spreadsheet)

LAND USE LEGEND:

- Rural/Agricultural
- Rural Residential
- Community Commercial
- Community Residential
- Government
- Tourist Commercial
- Open Space
- Light Industrial/Manufacturing
- Parcel Boundary

FIGURE 3
Access Management Plan and
Future Land Use for
the Highway 331 Corridor
(Segment 3 of 5)



DAVID EVANS
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(Scale: 1" = 500')

ACCESS LEGEND:

- Remove Existing Intersection
- Existing Intersection
- New Intersection
- Remove Existing Driveway Approach
- Existing Driveway Approach
- New Driveway Approach
- Remove Existing Road
- Existing Road
- New Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- Access Control Line
- Access Identifier Number (See Inventory Spreadsheet)

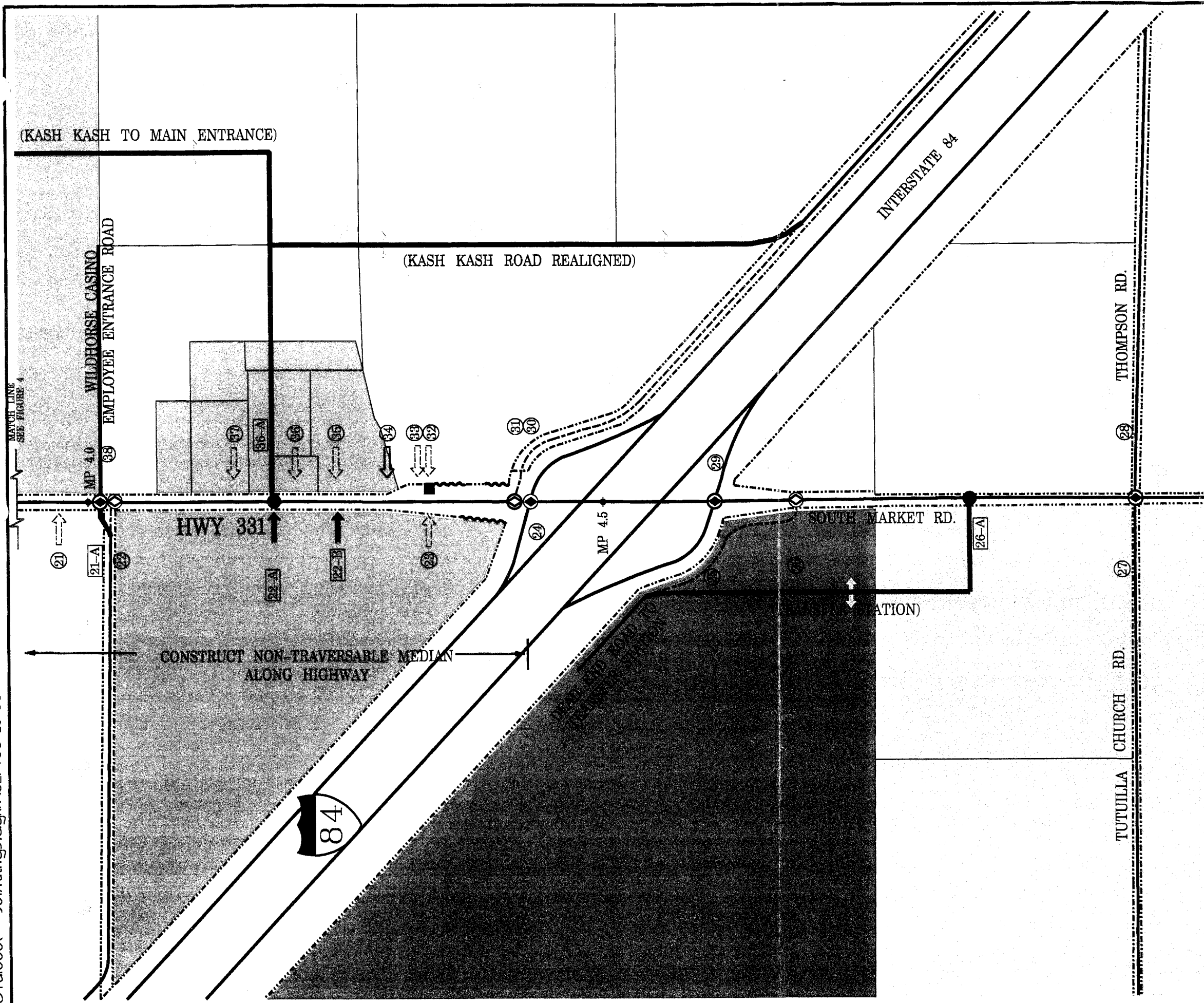
LAND USE LEGEND:

- Rural/Agricultural
- Rural Residential
- Community Commercial
- Community Residential
- Government
- Tourist Commercial
- Open Space
- Light Industrial/Manufacturing
- Parcel Boundary

FIGURE 4

Access Management Plan and
Future Land Use for
the Highway 331 Corridor
(Segment 4 of 5)

CTU1000 201/futfig5.dgn/R5LP/08-29-00



**DAVID EVANS
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(Scale: 1" = 500')

ACCESS LEGEND:

- ⊙ Remove Existing Intersection
- ⊙ Existing Intersection
- New Intersection
- ↔ Remove Existing Driveway Approach
- ↔ Existing Driveway Approach
- ↔ New Driveway Approach
- Remove Existing Road
- Existing Road
- New Road
- Milepoint Marker
- Right-of-Way Line
- Reservation of Access Points
- ~ Access Control Line
- ② Access Identifier Number
(See Inventory Spreadsheet)

LAND USE LEGEND:

- Rural/Agricultural
- Rural Residential
- Community Commercial
- Community Residential
- Government
- Tourist Commercial
- Open Space
- Light Industrial/Manufacturing
- ▭ Parcel Boundary

FIGURE 5

**Access Management Plan and
Future Land Use for
the Highway 331 Corridor
(Segment 5 of 5)**

FTA SECTION 5311 FUNDING FOR TRANSIT SERVICES

POTENTIAL DEVELOPMENTAL PROJECT CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION

Funding Available

\$56,538 in funding from FTA Section 5311 Funding has been obligated for the Umatilla Tribes for a developmental project.

- Funds can be used for operating expenses or capital expenses associated with a transit service.
- A 50% match is required if funds are used for operating. The total project amount would be \$114,076, with \$56,538 the local match and \$56,538 the federal amount.
- A 20% match is required if funds are used for capital. The total project amount would be \$70,672, with \$14,134 local match and \$56,538 the federal amount.
- The 5311 program funds "general public" transit services. Service design cannot be exclusive to a particular clientele, such as for elderly and disable persons only. There can be no "space available only" policies. It has to be open to all passengers on an equal basis.

Federal and State Requirements

Grant recipients must:

- demonstrate legal, fiscal and managerial capacity to receive, manage and account for federal funds;
- be involved in transportation coordination efforts with other transit providers in the area;
- notify the public of intent to make application for a grant, and allow opportunity for the public to comment;
- comply with Civil Rights/ADA requirements on first day of service; all vehicles must be ADA accessible and meet other service requirements; paratransit services are required for fixed route, and deviated or modified fixed route
- meet Drug and Alcohol testing requirements on the first day of service; the service provider must have an approved drug and alcohol policy and testing program (approval done by Public Transit Division).
- Other federal requirements include (but are not limited to) charter bus and school bus provisions, contracting, equipment management and safety systems, and labor protections.

Next Steps

- The Tribal Government should notify Public Transit Division if it wants to proceed with a project.
- Fill out an application for funding (new applications for 2000 will be out soon).
- Meet with Public Transit Division staff to discuss federal requirements and project implementation,

PTD 3/15/00

FEDERAL AND STATE FUNDING SOURCES

Transportation Funding Programs Available to Cities, Counties, Districts, and Other Agencies

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NOTE: This information provides an introduction to ODOT funded programs that are available to local agencies. While every effort has been made to compile accurate descriptions, this information is provided for convenience only and is not the official policy. Please contact the persons listed with programs of interest for more definitive information and official program guidance. Contact Gary Whitney, (503) 986-3921, with questions or comments on this document.

Introduction

All of the following programs provide financial assistance to local agencies for transportation projects and related activities. The brief program descriptions are intended to give introductory information on selected characteristics of each program. Some of these programs are operated by ODOT while others are operated jointly with other State Agencies.

The program's source of funding, either federal or state, may be of particular interest to readers since the type of funding involved determines most of the program requirements. Federally funded programs are governed by strict federal requirements. Some of the relevant federal requirements are summarized within the program descriptions. More current and comprehensive information on federal requirements is available by following the links to the appropriate web site: for Federal Highways Administration, <http://www.fhwa.dot.gov/>; and for Federal Transit Administration, <http://www.fta.dot.gov/>. State-funded programs are primarily funded from state highway fund revenues. These expenditures are governed by the state Constitution and various state laws.

Surface Transportation Program (STP)

All Oregon counties and most cities receive federal STP funds from ODOT. Incorporated cities of more than 5,000 population located outside the boundary of the Portland metropolitan area are eligible. (The Portland metropolitan area, through Metro, receives its own separate STP-Urban funds.)

Federal funds, including STP funds, may generally be used for any roads, including National Highway System (NHS) roads, that are not functionally classified as local roads or as rural minor collectors. These roads are collectively referred to as Federal-aid highways. Through the federal fiscal year 2003 (the duration of TEA-21 - the Transportation Equity Act of the 21st Century), cities will receive an estimated \$6.1 million a year and counties will receive an estimated \$9.1 million a year. Surface Transportation Program funds are among the most flexible of all federal funds.

ODOT Contact ***Annual Amount***

503-986-3900, Funds & Grants, Financial Services Branch.
During TEA-21: Counties receive \$9.1 million annually, and Cities receive \$6.1 million annually.

Match Requirements

TEA-21 requires a minimum match of 80/20: 80% STP funds matched with 20% local (non-federal) funds. Because Oregon has a relatively large amount of federal lands, it is a "sliding scale state". This means that the percentage of local match is reduced (from 20% to 10.27%) and the federal share increases (from 80% to 90.27%). Oregon's sliding scale ratio is 90.73/10.27.

Program Rules ***Eligible Uses***

Code of Federal Regulations (CFR) Title 23.
Federal-aid highway and bridge construction, maintenance, safety, planning, research, and transit capital.

<i>Eligible Recipients</i>	Counties and most cities (cities more than 5,000 population, and outside the Metro boundary are eligible).
<i>Project Selection Process</i>	Projects programmed for funding are listed in the State Transportation Improvement Program (STIP).

State and Local STP Fund Exchange Program

Currently ODOT will exchange the local STP funds with state funds, allowing local governments to use less restrictive state dollars instead of federal dollars on their projects. Because state funds are not governed by Title 23 requirements and are more flexible and desirable, the federal funds trade at \$1.00 federal for \$.94 state funds.

STP Set Aside for Safety; Hazard Elimination Program (HEP)

The mission of the Hazard Elimination Program (HEP) is to fund safety improvement projects that reduce the risk, number and/or severity of accidents. It is a federally funded program that is open to both Local Agencies and to ODOT

Projects should be funded primarily or exclusively using HEP funds and should not exceed \$500,000. Any public road or public transportation surface facility is eligible for funding, including improvements at public transportation facilities and public pedestrian and bicycle pathways and trails. The projects should be stand-alone projects and not portions of larger construction projects.

Types of eligible projects include:

- Signal Installation or Improvement
- Signal Priority Preemption
- Channelization
- Grade Separation
- Curve Realignment
- Illumination
- Pavement Markings
- Delineation
- Guardrail or Median Barrier
- Impact Attenuators
- Slope Flattening
- Fixed Object Removal
- Rockfall Correction
- Corridor Safety Improvements
- Bicycle Lanes
- Pedestrian Paths

ODOT Application Contact Applications go to Region Federal-Aid Specialists or Region Traffic.

<i>ODOT Program Contact</i>	503-986-3609, Hazard Elimination Program Coordinator, Traffic Management Section, Technical Services Branch.
<i>Annual Amount</i>	During TEA-21, \$2,000,000/yr. is available statewide.
<i>Match Requirements</i>	The match ratio is 89.73/10.27, with 10.27% being local (non-federal) funds.
<i>Program Rules</i>	23 U.S.C. 152.
<i>Eligible Uses</i>	See list above.
<i>Eligible Recipients</i>	Counties, cities and ODOT.
<i>Project Selection Process</i>	See the program guidebook available from ODOT Contact.

Transportation Enhancement Program

States are required to apportion 10% of their Surface Transportation Program funds to the Enhancement Program. These funds are available for a variety of projects that enhance the cultural, esthetic, and environmental value of the state's transportation system. Projects may include:

- pedestrian & bicycle facilities
- safety and educational activities for pedestrians and bicyclists
- acquisition of scenic easements and scenic or historic sites
- scenic or historic highway programs (including provision of tourist and welcome center facilities)
- landscaping and other scenic beautification
- historic preservation
- rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals)
- preservation of abandoned railway corridors (including conversion and use for pedestrian or bicycle trails)
- control and removal of outdoor advertising
- archaeological planning and research
- mitigation to address water pollution due to highway runoff
- mitigation to reduce vehicle-caused wildlife mortality, while maintaining habitat connectivity, and
- establishment of transportation museums

TEA-21 will provide Oregon up to \$8 million annually. ODOT will allocate \$5 million per year to local governments and other public agencies for "local program" projects, and \$2 million to \$3 million annually to a "statewide" program for projects having regional, multi-regional or statewide significance. The Statewide Program is open to ODOT and other public agencies.

<i>ODOT Contact</i>	503-986-3528, Transportation Enhancement Coordinator, Preliminary Design Unit, Technical Services Branch.
<i>Annual Amount</i>	\$5 million annually to the Local Program; and \$2 to \$3 million annually to the Statewide Program.

<i>Match Requirements</i>	89.73% maximum federal share. Minimum of 10.27% matching funds from the project sponsor, in cash or approved in-kind contribution.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 23.
<i>Eligible Uses</i>	Transportation enhancement activities (defined in 23 USC 101(a)).
<i>Eligible Recipients</i>	Public Agencies with taxing authority. Private entities must have a public agency sponsor.
<i>Project Selection Process</i>	<u>Local Program</u> : Separate committees for each ODOT region, made up of local government and public agency representatives, along with ODOT staff and a citizen advocate or interest group member. <u>Statewide Program</u> : One inter-agency committee that includes ODOT and private/nonprofit representation. Committees select projects using an agreed upon point system, and recommend the top ranking projects for available funding.
<i>Web Site</i>	http://www.odot.state.or.us/techserv/engineer/pdu/Enhance.htm

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

These federal funds are designated for areas identified as non-attainment or maintenance areas under the Clean Air Act Amendments of 1990. There are seven areas that qualify for CMAQ funding – Portland/METRO, Klamath Falls (UGB), La Grande (UGB), Lakeview (UGB), Oakridge (UGB), Medford/Ashland (AQMA – Air Quality Maintenance Area) and Grants Pass (UGB). The purpose is to fund transportation projects and programs that contribute to improving air quality.

The Federal Highway Administration, in coordination with the Environmental Protection Agency, established general project guidelines for CMAQ projects. In Oregon, a CMAQ Committee with membership representing state, local and federal governments assisted in developing specific project selection criteria and distribution targets. The funding level over the next several years is anticipated to be approximately \$8 million per year.

All projects must demonstrate savings in emissions (carbon monoxide, ozone and/or particulate matter). Eligible projects and programs include:

- transportation activities in an approved State Implementation Plan
- transportation control measures identified in an approved air quality State Implementation Plan
- pedestrian/bicycle off road or on road facilities, including modification of existing public walkways to comply with the Americans with Disabilities Act
- TEA-21 management and monitoring systems
- traffic management/monitoring/congestion relief strategies
- transit (new system/service expansion or operations)
- alternative fuel projects (including clean fuel fleet programs and conversions)
- public/private partnerships and initiatives

- inspection and maintenance programs
- intermodal freight
- travel demand management
- project development activities for new services and programs with air quality benefits
- public education and outreach activities
- rideshare programs
- establishing/contracting with transportation management associations (TMAs)
- fare/fee subsidy programs
- experimental pilot projects/innovative financing, and
- other transportation projects

<i>ODOT Contact</i>	Vince Carrow, 503-986-3485, Environmental Engineering Unit, Technical Services Branch; or the ODOT Region Federal-Aid Specialist.
<i>Annual Amount</i>	Anticipated to be approximately \$8 million per year.
<i>Match Requirements</i>	89.73% maximum federal share. Minimum 10.27% non-federal funds.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 23.
<i>Eligible Uses</i>	See list above.
<i>Eligible Recipients</i>	Sponsors of projects in designated non-attainment and maintenance areas as defined by the Clean Air Act.
<i>Project Selection Process</i>	Local decision; normal STIP process.
<i>Planning and Implementation Assistance</i>	ODOT Region Federal-Aid Specialist and ODOT Environmental Engineering Unit.
<i>Web Site</i>	http://www.odot.state.or.us/eshtm/air.htm

Highway Bridge Rehabilitation or Replacement (HBRR)

The purpose of HBRR funding is to replace or rehabilitate roadway bridges over waterways, other topographical barriers, other roadways, railroads, canals, ferry landings, etc., when those bridges have been determined deficient because of structural deficiencies, physical deterioration, or functional obsolescence.

These funds are used for replacement or rehabilitation of local bridges, both "on" and "off" the federal-aid highway system. ODOT develops a list of eligible bridges every one or two years from the Bridge Management System. The bridge owners submit a list of bridges they would like considered. The Local Bridge Review Selection Committee reviews and prioritizes the bridges based on a technical ranking system. HBRR funds can be used for:

- The total replacement of a structurally deficient or functionally obsolete highway bridge on any public road with a new facility constructed in the same general traffic corridor,

- The rehabilitation that is required to restore the structural integrity of a bridge on any public road, as well as the rehabilitation work necessary to correct major safety (functional) defects,
- Bridge painting, seismic retrofitting.

By agreement, ODOT provides half the required 20% non-federal match, leaving the local government responsible for only 10% of the project costs.

<i>ODOT Contact</i>	Ivan Silbernagel, 503-986-3399, Interim Bridge Operations
<i>Annual Amount</i>	Managing Engineer, Bridge Section, Technical Services Branch
<i>Match Requirements</i>	\$19,000,000 for Local Agency bridges.
<i>Program Rules</i>	In Oregon, 80% HBRR funds are matched with 10% local (non-federal funds) and 10% state funds.
<i>Eligible Uses</i>	23 U.S.C. 144
<i>Eligible Recipients</i>	Qualifying bridge repair and replacement.
	Not less than 15% is to be spent on bridges off of the Federal-aid highway system (i.e., bridges on local roads and rural minor collectors). Up to 85%, but not less than 65% is to be spent for bridges on the Federal-aid highway system.
<i>Project Selection Process</i>	Projects programmed for funding are listed in the Statewide Transportation Improvement Program (STIP).
<i>Web Site</i>	http://www.odot.state.or.us/tsbbridgepub/

Immediate Opportunity Fund (IOF)

Immediate Opportunity Funds are available to support economic development in Oregon through the construction and improvement of public streets and roads in support of plant locations and other immediate opportunities. The maximum available to the Immediate Opportunity Fund is \$7 million a year. The fund is separated into two categories:

- Type A projects support specific economic development activities that affirm job retention and create job opportunities. A qualifying project can receive up to \$500,000.
- Type B projects focus on the revitalization of business or industrial centers to support economic development and quality development objectives. A qualifying project can receive up to \$250,000.

Both types of projects require a 50 percent match from public or private sources. Funding requests are made through the Oregon Economic and Community Development Department's (OECDD) Region Development Officer and coordinated with ODOT Region offices. Formal recommendations for approval are made by the OECDD and ODOT directors to the Oregon Transportation Commission based on economic merit, transportation need and quality development objectives. Annual funding is set at \$7 million; unused balances are returned annually to the Statewide Transportation Improvement Program.

<i>Program Contact</i>	503-986-0110, OECDD Office of the Director can provide referrals to the region contact for your area.
<i>Annual Amount</i>	Up to \$7,000,000; project limits of either \$500,000 or \$250,000.
<i>Match Requirements</i>	50/50; 50% IOF funds matched with 50% local funds
<i>Program Rules</i>	Policy guidelines are available on request.
<i>Eligible Uses</i>	Policy guidelines are available on request.
<i>Eligible Recipients</i>	Cities and counties.
<i>Project Selection Process</i>	Oregon Economic and Community Development Department receives initial applications, final decisions are by the Oregon Transportation Commission.
<i>Web site</i>	http://www.econ.state.or.us

Oregon Transportation Infrastructure Bank (OTIB)

The Oregon Transportation Infrastructure Bank provides loans and other forms of financial assistance to local jurisdictions for Federal-aid eligible highway and for Title 49 eligible transit capital projects. Projects must meet appropriate planning, programming, design and contracting requirements. Applications are evaluated and ranked on ten criteria by OTIB staff and a Regional Advisory Committee. The Chief Financial Officer makes formal recommendations for approval to the Oregon Transportation Commission. The bank was initially capitalized with \$10 million of federal and state highway funds. An additional \$5.51 million of federal funds has also been awarded to the OTIB.

<i>ODOT Contact</i>	Gary Whitney, 503-986-3921, Oregon Transportation Infrastructure Bank, Financial Services Branch.
<i>Annual Amount</i>	Determined by local agency need.
<i>Match Requirements</i>	OTIB loans can finance up to 100% of eligible project costs.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 23 and state requirements govern highway Federal-aid projects. Code of Federal Regulations (CFR) Title 49 and state requirements apply to transit capital projects.
<i>Eligible Uses</i>	Federal-aid highway (Title 23) and transit capital (Title 49) projects.
<i>Eligible Recipients</i>	Cities, counties, special districts (including transit, transportation, and port districts) state agencies and tribal governments.
<i>Project Selection Process</i>	Projects are ranked on established criteria; final decisions are made by the Oregon Transportation Commission.
<i>Web site</i>	http://www.odot.state.or.us/fsbpublic/otib.htm

Special City Allotment (SCA) Program

Funding for road improvements is available to incorporated cities with populations of 5,000 or less. This funding comes from state highway fund revenues and provides reimbursement funds up to \$25,000 to selected projects. ODOT annually asks cities to apply for funding for projects they

select on their local street system. Cities can apply only if previous SCA projects are complete and paid for. ODOT Regions evaluate and rank project proposals from each city. Total funding of \$1,000,000 per year is available.

<i>ODOT Contact</i>	Region Federal-Aid Specialist.
<i>Annual Amount</i>	Up to \$1,000,000 annually; project limit of \$25,000.
<i>Match Requirements</i>	No match required.
<i>Program Rules</i>	ORS 366.805
<i>Eligible Uses</i>	Maintenance, repair and/or improvement of existing roads.
<i>Eligible Recipients</i>	Incorporated cities with population of 5,000 or less.
<i>Project Selection Process</i>	Region Federal-Aid Specialists rate projects in their region. Ranking is based on established criteria.

Special County Allotment Program

Special County Allotment funds are allocated to the county with the lowest federal and state resource per equivalent road mile in an amount to raise the resource per equivalent road mile to the level of the next lowest county. The funds are then allocated to the two lowest counties until they reach the equivalent road mile rate of the next lowest county. This process is repeated until all available funding is allocated. Total funding of \$750,000 per year is available.

<i>ODOT Contact</i>	Region Federal-Aid Specialists.
<i>Annual Amount</i>	Up to \$750,000 total per year statewide.
<i>Match Requirements</i>	No match required.
<i>Program Rules</i>	ORS 366.541
<i>Eligible Uses</i>	Maintenance, repair and/or improvement of existing roads.
<i>Eligible Recipient</i>	Select counties, as defined by statute.
<i>Project Selection Process</i>	See above description.

State Bicycle and Pedestrian Grants

Cities and counties can apply for grants for bicycle and/or pedestrian projects. Grants are limited to \$100,000 and projects are to be administered by the applicant. Projects can be located on local streets or state highways, but they must be located in the right-of-way of a highway, street, or road. In other words, no bicycle or pedestrian paths in parks can be constructed through this program. State highway projects should not require additional right-of-way and should be low-impact. Improvements proposed in conjunction with preservation overlays are looked at very favorably. The addition of bike lanes and sidewalks as part of road construction and reconstruction are not eligible. Some conditions are common to both the local program and the state program, others apply to only one:

<i>ODOT Contact</i>	503-986-3555, Bicycle & Pedestrian Program, Technical Services Branch.
<i>Annual Amount</i>	\$1,800,000 annually

<i>Match Requirements</i>	20% match on local projects. No match required on state highway projects, but contributions are welcome.
<i>Program Rules</i>	Projects must meet current ODOT design standards.
<i>Eligible Uses</i>	For bicycle projects: shoulder widening or bike lane striping. For pedestrian projects: sidewalk infill, ADA upgrades, pedestrian crossings or intersection improvements.
<i>Eligible Recipients</i>	<u>Local projects</u> : Cities & counties. <u>State highway projects</u> : Cities, counties and ODOT.
<i>Project Selection Process</i>	<u>Local projects</u> : Every two years by the Oregon Bicycle and Pedestrian Advisory Committee. <u>State Highway Projects</u> : Every two years by ODOT.
<i>Web Site</i>	http://www.odot.state.or.us/techserv/bikewalk/index.htm

Special Transportation Fund (STF)

The Special Transportation Fund makes funds available to maintain, develop and improve transportation services for people with disabilities and people age 60 and over. Funds are distributed to mass transit districts, transportation districts and, where the districts do not exist, to counties. Three fourths of the funds are distributed on a per capita formula, and one fourth of the funds are awarded by competitive grant. The grants are awarded every two years, in conjunction with the STIP update process, and grant funds are distributed annually.

Total distribution is approximately \$10,000,000 annually during the July 1, 1999 to June 30, 2001 biennium. Of the \$10,000,000 about half is from a two-cents per pack state tax on cigarettes and half is from state general funds.

<i>ODOT Contact</i>	503-986-3300, Public Transit Division.
<i>Annual Amount</i>	Approximately \$10,000,000 annually during the July 1, 1999 to June 30, 2001 biennium.
<i>Match Requirements</i>	No match requirements on funds disbursed by formula; 80/20 match (80% STF funds matched with 20% local funds) required for planning and capital projects; 50% match for operations projects funded by competitive grant.
<i>Program Statutes</i>	ORS 391.800 to 391.830
<i>Eligible Uses</i>	Transportation services for the elderly and persons with disabilities.
<i>Eligible Recipients</i>	Governing Bodies as defined by the statute.
<i>Project Selection Process</i>	None for funds distributed by formula; every two years in conjunction with the STIP update for funds distributed by competitive grant.
<i>Web Site</i>	http://www.odot.state.or.us/tdb/pubtrans/index.htm

Public Transit Set-Aside of STP Funds

During the July 1, 1999 to June 30, 2001 biennium the state legislature has directed that \$10,000,000 of STP funds be made available to transit providers for vehicle replacements and to add capacity for transportation services for the elderly and for persons with disabilities.

Small Cities and Rural Areas Program (Section 5311)

The Public Transit Division of ODOT operates the Small Cities and Rural Areas Program, which is funded by the Federal Transit Administration (FTA). The program provides funds (by formula) to eligible recipients for general public transit service. Local public bodies providing service to areas of less than 50,000 population are eligible recipients. Funds are awarded annually and disbursed quarterly. More than \$2,000,000 per year is available.

<i>ODOT Contact</i>	Kathy Straton, 503-986-3408, Public Transit Division
<i>Annual Amount</i>	More than \$2,000,000 annually.
<i>Match Requirements</i>	80/20; 80% federal funds matched with 20% local (non-federal) funds for "capital" projects; 50% match required for "operations" expenditures.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 49
<i>Eligible Uses</i>	Transportation services for the general public.
<i>Eligible Recipients</i>	Transit providers serving rural areas of less than 50,000 population.
<i>Project Selection Process</i>	Potential grantees apply for eligibility and funds are distributed to eligible grantees by formula.
<i>Web Site</i>	http://www.odot.state.or.us/tdb/pubtrans/index.htm

Capital Assistance Program (Section 5310)

The Public Transit Division of ODOT operates the Capital Assistance Program, which is funded by the Federal Transit Administration (FTA). The program provides funds (by competitive grant) to eligible recipients for transit capital needs for providers of service to the elderly and persons with disabilities. Local public bodies and non-profits are eligible recipients. Grants are awarded every two years, in conjunction with the STIP update process, and funds are disbursed annually. Approximately \$1,000,000 per year is available. The Public Transit Division's competitive grant program (funded with Special Transportation Funds, region STP, and Section 5310 funds) is operated under the umbrella name "Community Transportation Program (CTP)."

<i>ODOT Contact</i>	Steve Dickey, 503-986-3416, Public Transit Division.
<i>Annual Amount</i>	Approximately \$1,000,000 annually.
<i>Match Requirements</i>	80/20; 80% federal funds matched with 20% local (non-federal) funds.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 49

<i>Eligible Uses</i>	Capital expenditures for transportation services for the elderly and persons with disabilities.
<i>Eligible Recipients</i>	Local public and non-profit agencies.
<i>Project Selection Process</i>	Every two years in conjunction with the STIP update process.
<i>Web Site</i>	http://www.odot.state.or.us/tdb/pubtrans/index.htm

Transportation Safety Programs

The Transportation Safety Division of ODOT awards grants for transportation safety programs. The selection of recipients is based on a statewide analysis of safety data followed by a detailed review of the local data. More than \$6 million per year is awarded for programs in impaired driving, occupant protection, youth, pedestrian, speed, enforcement, bicycle and motorcycle safety.

<i>ODOT Contact</i>	Sandi Bertolani, 503-986-4193, Grants/Contract Coordinator, Transportation Safety Division.
<i>Annual Amount</i>	\$6 million.
<i>Match Requirements</i>	Sliding scale.
<i>Program Rules</i>	Code of Federal Regulations (CFR) Title 23.
<i>Eligible Uses</i>	Enforcement, education, minor engineering.
<i>Eligible Recipients</i>	State, local and non-profit organizations.
<i>Project Selection Process</i>	Solicited annually by Transportation Safety Division staff, based upon statewide problem identification.
<i>Web Site</i>	http://www.odot.state.or.us/lawsafe.htm

Transportation Growth Management Funds

The Transportation Growth Management Program will provide approximately \$8 million in grants and development assistance to local governments for transportation planning in the 1999 - 2001 biennium. Three separate programs, one grant program and two assistance programs, operate under the umbrella of the Transportation Growth Management Program.

The grants program:

- Transportation and coordinated transportation/land use planning grants totaling approximately \$6 million will be provided to local governments in the 1999 - 2001 biennium. Applications were closed May 17th for the current biennium.

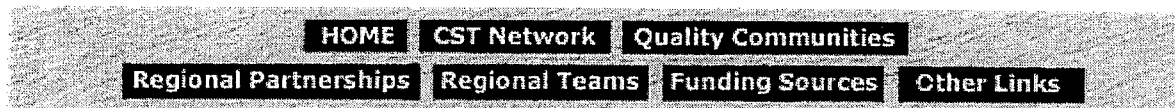
The development assistance programs are:

- The Quick Response Program provides planning and design services to help developers and communities create compact, pedestrian-friendly, and livable neighborhoods and activity centers. In response to local requests, property owners, local and state officials, and affected stakeholders come together to review development proposals, develop innovative design solutions, and overcome regulatory obstacles to land use, transportation, and design

issues. For further information contact Eric Jacobson by email Eric.Jacobson@state.or.us, by phone 503-373-0050 ext. 265, or by fax 503-378-2687.

- The Smart Development Code Assistance Program provides technical assistance to local communities to revise land development codes to remove obstacles to development that supports efficient use of the transportation system. For further information contact Gloria Gardiner by email Gloria.Gardiner@state.or.us, by phone 503-373-0050 ext. 282; or by fax: 503-378-2687.

<i>ODOT Contact</i>	For general information contact Alan J. Fox, 503-986-4126, TGM Program Coordinator.
<i>Biennial Amount</i>	Approximately \$6 million in 1999-2001 biennium grants.
<i>Match Requirements</i>	89.73% federal funds matched with 10.27% non-federal funds.
<i>Program Rules</i>	Federal requirements and State Transportation Planning Rule.
<i>Eligible Uses</i>	Transportation and coordinated transportation/land use planning.
<i>Eligible Recipients</i>	Cities, counties and metropolitan planning organizations are the principal recipients. Other eligible recipients include councils of government when acting on behalf of governments, and special districts for cooperative and urban service agreements.
<i>Project Selection Process</i>	Transportation planning grants are awarded on a biennial basis in odd numbered years. The Quick Response Program and the Smart Development Code Assistance Program are open continually to accepting new applications.
<i>Web Site</i>	http://www.lcd.state.or.us/issues/tgmweb/index-f.htm



Oregon Department of Transportation

PROGRAMS	PROGRAM MANAGER (contact person)	PURPOSE/FOCUS (include amount of appropriation)	APPLICATION CYCLE	WHO CAN APPLY?
Special City Allotments	Don Aman 503-986-3880	Grants of up to \$25,000 for local street system improvement projects. Total funding of \$1 million per year.	Yearly	Incorporated cities with populations of less than 5,000.
State Pedestrian & Bicycle Grants	Michael Ronkin 503-986-3555	Grants for pedestrian or bicycle improvements on state highways or local streets. Grant amount up to \$200,000, local match encouraged. Requires applicant to administer project. Projects must be situated in road, street or highway right-of-way. Project types include sidewalk infill, ADA upgrades, street crossings, intersection improvements, minor widening for bike lanes.	Every two years — Coincides with STIP update cycle	Cities and counties
Immediate Opportunity Fund	Jack Svadlenak 503-986-3467	This fund provides needed street and road improvements to (A) influence location or retention of firms providing primary employment or (B) revitalize business or industrial centers where the investment is not speculative. State funding up to \$500,000 for type A or \$250,000 for type B is available and requires a 50 percent match from public or private sources. (Annual funding is set at \$3 million for FY 2001 and \$1 million thereafter.)	As needed. Can apply as often as they need warrants. Limited to yearly funding.	Cities and Counties apply through the Oregon Economic Development Department
Highway Bridge	Mark Hirota 503-986-	Local bridge rehabilitation or replacement	Every two years. Coincides with	Any city or county with a structurally

Rehabilitation or Replacement	4200		STIP update cycle.	deficient or functionally obsolete bridge meeting criteria established by federal regulations or FHWA policies.
Oregon Transportation Infrastructure Bank	Paul Cormier 503-986-3921	Provides loans and other forms of financial assistance to local jurisdictions for federal-aid eligible highway and transit capital projects. Loans can cover all or a portion of an eligible project, and can be used to advance a project's schedule.	Applications are accepted at any time.	Cities, counties, special districts, transit districts, tribal governments, ports, state agencies, and private for-profit and non-profit organizations.
Corridor Planning (Transportation System Planning)	ODOT Region Planners Region 1 Leo Huff 503-731-8228 Region 2 John deTar 503-986-2653 Region 3 Terry Harbour 541-957-3501 Region 4 Mark DeVoney 541-388-6342 Region 5 Bill Barnett 541-963-1347	Funding is accessed through Corridor Planning at the Region level. Funds are available for documenting the needs on local transportation systems and tying these needs to the state's corridor planning process. ODOT regions fund program with Gas Tax revenues and State Planning and Research dollars.	No application process. Cities, Counties and MPOs over 2,500 pop. are required to have transportation plans. Cities with population less than 10,000 may be exempt from transportation planning. ODOT chooses to participate in the development of these plans by Intergovernmental Agreement or by providing consultant services or by coordination or other assistance.	Cities, counties and MPOs
Federal Surface Transportation	ODOT Region	Construct, re-construct. re-	Federal Legislation:	Local governments, or others working

Program	Managers:	surface and restore roads.	Transportation Equity Act of the 21 st Century (TEA-21). Yearly apportionments received from FHWA. The amount to local jurisdictions is by agreement with AOC and LOC.	through a local government as their sponsor. Matching (non-federal) funds are required in varying proportions from 10% to 50% depending on program selected.
	Region 1 (Portland and surrounding area): Kay Van Sickle 503-731-8256	• Operational improvements on federal aid highways. • Carpool projects. • Capitol cost for transit. • Safety improvements. • Planning and research. • Management Systems. • Wetland mitigation related to Title 23 projects. • Transportation Enhancement activities.		
	Region 2 (NW Oregon) Gary Johnson 503-986-2631			
	Region 3 (SW Oregon) Paul Mather 541-957-3507			
	Region 4 (Central Oregon) Bob Bryant 541-388-6184			
	Region 5 (Eastern Oregon) Tom Schuft 541-963-3179			
Transportation Enhancement Program	Pat Rogers 503-986-3528	Projects that enhance the cultural, aesthetic and environmental value of the state's transportation system. Twelve eligible activities, including bicycle/ pedestrian projects, historic preservation, landscaping and scenic beautification, mitigation of pollution due to highway runoff, and preservation of abandoned railway corridors. 10.27% minimum match required. (\$3 million annual funding	Every two years in conjunction with STIP update process.	Local governments, other public agencies (state, federal, tribal) & five ODOT regions

		for FY 2002 through 2005)		
Congestion Mitigation and Air Quality Improvement Program	Vince Carrow 503-986-3485	Supports transportation projects and programs that reduce traffic congestion and improve air quality. (The funding level over the 2000 — 2003 State Transportation Improvement Program funding is anticipated to be \$9-9.5 million per year. A 10.27% match is required)	Every two years in conjunction with STIP update process.	Any local government in Portland Metro area; Klamath Falls; La Grande; Lakeview; Oakridge; Medford/ Ashland Metro area; and Grants Pass
Special Transportation Fund	Jean Palmateer 541-296-2602	The annual distribution of about \$4.5 million is made available to maintain, develop and improve transportation services for people with disabilities and people aged 60 and over.	Annually in June.	Governing Bodies as defined by statute — primarily counties, transit or transportation districts.
Community Transportation Program	Dinah Van Der Hyde 503-986-3415	Grant funds for special needs and public transportation services throughout the state. Approximately \$3 — 4 million per year.	Every two years coordinated with STIP cycle.	Cities, counties, Tribal Governments, private non-profits, transit and transportation districts.
Transportation Safety	Sandi Bertolani 503-986-4193	Program promotes transportation safety such as programs in impaired driving, occupant protection, youth, pedestrian, speed, enforcement, bicycle & motorcycle safety. (Over \$1.25 million is awarded annually)	Not an application process. Projects chosen by problem identification.	State and local agencies, Indian Tribes/ Nations, and Non-Profit groups.
Hazard Elimination Program (HEP)	Chris Monsere (After 09/25/00) 503-986-3580 Paul Davis (Interim) 503-986-3609	Program's mission is to carry out safety improvement projects to reduce the risk, number, and/or severity of accidents at highway locations, sections, and elements on any public road or public transportation facility.	Applications accepted at any time. Once the agency identifies a safety problem they should contact the appropriate Region staff and forward accident records, justification	State and local agencies

			documents, and other pertinent project information. Region staff will then prepare a draft prospectus and send it to the Traffic Management Section to determine program eligibility.	
Transportation and Growth Management Program	Alan Fox, Program Coordinator (ODOT) 503-986-4126 Anna Russo, Program Manager (DLCD) 503-373-0050 (Ext. 260) Barbara Fraser, Program Manager (ODOT) 503-986-4127	Program's mission is to enhance Oregon's livability, foster integrated transportation and land use planning and development that result in compact, pedestrian, bicycle, and transit friendly communities. The program offers: 1. Grants to Local Governments for Transportation System Planning (\$5 million budgeted for 2001-2003) 1. Development Assistance (\$1.2 million budgeted for 2001-2003) - o Quick Response - o Community Outreach - o Code Assistance	Every two years (in odd numbered years).	Cities, counties, metropolitan planning orgs., COG's, and special districts
Public Lands Highways (PLH) Discretionary Program	Pat Rogers 503-986-3528	For projects that improve access to or within federal lands of the nation. Can fund engineering or construction of highways and roads, transportation planning and research, and other facilities related to public travel on roads to or through federal lands. Provides reimbursement,	Funding Cycle: Yearly. Opens in Dec./Jan. Applications due in May. Selections in Nov./Dec. Oregon will select candidate projects to enter in the nationwide competition for	Public agencies (local, state, federal, regional, tribal).

		not grants. Nationwide competition with no guaranteed minimum for Oregon.	funds.	
Local Street Networks Fund	John Fink 503-986-3922	Program purpose is to provide local transportation system improvements where the improvements benefit the state highway. This program is part of the "Oregon Livability Initiative." A total of \$30,000,000 is available for projects statewide with funding allocated by ODOT Region on an equity basis.	A one-time round of applications was closed on May 19, 2000. Additional applications may be solicited only if a suitable number of projects are not identified through this round of applications.	Cities, counties, ports, tribal governments, other public agencies (projects must be on public right of way).
Access Management Fund	John Fink 503-986-3922	Program purpose is to provide supplemental funding to help maintain and improve the state highway system through access management techniques. This program is part of the "Oregon Livability Initiative." A total of \$20,000,000 is available for projects statewide with \$3,000,000 allocated for priority purchases of reservations of access.	A one-time allocation of funds with funds to be expended by June 30, 2001.	A preliminary list of projects is to be developed by each ODOT Region, then advanced to the Area Commission on Transportation (where one exist , and the regional Community Solutions Team for review and comments.

Last update 9/7/00