US 730
Corridor Refinement Plan

October 2007

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Preface

The progress of this plan was guided by the Project Planning Management Team (PPMT) identified below.

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The PPMT members devoted a substantial amount of time and effort to the development of the US 730 Corridor Refinement Plan, and their participation was instrumental in the development of the recommendations that are presented in this report.

Section 1 - Introduction

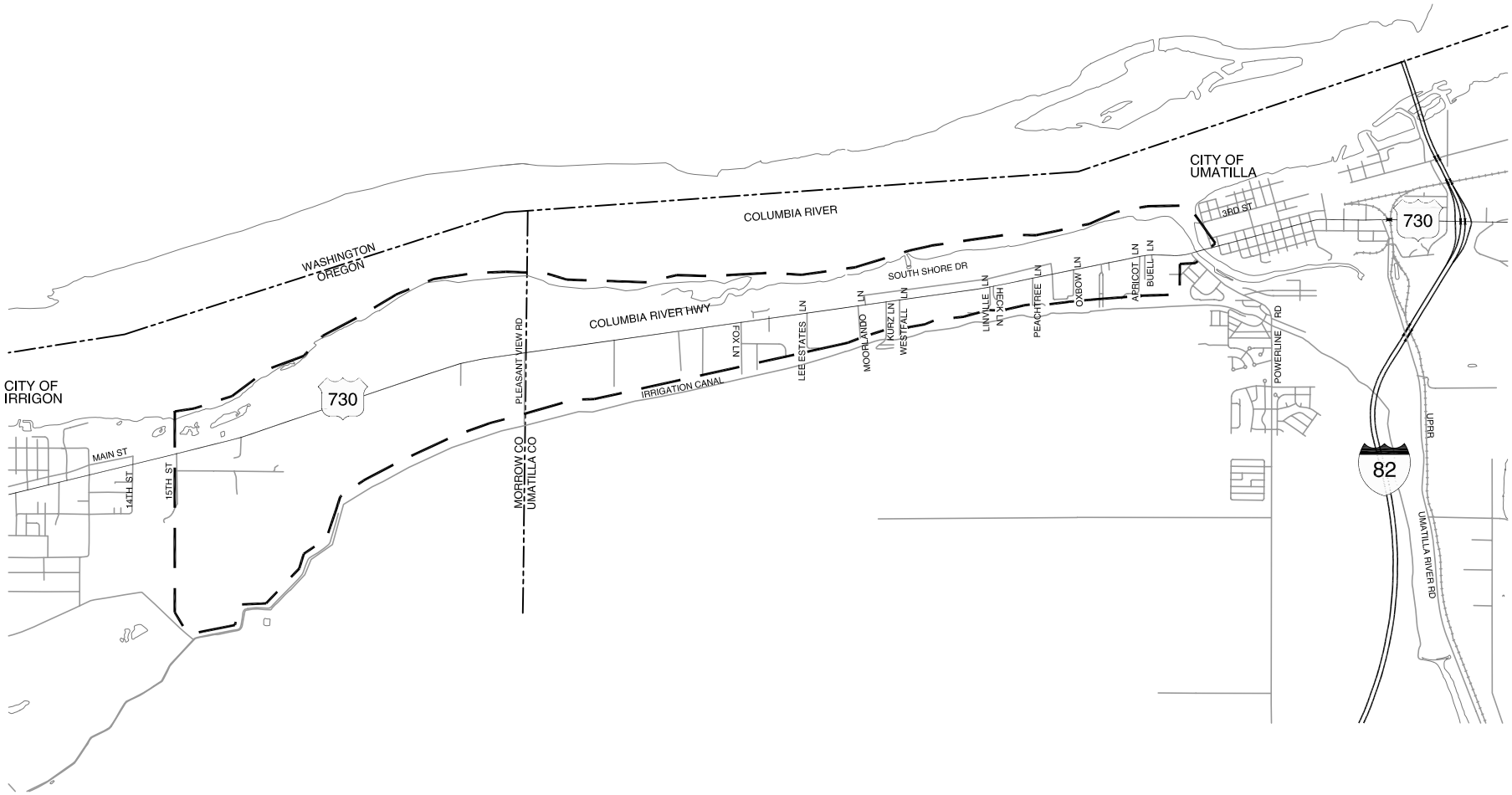
Section 1 - Introduction

In 2003, the Oregon Department of Transportation (ODOT) designated a portion of US 730 (roughly from the east city limits of the City of Irrigon to the west city limits of the City of Umatilla) as a Safety Corridor. This designation came after an extensive review of historical safety data which indicated that the highway corridor has been experiencing a crash rate that is higher than the statewide average for comparable highway corridors. Currently characterized as having a significant number of private-access driveways, a limited supporting local roadway network, and a significant amount of high-speed-truck and through traffic, it is recognized that this section of US 730, in its present state, is limited in its ability to operate in a safe and efficient manner. In addition, the adopted Umatilla County, Morrow County, and City of Umatilla Transportation System Plans do not currently provide detailed long-term planning guidance to manage the near- and long-term safety, circulation, and access needs of the highway corridor. As such, the *US 730 Corridor Refinement Plan* was developed to identify circulation and access-management strategies that would address the corridor's near- and long-term safety needs.

These circulation and access-management strategies, while specific to the unique land-use and transportation characteristics of the US 730 study corridor, have been refined under the policy-level guidance of a Regional Highway facility to systematically address the safety concerns and preserve its long-term function. As a result, Morrow County, Umatilla County, and the City of Umatilla will have a specific plan that can be used to guide future circulation and access improvements along the study corridor.

STUDY AREA

US 730 is a state owned and maintained highway and is the only direct east/west roadway linking the Cities of Irrigon and Umatilla. This Regional Highway goes on to connect with I-84, west of Irrigon, and I-82, east of the study area. The *US 730 Corridor Refinement Plan* is specifically concerned with the section of US 730 from the east city limits of the City of Irrigon (MP 176.61) to the west city limits of the City of Umatilla (MP 182.54). However, this study effort recognizes that the land-use parcels located adjacent to and along this corridor have a direct impact on the daily operation of the highway. In order to identify the long-term direction of this corridor, the study area includes the areas roughly bounded by the Columbia River to the north and the regional irrigation canal to the south. Figure 1 graphically illustrates the US 730 corridor study area.



LEGEND

-STUDY AREA

US 730 STUDY AREA MAP

FIGURE 1

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING

H:\projfile\8212 - US 730 Corridor Refinement Plan\dwgs\Maps\design\Final-Report-Figs\8212_FIGS.dwg Jun 13, 2008 - 10:29am - mbell Layout Tab: FIG01

DEVELOPMENT OF THE CORRIDOR REFINEMENT PLAN

The *US 730 Corridor Refinement Plan* was guided by the Project Planning Management Team (PPMT), a technical review and advisory committee comprising representatives from ODOT, the City of Umatilla, the City of Irrigon, Morrow County, and Umatilla County. The PPMT convened throughout the course of the project to review and guide the technical documentation prepared by the consultant team. *Appendix "A" provides a summary of the individual PPMT meetings.*

Public Involvement

In addition to the technical review work provided by members of the PPMT, the project consultant team also met with interested citizens and adjacent property owners on four separate occasions to provide them with opportunities to comment on and help identify priorities for future circulation and access along the study corridor. Public notices for the community open houses were provided through local newspaper, press releases to local radio stations, and mailed/hand delivered meeting notices to property owners located along the study corridor. *A summary of the public involvement process is summarized in Appendix "A".*

US 730 CORRIDOR REFINEMENT PLAN ORGANIZATION

The development of the US 730 Corridor Refinement Plan began with the review of the local, regional, and statewide plans and policies that guide land use and transportation planning in the area. The *Plan and Policy Review* is presented in **Section 2** of this plan. Next, an inventory of the existing land use and transportation system was prepared. This inventory documented all major land uses and transportation facilities within the study area, which allowed for an objective assessment of the current system's physical characteristics, operation performance, safety, and general function. The inventory process and the documentation of *Existing Land Use/Transportation Conditions* are presented in **Section 3** of this report.

Upon completion of the existing conditions analysis, the focus of the project shifted to forecasting future travel demand and the corresponding long-term future transportation system needs. Development of long-term transportation system forecasts relied heavily on the development potential of the study corridor as well as historical traffic volume growth characteristics. Based on these projections, and with input from the PPMT, reasonable assumptions were drawn as to the potential for and location of future development areas. **Section 4** of this report, *Future Conditions Analysis*, details the development of anticipated long-term future transportation needs within the study area.

Section 5 of this report, *Circulation and Access Opportunities & Constraints Analysis*, documents the development of supporting roadway and access alternatives that would help ensure the safety needs of the study corridor. The impact of each of the identified alternatives was considered on the basis of its potential costs, benefits, and impacts to the existing transportation system and adjacent land uses. Ultimately, based on comments received from the PPMT and public involvement process, a preferred circulation and access plan was developed that reflected a consensus on which components should be

incorporated into the Umatilla County, Morrow County, and City of Umatilla long-term transportation system plans.

Having identified a set of local access and circulation alternatives, the recommendations identified in **Section 6** *US 730 Corridor Refinement Plan*, include the individual components of a circulation plan and an access management plan.

Section 2 - Plans and Policy Review

Section 2 - Plans and Policy Review

This section of the *US 730 Corridor Refinement Plan* documents all of the plans and policies at the state, regional, and local level that govern land use, transportation, and development along the US 730 study corridor.

REGULATORY CONTEXT

Land use and transportation decision-making along the US 730 study corridor is governed by policies, rules, regulations, and plans at different levels of government including the State of Oregon, the Oregon Department of Transportation (ODOT), Morrow County, Umatilla County, and the City of Umatilla. The purpose of this section is to identify those plans, policies, and regulations and describe how they are likely to affect land-use and transportation decision-making along the US 730 study corridor. The documents addressed by this plan are listed here:

- Statewide Planning Goals 2 (Land Use Planning), 3 (Agricultural Lands), 12 (Transportation) and 14 (Urbanization)
- *1999 Oregon Highway Plan*
- OAR 734, Division 51 (Access Management)
- *2005 Morrow County Transportation System Plan*
- *2002 Umatilla County Transportation System Plan*
- *1999 City of Umatilla Transportation System Plan*

It should be noted that the plans and policies affecting the City of Irrigon were not evaluated, as the study corridor is not within the City's limits or urban growth boundary.

Statewide Planning Goal 2 (Land-Use Planning)

The intent of the Land-Use Planning goal is to ensure that all decisions and actions related to the use of land are guided by a specific land-use planning process and policy framework. In particular, Goal 2 requires coordination and consistency between federal, state, county, and city regulatory land-use actions, with the intent that documents like city or county comprehensive plans support and compliment one another when jurisdictional boundaries overlap. This policy is important as it relates to the *US 730 Corridor Refinement Plan* as Morrow County, Umatilla County, and the City of Umatilla have jurisdictional land-use authority at different points along the US 730 study corridor. In particular, Morrow County has land-use authority from the western study corridor limits at the City of Irrigon to the Morrow County/Umatilla County line. Umatilla County has land-use authority from the Morrow County/Umatilla County line to the eastern study corridor limits near Powerline Road. Finally, the City of Umatilla has land-use authority at the eastern study corridor to just west of Powerline Road. It should be noted that the City of Umatilla Urban Growth Boundary extends from the US 730/Powerline Road intersection to just west of Kurz Lane.

Statewide Planning Goal 3 (Agricultural Lands)

The Agricultural Lands goal is intended to preserve agricultural lands for farming and other related uses through the use of zoning regulations. A significant portion of the land adjacent to the US 730 study corridor is located outside of the urban growth boundaries for the cities of Umatilla and Irrigon, and has been designated as Exclusive Farm Use (EFU). Common uses permitted on EFU-zoned lands in both Umatilla and Morrow County include dwellings and agricultural buildings customarily provided in conjunction with farming, public or private schools, churches, wineries, farm stands, golf courses, and fire-service facilities. *For reference purposes, Appendix "B" provides a summary of all applicable Umatilla County, Morrow County, and City of Umatilla zoning information for all land uses located within the study corridor.*

Statewide Planning Goal 12 (Transportation)

The Transportation Planning goal is intended to ensure that all levels of government provide a safe and efficient transportation system through the development of Transportation System Plans (TSPs). Goal 12 is implemented through OAR 660, Division 12, the Transportation Planning Rule (TPR). As it relates to the US 730 Corridor Refinement Plan, Umatilla County, Morrow County, and the City of Umatilla have adopted TSPs that address transportation facilities located within the study corridor. These three TSPs and the applicable elements associated with the US 730 study corridor will be addressed later in this plan.

Statewide Planning Goal 14 (Urbanization)

Goal 14 is intended to ensure the orderly expansion of urbanization through the use of urban growth boundaries (UGB). While the overwhelming majority of land adjacent to the US 730 study corridor is not inside a local UGB, a portion near the east end of the corridor falls within the City of Umatilla UGB. The City of Umatilla has designated this area as suitable for future urban development. Planning designations for this land include Residential (R) and Recreational/Open Space (R/OS). However, the City of Umatilla does not have the ability to regulate lands located in the UGB that are not located within the official city limits. In this case, Umatilla County has land-use authority within the UGB land. *The principal uses allowed within these zones are documented in Appendix "B".*

1999 OREGON HIGHWAY PLAN

The *1999 Oregon Highway Plan* (OHP) guides the long-term development and management of Oregon's state highway system. The policies found within the OHP that apply to the *US 730 Corridor Refinement Plan* include the following:

Policy 1A: State Highway System Classification System

The OHP lists five classifications of roadways including Interstate Highways, Statewide Highways, Regional Highways, District Highways, and Local Interest Roads. The US 730 study corridor is currently classified as a Regional Highway. According to the *Oregon Highway Plan*, the function of Regional Highways is to "provide connections and links to regions within the state, and between small urbanized areas and larger population centers through connections and links to Freeways, Expressways, or Statewide Highways."

Policy 1B: Land Use and Transportation

This policy recognizes the role of both the State of Oregon and local governments related to the state highway system and calls for a coordinated approach to land-use and transportation planning. Under this policy, specific actions as they relate to the *US 730 Corridor Refinement Plan* include protecting the state highway through the use of land-use and subdivision ordinances and development of access-management or corridor plans.

Policy 1C: State Highway Freight System

This policy recognizes the need to move freight efficiently through the state. Although the US 730 study corridor is not classified as an official "Freight Route" in the Oregon Highway Plan, it is a federally designated Truck Route. A Federal Truck Route designation applies to those federal-aid primary highways that meet a minimum set of safety and design criteria for the accommodation of commercial motor vehicles (subject to size and weight limitations). The purpose of the federal designation is to identify a national network of highways that are available to vehicles authorized by the Surface Transportation Assistance Act of 1982 (STAA).

Policy 1F: Highway Mobility Standards

This policy addresses state highway performance expectations, providing guidance for managing access and traffic-control systems. The adopted highway performance standard along the entire length of the US 730 study corridor is to maintain a volume-to-capacity ratio of 0.80 or better for the portion of the corridor located within the City of Umatilla UGB and 0.70 or better for the remainder of the study corridor. For side-street movements at unsignalized intersections, the performance standard for critical side-street movements is 0.80 along the entire length of the study corridor.

Policy 1G: Major Improvements

This policy emphasizes the State's preference for improving system efficiency and management before adding capacity.

Policy 2D: Public Involvement

This policy ensures that citizens, businesses, and regional and local governments have an opportunity to provide input as plans such as the *US 730 Corridor Refinement Plan* are prepared.

Policy 2F: Safety

This policy emphasizes the State's goal to improve overall roadway safety through engineering, education, enforcement, and emergency medical services. In 2003, ODOT designated the US 730 study corridor as a "Safety Corridor." Safety Corridors are stretches of highways with a higher-than-average incidence of fatal or injury traffic crashes for that type of roadway in the state. Additional detail regarding the crash history of the study corridor is provided in Section 3 of this plan.

Policy 3A: Classification and Spacing Standards

This policy addresses the location, spacing, and type of road and street intersections and approach roads on state highways. Table 1 illustrates the adopted spacing standards for Statewide Highways as documented in the *1999 Oregon Highway Plan*. The US 730 study corridor has speed limits ranging from 25 to 55 MPH and is classified as both rural and

urban, given that part of the highway is located within the City of Umatilla UGB. Based on the posted speed, the spacing standard for intersections or approach roads ranges from 450-990 feet as outlined in Table 1.

Table 1 ODOT Spacing Standards for Regional Highways (feet)

Posted Speed	Rural Expressway	Rural	Urban Expressway	Urban	STA
≥55	5,280	990	2,640	990	-
50	5,280	830	2,640	830	-
40 & 45	5,280	750	2,640	750	-
30 & 35	-	600	-	600	-
≤25	-	450	-	450	-

Policy 3B: Medians

This policy guides the planning and management of medians on state highways to enhance their efficiency and safety and influence land-use development patterns. Given the safety concerns along the study corridor, the installation of medians could be considered as part of the planning process.

Policy 4A: Efficiency of Freight Movement

This policy emphasizes the need to maintain and improve the efficiency of freight movement on the state highway system. As noted previously, US 730 is not an official Freight Route; however, it does have a Federal "Truck Route" designation.

OAR 734, Division 51 (Access Management)

The Division 51 rules are used by ODOT to regulate approaches to state highways and govern access control, spacing standards, medians, and the restriction of turning movements. The access-management spacing standards for private and public approaches on Regional Highways are consistent with the adopted *1999 Oregon Highway Plan* as illustrated in Table 1.

MORROW COUNTY POLICY DOCUMENTS

Morrow County Transportation System Plan

The Morrow County Transportation System Plan (TSP), adopted in April 2005, contains recommended roadway spacing standards for all rural County-owned and -maintained roadways, as shown in Table 2. These spacing standards do not apply to US 730, only Morrow County-owned and -maintained roadways. The County defers all access decisions to State-owned facilities, such as US 730 to ODOT, and the standards outlined in Table 2.

Table 2 Morrow County Access Management Standards

Functional Classification	Intersection			
	Public or Private Road		Private Access	
	Type	Minimum Spacing	Type	Minimum Spacing
Rural Arterial	At-grade	600 feet	Left/right-turns	300 feet
Rural Collector	At-grade	300 feet	Left/right-turns	100 feet
Rural Local	At-grade	200 feet	Left/right-turns	Access to each lot

Any access to a state highway requires a permit from the district office of ODOT and is subject to the access spacing standards of the 1999 Oregon Highway Plan.

A review of the transportation improvement project list indicated that there are several recommended county projects that would involve the US 730 corridor or roadways that intersect the corridor. These identified projects include:

- US 730 Corridor Safety Study – Included as a reference to recommended improvements on state facilities, calls for access management, and safety improvements to US 730 within Morrow and Umatilla Counties.
- CR #716 (Pleasant View Road) – As part of the recommended 0–5 Year High Priority Recommended Roadway Systems Projects list, chip seal Pleasant View Lane south of US 730.

UMATILLA COUNTY POLICY DOCUMENTS

Umatilla County Transportation System Plan

The County of Umatilla adopted a TSP in April 2002. This TSP includes an access-management policy that aims to maintain the capacity, safety, and level of service of the County's roads.

The Umatilla County TSP includes language that acknowledges the jurisdiction of ODOT to implement access-management and performance standards as identified in the *1999 Oregon Highway Plan* on all state highways located within the county. Table 3 provides a summary of the access-management guidelines, by roadway classification, for Umatilla County-owned and -maintained roadways.

Table 3 Umatilla County Access Management Standards

Functional Classification	Intersections			
	Public Road		Private Drive	
	Type[1]	Spacing	Type	Spacing
Arterial State Highways	[3]	[3]	[3]	[3]
Major Collectors	At-Grade	¼ mile	L/R Turns	500 ft.
Major and Minor Collectors	At-Grade	500 ft.	L/R Turns	250 ft.
Local Road	At-Grade	250 ft.	L/R Turns	Access to Each Lot
Alley (Urban)	At-Grade	100 ft.	L/R Turns	Access to Each Lot

Notes:
[1] For most roadways, at-grade crossing are appropriate
[2] Allowed moves and spacing requirements may be more restrictive than those shown to optimize capacity and safety.
[3] See Access Management Spacing Standards, Appendix C of the *1999 Oregon Highway Plan*.

A review of the Roadway Improvement Project list does not reveal any projects that would directly impact the US 730 study corridor. However, it should be noted that a multi-phased improvement has been identified for the US 730/Powerline Road intersection that calls for signalization of the intersection and the eventual reconstruction of the Umatilla River Bridge. It is not anticipated that this identified improvement need will coincide or conflict with the *US 730 Corridor Refinement Plan*.

CITY OF UMATILLA POLICY DOCUMENTS

City of Umatilla Transportation System Plan

There are no elements of the *City of Umatilla Transportation System Plan* that pertain to the US 730 study corridor, aside from the previously noted identified improvements to the US 730/Powerline Road intersection.

MISCELLANEOUS PLANNING AND POLICY INFORMATION

US 730: Irrigon to Umatilla Section STIP Project

A portion of US 730 between milepost 176.60 and milepost 181.80 has been designated as one of three safety corridors in ODOT's Region 5–area of the state. There is a history of accidents in this corridor, primarily associated with turning movements and the high truck volume. A large number of trucks that enter Oregon from Washington use this section of US 730. This corridor spans rural and semi-rural residential areas that are served by approximately 115 public and private driveways. The through truck volume and the reduced speed limit result in conflicts with the local community traffic that accesses the driveways. This results in a large number of rear-end collisions. The existing shoulders are commonly used for bicycle and pedestrian access, mail delivery, and school-bus pickup and drop-off. ODOT has identified this section of US 730 as a project for inclusion in the 2006–2009 Statewide Transportation Improvement Project (STIP). The first phase of this

project is planned to be implemented during the 2009 construction season. Subsequent phases of this project will likely be included in the 2008–2011 STIP update.

Project Delivery Operational Notice #3 (PD-O3)

ODOT has published PD-O3 to provide guidance and structure for the task of making access-management decisions in the development of highway projects. This document is applicable to the *US 730 Corridor Refinement Plan* as a large component of the project involved a review of existing highway access points and the formulation of an access management plan and strategy for implementing or moving towards the spacing standards of OAR 734, Division 51 and the *1999 Oregon Highway Plan*.

Oregon Transportation Safety Action Plan

In 2004, ODOT developed the *Oregon Transportation Safety Action Plan* (OTSAP). The OTSAP provides a long-term safety outline to reinforce the safety goals and policies of the *1999 Oregon Highway Plan*. Comprised of 69 implementable action items, the OTSAP is ultimately a safety agenda that will help guide future transportation safety investment decisions. Of the 69 action items, 9 of those items respond directly to the factors that contribute to the highest number of transportation related deaths and injuries. These nine key action items are summarized in Table 4.

Table 4 Key OTSAP Action Items

Action Number	OTSAP Action	Significant Factors in Fatal Crashes
1	Traffic law enforcement strategy	Speed, Occupant Protection, SUII
2	Traffic law enforcement and education.	Speed, Occupant Protection, SUII
4	Judicial training	Speed, Occupant Protection, SUII
8	Transportation safety public information/education program.	Speed, Occupant Protection, SUII
10	Expand driver education in Oregon	Speed, Occupant Protection, SUII, Young Drivers
16	Improve ODOT ability to allocate resources to the highest priority safety needs.	Single Vehicle Run-off, Speed, DUII, Rural Roads
26	Develop an effective and integrated EMS system.	Post Crash Medical Care – Availability and Location
37	Revise driving under the influence of intoxicants DUII statutes.	DUII
50	Continue public education efforts aimed at increasing proper use of safety belts and child restraint systems.	Occupant Protection

Section 3 - Transportation/Land Use Inventory of Existing Conditions

Section 3 - Transportation/Land Use Inventory of Existing Conditions

This section of the plan documents the land-use conditions and the physical characteristics of the transportation facilities along the study corridor in 2007.

US 730 CORRIDOR REFINEMENT PLAN STUDY AREA

US 730 is a state-owned and -maintained regional highway that connects the cities of Irrigon and Umatilla with the larger statewide transportation network such as I-82 and I-84. The *US 730 Corridor Refinement Plan* is specifically concerned with the section of US 730 from the east Irrigon city limits to the west Umatilla city limits.

EXISTING LAND USE INVENTORY

To establish a base level of understanding along the US 730 study corridor, a land-use inventory was prepared. This section provides a description of the 2007 land-use patterns and zoning regulations in the study area. Existing land uses in the study area primarily include a mix of rural residential and agricultural uses. Given that the study area consists of a number of different land uses and that these land uses are located within the jurisdictions and planning areas of multiple counties and cities, three sub-area classifications have been created for ease in describing the land-use inventory. These different sub-areas are described below and their boundaries are illustrated in Figure 2.

- Sub-Area "A" includes those land parcels located east of 15th Street, south of the Columbia River, west of Pleasant View Road, and north of the irrigation canal.
- Sub-Area "B" includes those land parcels located east of Pleasant View Road, south of the Columbia River, west of Kurz Lane (private), and north of the irrigation canal.
- Sub-Area "C" includes those land parcels located east of Kurz Lane (private), south of the Columbia River, west of Powerline Road, and north of the irrigation canal.

Sub Area "A" (Morrow County)

Sub Area "A", begins just outside the City of Irrigon's city limits and urban growth boundary and extends east to the Morrow County/Umatilla County line at Pleasant View Road. All of the land in this sub-area is located within the planning jurisdiction of Morrow County and is zoned either rural residential (RR) or exclusive farm use (EFU). Current uses located in this zone include mainly agricultural/farming operations and supporting uses along with some residential. A significant portion of the sub-area north of US 730 is owned by the Army Corps of Engineers and is not zoned by the County. Figure 3 illustrates the zoning designations for all study areas.

Sub Area "B" (Umatilla County – Rural)

Sub Area "B" begins at the Morrow County/Umatilla County line at Pleasant View Road and extends east to the City of Umatilla UGB line at Kurz Lane (private). All of the land within this sub-area is located within the planning jurisdiction of Umatilla County. The land making up Sub Area "B" is a mixture of exclusive farm use (EFU) and rural residential zoning (RR-4 and RR-2). Current land uses located in this zone are similar to Sub-area "A", including some low-density residential housing and small agricultural/farming operations.

Sub Area "C" (City of Umatilla UGB)

Sub Area "C" begins at Kurz Lane and extends east to the Umatilla city limits near Powerline Road. All of the land located within this sub-area is included in the City of Umatilla UGB but not within the city limits. The land within the UGB is governed by a joint agreement between Umatilla County and the City of Umatilla which provides land use and development standards to these unincorporated areas. Umatilla County is the overall land use authority and has established a number of zones within this area. These include suburban residential (designated as R2), two acre residential (designated as zone R1-A), exclusive farm use (designated as zone F-1), general rural (designated as F2), agricultural-residential (designated as R1), and tourist commercial (designated as C-2). Current uses include an assortment of small commercial businesses, a higher concentration of low density residences, a mobile home park, and other miscellaneous uses. In comparison to the other sub areas, Sub Area "C" is the most developed and populated.

EXISTING TRANSPORTATION INVENTORY

The second major component of the *US 730 Corridor Refinement Plan* existing conditions evaluation process is the transportation system. The existing transportation inventory provides a detailed description of all transportation facilities and travel modes within the study area. In addition, the inventory identifies the current geometric characteristics of roadways and other transportation facilities in the study corridor. A detailed description of these facilities is provided in the sections that follow.

Roadway Facilities

US 730 is the only direct east/west roadway linking the City of Irrigon to the City of Umatilla. This regional highway goes on to connect with I-84, west of Irrigon, and I-82, east of the study area. Within the corridor study area, there are a limited number of public roadways that serve adjacent land uses but do not necessary provide access to the larger region due to the presence of the Columbia River to the north, the irrigation canal to the south, and other regional land use constraints such as the US Army Depot to the south. These secondary roadway facilities include 15th Street, Rand Road, Pleasant View Road, Apricot Lane, and Southshore Drive. Additional details about these roadway facilities are discussed below.

Figure 2 US 730 Sub Area Map

Figure 3 US 730 Study Area Zoning Designations

US 730

Within the study corridor, US 730 is classified as a Regional Highway by the *1999 Oregon Highway Plan*. There are no other sub-classifications for this highway. US 730 is a three-lane (with center turn lane) highway within the City of Irrigon. East of 15th Street, the highway transitions to a two-lane facility with ten-foot shoulders and remains a two-lane facility for several miles. Near the private intersection of Heck Lane, US 730 transitions back to a three-lane facility (with center turn lane). Just west of Apricot Lane, US 730 transitions back to a two-lane roadway and remains as a two-lane roadway to the eastern-most study corridor limits.

As with the lane configurations, the speed limits along US 730 vary in different sections along the corridor. Table 5 describes the details of these varying speed limits along the study corridor.

Table 5 Speed Limits Along US 730 Study Corridor

Direction of Travel	Posted Speed	Milepoint	Nearest Cross Street/Access Point
Westbound	25 MPH	182.66	Umatilla River Bridge
Westbound	40 MPH	182.54	Just west of Powerline Road
Westbound	55 MPH	182.17	Just west of Apricot Lane
Westbound	45 MPH	176.62	Just east of Irrigon City Limits at 15th St.
Eastbound	45 MPH	172.26	West of 14th St.
Eastbound	55 MPH	176.63	East of Irrigon City Limits at 15th St.
Eastbound	40 MPH	182.22	Just west of Apricot Lane
Eastbound	25 MPH	182.54	Just west of Powerline Road

Secondary Roadways

In addition to US 730, there are a number of other minor public roadways that serve adjacent land uses along the study corridor. These public facilities include 15th Street, Rand Road, Pleasant View Road, Apricot Lane, Powerline Road, and Southshore Drive. With the exception of Powerline Road, all of these minor roadways have limited or no connectivity to the larger regional travel network. As such, the majority of land uses within the study corridor rely upon US 730 for regional access. Table 6 summarizes the characteristics of US 730 and all the secondary transportation facilities in the US 730 study corridor.

Table 6 Existing Transportation Facilities and Roadway Designations

Roadway	Existing Roadway Ownership and Functional Classification	Posted Speed	Side-walks?	Bicycle Lanes?	Cross Section	Surface Type
US 730	ODOT - Regional Highway	Varies (25-55 mph)[1]	None	None	2-3 lanes[2]	Paved
Southshore Drive	Umatilla County – Local Road	35 mph	None	None	2 lanes	Paved
15th St.	City of Irrigon – Local Road	Not Posted	None	None	2 lanes	Paved
Rand Road	Morrow County – Local Road	Not Posted	None	None	2 lanes	Gravel
Pleasant View Road	Morrow County – Local Road	Not Posted	None	None	2 lanes	Paved[3]
Powerline Road	Umatilla County – Urban Collector/ Rural Major Collector	35 mph	None	None	2 lanes	Paved

[1] See Table 5 for additional detail
[2] See previous paragraph for additional detail
[3] Pleasant View Road is paved south of US 730 and unpaved north of US 730

Pedestrian and Bicycle Facilities

There are no bicycle or pedestrian facilities (sidewalks or striped bicycle lanes) along the US 730 study corridor. However, there is a wide shoulder along the highway that could be used by bicyclists. Field observations revealed relatively low levels of pedestrian and bicycle activity. This low level of activity is likely attributed to the predominately rural nature of the study corridor, low-density levels, and a lack of pedestrian and bicycle facilities along the study-area roadways.

Although low levels of pedestrian and bicycle activity have been observed along the highway itself, it should be noted that there is a recreational trail located north of the US 730 known as the Lewis and Clark Trail. Within the study corridor, this trail begins at the Umatilla River Bridge and parallels the study corridor on the north side of the highway. Within Morrow County, this trail is known as the Heritage Trail. Both trails are frequently utilized by walkers, bicyclists, horseback riding, and other non-motorized travelers and recreational users.

Truck Freight

As a primary link between the cities of Irrigon and Umatilla, US 730 accommodates a high volume of truck freight. Truck freight increases during local harvest periods. According to recent traffic counts conducted at the US 730/Powerline Road intersection, it is estimated that approximately 26 percent of the daily traffic on the US 730 study corridor is truck traffic.

EXISTING TRAFFIC VOLUMES

As part of this study effort, ODOT collected daily roadway traffic counts at various locations along the study corridor. These counts include the following locations:

- US 730 between 13th and 14th Avenue in the City of Irrigon
- US 730 just west of Pleasant View Road at the Morrow County/Umatilla County line.
- US 730 at the Umatilla River Bridge
- East and west ends of Southshore Drive at US 730

Table 7 and Figure 4 summarize the existing average daily traffic (ADT) volumes and locations along the study corridor.

Table 7 Existing Average Daily Traffic Volumes

Location	ADT (Both Directions)
US 730 between 13th and 14th Avenue	7,300
US 730 just west of Pleasant View Road	6,450
US 730 at the Umatilla River Bridge	8,900
US 730 just west of Powerline Road	6,750[1]
Powerline Road south of US 730	2,450[1]
West end of Southshore Drive at US 730	150
East end of Southshore Drive at US 730	210

[1] ADT estimated from 16-hour turning movement counts at US 730/Powerline Road intersection.

As shown in the table, the ADT along the study corridor fluctuates depending upon location. At the east end of the corridor, where there is a higher concentration of residential and commercial uses, the average daily traffic volumes are the highest at 8,900 vehicles per day. At the west end of the corridor, average daily traffic volumes are slightly lower at 7,300 vehicles per day.

TRAFFIC SAFETY

In 2003, after an extensive review of historical safety data, ODOT designated the US 730 study corridor (east city limits of Irrigon – milepoint 176.6 to the Umatilla River Bridge in Umatilla) as a Safety Corridor. Safety corridors are stretches of highways where the reported incidences of fatal or injury traffic crashes is higher than the statewide average for highways of similar size and character. With this designation, the study corridor became eligible for additional law enforcement and data collection. A summary of ODOT's crash analysis that helped determine the safety corridor designation is provided in Table 8 below. As illustrated in the table, the US 730 study corridor has historically exceeded the statewide average in the total number of crashes, the number of fatal & serious injuries, and the number of fatalities.

Table 8 US 730 Safety Corridor Summary Data (MP 176.6-182.6)

Year	ADT	Crashes			Fatal & Serious Injury			Fatalities		
		Total	Local Rate	State Rate	Total	Local Rate	State Rate	Total	Local Rate	State Rate
1997	6,000	7	0.53	0.72	0	0.00	6.80	0	0.00	2.70
1998	6,200	11	**0.81**	0.71	1	**7.36**	6.87	0	0.00	3.03
1999	6,000	14	**1.07**	0.80	0	0.00	6.88	0	0.00	2.53
2000	6,100	13	**0.97**	0.82	2	**14.97**	7.36	1	**7.49**	3.11
2001	6,200	10	0.74	0.85	0	0.00	7.16	0	0.00	2.76
2002	6,100	10	**0.75**	0.72	1	**7.49**	6.38	0	0.00	2.78
2003[1]	6,100	11	**0.82**	0.72	4	**29.94**	6.34	1	**7.49**	3.03
2004	6,000	10	**0.76**	0.62	0	0.00	6.21	0	0.00	2.74
2005	6,100	7	0.52	0.68	2	**14.97**	7.05	1	**7.49**	2.57
2006	6,100	8	0.60	0.70	1	**7.49**	6.46	0	0.00	2.72

Notes:
Shaded cells represent local rates that are higher than the statewide average for that same type of roadway functional classification.
[1] Year 2003 was the year that the US 730 study corridor was designated as a Safety Corridor.

Since its designation as a Safety Corridor, Safety Corridor notification signs have been installed along the highway and additional traffic law enforcement has been initiated. Although the total number of crashes decreased in 2005 and 2006, there were additional incidences of fatal & serious injury crashes. Based on this, it is unclear at this time whether the Safety Corridor designation has had a significant safety related impact.

Crash Types and Attributed Causes

In addition to the corridor crash analysis summary, the most recent five years of crash data along the study corridor were examined in greater detail. The purpose of this analysis was to further understand what types of crashes were occurring along the corridor and the cause of those crashes. Table 9 summarizes the type of collisions and the attributed cause for each as summarized in the crash report summaries provided by ODOT. As shown in this table, the majority of collisions involved vehicles running off the road and striking fixed objects. In most of these instances, it was reported that the vehicles involved in the collisions were traveling too fast for the roadway conditions, but not exceeding the posted speed limit. Read end and turning movement collisions were also prominent along the study corridor. In most of these instances, drivers were cited for following the vehicle in front of them too closely or not paying close enough attention to the roadway environment. Finally, it should be noted that there have been two fatal crashes along the study corridor. Both of these collisions were head-on crashes where one of the vehicles was driving left of the roadway centerline.

Figure 4 Existing Average Daily Traffic Volumes

Figure 5 US 730 Corridor Crash History (2001-2005)

Table 9 Crash Data Summary

Attributed Cause	Crash Type					
	Other	Fixed Object	Turning	Rear End	Head On	Over-turned
Involved an animal	5	0	0	0	0	0
Inattention	0	4	0	4	0	0
Driving too fast for the conditions[1]	1	12	0	1	0	2
Improper overtaking	0	0	2	0	0	0
Followed too closely	0	0	3	8	0	0
Did not yield the right of way	1	0	2	0	0	0
Other improper driving	0	0	0	3	0	0
Drove left of center	0	0	0	0	2	0

[1](not exceeding the posted speed limit)

Although not summarized in Table 9, the following bullets provide a few other facts extracted from the historical crash data.

- Number of crashes occurring during fog or icy conditions – 8
- Number of crashes that involved semi tractor-trailer trucks – 3
- Number of crashes involving alcohol – 0

Crash Locations

Figure 5 graphically illustrates the location and type of crashes that have occurred along the US 730 study corridor for the five-year period from January 1, 2001, through December 31, 2005. As shown in the figure, the majority of collisions have occurred in the eastern half of the study corridor where there is greater development density and a higher number of public and private highway approaches.

US 730 EXISTING ROADWAY ACCESS INVENTORY

ODOT currently has the authority to regulate roadway and public/private driveway access along state highways such as US 730 through the rules and regulations stipulated in OAR 734-051. To gain an understanding of the existing access conditions along the US 730 study corridor, an access inventory from 15th Street to Powerline Road was performed. *The inventory is summarized in tabular and graphical form in Appendix "C".*

A summary of this highway approach inventory is highlighted below.

- There are approximately 122 different public and private highway approaches along the study corridor.
- ODOT currently has access control rights along portions of the study corridor. As such, 47 of the highway approaches currently have reservations of access.
- The large majority of these approaches are privately owned roads that serve single or multiple private properties.
- With the exception of Powerline Road, all of the public approaches are limited in their ability to provide access to the larger regional vicinity.
- ODOT's access spacing standards are not met at any point along the study corridor due to the number and frequency of private approaches on the highway.

Section 4 - Forecast Future Travel Demand

Section 4 - Forecast Future Travel Demand

This section of the plan documents the mid-term (2017) and long-term (2027) projected future traffic conditions along the US 730 study corridor. More specifically, this memorandum identifies how the US 730 study corridor will operate upon an assumption of continued background traffic growth and reasonable buildout of the adjacent study area. This analysis assumes no major transportation improvements to the roadway network.

A description of planned transportation infrastructure improvements within the study area are included, along with assessments of forecast study area growth rates and resulting traffic operations along the roadways and intersections located within the US 730 study corridor.

PLANNED TRANSPORTATION IMPROVEMENTS

Based on a review of the transportation system plans for Morrow County, Umatilla County, and the City of Umatilla, there are no near-term or long-term planned improvements identified specifically for the US 730 study corridor between the east city limits of Irrigon and the west city limits of Umatilla. However, as identified in the Plans and Policy Review memorandum, ODOT has identified this section of highway for inclusion in the Statewide Transportation Improvement Plan (STIP). It is the purpose of the US 730 Corridor Refinement Plan to develop a scope of work for this STIP project which could include among other things, highway widening, intersection improvements at critical intersections, and access modifications. Following the completion of the plan and the subsequent adoption of any improvements, the STIP work could begin as early as the 2009 construction season.

Although there are no identified improvements for US 730 itself, it should be noted that both Umatilla County and the City of Umatilla have identified a series of improvements at the US 730/Powerline Road intersection. These improvements call for signalization of the intersection and the eventual grade separation of US 730 over Powerline Road that would take place with reconstruction of the Umatilla River Bridge. Both projects are long-term improvements that are not currently funded. As such, they are not assumed as part of the forecast future conditions for the US 730 study corridor.

FUTURE TRANSPORTATION DEMAND

This section presents the transportation demand forecast for the US 730 study corridor through the mid-term year 2017 and the long-term year 2027 timer periods. To develop the transportation growth rate assumptions, the forecasting task has been organized into two main subtasks. The first subtask only considers growth in regional through traffic along US 730. For example, this traffic could include trips using US 730 as a connector between I-82 and I-84. The second subtask considers local traffic growth as a result of future buildout of the vacant or underdeveloped parcels located within the study corridor. Together, this more detailed level of growth analysis provides a more geographically specific, yet conservative approach to future travel forecast estimation.

Background Growth in Regional Through Traffic on US 730

Year 2017 and 2027 regional through traffic volume forecasts for the highway were derived from a combination of historical growth trends along the US 730 study corridor and future growth rate information derived from the Morrow County and Umatilla County TSPs. The following paragraph outlines the process that was undertaken to develop the 2017 and 2027 future volume forecasts.

US 730 Regional and Through Traffic Growth

Based on a review of past traffic counts along various portions of US 730, a conservative linear growth rate was calculated from ODOT's Future Volumes Tables to be approximately 1.5 percent per year. This figure is consistent with previous growth rates utilized in the Morrow and Umatilla County TSPs. Due to the lack of regional roadway facilities that connect to the US 730 study corridor, this growth rate is likely to remain constant and, thus, is appropriate for estimating overall through traffic growth potential through the year 2027.

Buildout Growth in the US 730 Study Area for the years 2017, 2027

While the growth rates in the previous section account for the estimated background growth in regional through traffic on US 730, a separate method for estimating development related growth amongst the individual parcels located within the US 730 study area was developed. This effort utilized the three sub-areas presented in Figure 2 of the previous section. These three sub-areas logically break up the study corridor into their respective jurisdictional and planning area boundaries and include the following:

- Sub-Area "A" includes those land parcels located east of 15th Street, south of the Columbia River, west of Pleasant View Road, and north of the irrigation canal. All of this sub-area is located within Morrow County and subject to Morrow County land use regulations.
- Sub-Area "B" includes those land parcels located east of Pleasant View Road, south of the Columbia River, west of Kurz Lane (private road), and north of the irrigation canal. All of this sub-area is located within Umatilla County and is subject to Umatilla County land use regulations.
- Sub-Area "C" includes those land parcels located eat of Kurz Lane (private road), south of Columbia River, west of Powerline Road, and north of the irrigation canal. All of this sub-area is located within the Umatilla Urban Growth Boundary (UGB); however, Umatilla County is still the underlying land use authority.

To account for development related growth potential in each sub-area, an analysis was performed to determine a reasonable buildout potential of all vacant or underutilized lands. To complete this analysis, inventory information was obtained from Morrow County, Umatilla County, and the City of Umatilla. In addition, aerial maps, tax lot records, field visits, and conversations with planning staff were utilized in estimating the buildout potential.

Sub-Area "A"

Sub-area "A" is located within Morrow County. Within this sub-area, applicable land use zones include Rural Residential (RR-1) and Exclusive Farm Use (EFU). For the purposes of this analysis, it was assumed that all development in Sub-area "A" would occur within the RR-1 zone. Furthermore, assuming the regulations for this zone are constant, it was anticipated that all development in this zone would occur as residential.

Given these assumptions, an investigation of the vacant and underdeveloped lands indicates that this area has the potential to support an additional 153 dwelling units by 2027 under the existing land use regulations. This estimate is based on a buildable lands inventory provided by Morrow County that estimates future buildout potential.

However, given the rural character of the area and how quickly things have been, and are, developing, it was determined that a reasonable and conservative growth rate for future development over the next twenty years is approximately 5 dwelling units per year. As such, it was assumed that Sub-Area "A" may only see an additional 100 single family dwelling units, instead of 153, through the year 2027.

Sub-Area "B"

Sub-area "B" is located within Umatilla County. Within this sub-area, applicable land use zones include Rural Residential (RR-2) and Exclusive Farm Use (EFU). As with Sub-Area "A", all future development is assumed to occur in the RR-2 zone. It was also anticipated that all future development in this zone would occur as residential to provide a reasonable worst-case assessment of transportation impacts.

Based on a buildable lands inventory provided by Umatilla County, it was determined that the vacant and underdeveloped lands in this sub-area could support a maximum of 89 additional dwelling units by the year 2027. As with Sub-Area "A", it was conservatively assumed that development would occur at a relatively slow pace (approximately 4 dwelling units per year) considering the rural character of the area. As such, it was assumed that Sub-Area "B" would see an additional 80 single family dwelling units through the year 2027.

Sub-Area "C"

Sub-Area "C" is located within the City of Umatilla UGB; however, Umatilla County still controls the land-use regulations until this area is annexed into the City of Umatilla. For the purposes of this study, it was assumed that Sub-Area "C" would not be annexed into the City of Umatilla within the long-term 20-year planning horizon given that this area is not currently by sewer and water. As such, the existing Suburban Residential (R-2), Two Acre Residential (R1-A), Exclusive Farm Use (F-1), General Rural Zone (F-2), and Tourist Commercial Zone (C-2) zones would accommodate all of the future development according to their respective land use regulations.

To account for development related growth in these zones, information was obtained from aerial maps, tax lot records, field visits, and conversations with Umatilla County and City of Umatilla staff. Using the minimum parcel size and density requirements in each zone, a future buildout potential was estimated for Sub-Area "C". Based on this analysis, the two residential (R-1A and R-2) and the two rural zones (F-1 and F-2) could accommodate an additional 48 single family dwelling units by the year 2027. In addition, the Tourist Commercial zone was reviewed and determined that it could potential support

an auto oriented use such as a gas station. A summary of these land use assumptions along with the assumptions from the other two sub-areas is presented in Table 10.

Table 10 Future Vacant/Buildable Lands Assumptions

Sub-Area	Zoning Designation	Future Land Use Assumption of Vacant/Underdeveloped Land Parcels	Assumed Buildout Estimate for the year 2017	Assumed Buildout Estimate for the year 2027
Sub-Area "A" (Morrow County)	RR-1 – Rural Residential	Single family residential homes	50 homes	100 homes
	EFU – Exclusive Farm Use	Will remain as farm use	-	-
Sub-Area "B" (Umatilla County)	RR-2 – Rural Residential	Singe family residential homes	40 homes	80 homes
	EFU – Exclusive Farm Use	Will remain as farm use	-	-
Sub-Area "C" (Umatilla County)	R-1A – Two Acre Residential	Singe family residential homes	19 homes	35 homes
	R-2 – Suburban Residential	Single family residential homes	5homes	9 homes
	F-1 – Exclusive Farm Use	Single family residential homes	3 homes	4 homes
	F-2 – General Rural Zone	Was assumed to remain as is	-	-
	C-2 – Tourist Commercial	Highway oriented commercial	Gas station	Gas station

To determine the traffic related impacts that these above developments would have on the US 730 study corridor, future daily trip estimates were developed for each land use. These estimates were derived from the ITE Trip Generation Manual using the land use code 210 for single family detached housing. Depending upon the sub-area and the type of assumed development, these additional vehicle trips were distributed onto the US 730 study area roadways. From this analysis, it is estimated that a reasonable buildout of the vacant/underdeveloped lands along the study corridor will generate approximately 1,380 daily trips by 2017 and 2,180 daily trips by 2027.

Overall Future Traffic Conditions Along the US 730 Study Corridor

Accounting for 11 years of growth after 2006 in regional through traffic plus an assumed reasonable buildout of the vacant or underdeveloped parcels within the study area through the year 2017, Figure 6 illustrates the resulting 2017 daily traffic volume estimates at various locations along the US 730 study corridor. Figure 7 illustrates the resulting daily traffic volume estimates resulting in the year 2027 from the growth in regional through traffic and buildout of vacant or underdeveloped lands.

Figure 6 2017 Future Daily Traffic Conditions

Figure 7 2027 Future Daily Traffic Conditions

Section 5 - Circulation and Access Opportunities & Constraints Analysis

Section 5 - Circulation and Access Opportunities & Constraints Analysis

This section of the plan documents possible future circulation, access management, and safety opportunities that can be implemented along the study corridor, both from a near-term and long-term planning perspective. A description of the various circulation, access, and safety alternatives is included along with a qualitative assessment discussing the advantages and disadvantages of each.

OVERVIEW

The US 730 study corridor between the Irrigon and Umatilla City limits has a total of 122 different points of access (public and private driveways) to the highway serving residences, farms, and businesses. The majority of the driveways and street intersections are located off of the south side of US 730 and east of the Morrow County/Umatilla County line. A review of the 1999 Oregon Highway Plan spacing standards indicates that very few of these driveways or intersections currently meet the minimum access spacing requirements for a Regional Highway. Recognizing that the purpose of the US 730 Corridor Refinement Plan is to develop near-term, mid-term, and long-term-safety and access-management strategies, this section of the plan is broken out into the following sub-sections.

The first sub-section provides a brief overview of the existing access management policies and guidelines that are applicable to the US 730 study corridor. These standards are important to understand as alternative safety and access opportunities are explored later in the memorandum. The second sub-section provides a qualitative description of general access management strategies/techniques that may be applicable to the US 730 study corridor for restricting and/or reducing the overall number of access points to the highway. Following these background information sections is a description and evaluation of potential near-term/low impact and longer-term/higher impact safety, circulation, and access alternatives that could be implemented along the US 730 study corridor.

EXISTING ACCESS MANAGEMENT POLICIES AND GUIDELINES

In 1949, the Oregon Legislature passed a statute that required an individual with property frontage along an Oregon State Highway to receive written permission from ODOT before constructing an approach to the highway. This statute was adopted because there was a recognition that highways would not operate safely or efficiently if there were an unlimited number of accesses.

Even those driveways approved by ODOT many years ago can become more problematic as the traffic volumes and speed of highway traffic increase over time. This increase has also paralleled a broader mix of vehicles in the travel stream. These include smaller and lighter passenger cars at the same time that many trucks carrying freight have become larger and heavier. This dynamic in tandem with frequent and closely spaced driveways can lead to a less safe roadway environment and decreased efficiency of the roadway to accommodate all road users. Data developed by ODOT in the 1990s has shown that approximately 66 percent of all crashes in the urban areas and 33 percent of all crashes in

the rural area on Oregon state non-freeway highways are directly related to driveways and intersections. A combination of these concerns led the Oregon Transportation Commission to adopt policies on access management that were incorporated into the *1999 Oregon Highway Plan*.

The following is a brief overview of the applicable access management policies and action items from the *1999 Oregon Highway Plan. The full text and specific action items are listed in Appendix "D" for reference.*

1999 Oregon Highway Plan

A review of the *1999 Oregon Highway Plan*, "Goal 3: Access Management" states the following:

> To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.

Policy 3A: Classification and Spacing Standards

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

Regional Highways - Other Rural Highways

- Regional Rural Highways provide for efficient and safe medium to high speed and medium to high volume traffic movements.
- These highways serve as routes passing through areas which have moderate dependence on the highway to serve land access.
- The function of the highway supports selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, preserving highway capacity on land adjacent to an urban growth boundary, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or these with a history of accidents.
- The primary function of these highways is to provide connections and links to regions within the state, and between small urbanized areas and larger population centers through connections and links to Freeways, Expressways, or Statewide Highways.

Regional Highways - Other Urban Highways

- The function of the highway is consistent with selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, preserving highway capacity on land adjacent to an urban growth boundary, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or these with a history of accidents.

GENERAL ACCESS MANAGEMENT STRATEGIES/TECHNIQUES FOR STATE HIGHWAYS

The following section outlines a series of general access management strategies/techniques that are potentially applicable to the US 730 study corridor. Specific instances of when and where these strategies can be applied will be presented later in this memorandum.

Low cost access management techniques:

- Modify existing driveways to be consistent with permit conditions. This would include reducing driveways with a wide-open frontage to the specified width allowed, often 24 feet.
- Identify illegal driveways (those driveways constructed since 1949 without a permit from ODOT) and close them, or if appropriate, place under permit. Unless property is otherwise landlocked, ensure that spacing criteria is achieved, or process deviation to determine if it can remain open. Condition the permit to state that private access will be eliminated when other alternate, reasonable access becomes available to the property.
- Provision of left-turn lanes on the state highway at major intersections and/or private drives that experience high volumes of left turning vehicles.
- Refine County/City ordinance and development codes to include language that:
    - Requires adjacent property owners to share an approach to the highway as properties re-develop. Condition the permit to state that private access will be eliminated when other alternate, reasonable access becomes available to the property (This assumes that no alternate and reasonable access is available to the property).
    - Prevent future property subdivision or partitioning that would result in properties having highway frontage with shallow depth and unable to provide access by another road system.
    - Requires future subdivisions or partitioning of lands to depend on a local road system or easement to a local road system, and will not allow access to the state highway, except through a public road approach.
    - Requires that the property does not rely on state highway for internal circulation as re-development occurs along the highway. Access should be located to the local street system.

More costly access-management techniques that can be implemented over time or as properties develop/re-develop include:

- Plan for and acquire right-of-way for a local street network to serve properties now dependent on the state highway for access.
- Where properties have alternate, reasonable access by some means other than the state highway, consider purchase of all remaining rights of access between the adjacent property and the state highway.
- In those areas where there are significant safety concerns and where no alternate reasonable access is available to the adjacent property owner, consider purchase of entire property.
- Plan for and develop a system of frontage roads that parallel the highway, normally located between the highway and the adjacent building frontage. If this course is pursued, it should be developed in tandem with local ordinance that requires a building set-back to accommodate a revised access and site circulation that is effective when additional right-of-way is required. This strategy also requires sufficient right-of-way surrounding the major intersections on the highway to ensure that the frontage road cross street intersection is a sufficient distance from the highway. The cost to implement this strategy can be high if the development of the frontage road displaces buildings located close to the property frontage.
- Plan for and develop a system of backage roads, which results in a system of roads behind the buildings that front the state highway. This solution normally solves the problem of an intersection located too close to the state highway, but can lead to perceived reduction of access to properties along the highway. While commercial properties often seek to rely on the traffic on the state highway for exposure to the business, the only available access is by means of the rear of the property.
- Construct driveway restrictions such as medians or right-in/right-out barriers that limit turning movements onto the highway from side streets or driveways.

POTENTIAL NEAR-TERM/LOW-IMPACT CIRCULATION, ACCESS, AND SAFETY STRATEGIES

The following sections describe different circulation, access, and safety strategies that could be implemented along the US 730 study corridor as potential near-term action items. These are low-cost/low-impact strategies that could be immediately employed in an effort to address overall circulation, access, and safety concerns along the study corridor.

Driveway Closures/Consolidations of Existing Highway Approaches

Using the background information presented in the previous two sections and recognizing that the US 730 study corridor contains a number of different driveways and access roads, an investigation was performed to determine if there are any opportunities for closing, consolidating, or redesigning some of these driveways without significantly impacting the land uses that they serve.

Appendix "C" contains an access inventory log and aerial photos of the US 730 study corridor indicating the locations of the various access points to the highway. This log is based on field inventory data provided by ODOT and supplemental inventory data performed by the project team. Based on a review of this data, there are a total of 122 different public street intersections or private driveway approaches along the US 730 study corridor. The vast majority of these access points currently serve residential properties, fields, and businesses that depend on them as either their sole means of highway access or as an integral part of the ingress and egress circulation pattern. As such, the ability to close, consolidate, or redesign all of these access points would landlock certain properties or impose certain hardships on the property owners. However, an examination of the access inventory along with driveway photographs and aerial photo coverage reveals that there are several potential driveways that could be closed or consolidated in the near-term without creating major adverse impacts to the property owners.

Table 11 summarizes these potential near-term access modifications. *The identification numbers listed in the table corresponds to the identification numbers (id#) illustrated in the access inventory log summarized in Appendix "C".* As shown in the table, there are a total of 28 highway approaches that could be closed or consolidated with other existing permitted approaches. Based on field observations, these closures appear to have no significant impacts to the property or properties that they serve, since other existing highway approaches already serve these properties.

Passing Sight Distance Investigation

Based on comments received during the PPMT and public open house, it was noted that there is a section of US 730 (roughly from milepost 179.21 – The Columbia View Ranch to 180.15 – Dans Lane) where the passing sight distance is potentially limited due to a slight grade differential in the highway. Given that there have been several fatal crashes within this section and given that the study corridor is often prone to limited visibility due to fog and rain, a formal passing sight distance evaluation may need to be performed for this section of highway. If it is determined that there is marginal or insufficient passing sight distance, then a "No Passing" zone should be considered.

Table 11 Potential Near-Term Access Consolidations and Closures

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
2 (Sheet C-1)	South	100.8	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
3 (Sheet C-1)	South	102	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
4 (Sheet C-1)	South	105.3	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
6 (Sheet C-1)	South	106.9	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
7 (Sheet C-2)	South	115	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
8 (Sheet C-2)	South	119.5	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
9 (Sheet C-2)	South	123	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
10 (Sheet C-2)	South	127	Field Access	5N2720 (#100)	Indenture access reservation from private use to public use (future 18th Street corridor).	Property currently served lies within Army Corps Reservation Taking Line. Future location of 18th Street corridor intersection with US 730.	Appears to have no significant property impacts.
11 (Sheet C-2)	South	130	Field Access	5N2720 (#2500)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #12.	Appears to have no significant property impacts.
20 (Sheet C-3)	South	162.3	Field Access	5N2721B (#300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #19.	Appears to have no significant property impacts.

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
22 (Sheet C-3)	South	166.5	Field Access	5N2721A (#4600)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
23 (Sheet C-3)	South	169	Field Access	5N2721A (#4600)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
26 (Sheet C-4)	South	181	Field Access	5N2721A (#4900)	Acquire access reservation.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
27 (Sheet C-4)	South	184.2	Field Access	5N2721A (#5800)	Acquire access reservation.	Property has alternative access to US 730 via access #29.	Appears to have no significant property impacts.
28 (Sheet C-4)	South	185.7	Field Access	5N2721A (#5800)	Acquire access reservation.	Property has alternative access to US 730 via access #29.	Appears to have no significant property impacts.
36 (Sheet C-5)	South	213.56	Field Access	5N2722 (#400)	Close driveway.	Property has alternative access to US 730 via access #37.	Appears to have no significant property impacts.
42 (Sheet C-6)	South	255.27	Field Access	5N2714C (#600)	Close driveway.	Property has alternative access to US 730 via access #43.	Appears to have no significant property impacts.
45 (Sheet C-7)	South	264.25	Field Access	5N2714C (#800)	Close driveway.	Property has alternative access to US 730 via Fox Lane.	Appears to have no significant property impacts.
46 (Sheet C-7)	South	266.36	Residence	5N2714C (#800)	Close driveway.	Property has alternative access to US 730 via Fox Lane.	Would likely require new access road to Fox Lane.
55 (Sheet C-8)	South	289.59	Field Access	5N2714D (#1300)	Close driveway.	Property has alternative access to US 730 via access #56.	Appears to have no significant property impacts.
69 (Sheet C-9)	South	321.27	Field Access	5N2713C (#3200)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #70.	Appears to have no significant property impacts.
72 (Sheet C-9)	South	329.19	Field Access	5N2713D (#1800)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #73.	Appears to have no significant property impacts.
91 (Sheet C-11)	South	377.24	Field Access	5N2818 (#1508)	Close driveway.	Property has alternative access to US 730 via access #92	Appears to have no significant property impacts.

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
98 (Sheet C-11)	South	387.80	Field Access	5N2818DB (#2300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #97.	Appears to have no significant property impacts.
100 (Sheet C-11)	South	389.91	Field Access	5N2818DB (#300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Powerline Road.	Appears to have no significant property impacts.
101 (Sheet C-12)	South	394.13	Field Access	5N2818DB (#300)	Acquire access reservation and close field access.	Property has alternative access to US 730 via Powerline Road.	Appears to have no significant property impacts.
105 (Sheet C-11)	North	395.72	Field Access	5N2818 (#200)	Acquire access reservation and close field access.	Property has alternative access to US 730 via access #104.	Appears to have no significant property impacts.
108 (Sheet C-11)	North	394.13	Business	5N2818 (#400)	Acquire access reservation and close access.	Property has alternative access to US 730 via access #109.	Appears to have no significant property impacts.

Additional Traffic Enforcement

Based on public comments, there has been discussion regarding the lowering of speed limits along the study corridor in hopes of reducing the number of speeding automobiles and trucks. In response, it should be noted that speed limits for highways are primarily set based on the statutory speed for that type of facility. This is often 55 mph for rural non-freeway highways which have been designed to accommodate higher volumes and higher speeds. As such, studies have shown that most drivers will typically adjust their driving characteristics to within the general proximity of the highway design speed. Given the relatively flat and straight characteristics of the study corridor, it is very likely that vehicles could be traveling at speeds in excess of the posted 55 mph speed at certain times. For this reason, studies have also shown that an artificial lowering of the speed limit doesn't necessarily translate into a reduction of travel speeds or increased safety. In fact, a lower posted speed could potentially create greater speed differentials between vehicles which can be a safety concern. Other measures such as education and enforcement have been found to be more effective tools at lowering travel speeds and increasing the safety of the highway.

As noted in the Existing Conditions section of this plan, the US 730 study corridor has experienced a higher-than-average number of fatal or injury traffic crashes in recent years. Since its designation as a Safety Corridor in 2003, Safety Corridor notification signs have been installed along the highway to remind drivers to drive cautiously and within the posted speed limits. To supplement these signs, additional traffic law enforcement was initiated along the corridor. In an effort to continue to encourage safe driving along the US 730 study corridor, additional grant funds can continue to be pursued in an effort to provide extra dedicated traffic enforcement.

Re-establish Public Right-of-Way

When the John Day Dam was constructed, several platted rights-of-way in Morrow County fell within the reservation taking line established by the Army Corps of Engineers. As such, the rights-of-way and surrounding land ownership was transferred to the Army Corps of Engineers, making them unavailable for public use. Some of these rights-of-way were north/south alignments that could have served as Morrow County public access roads to US 730. As development continues to increase along the study corridor, the establishment of public roadways that can serve this development will be increasingly important when it comes to minimizing the number of private highway approaches to US 730. Re-establishing some of these north/south corridors such as the 18th Street (near milepost 177.43) and 21st Street (near milepost 178.16) corridors would make a logical location for public roadway connections to US 730 that can funnel future development-related traffic to/from the highway.

Summary of Near-Term/Low-Impact Circulation, Access, and Safety Strategies

As outlined above, there are a number of relatively low-impact measures that can be implemented in an effort to improve the safety of the US 730 study corridor. However, these measures are only anticipated to marginally improve circulation and safety along the corridor. Given the potential for additional study area development and an anticipated increase in future traffic volumes along the highway, a longer-term circulation and access

plan is needed that strives to implement a more permanent circulation and access management strategy.

POTENTIAL LONGER-TERM/HIGHWAY-IMPACT CIRCULATION, ACCESS, AND SAFETY STRATEGIES

As described in the existing conditions analysis, the study corridor does not have an established local or regional circulation system that serves the adjacent properties along the US 730 study corridor. This is primarily due to the fact that the study corridor is geographically constrained by the Columbia River to the north and a major irrigation canal to the south. These features have created a relatively narrow stretch of low density rural development where the majority of residences, farms, and businesses were forced to established direct access to US 730. As a result, there is a multitude of individual highway approaches that are not ideally located from a safety and traffic operations perspective.

The following sections describe different circulation, access, and safety strategies that could be implemented along the US 730 study corridor as potential longer-term action items. Compared to the short-term strategies described above, these are more costly, higher-impact solutions that involve a combination of physical-roadway-related improvements to US 730 and/or the development of new public circulation roads and turning-movement restrictions.

Center Turn Lane Alternative

As stated in the Existing Conditions section of this plan, the majority of the study corridor is an undivided two-lane highway with shoulders that vary between four and ten feet. However, there is a relatively short section of the US 730 study corridor that consists of two travel lanes with a center-turn lane (roughly between Heck Lane and Apricot Lane). One potential project that has been discussed within the PPMT and by citizens attending the Public Open House meetings is the extension of the center turn lane to serve a larger section of the study corridor. This concept could potentially include several options:

- Widen the entire stretch of the US 730 study corridor (where a center turn lane does not already exist) to provide a continuous center turn lane. This would require that the highway be widened.
- Widen US 730 and extend the existing center turn lane one mile to the west of its current westernmost terminus in order to provide an eastbound left-turn lane for the westernmost Southshore Drive intersection. This would require that the highway be widened as much as 8 feet on each side of the centerline.
- Only widen portions of the study corridor to provide a left-turn lane at existing public intersections. Within the study corridor, there are only a small number of major public roadways that are not already served by a left-turn lane. These include Rand Road, Pleasant View Road, and the western terminus of Southshore Drive. Development of left-turn lanes at these locations would require as much as 8 feet of highway widening on each side of the centerline.

Figures 8 through 10 provide a graphical representation of these concepts.

Figure 8 Center-Turn-Lane Alternative

Figure 9 Center-Turn-Lane Alternative (Continued)

Figure 10 Center-Turn-Lane Alternative (Continued)

Based on ODOT's current standards for a three lane highway, the design for a typical cross section is illustrated in Figure 11. To accommodate a center turn lane, current ODOT design standards call for a 60-foot-wide pavement cross section that consists of two 8-foot shoulders, two 12-14-foot travel lanes, and a 16-foot center turn lane. To accommodate this full three lane cross section, the existing highway would need to be widened as much as 8 feet on each side of the centerline for the majority of the study corridor that does not already have a center turn lane. Based on a preliminary right-of-way assessment, it appears that this widening can be accommodated with minimal property impacts for a significant portion of the study corridor.

Evaluation of a Center Turn Lane Concept

Advantages

- The development of a center turn lane would remove left-turning traffic from the through lanes along US 730, thereby reducing delay for through movements and improving the safety for left-turn movements. Over the past five years, at least four crashes along the study corridor have involved left-turning vehicles being rear-ended as they were waiting to make a left-turn from the through lane.
- A preliminary right-of-way assessment indicates that this widening could occur within available right-of-way for a large portion of the study corridor which would reduce costs and land use/social impacts to adjacent properties.
- A center turn lane would still provide full access to existing US 730 properties.

Disadvantages

- Does not address the turning movement conflicts that are the result of multiple driveway approaches, potentially leading to continued corridor safety issues.
- Does not necessitate a long-term plan for reducing the number of private driveway approaches along the highway.
- As noted from public comments, the extension of continuous undivided center turn lanes may encourage further usage of this lane as a passing lane. This has the potential to become a safety concern.
- School bus stops and mail delivery would still occur along the highway shoulders where there have been some noted safety concerns.
- A continuous center turn lane would lead to a wider highway that could potentially create an environment of increasing travel speeds.

In summary, the development of a continuous center turn lane or portions of center turn lanes along the US 730 study corridor is not ideal for the majority of the corridor given the number and frequency of existing private highway approaches. In essence, while a center turn lane would better facilitate left-turn movements from the highway, it does nothing to address the long-term safety issues associated with the large number of individual private driveways/public roadways along the corridor. As such, the development of center turn lanes in and of themselves may need to be modified and coupled with other circulation and access control measures.

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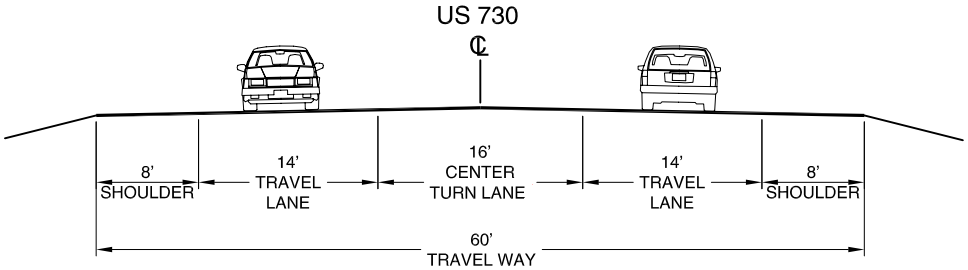
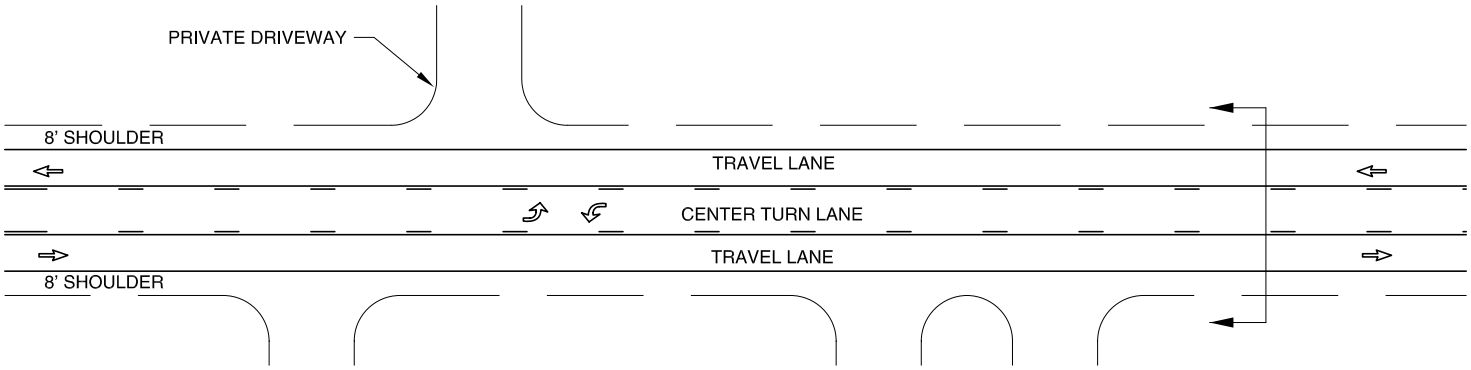
TYPICAL THREE LANE CROSS SECTION





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TYPICAL THREE LANE HIGHWAY CROSS SECTION

FIGURE 11

Frontage Road Alternative

A second major access, circulation, and safety alternative is the development of a local roadway network within the study corridor that would serve adjacent properties and eliminate the need for individual property access to US 730. Given the lineal development patterns and the overall rural character of the study corridor, one type of circulation network that would mitigate the access challenges brought on by this kind of development pattern is a frontage road. As part of an initial look at the corridor, a preliminary frontage road development strategy has been developed that would provide a continuous system of frontage roads along the entire US 730 study corridor. This strategy is outlined below.

Figures 12 through 14 graphically illustrate how potential frontage roads could be developed along the study corridor. Major elements of this strategy include the following:

- East of milepost 176.61 (15th Street in Irrigon) for ¾ of a mile, the majority of land to the north and south of US 730 is owned by the Army Corps of Engineers. As such, frontage roads are not necessary as it is unlikely that there will ever be development in this area.
- At milepost 177.30 (shown on Figure 13), the available right-of-way along US 730 shifts such that there is additional right-of-way on the north side of the existing highway. To take advantage of this existing right-of-way, a new segment of US 730 would be constructed to the north of its current alignment. This highway shift would leave the existing highway in place where it could then be used as a frontage road serving properties along the south side of the highway. An initial assessment suggests that there is sufficient right-of-way to accommodate the majority of the highway shift and frontage road.
- At milepost 177.43 (the previously vacated 18th Street corridor), a potential future access could be created assuming the corridor right-of-way could be re-established. The point would serve as the western terminus of the south side frontage road.
- At milepost 178.43 (shown on Figure 13), US 730 would shift back to its existing alignment and separate frontage roads would be constructed both north and south of the highway. An initial assessment suggests that some additional right-of-way would likely need to be acquired to accommodate the frontage roads.
- At milepost 178.71 (shown on Figure 13), a frontage road access point to US 730 would be created at what is now Pleasant View Road.
- From milepost 178.71 (Pleasant View Road) to milepost 180.35, a new frontage road would be constructed on the south side of the existing US 730 alignment. Sufficient right-of-way exists to accommodate the frontage road. At a midpoint location (near the existing Harbor Lite Drive), a new frontage road access point could be developed to shorten the uninterrupted stretches of frontage road and limit the amount of out of direction travel for adjacent property owners.
- At milepost 180.35 (shown on Figure 14), there is a sizable amount of primarily vacant land located north of US 730 and south of Southshore Drive that was

once part of an old rail line. Given that this land is relatively vacant, US 730 could be constructed to the north of its current alignment. This highway shift would leave the existing highway in place where it could then be utilized as a frontage road serving properties along the south side of the highway. Southshore Drive would then continue to act as a frontage road on the north side of the highway. To accommodate the highway shift, a preliminary assessment indicates that some additional right-of-way would likely be needed between US 730 and Southshore Drive.

- Another potential access point to the frontage road south of US 730 could be developed across from the eastern terminus of Southshore Drive as illustrated in Figure 15.
- Under the entire frontage road development strategy, a total of five different points of frontage road access would be developed (the east and west connections of Southshore Drive, a new connection near the existing Harbor Lite Drive, Pleasant View Road, and a potential new connection at the vacated 18th Street corridor). To accommodate turning movements off of the highway, left-turn lanes could be developed at each of these intersections.

As noted above, the development of frontage roads will require the construction of additional roadways (new US 730 alignment or frontage roads) depending upon the section of the study corridor. Figure 15 illustrates two potential design strategies that could be examined to accommodate both the US 730 highway and an adjacent frontage road.

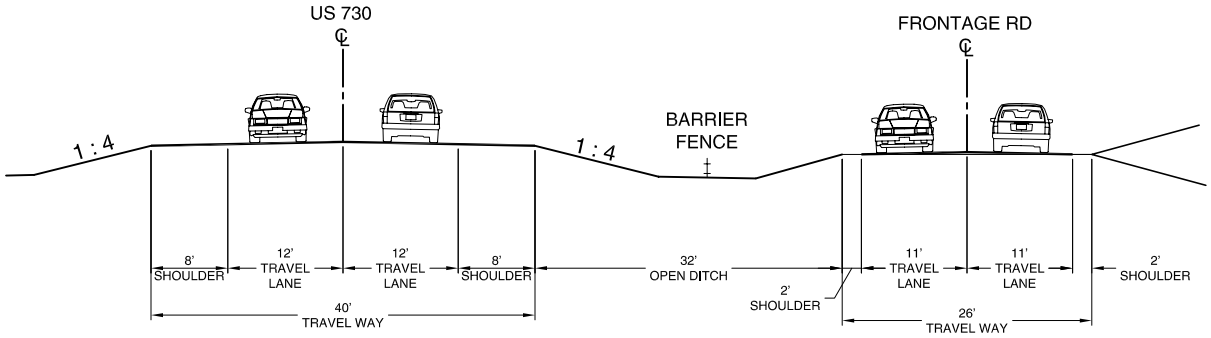
The first option illustrates a typical cross section for US 730 and a parallel frontage road with a buffer between the two roadways. This buffer would consist of a 30-40 foot drainage/open space separation. Under this option, additional right-of-way would need to be acquired in order to establish the buffer. In addition, it is likely that a cable barrier or other form of barrier would need to be installed in the open space buffer for safety and access control purposes.

The second option illustrates how portions of the existing US 730 could be used to establish both a realigned US 730 highway and a parallel frontage road. Under this option, the frontage road would utilize approximately one half of the existing US 730 road bed. Instead of an open space buffer, a physical barrier (cable or concrete barrier) would be installed on the other half of the existing US 730 road bed and a newly constructed US 730 road bed would be located on the other side of the barrier. From a right-of-way acquisition perspective, this option can save approximately 30 – 40 feet of right-of-way. This can be beneficial in those areas where existing right-of-way is limited or where there is a need to minimize environmental, physical, or social impacts.

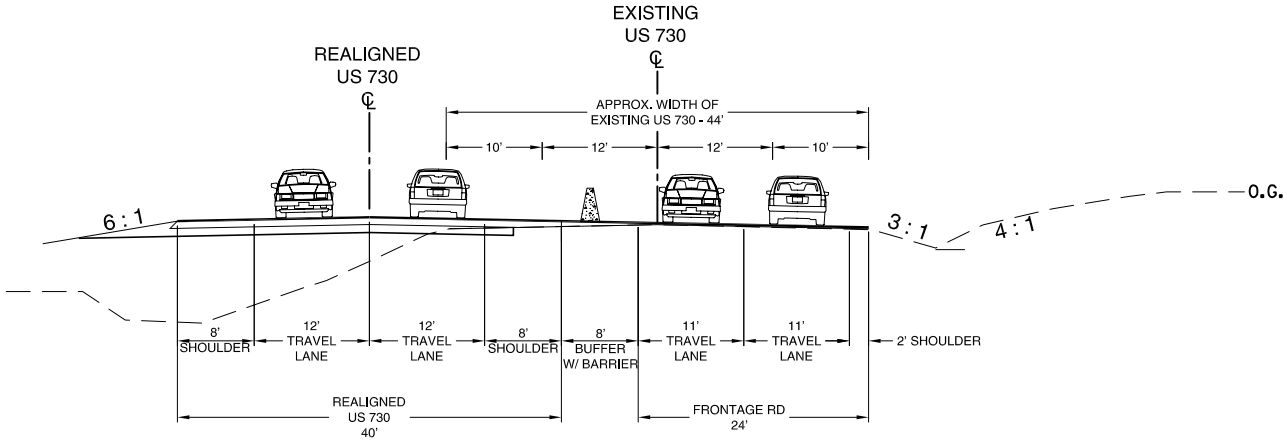
Figure 12 Frontage Road Development Alternative

Figure 13 Frontage Road Development Alternative(Continued)

Figure 14 Frontage Road Development Alternative (Continued)



OPTION 1 (OPEN SPACE BUFFER)



OPTION 1 (OPEN SPACE BUFFER)

FRONTAGE ROADS

FIGURE 15

Evaluation of the Frontage Road Concept

Advantages

- Frontage roads would eliminate approximately 90 percent of the individual side-street/private access turning movements and consolidate them at a few major access points. Dedicated left-turn lanes would be provided at these consolidated access locations to better facilitate the safety and efficiency of left-turn movement from the highway to the side-streets.
- Although most property owners will lose direct access to the highway, a parallel frontage road system would not create any significant out-of-direction travel for the majority of property owners. In addition, access to/from their driveways will be much easier and safer via a lower volume, lower speed frontage road.
- A number of existing safety concerns can be resolved along the study corridor with the development of frontage roads including the following:
  - All school bus stops and mailboxes can be moved to the frontage roads, eliminating these stopping maneuvers from the highway shoulders.
  - All pedestrian and bicycle movements can be moved off of the highway shoulders and onto the slower speed frontage roads.
  - A consolidated US 730 access scenario could have potentially mitigated up to 14 different collisions involving access to/from private driveway approaches over the past five years.

Disadvantages

- Frontage roads can impact some businesses along the highway who rely upon daily pass-by volumes.
- Some portions of the frontage road system will be immediately adjacent to the US 730 highway in order to minimize the need for right-of-way acquisition. As such, there will likely be the need for cable or concrete barriers to separate the two roadways. This can have a negative aesthetic impact along portions of the study corridor.
- Shifting of the highway could potentially have some additional social impacts on adjacent property owners.
- The costs associated with right-of-way acquisition, frontage road construction, and highway realignments can be significant, particularly at the proposed frontage road access points.

Based on this evaluation, development of a frontage-road circulation plan more clearly addresses the existing safety and access issues that are partly the result of a multitude of individual private and public access along the US 730 study corridor. When compared to the development of a center turn lane, it provides a more definitive long-term vision for resolving these access concerns. On the other hand, development of the frontage roads would require greater right-of-way acquisition and would be a more costly alternative.

Limited Access Hybrid Alternative

A third major access, circulation, and safety alternative involves a hybrid variation of the center turn lane and frontage road alternatives. In this alternative, the highway would be widened to a three lane cross-section for those areas of the study corridor with the highest concentration of individual property access driveways. Instead of a center-turn lane or a frontage road, a series of raised medians would be installed with the provision for left-turn lanes at periodic locations. Rather than serving individual property access, the left-turn lanes would provide consolidated access to specially designed indirect u-turn lanes or "jughandles." These u-turn lanes would allow drivers who could not turn left at their respective driveway due to the median, an opportunity to turn around and access their property via a right-turn movement from the opposite direction. The raised median would reduce the number of conflicting left-turn movements along the highway. For those segments of the study corridor that have sufficient right-of-way and minimal existing conflicts, frontage roads would be installed instead of the raised medians.

Figures 16 through 18 graphically illustrate potential implementation of this alternative. Major elements of this hybrid strategy include the following:

- As shown in figures 17 and 18, median breaks with the proper left-turn deceleration lanes would be provided to allow for left-turns to/from the highway.
- At each median break, an indirect u-turn lane or "jughandle" would be constructed. US 730 vehicles who can't directly access their property because of the raised median would travel downstream to the next jughandle, turn left off the highway from the left-turn lane, cross the opposing through lane, loop around the jughandle lane, merge back with US 730 traffic traveling in the opposite direction, and then make a right-turn at their respective driveway.
- At each jughandle, possible lighting could be installed at the intersection with US 730 so drivers can better detect upcoming jughandle intersections and any conflicting, left turn movements occurring at those locations.
- In addition, consolidated mail boxes and school bus stops could be established at each jughandle, eliminating the current pick-up and delivery patterns along the shoulders of US 730.
- As shown in Figure 19, US 730 would need to be widened to a 60' cross section that would ultimately consist of two 12' travel lanes (one in each direction), two 8' shoulders, and a 16' center lane with raised median. This cross section is consistent with standard 3-lane cross sections for new rural arterial highways. It is envisioned that the three-lane widening would occur from the eastern end of the study corridor to approximately Fox Lane, excluding that short ½ mile section of highway that has already been widened to three lanes.
- West of Fox Lane, US 730 would revert back to its existing two-lane highway cross section and the system of frontage roads described in alternative two would be developed along the south side of the highway and extended to Pleasant View Road.

Figure 16 Limited Access Hybrid Alternative

Figure 17 Limited Access Hybrid Alternative (Continued)

Figure 18 Limited Access Hybrid Alternative (Continued)

Based on ODOT's current standards for a three-lane highway, the design for a typical cross section is illustrated in Figure 19. To accommodate a median in the center turn lane, current ODOT design standards call for a 60-foot-wide pavement cross section that consists of two 8-foot shoulders, two 14-foot travel lanes, and a 16-foot center turn lane (to accommodate the median). To accommodate this full three-lane cross section, the existing highway would need to be widened as much as 8 feet on each side of the centerline for the majority of the study corridor that does not already have a center turn lane.

The cross section also illustrates the general elements for the "jughandle" indirect u-turn lanes. As shown, there is the potential to incorporate school bus/mailbox pull-out areas within the jughandle lanes.

Evaluation of the Limited-Access Hybrid Concept

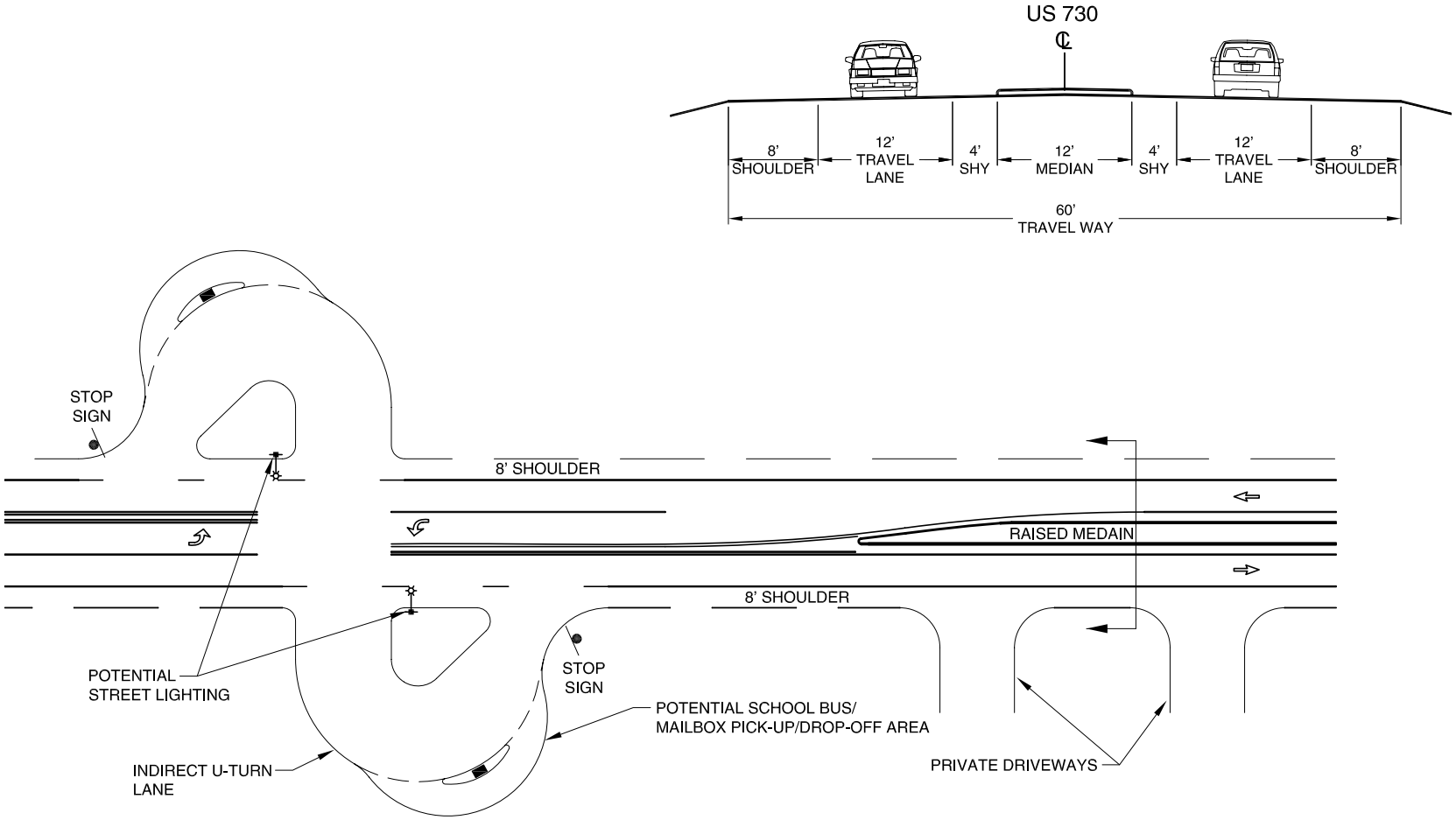
Advantages

- Compared to the frontage road alternative, this strategy would reduce the overall right-of-way needs, particularly since the widening would only be limited to discrete sections, rather than the entire length of the highway.
- Medians would restrict and consolidate highway and side-street left-turns to a few locations, thus reducing the number of conflicting turn movements along US 730.
- Medians would reduce the likelihood of head-on collisions since a barrier would be placed between opposing lanes of traffic. Over the past five years, at least three crashes along the study corridor have involved head-on collisions or vehicles traveling over the highway center line.
- Medians would change the environment along US 730 and potentially result in slower travel speeds.
- Mail box and school bus pick-up/drop-off locations could be located off of the highway shoulders in the jughandle turn around areas.
- Frontage roads along the western half of the study corridor would have fewer land use/social impacts.

Disadvantages

- Turning movements for some driveways and businesses along US 730 would only be limited to right-in/right-out for at least one direction of travel.
- The jughandle lanes would require right-of-way acquisition, potentially impacting some properties. In comparison to the Center Turn Lane alternative, the jughandle lanes and median would have a higher cost.
- Medians would create some out-of-direction travel.

Based on this evaluation, the limited-access hybrid alternative would better address the existing safety and access issues compared to the center-turn-lane alternative. In addition, the need for significant amounts of continuous right-of-way is minimized compared to the frontage road alternative, which would lower the overall cost.



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LIMITED ACCESS HYBRID CROSS SECTION

FIGURE 19

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ALTERNATIVES COMPARISON

Based on the previously noted advantages and disadvantages of each access, circulation, and safety alternative, a comparison table was developed as shown in Table 12. These alternatives were evaluated according to the following evaluation categories:

- Safety – How well does the alternative address the existing safety concerns noted along the US 730 study corridor?
- Access Management – Does the alternative establish or work in the direction of establishing a long-term plan for reducing the number of private driveway approaches along the highway?
- Land Use/Social Impacts – How well does the alternative minimize the degree of land use and social impacts?

Table 12 Qualitative Alternatives Comparison

Alternative	Safety	Access Management	Land Use / Social Impacts
Near-Term Low Impact	○	○	●
Center Turn Lane	⊙	⊙	●
Frontage Road	●	●	⊙
Limited Access Hybrid	◉	◉	◉

● - Does the best at meeting the requirements in the evaluation category
◉ - Does moderately well at meeting the requirements in the evaluation category
⊙ - Only partly addresses the requirements in the evaluation category
○ - Does not meet the requirements of the evaluation category

As summarized in the table, the Frontage Road alternative is the best at addressing the existing safety issues and laying out a plan to systematically reduce the number of existing private driveway approaches that directly access US 730. The Center Turn Lane alternative minimizes the land use/social impacts, thereby scoring the best in that category. However, it is the Limited-Access Hybrid alternative that more consistently addresses the evaluation categories as a whole. Although this alternative isn't as effective at reducing the number of private driveway approaches, raised medians will reduce the number of turning movement conflicts at each driveway, thereby creating potential long-term safety benefits not found in the Center Turn Lane alternative. Lastly, the land use/social impacts of the Limited-Access Hybrid alternative are comparable to those of the Center Turn Lane alternative.

RECOMMENDED ALTERNATIVE

Based on input from the fourth public open house and subsequent project team discussions, the PPMT had the following comments regarding future safety, circulation, and access along the study corridor as it related to the previously described alternatives:

- The Limited Access Hybrid most consistently addresses the major evaluation categories as a whole. As such, implementation of the access and circulation

components associated with this alternative is recommended for addressing the safety concerns along the US 730 study corridor.

- Given the costs associated with implementing the various components of the Limited Access Hybrid circulation and access plan, a phased implementation is recommended. Phased components could include modification/consolidation of highway approaches in the near-term, highway widening to a three-lane cross section in the near- to mid-term, and construction of raised medians and u-turn lanes/jughandles in the long-term.
- Safety performance measures should be established as part of the plan that will provide guidance for the phased implementation of the median and u-turn lanes/jughandles.
- The western third of the study corridor (Morrow County) has the greatest potential for the development of a supporting local circulation network. As such, there is less of a long-term need for frontage roads to serve adjacent highway properties. Instead, the plan should reinforce the access management principles through the development of north-south and east-west public roadways to serve existing and future development.

Recommended Long-Term Circulation & Access Alternative

The above noted comments and assessment of the Limited Access Hybrid alternative resulted in the following major component recommendations as summarized below.

Table 13 Recommended Long-Term Circulation & Access Components

Project Description - Morrow County (15th Street to Pleasant View Road)
– Reinforce the development of platted north/south corridors (18th Street, 19th Street, and 21st Street) through private property redevelopment and County capital improvement projects.
– Plan for a north/south public road opposite Rand Road and an east/west public road that would provide access to developable properties on the north side of US 730 and west of Pleasant View Road.
– Provide US 730 access at 18th Street, 19th Street, 21st Street, Rand Road, and Pleasant View Road. As access becomes available, close existing private highway approaches to adjacent properties.
– Establish safety performance measures for US 730 that would ultimately provide for limited access restrictions at 19th Street and Rand Road.
Project Description - Umatilla County (Pleasant View Road to Umatilla River)
– Construct a south side frontage road from Pleasant View Road to Fox Lane and close existing private highway approaches.
– Widen US 730 to a full three-lane cross section (including shoulder widening along the existing section of three-lane highway) from Fox Lane to just west of the Powerline Road.
– Establish safety performance measures for US 730 that would ultimately provide for the construction of a series of median sections along the three-lane cross section. Construct raised medians.
– Construct u-turn/jughandle lanes at median break locations Fox Lane, Moorlando Lane/South Shore Drive (west), South Shore Drive (east), and Oxbow Lane).

Section 6 - US 730 Corridor Refinement Plan

Section 6 - US 730 Corridor Refinement Plan

In 2003, the Oregon Department of Transportation (ODOT) designated a portion of US 730 as a Safety Corridor. As a result of this designation, the US 730 Corridor Refinement Plan was developed to identify circulation and access management strategies that would address the corridor's near-term and long-term safety needs. As these strategies and the associated improvements are implemented over time through development and various capital improvement projects, it is anticipated that the highway segment will function in a manner that is consistent with the characteristics of a safe and efficient Regional Highway.

OVERALL BENEFITS OF THE US 730 PLANNING EFFORT

Currently characterized as having a significant number of individual access driveways and a limited supporting local roadway network; it is recognized that the ability of the US 730 study corridor in its present state to safely and efficiently accommodate local and through traffic is limited. For Umatilla County, Morrow County, and the City of Umatilla, the US 730 Corridor Refinement Plan is a planning tool that more clearly defines the future safety, access, and circulation characteristics of the highway corridor. Specifically, the US 730 Corridor Refinement Plan offers the following benefits:

- It identifies strategies and improvements to create a safe and efficient highway that can better accommodate local and through traffic.
- It is a planning tool that offers a systematic approach for ensuring consolidated access and circulation opportunities for developing/redeveloping corridor properties.
- It assists in the development of a long-term circulation system that meets the unique land use characteristics and travel modes of the US 730 corridor.

The remaining portions of this section present the individual plan elements of the corridor refinement plan, which include a future circulation plan, an access management plan, and an implementation plan. It is intended through the recommendations listed in this section, that Umatilla County, Morrow County, and the City of Umatilla will adopt specific elements of the US 730 Corridor Refinement Plan into their respective transportation system plans.

STUDY CORRIDOR CIRCULATION PLAN

The first element of the US 730 Corridor Refinement Plan is the study corridor circulation plan. The study corridor circulation plan consists of the development of a refined plan that describes the various circulation elements of the study corridor.

In an effort to improve the overall safety and mobility of the study corridor, an approach that addresses the long-term circulation and access through highway widening, long-term access control, and the establishment of a supporting local circulation system is the preferred plan. This overall concept is supported by the following:

- The majority of the US 730 study corridor lacks a local street network to support and serve the properties and businesses along the highway. The lack of a supporting network has resulted in a total of 122 different driveways and intersections along the study corridor.
- The study corridor has experienced a significant number of fatal or injury crashes that is higher than the statewide average for highways of similar size and character. As a result, the highway has been given a "Safety Corridor" designation. Of the crashes, a large majority involved rear end, turning movement, and fixed object collisions that occurred in the eastern half of the study corridor where there is greater development density and a higher number of public and private highway approaches.

PRIORITIZED US 730 IMPROVEMENT PLAN

The US 730 improvement plan outlines specific transportation system improvements that have been identified to improve the long-term safety, function, and capacity of the US 730 study corridor. Umatilla County, Morrow County, and the City of Umatilla have adopted Transportation System Plans with a roadway system component that provides guidance on how best to facilitate long-term travel within each jurisdiction. The US 730 Corridor Refinement Plan builds upon these existing plan documents through the provision of safety, circulatory, and access improvements that are specific to the US 730 study corridor.

The improvement plan addresses a 20-year planning horizon and identifies future roadway improvements. The purpose of identifying these future roadway improvements was to:

- Provide highway safety improvements along US 730 that will better accommodate both through traffic and local traffic.
- Provide a plan for limiting the amount of individual private driveway approaches to the highway through closure, consolidation, and modification;
- Provide for an appropriate supporting roadway infrastructure to serve those portions of the study area that have the potential to accommodate future development;
- Provide Morrow County with guidelines for roadway alignments as future development occurs along the highway corridor;

Under this guidance, a project list was developed based on the need to systematically address the safety issues of the study corridor. As a result of the consensus achieved through the US 730 Corridor Refinement Plan study efforts, a series of new transportation improvement projects have been identified. These improvement projects are broken down by segments and graphically illustrated in Figures 20 through 22. Tables 14-19 identify the projects relative to the figures, and provide detailed descriptions of the projects, the priority of the projects, and potential funding sources.

Figure 20 Segment "A" Transportation Plan

Figure 21 Segments “B”, “C”, & “D” Transportation Plan

Figure 22 Segments “D”, “E”, & “F” Transportation Plan

Table 14 Segment "A" Transportation Improvement Implementation Plan (Morrow County)

Segment "A"				
Timeframe	**Map Reference Number**	**Circulation/Access Project**	**Implementation Threshold**	**Potential Funding Sources**
Short-Term	A1	- Close non-permitted approaches to US 730.	- As part of initial of subsequent STIP project.	STIP
	A2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public street or other legal approach.	- As part of initial or subsequent STIP project.	STIP
	A3	- Purchase access control.	- As part of initial or subsequent STIP project.	STIP
Mid-Term	A4, A5, A6, A7, A8, A9, A10, A11, A12	- Continue development of the local transportation network.	- When redevelopment occurs. - If Morrow County funding sources become available.	PDF, MCF
Long-Term	A4, A5, A6, A7, A8, A9, A10, A11, A12	- Continue development of the local transportation network.	- When redevelopment occurs. - If Morrow County funding sources become available.	PDF, MCF
	A13	- Widen highway to a three-lane cross section and install a raised median from the future 18th Street Corridor to Pleasant View Road.	- If segment crash rate consistently exceeds the statewide average for similar highway segments.	STIP
	A14, A15	- Implement turning movement restrictions at future 19th Street intersection and existing Rand Road.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program
PDF – Private Development Funding
MCF – Morrow County Funding

Table 15 Segment "B" Transportation Improvement Implementation Plan (Umatilla County)

Segment "B"				
Timeframe	**Map Reference Number**	**Action Item**	**Implementation Threshold**	**Potential Funding Sources**
Short-Term	B1	- Close non-permitted approaches to US 730.	- As part of initial or subsequent STIP project.	STIP
	B2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public street or other legal approach.	- As part of initial or subsequent STIP project.	STIP
	B3	- Purchase access control.	- As part of initial or subsequent STIP project.	STIP
	B4	- Perform a formal passing sight distance investigation along US 730 in the vicinity of Fox Lane/Harborlite Road.	- As part of initial or subsequent STIP project.	STIP
Mid/Long-Term	B5	- Construct a south side frontage road access point at Fox Lane.	- If segment crash rate consistently exceeds the statewide average for similar highway segments.	STIP
	B6	- Construct a south side frontage road from Pleasant View Road to Fox Lane.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program

Table 16 Segment "C" Transportation Improvement Implementation Plan (Umatilla County)

Segment "C"				
Timeframe	**Map Reference Number**	**Action Item**	**Implementation Threshold**	**Potential Funding Sources**
Short-Term	C1	- Close illegal (not permitted) US 730 approaches.	- As part of initial or subsequent STIP project.	STIP
	C2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public side street or other legal approach.	- As part of initial or subsequent STIP project.	STIP
	C3	- Widen highway to a full three-lane cross-section from Fox Lane to Moorlando Lane.	- As part of initial or subsequent STIP project.	
	C4	- Purchase access control.	- As part of initial or subsequent STIP project.	
Mid/Long-Term	C5	- Construct a raised median along US 730 with left-turn lanes at Fox Lane and Moorlando Lane.	- If segment crash rate consistently exceeds the statewide average for similar highway segments.	STIP
	C6	- Acquire right-of-way and construct a westbound u-turn lane/jughandle at Fox Lane.		
	C7	- Acquire right-of-way and construct an eastbound u-turn lane/jughandle at Southshore Drive.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program

Table 17 Segment "D" Transportation Improvement Implementation Plan (Umatilla County)

Segment "D"				
Timeframe	**Map Reference Number**	**Action Item**	**Implementation Threshold**	**Potential Funding Sources**
Short-Term	D1	- Close illegal (not permitted) US 730 approaches.	- As part of initial STIP project.	STIP
	D2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public side street or other legal approach.	- As part of initial STIP project.	
	D3	- Widen highway to a full three-lane cross-section from Moorlando Lane/Southshore Drive to west end of the existing three-lane highway section.	- As part of initial or subsequent STIP project.	
	D4	- Extend Southshore Drive to the west and construct a new US 730 access across from Moorlando Lane.	- As part of initial or subsequent STIP project.	
	D5	- Purchase access control.	- As part of initial or subsequent STIP project.	
Mid/Long-Term	D6	- Construct a raised median along US 730 with a westbound left-turn lane at Moorlando Lane.	- If segment crash rate consistently exceeds the statewide average for similar highway segments.	STIP
	D7	- Acquire right-of-way and construct a westbound u-turn lane/jughandle at Moorlando Lane.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program

Table 18 Segment "E" Transportation Improvement Implementation Plan (Umatilla County)

Segment "E"				
Timeframe	**Map Reference Number**	**Action Item**	**Implementation Threshold**	**Potential Funding Sources**
Short-Term	E1	- Close illegal (not permitted) US 730 approaches.	- As part of initial or subsequent STIP project.	STIP
	E2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public side street or other legal approach.	- As part of initial or subsequent STIP project.	STIP
	E3	- Widen highway to a full three-lane cross-section from the west end of the existing three-lane highway section to the east end of the existing three-lane highway section.	- As part of initial or subsequent STIP project.	
	E4	- Purchase access control.	- As part of initial or subsequent STIP project.	
Mid/Long-Term	E5	- Construct a raised median along US 730 with a westbound and eastbound left-turn lane at Southshore Drive.	- If segment crash rate consistently exceeds the statewide average for similar highway segments.	STIP
	E6	- Acquire right-of-way and construct a westbound and eastbound u-turn lane/jughandle at Oxbow Lane and Southshore Drive.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program

Table 19 Segment "F" Transportation Improvement Implementation Plan (Umatilla County)

Segment "F"				
Timeframe	**Map Reference Number**	**Action Item**	**Implementation Threshold**	**Potential Funding Sources**
Short Term	F1	- Close illegal (not permitted) US 730 approaches.	- As part of initial or subsequent STIP project.	STIP
	F2	- Purchase and close existing reservations of access in which the affected property has reasonable alternative access to a public side street or other legal approach.	- As part of initial or subsequent STIP project.	STIP
	F3	- Widen highway to a full three-lane cross-section from the east end of the existing three-lane highway section to the east end of the study corridor.	- As part of initial or subsequent STIP project.	
	F4	- Purchase access control.	- As part of initial or subsequent STIP project.	
Mid/Long Term	F5	- Construct a raised median along US 730 with an eastbound left-turn lane at the east end u-turn lane/jughandle.	- If segment crash rate exceeds the statewide average for similar highway segments.	STIP
	F6	- Acquire right-of-way and construct an eastbound u-turn lane/jughandle at the east end of the study corridor.		

Note: Potential Funding Sources Include the Following:
STIP – Statewide Transportation Improvement Program

Project Timing and Implementation

With respect to the project priority, each project has been categorized according to whether or not it would occur in the near-term, mid-term, or long-term. Although an attempt has been made to categorize the projects, the actual timing will be primarily dependent upon the availability of funding and redevelopment of private property.

As noted in Tables 14-19, an implementation threshold has been identified for each project. The highway approach closure/consolidation projects identified along the study corridor have all been identified as near-term projects that can likely be implemented as part of the upcoming STIP funding identified by ODOT. Specific details of the approach closure/consolidation projects can be found in the following Access Management section of this plan. As will be identified in this section, there are 28 different highway approaches that can potentially be eliminated from the study corridor, thereby reducing the likelihood of rear-end and turning movement collisions at these driveway locations. Each identified driveway closure/consolidation is a relatively low cost effort, is likely to have little social impacts on the properties that they serve, and they can result in significant safety benefits to the highway.

Although the driveway closure/consolidation projects can be implemented fairly quickly and at a relatively low cost, the remaining projects all involve significant infrastructure improvements that can be more costly and time consuming to implement. Provided sufficient funding is available through the upcoming STIP project, the plan identifies a near-term widening for US 730 to a standard three-lane highway for Segments "C" through "F". This widening will provide a center left-turn lane that will better facilitate left-turn movements and decrease the potential for certain turning movement and rear-end collisions. A graphical representation of the initial near-term plan and cross section is provided in Figure 23. Recognizing that three lane highway segments have limited long-term safety benefits, the plan has identified an implementation threshold that would ultimately provide for the highway widening to be coupled with a series of raised medians, frontage roads, and jughandle/u-turn lanes. The implementation threshold involves a review of the highway segment crash rates. If it is found that the segment crash rates continue to exceed that statewide average for similar highway facilities, ODOT will then have the ability to implement the higher order access control improvements. A graphical representation of the ultimate long-term highway improvement is illustrated in Figure 24.

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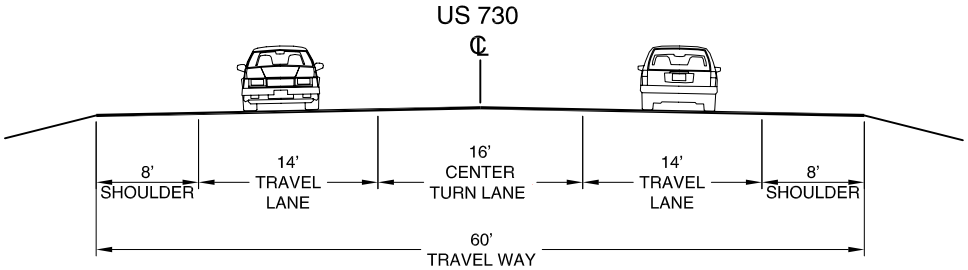
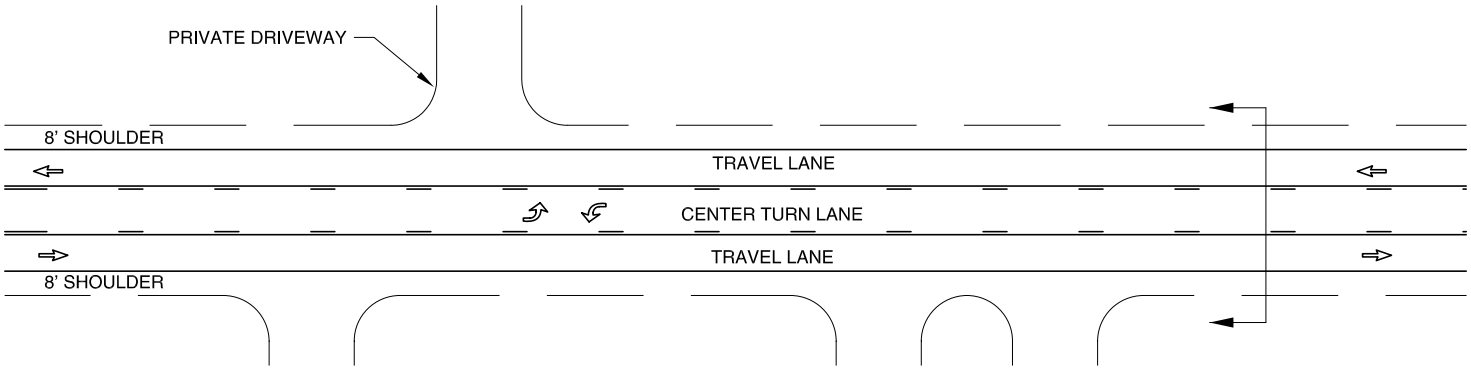
TYPICAL THREE LANE CROSS SECTION





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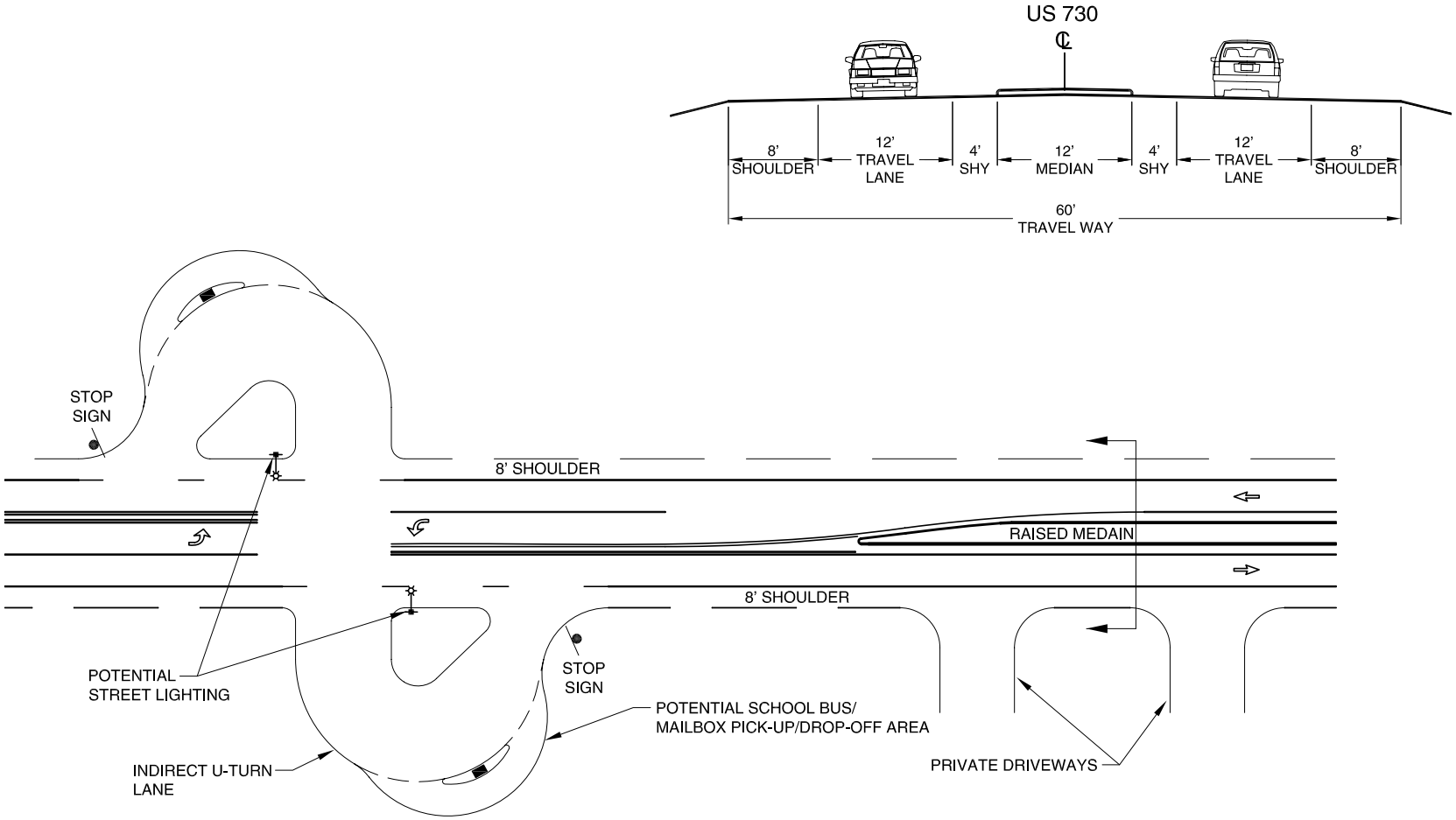
NEAR TERM US 730 PLAN AND CROSS SECTION

FIGURE 23



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LONG TERM US 730 PLAN AND CROSS SECTION

FIGURE 24

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ACCESS MANAGEMENT PLAN

US 730 between Irrigon and Umatilla currently has a significant number of driveway approaches serving individual farms, homes, and businesses as documented in the Existing Conditions section of this plan. A projected increase in travel demand along US 730 coupled with the turning movement conflicts associated with these driveways is a contributing factor in the safety issues along the study corridor. In order to more effectively manage this condition, it is important to develop a plan for managing existing and future access along the US 730 study corridor.

As part of the US 730 Corridor Refinement Plan, a generalized highway access plan was developed to help identify future access locations and public circulation routes along the study corridor. The plan shall be used by Morrow County, Umatilla County, the City of Umatilla, and ODOT in future land use decisions involving the properties located within and along the US 730 study corridor.

US 730 Access Plan

Access spacing standards along US 730 are currently regulated by the *1999 Oregon Highway Plan*. Although it is inherently difficult to modify existing roadway sections to meet these exact access management standards, under the guidance of the planning process, an access management plan has been developed for the US 730 study corridor. The resulting access management plan contains strategies and future access plans that balance the need to provide reasonable access to the highway while still efficiently accommodating through traffic. Together with the recommended circulation improvement projects, the access management plan will enhance the safety, function, and capacity of the US 730 study corridor. The following sections outline details of the access management plan for US 730.

US 730 from 15th Street to Pleasant View Road (Morrow County)

This section of the study corridor is entirely within Morrow County and is consistent with Segment "A" in Figure 20. Compared with the other sections of the study corridor, there are several unique characteristics of this section that can be used to help shape its long-term access characteristics. First, along the south side of the highway, ODOT has established access control and all of the existing highway approaches currently have reservations of access. Second, there are several platted/planned roadway corridors that have the potential to establish a supporting local roadway network. Given these conditions, the focus of the access management plan on this section of the study corridor is to consolidate the overall number of private access driveways in the near-term and work towards reliance upon the platted/planned public corridors for private access in the long-term. To achieve this, the following access plan and management strategies have been developed:

- Near-Term: Work to close/consolidate the existing highway approach permits and reservations of access through the implementation of the following strategies:
    - Identify illegal approaches and close (those driveways constructed since 1949 without a permit from ODOT) or if appropriate, place under

permit. For legal approach permits, condition the permit to state that private access will be eliminated when other alternate, reasonable access becomes available to the property.

- Identify locations where adjacent properties can share access to US 730 and relocate (indenture) existing highway approaches to the new shared locations.
- Where properties have multiple highway approaches, identify situations where approaches can be consolidated.
- Where properties already have alternate, reasonable access by some means other than US 730 such as an adjacent County roadway, purchase remaining rights of access to the highway and close the driveway(s).
- Purchase access control along those portions of the corridor where it hasn't already been acquired and where future development potential exists.

Based on these strategies, Table 20 summarizes a near-term implementation plan for closing, consolidating, and indenturing the existing highway approaches along this section of US 730[1]. Since the majority of approaches have existing reservations of access, closing them will require that ODOT purchase the right of access from property owner. Referencing figures and detailed information for each individual highway approach are provided in Appendix "C".

[1] It should be noted that the access plan outlined in Table 20 will be reviewed in greater detail and possibly refined during any subsequent implementation projects.

Table 20 Near-Term Access Management Implementation Plan (15th Street to Pleasant View Road)

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
2 (Sheet C-1)	South	100.8	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
3 (Sheet C-1)	South	102	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
4 (Sheet C-1)	South	105.3	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
6 (Sheet C-1)	South	106.9	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
7 (Sheet C-2)	South	115	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
8 (Sheet C-2)	South	119.5	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
9 (Sheet C-2)	South	123	Field Access	5N2720 (#100)	Acquire access reservation.	Property served lies within Army Corps Reservation Taking Line. No physical driveway.	Appears to have no significant property impacts.
10 (Sheet C-2)	South	127	Field Access	5N2720 (#100)	Indenture access reservation from private use to public use (future 18th Street corridor).	Property currently served lies within Army Corps Reservation Taking Line. Future location of 18th Street corridor intersection with US 730.	Appears to have no significant property impacts.
11 (Sheet C-2)	South	130	Field Access	5N2720 (#2500)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #12.	Appears to have no significant property impacts.

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
20 (Sheet C-3)	South	162.3	Field Access	5N2721B (#300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #19.	Appears to have no significant property impacts.
22 (Sheet C-3)	South	166.5	Field Access	5N2721A (#4600)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
23 (Sheet C-3)	South	169	Field Access	5N2721A (#4600)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
26 (Sheet C-4)	South	181	Field Access	5N2721A (#4900)	Acquire access reservation.	Property has alternative access to US 730 via Rand Road.	Appears to have no significant property impacts.
27 (Sheet C-4)	South	184.2	Field Access	5N2721A (#5800)	Acquire access reservation.	Property has alternative access to US 730 via access #29.	Appears to have no significant property impacts.
28 (Sheet C-4)	South	185.7	Field Access	5N2721A (#5800)	Acquire access reservation.	Property has alternative access to US 730 via access #29.	Appears to have no significant property impacts.

- Mid/Long-Term: Establish public access to the south side of US 730 as outlined below.
  - As part of private property redevelopment or capital improvement projects, establish a public access reservation (through a Grant of Access) and approach at the future 18th Street corridor. This full access connection would provide both near-term and long-term access to/from US 730. It should be noted that some property will need to be acquired from the US Army Corps of Engineers in order to establish a public roadway connection to US 730.
  - As part of private property redevelopment, establish a public access reservation (through a Grant of Access) at the future 19th Street corridor. In the near-term, the 19th Street corridor would be full access to/from US 730. When supporting parallel roadway facilities (Oregon Street and Bevington Lane) are established, this access could potentially revert to a limited access right-in/right-out intersection if segment crash rates along US 730 exceed statewide rates for similar highway facilities.
  - As part of redevelopment, establish a public access reservation (through a Grant of Access) at the future 21st Street corridor. This full access connection would provide both near- and long-term access to/from US 730.
  - In the near-term, the existing Rand Road access would be full access to/from US 730. When supporting parallel roadway facilities (Oregon Street and Bevington Lane) are established, this access could potentially revert to a limited access right-in/right-out intersection if segment crash rates exceed statewide rates for similar highway facilities.
  - Upon redevelopment, redirect property access to the local roadway system, purchase remaining access reservations, and close highway approaches.
- Mid/Long-Term: Establish public access to the north side of US 730 opposite Rand Road.
  - As part of private property redevelopment, establish a public access approach to the north side of US 730 across from Rand Road. When supporting parallel roadways are established that provide backage road access to Pleasant View Road, this access could potentially revert to a limited access right-in/right-out intersection if segment crash rates along US 730 exceed statewide rates for similar highway facilities.
  - Upon redevelopment, redirect property access to the local roadway system and close existing highway approaches.
- Mid/Long-Term: Construct raised medians along US 730 between the future 18th Street corridor and Pleasant View Road with full access median breaks at the future 18th Street, future 21st Street, and existing Pleasant View Road corridors. The construction of medians should not be considered until parallel roadway facilities are in place, alternate access has been established for properties impacted by the median, and noted safety performance measures have been met.

US 730 from Pleasant View Road to East End of the Study Corridor (Umatilla County)

This section of the study corridor is entirely within Umatilla County and is consistent with Segments "B" through "F" in Figures 21-22. Compared with the Morrow County section, there are significantly more highway approaches and less potential for the development of a supporting local roadway network. Given these conditions, the focus of the access management plan on this section of the study corridor is to consolidate the overall number of private access driveways in the near-term and plan to limit access and turning movements in the long-term through frontage roads and highway median controls. To achieve this, the following access plan and management strategies have been developed:

- Work to consolidate the existing highway approach permits and reservations of access through the implementation of the following strategies:
  - Identify illegal approaches and close (those driveways constructed since 1949 without a permit from ODOT) or if appropriate, place under permit. For legal approach permits, condition the permit to state that private access will be eliminated when other alternate, reasonable access becomes available to the property.
  - Identify locations where adjacent properties can share access to US 730 and relocate (indenture) existing highway approaches to the new shared locations.
  - Where properties have multiple highway approaches, identify situations where approaches can be consolidated.
  - Where properties already have alternate, reasonable access by some means other than US 730 such as an adjacent County roadway, purchase remaining rights of access to the highway and close the driveway(s).
  - Purchase access control along those portions of the corridor where it hasn't already been acquired and where future development potential exists.

Based on these strategies, Table 21 summarizes a near-term implementation plan for closing, consolidating, and indenturing the existing highway approaches along this section of US 730[2]. Referencing figures and detailed information for each individual highway approach are provided in Appendix "C".

[2] It should be noted that the access plan outlined in Table 21 will be reviewed in greater detail and possibly refined during any subsequent implementation projects.

Table 21 Near-Term Access Management Implementation Plan (Pleasant View Road to East End of Study Corridor)

ID #	Side of US 730	M.P.	Type of Access	Serves Tax Lot #	Action	Justification	Potential Impact to Property
36 (Sheet C-5)	South	213.56	Field Access	5N2722 (#400)	Close driveway.	Property has alternative access to US 730 via access #37.	Appears to have no significant property impacts.
42 (Sheet C-6)	South	255.27	Field Access	5N2714C (#600)	Close driveway.	Property has alternative access to US 730 via access #43.	Appears to have no significant property impacts.
45 (Sheet C-7)	South	264.25	Field Access	5N2714C (#800)	Close driveway.	Property has alternative access to US 730 via Fox Lane.	Appears to have no significant property impacts.
46 (Sheet C-7)	South	266.36	Residence	5N2714C (#800)	Close driveway.	Property has alternative access to US 730 via Fox Lane.	Would likely require new access road to Fox Lane.
55 (Sheet C-8)	South	289.59	Field Access	5N2714D (#1300)	Close driveway.	Property has alternative access to US 730 via access #56.	Appears to have no significant property impacts.
69 (Sheet C-9)	South	321.27	Field Access	5N2713C (#3200)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #70.	Appears to have no significant property impacts.
72 (Sheet C-9)	South	329.19	Field Access	5N2713D (#1800)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #73.	Appears to have no significant property impacts.
91 (Sheet C-11)	South	377.24	Field Access	5N2818 (#1508)	Close driveway.	Property has alternative access to US 730 via access #92	Appears to have no significant property impacts.
98 (Sheet C-11)	South	387.80	Field Access	5N2818DB (#2300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via access #97.	Appears to have no significant property impacts.
100 (Sheet C-11)	South	389.91	Field Access	5N2818DB (#300)	Acquire access reservation and close field access to US 730.	Property has alternative access to US 730 via Powerline Road.	Appears to have no significant property impacts.
101 (Sheet C-12)	South	394.13	Field Access	5N2818DB (#300)	Acquire access reservation and close field access.	Property has alternative access to US 730 via Powerline Road.	Appears to have no significant property impacts.
105 (Sheet C-11)	North	395.72	Field Access	5N2818 (#200)	Acquire access reservation and close field access.	Property has alternative access to US 730 via access #104.	Appears to have no significant property impacts.
108 (Sheet C-11)	North	394.13	Business	5N2818 (#400)	Acquire access reservation and close access.	Property has alternative access to US 730 via access #109.	Appears to have no significant property impacts.

- Mid/Long-Term: Establish a frontage road on the south side of US 730 between Pleasant View Road and Fox Lane.
  - Frontage roads will be considered if segment crash rates along that US 730 exceed statewide rates for similar highway facilities.
  - Close individual property driveways and reconnect them to the frontage road.
- Mid/Long-Term: Construct raised medians along US 730 between Fox Lane and the east end of the study corridor.
  - Full access median breaks would be provided at Fox Lane, Moorlando Lane/South Shore Drive (west), Oxbow Lane/South Shore Drive (east), and a new north side access at the east end of the study corridor.
  - The construction of medians should not be considered until segment crash rates along that section of US 730 exceed the statewide rates for similar highway facilities.
  - Construct jughandle/u-turn lanes at the median breaks to better facilitate private property access that is restricted by the raised medians.
- All remaining highway approaches would continue to have median restricted limited access to US 730.

Local Access Management Standards

As part of their existing Transportation System Plan, Morrow County, Umatilla County, and the City of Umatilla have all adopted an access management plan for their applicable roadways/streets. These standards are outlined in the respective Transportation System Plans (TSP) and are all consistent with the identified projects listed in the US 730 Access Management Plan. In addition to the local access management standards, each of the TSPs have adopted the ODOT access management standards outlined in the *1999 Oregon Highway Plan* (subsequently reproduced in Appendix "E" of this document) for private property access to state facilities. It should be noted that the City of Umatilla TSP was developed prior to completion of the *1999 Oregon Highway Plan*. As such, the access spacing standard references are no longer valid. For consistency purposes, it is recommended that the City of Umatilla modify the references to the current standards outlined in the *1999 Oregon Highway Plan*.

TRANSPORTATION FUNDING PLAN

Typically funding for transportation improvement projects are derived from state and local funding sources. The following paragraphs provide a general overview of these sources. As funding for projects becomes available, the list of transportation improvement projects identified in the refinement plan should be used to select projects for implementation.

State Funding

ODOT operates and maintains US 730 within the study corridor. State and Federal funds administered through ODOT will be the primary sources of funding for improvements to this facility. All highway related improvement projects are funded through the Statewide Transportation Improvement Program (STIP). As described in Section 2, ODOT currently has an upcoming STIP project set aside for US 730. This STIP project has identified funding for the purposes of addressing the safety issues along US 730. With the help of this plan, the funding will be used to implement specific projects for the study corridor. In the near-term, this funding should be used to perform some of the highway approach closure/consolidation projects identified throughout the study corridor. In addition, some of the highway widening projects (three-lane cross-section and shoulder widening) are also recommended in the near-term for segments located in the eastern third of the study corridor. Given the length of the corridor, other projects such as the frontage road segment and construction of raised medians will most likely need to be funded through future STIP projects as warranted.

Local Funding

Many of the circulation projects identified in the western third of the study corridor (Morrow County) involve the planning and development of parallel and supporting local roadways to support existing and future development. Given the high level of annual expenditures needed for construction of the transportation projects identified, existing sources of revenue are not expected to be adequate to meet the demand for new projects. To meet the additional funding needs, Morrow County may wish to consider additional revenue-generating options such as systems development charges and local transportation improvement districts to supplement existing general fund revenues. Projects such as the 18th Street, 19th Street, 21st Street, and Bevington Lane corridors would benefit from these funding sources.

It should be noted that, even with increased funding, it may prove difficult to fund all of the projects identified in this plan. Accordingly, Morrow County and ODOT should review the identified improvement projects on a periodic basis to prioritize local transportation system funding such that it most appropriately reflects current and projected needs.

US 730 CORRIDOR REFINEMENT PLAN IMPLEMENTATION

To implement the recommendations of the US 730 Corridor Refinement Plan, the contents of this plan will need to undergo an extensive review and adoption process at the local (City of Umatilla, Morrow County, and Umatilla County) and state (ODOT and Oregon Transportation Commission) levels. These steps are outlined below.

Preparation of Morrow County, Umatilla County, and City of Umatilla TSP Amendments

All three jurisdictions will need to either amend their TSPs per the applicable elements of the US 730 Corridor Refinement Plan and/or adopt the plan by reference.

DLCD Review

As requires by OAR 660-018, the amendment documents will need to be submitted to the Department of Land Conservation and Development (DLCD) for review at least 45 days prior to the first evidentiary public hearing.

Morrow County

The Morrow County Planning Commission and County Court will need to hold separate public hearings to review and formally adopt the applicable contents of the Morrow County TSP.

Umatilla County

The Umatilla County Planning Commission and Board of Commissioners will need to hold separate public hearings to review and formally adopt the applicable contents of the Morrow County TSP.

City of Umatilla

The City of Umatilla Planning Commission and City Council will need to hold separate public hearings to review and formally adopt the applicable contents of the Morrow County TSP.

Oregon Transportation Commission

Following local adoption of the contents of the US 730 Corridor Refinement Plan, the Oregon Transportation Commission (OTC) will need to formally adopt the plan.

Appendix A — PPMT and Public Involvement Meeting Summaries

Appendix A – PPMT and Public Involvement Meeting Summaries

To ensure that adequate project coordination and public participation occurred throughout the development of the US 730 Corridor Refinement Plan, a series of Project Planning Management Team (PPMT) and public open house meetings were held over the course of the project. These meeting dates and objectives are summarized below.

Meeting Event	Date	Purpose/Objective
PPMT Conference Call (Meeting #1)	10/16/06	The purpose of the PPMT Conference Call #1 was to introduce the US 730 Corridor Refinement Plan, review the project schedule, develop project goals & objectives, set deliverable dates, and develop the remaining project schedule.
PPMT (Meeting #2)	11/20/06	The purpose of the second PPMT meeting was to review the draft versions of Technical Memorandums #1 (Plans and Policy Review) and #2 (Existing Land Use/Transportation Conditions).
PPMT (Meeting #3)	12/13/06	The purpose of the third PPMT meeting was to review the draft version of Technical Memorandum #3 (Future Transportation Conditions) and discuss future access & circulation opportunities.
Public Open House #1	12/13/06	The purpose of Public Open House #1 was to introduce the US 730 Corridor Refinement Plan study to adjacent property owners and interested citizens. Those in attendance were asked to participate in a mini design charette that focused on access and circulation alternatives along the highway corridor.
PPMT (Meeting #4)	2/15/07	The purpose of the fourth PPMT meeting was to review the draft findings of Technical Memorandum #4 (Circulation and Access Opportunities & Constraints Analysis) and the two circulation and access alternatives developed from the December 13, 2006 public open house.
PPMT (Meeting #5)	4/25/07	The purpose of the fifth PPMT meeting was to review refinements to the two circulation and access alternatives potential implementation strategies.
Public Open House #2	4/25/07	The purpose of the 2nd Public Open House was to review and comment upon the two initial safety, access, and circulation alternatives.
PPMT Conference Call (Meeting #6)	6/22/07	The purpose of this conference call was to prepare for and review the presentation strategy for the upcoming June 28, 2007 Public Open House.
Public Open House #3	6/28/07	The purpose of the 3rd Public Open House was to provide the public an additional opportunity to learn about the corridor planning process and review/comment upon the two initial safety, access, and circulation alternatives. Detailed notes were taken on the public questions and a formal response form was prepared.
PPMT Conference Call (Meeting #7)	8/1/07	The purpose of this conference call was to review the DRAFT Q&A response letter/meeting announcement flyer for the upcoming August 20, 2007 Public Open House.
Public Open House #4	8/20/07	The purpose of the 4th Public Open House was to provide an opportunity for the public to review the third safety, access, and circulation alternative developed based on comments and feedback from the 3rd Public Open House.
PPMT Conference Call	9/11/07	The purpose of the PPMT meeting was to strategize and refine the final approach of the formal planning document and hearing process.

Appendix B—Applicable Umatilla County and Morrow County Zoning Information

Appendix B – Zoning Codes

Applicable Morrow County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Rural Residential (RR-1)	– Single-family dwelling on an individual lot, including a mobile home – Farming – Utility facility necessary to serve the area or County. – Public park, recreation area, community or neighborhood center. – Other public uses or buildings necessary to serve the rural residential needs for the area.	– Golf Course. – Water supply and treatment facility. – Sewage disposal and treatment facility. – Solid waste disposal site and facility. – Two-family dwelling (duplex). – Home occupations	– The minimum average width of lots shall be 150 feet and have an area not less than 2 acres.
Exclusive Farm Use (EFU)	– Farm use – Propagation or harvesting of a forest product. – Buildings other than dwellings customarily provided in conjunction with farm use. – One single family dwelling customarily provided in conjunction with farm use. – A single family dwelling for an agricultural operator's help – A replacement dwelling – Creation, restoration and enhancement of wetlands. – Creation, restoration and enhancement of wildlife habitat. – Climbing and passing lanes within a highway right-of-way existing as of July 1, 1987. – Reconstruction or modification of public roads and highways. – Temporary public road and highway detours	– Single-family residential dwellings including mobile homes subject to Section 4.110 of this ordinance, not provided in conjunction with farm use – One single family dwelling on a tract of record, – Accessory (secondary) farm dwellings, including mobile homes subject to Section 4.110, customarily provided in conjunction with farm use – One manufactured dwelling, or recreational vehicle, or the temporary residential use of an existing building in conjunction with an existing dwelling – Residential home as defined in ORS 197.675 in an existing dwelling. – Room and board (bed and breakfast) arrangements for a maximum of five unrelated persons in an existing residence. – Livestock sales yard, hog or mink farm within one mile of a lot in a residential zone. – Commercial activities that are in conjunction with farm uses but not including the processing of farm crops – Propagation, cultivation, maintenance, and	– A lot or parcel of 160 acres or more shall be considered a farm unit. – A lot or parcel of less than 160 acres may be approved as a farm unit pursuant to the Conditional Use Permit process and when found to comply with the Agricultural Lands policies of the Comprehensive Plan and the provisions of Section 5.120 of the Morrow County Subdivision Ordinance.

Applicable Morrow County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Exclusive Farm Use (EFU)	– Minor betterment of existing public roads and highway facilities, such as maintenance yards, weight stations and rest areas – Alteration, restoration or replacement of a lawfully established dwelling that meets all the following criteria: – A replacement dwelling to be used in conjunction with farm use – Utility and transmission towers not exceeding 200 feet in height. – Public or private schools, including all buildings essential to the operation of a school – Churches and cemeteries – A site for the disposal of solid waste – Operations for the exploration for minerals as defines – Operations for the exploration of geothermal resources – Seasonal farm worker housing – A winery – Subdivisions and Series Partitions for the purpose of establishing "non-farm dwellings" – Onsite filming and activities accessory to onsite filming for 45 days or less – A site for the takeoff and landing of model aircraft	harvesting of aquatic or insect species. – Operations conducted for the exploration, mining and processing of geothermal resources – Operations conducted for the mining, crushing or stockpiling of mineral, aggregate and other mineral resources – Processing, as defined by ORS 517.750, of aggregate into asphalt or Portland cement – Private parks, playgrounds, hunting and fishing preserves and campgrounds – Parks, playgrounds or community centers owned by a governmental agency or non-profit community organization. – Golf Courses except that such uses are prohibited on high value farmland. – Commercial utility facilities for the purposes of generating power for public use by sale. – Utility facilities "necessary" for public service – Personal-use airports for airplanes and helicopter pads, including associated hangar, maintenance and service facilities. – Home occupation – A facility for the primary processing of forest products – Dog kennels, except that such uses are prohibited on high value farmland – A site for the disposal of solid waste – Construction of additional passing and travel lanes requiring the acquisition of right-of-way, but not resulting in the creation of new land parcels. – Reconstruction or modification of public roads and highways involving the	– Big Game Range Restrictions : In the case of Farm Use areas identified as Big Game Habitat no dwelling will be authorized where the overall density within a square mile exceeds one dwelling per 160 acres.

Applicable Morrow County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Exclusive Farm Use (EFU)		removal or displacement of structures but not resulting in the creation of new land parcels. – Improvement of public roads and highway related facilities such as maintenance yards, weigh stations, and rest areas – Farm ranch recreation – Onsite filming and activities accessory to onsite filming for more than 45 days – Expansion or relocation of existing county fair and rodeo grounds and activities directly relating to county fairgrounds – 29. Operations for the extraction and bottling of water. – Composting facilities – A wildlife habitat conservation and management plan – A facility for the processing of farm crops – A living history museum – Utility facility service lines and accessory facilities or structures that end at the point where the utility service is received by the customer and that are located on one or more of the following: – An outdoor mass gathering – Any gathering subject to review by the Planning Commission	

Applicable Umatilla County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Rural Residential Zone (RR-2)	– Farm use Uses Permitted with a Zoning Permit – Single family dwelling – Home occupation – Mobile home – Non-commercial greenhouse – Public or semi public use	– Church – Day care/Nursery – Commercial greenhouse or nursery – Agricultural roadside stand – Community center, park, playground, or recreational facility – Boarding house – Rest home / nursing home – Utility facility – Vet clinic – Stable – Model home – Cemetery – Personal use landing strip – Rest areas, weigh stations –	– Principal dwellings: 2 acres – All other uses determined by hearings officer
Exclusive Farm Use (EFU)	– Farm use – Propagation of a forest product – Temporary public road and highway detours – Utility facility service lines Uses Permitted with a Farm Exempt Permit – Non-inhabited agricultural buildings Uses Permitted with a Zoning Permit – Exploration/production of geothermal resources – Exploration of minerals – Winery – Farm stand – Model aircraft landing and takeoff facility – Fire service facilities – Greyhound breeding, kenneling, training	– Commercial activities in conjunction with farm uses – Operations for mining and geothermal resources – Private parks, playgrounds, hunting, fishing – Public parks – Golf courses – Commercial utility facilities – Personal use airports – Home occupations – Community centers – Dog kennels – Solid waste disposal site – Destination resort – Living history museum – Water bottling operation – Wildlife habitat – Composing facilities	– Farm parcels 160 acres or larger

Applicable Umatilla County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Suburban Residential Zone (R-2)	– Farm use – Mobile home park – Single family dwelling – Planned unit development – Public or semi-public use – School	– Cemetery – Church – Golf course – Mobile home park – Trailer park – Radio or television transmitter – Utility facility – Boarding, lodging or rooming house – Multi-family dwelling – Two family dwelling – Model home	– 1 acre minimum lot area for residential use – Non residential use – to be determined by DEQ – Multi-family – 1 acres for first four dwelling units plus 2,000 square feet for each additional dwelling unit.
Two Acre Residential Zone (R-1A)	– Farm use – Single family dwelling – Mobile home – Noncommercial outdoor recreation – School – Noncommercial greenhouse or nursery – Planned unit developments	– Commercial greenhouse or nursery – Roadside stand – Grange hall or community center – Boarding, lodging or rooming house – Rest home, nursing home, or convalescent home – Utility facility – Mobile home park – Trailer park – Veterinary clinic – Church – Horse boarding stable – Model home	– 2 acres minimum lot area for residential use – Non residential use – to be determined by DEQ
Tourist Commercial Zone (C-2)	– Addition to an existing structure – Automobile service station – Boarding, lodging or rooming house – Eating or drinking establishment – Food store – Gift shop – Information center – Motel, hotel – Sporting goods	– Accessory dwelling unit – Planned unit development – Public or semi-public use – Trailer park – Utility facility	– As determined by DEQ

Applicable Umatilla County Zoning Districts			
Zoning District	**Uses Permitted Outright**	**Conditional Uses**	**Minimum Lot Size**
Exclusive Farm Use (F-1)	– Farm use – Public or private school – Church – Propagation of a forest product – Utility facilities necessary for public service – Farm use dwelling unit	– Commercial activities in conjunction with farm uses – Operations for mining and geothermal resources – Private parks, playgrounds, hunting, fishing – Public parks – Golf courses – Commercial utility facilities – Personal use airports – Home occupations – A facility for the primary processing of a forest product	– 19 acres for a principal dwelling unit – Nonfarm uses – determined by DEQ
General Rural Zone (F-2)	– Agriculture experiment station – Boarding or lodging house – Single family dwelling – Mobile home, but excluding mobile home parks – Farm use – Forest products growing and harvesting, including processing of locally harvested crops – Planned unit development – Veterinary or animal hospital – Water storage reservoir – School – Church – Public or semi public uses – Park, playground – Golf course – Radio and television station or tower – Horse boarding stable	– Aircraft charter, rental, service, and maintenance – Airport or landing strip – Dog pound, kennel – Grounds and buildings for games or sports, country clubs, swimming, boating, tennis clubs, and similar activities – Gun or archery range – Hog farm – Sanitary landfill or other solid waste disposal – Livestock feed yard – Livestock sales yard – Commercial mining or asphalt plant – Mobile home park – Roadside stand for sale of agricultural products – Noncommercial gravel pit – Utility facility – Drive-in theater – Junkyard – Storage yard	– 19 acres for principal dwelling unit – All other uses – determined by DEQ

Appendix C—Existing US 730 Access Inventory

Appendix C – Existing US 730 Access Inventory

Existing US 730 Access Inventory					
ID #	Side of US 730	Engineering Station	Reservation of Access?	Serves Parcel (Map / Tax Lot #)	Road Name / Access Use
1	South	84.73	Public Street	5N2719	15th St.
2	South	100.8	Yes	5N2720, 101	No physical driveway*
3	South	102	Yes	5N2720, 101	No physical driveway*
4	South	105.3	Yes	5N2720, 101	No physical driveway*
5	South	105.322	Yes	5N2720, 101	Residence
6	South	106.906	Yes	5N2720, 101	Field, Residence
7	South	115	Yes	5N2720, 101	No physical driveway*
8	South	119.5	Yes	5N2720, 101	No physical driveway*
9	South	123	Yes	5N2720, 101	No physical driveway*
10	South	127	Yes	5N2720, 101	No physical driveway*
11	South	130	Yes	5N2720, 2500	No physical driveway*
12	South	136.474	Yes	5N2720, 2500	Residence
13	South	136.474	Yes	5N2720, 2401	Farm
14	South	149.146	Yes	5N2721, 600	Residence
15	South	150.202	Yes	5N2721B, 800	Residence
16	South	152.842	Yes	5N2721B, 700	Residence
17	South	156.01	Yes	5N2721B, 500, 600	Residence
18	South	158.122	Yes	5N2721B, 400	Residence - parking for boats
19	South	162.346	Yes	5N2721B, 300	Residence
20	South	162.3	Yes	5N2721B, 300	No physical driveway*
21	South	166.57	Yes	5N2721B, 200	Residence
22	South	166.5	Yes	5N2721A, 4600	No physical driveway*
23	South	169	Yes	5N2721A, 4600	No physical driveway*
24	South	174.49	Yes	5N2721A, 4700	Residence
25	South	177.13	Public Street	5N2721A, 4800	Rand Road
26	South	181	Yes	5N2721A, 4900	No physical driveway*
27	South	184.2	Yes	5N2721A, 5800	No physical driveway*
28	South	185.7	Yes	5N2721A, 5800	No physical driveway*
29	South	189.274	Yes	5N2721A, 5700, 5800	Residence
30	South	192.5	Yes	5N2721A, 5900	No physical driveway*
31	South	195.61	Public Street	5N2722, 801	Pleasant View Road - Umatilla and Morrow County Line
32	South	198.778	Yes	5N2722, 892	Business - Fruit Stand
33	South	200.362	Yes	5N2722, 700	Residence
34	South	203.002	No	5N2722, 500, 502	Residence
35	South	205.642	No	5N2722, 501	Residence

Existing US 730 Access Inventory					
ID #	Side of US 730	Engineering Station	Reservation of Access?	Serves Parcel (Map / Tax Lot #)	Road Name / Access Use
36	South	213.562	No	5N2722, 400	Field
37	South	222.01	No	5N2722, 301, 302, 400	Field
38	South	225.706	No	5N2722, 201	Field
39	South	227.29	No	5N2722, 200	Field
40	South	242.074	No	5N2722, 200	Residence
41	South	249.466	No	5N2714C, 500, 800, 1000, 1002, 1001	Harbor Lite Road
42	South	255.274	No	5N2714C, 600	Field
43	South	257.914	No	5N2714C, 600	Residential
44	South	262.666	No	5N2714C, 800, 801, 900 5N2723B, 100-400, 501-507, 600-700, 801, 901,	Fox Lane
45	South	264.25	No	5N2714C, 800	Farm
46	South	266.362	No	5N2714C, 800, 801, 900	Residential
47	South	267.418	No	5N2714C, 1000	Residence
48	South	269.002	No	5N2714C, 1100	Residence
49	South	269.53	No	5N2714C, 1200	Residence
50	South	271.642	No	5N2714C, 1300, 1400, 1600, 1700, 1800	Dans Lane
51	South	274.282	No	5N2714C, 1500	Residence
52	South	276.394	No	5N2714D, 1100	Residence
53	South	282.202	No	5N2714D, 1101, 1102, 1103, 1104 5N2723A, 100, 200, 201-205	Lee Estates Lane
54	South	286.954	No	5N2714D, 1200	Residence
55	South	289.594	No	5N2714D, 1300	Residence
56	South	291.178	No	5N2714D, 1300, 1400-1402	Residence
57	South	293.29	No	5N2714D, 1500	Residence
58	South	294.874	No	5N2714D, 1600, 1800	Business - Schneider's Auto
59	South	297.514	No	5N2714D, 1700, 1900-2500	Moorlando Lane
60	South	300.154	No	5N2714D, 2600	Residence
61	South	302.266	No	5N2714D, 2700 5N2713C, 1300	Residence
62	South	302.266	No	5N2713C, 1400	Residence
63	South	305.434	No	5N2713C, 1500-1800	Kurz Lane
64	South	306.49	No	5N2713C, 1900, 2000, 2100	Westfall Lane
65	South	309.13	No	5N2713C, 2300, 2400	Residence
66	South	312.298	No	5N2713C, 2500	Residence

Existing US 730 Access Inventory					
ID #	Side of US 730	Engineering Station	Reservation of Access?	Serves Parcel (Map / Tax Lot #)	Road Name / Access Use
67	South	313.882	No	5N2713C, 2600, 2700, 2900	Residence
68	South	315.994	No	5N2713C, 2800, 3000, 3100	Residence
69	South	321.274	Yes	5N2713C, 3200	Residence
70	South	324.442	Yes	5N2713C, 3200	Residence
71	South	328.138	Yes	5N2713D, 1800, 1900	Farm
72	South	329.194	Yes	5N2713D, 1800	Farm
73	South	331.834	Yes	5N2713D, 1800	Residence
74	South	334.474	No	5N2713D, 2000, 2100, 2200, 2300, 2400	Linnville Lane
75	South	338.17	No	5N2713D, 2300	Heck Lane
76	South	339.226	No	5N2713D, 2500	Residence
77	South	343.45	No	5N2713D, 2700	Business - Espresso, Residence
78	South	345.562	No	5N2713D, 2700	Residence
79	South	346.09	No	5N2713D, 2900, 3000, 3200	Residence , Business (Shared)
80	South	347.674	No	5N2713D, 3200	Business - Young's Orchard and Fruit Stand
81	South	348.202	No	5N2713D, 3100, 3200, 3300, 3400, 3500	Peach Tree Lane
82	South	349.786	No	5N2713D, 3300	Residence
83	South	351.37	No	5N2713D, 3600	Residence
84	South	356.122	No	5N2818, 700, 800, 3500	Oxbow Lane (west intersection)
85	South	356.122	No	5N2818, 1000	Oxbow Lane (east intersection)
86	South	362.986	No	5N2818, 1100	Residence (mobile home park)
87	South	370.906	No	5N2818, 1200	Business
88	South	373.546	No	5N2818, 1300	Residence
89	South	374.602	No	5N2818, 1502	Residence
90	South	376.714	No	5N2818, 1502	Residence
91	South	377.242	No	5N2818, 1508	Farm, Field
92	South	380.41	No	5N2818, 1500, 1504, 1507, 1508, 1509	Apricot Lane
93	South	383.05	No	5N2818DB, 1800	Business
94	South	383.578	No	5N2818DB, 1700, 1800, 1900, 2000	Buell Lane
95	South	384.634	No	5N2818DB, 1700	Residence
96	South	386.218	No	5N2818DB, 1600	Residence
97	South	387.274	No	5N2818DB, 2300	Residence
98	South	387.802	Yes	5N2818DB, 1500, 2100, 2300	Residence

Existing US 730 Access Inventory					
ID #	Side of US 730	Engineering Station	Reservation of Access?	Serves Parcel (Map / Tax Lot #)	Road Name / Access Use
99	South	389.914	Yes	5N2818DB, 300	Field
100	South	389.914	Yes	5N2818DB, 300	Field
101	South	394.138	Yes	5N2818DB, 300	Field
102	South	396.778	Public Street	5N2818DB, 300	Power Line Road
103	North	397.834	Yes	5N2818DB, 200	Business
104	North	398.89	Yes	5N2818, 200	Business
105	North	395.722	Yes	5N2818, 200	No physical driveway*
106	North	396.7	Yes	5N2818, 401	Residence
107	North	395.194	Yes	5N2818, 401	Business
108	North	394.138	Yes	5N2818, 400	Business
109	North	393.082	Yes	5N2818, 400	Business
110	North	390.97	No	5N2818, 600, 604, 605	Farm
111	North	366.154	Public Street	5N2818, 605	Southshore Drive – east driveway
112	North	355.066	Public Street	5N2714D, 300-1000	Southshore Drive – West driveway
113	North	297.514	No	5N2714D, 300-1000	Residence
114	North	282.202	No	5N2714C, 300	Wilcox Lane
115	North	264.778	No	5N27, 101	Public (Irrigon wildlife area)
116	North	242.074	No	5N2722, 600	Residence/Community – Columbia Equestrian Pleasant View
117	North	195.61	No	5N2721A, 102	Residence
118	North	182.41	No	5N2721A, 4500	Residence
119	North	181.354	No	5N2721A, 4500	Residence
120	North	174.49	Yes	5N2721, 100	Public – Wildlife Viewing Area
121	North	149.146	No	5N2721, 100	Public – Wildlife Viewing Area
122	North	128.026	No	5N2720, 100	Public – Wildlife Viewing Area

* There is a reservation of access registered at this particular engineering station, however no physical driveway serving the adjacent property.

Insert Figure C-1

Insert Figure C-2

Insert Figure C-3

Insert Figure C-4

Insert Figure C-5

Insert Figure C-6

Insert Figure C-7

Insert Figure C-8

Insert Figure C-9

Insert Figure C-10

Insert Figure C-11

Appendix D—Existing Access Management Policy

Appendix D – Existing Access Management Policy

1999 OREGON HIGHWAY PLAN

Policy 3A: Classification and Spacing Standards

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

Action 3A.1

Manage access to state highways based on the access management classifications as defined below.

3. Regional Highways – b. Rural Other

- Regional Rural Highways provide for efficient and safe medium to high speed and medium to high volume traffic movements.
- These highways serve as routes passing through areas which have moderate dependence on the highway to serve land access.
- The function of the highway supports selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, preserving highway capacity on land adjacent to an urban growth boundary, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.
- The primary function of these highways is to provide connections and links to regions within the state, and between small urbanized areas and larger population centers through connections and links to Freeways, Expressways, or Statewide Highways.

3. Regional Highways – d. Urban Other

- The function of the highway is consistent with selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.

Action 3A.2

Establish spacing standards on state highways based on highway classification, type of area and speed. (See table)

- These standards shall be applied to the development of all ODOT highway construction, reconstruction or modernization projects, approach road and private road crossing permits, as well as all planning processes involving state highways, including corridor studies, refinement plans, state and local transportation system plans and local comprehensive plans.
- These standards do not retroactively apply to legal approach roads or private road crossings in effect prior to adoption of this Oregon Highway Plan, except or until any redevelopment, change of use, or highway construction, reconstruction or modernization project affecting these legal approach roads or private road crossings occurs. At that time the goal is to meet the appropriate spacing standards, if possible, but at the very least to improve current conditions by moving in the direction of the spacing standards.
- When in-fill development occurs, the goal is to meet the appropriate spacing standards. In some cases this may not be possible, and at the very least the goal is to improve the current conditions by moving in the direction of the spacing standards. Thus, in-fill development should not worsen current approach road spacing. This may involve such options as joint access.
- In some cases access will be allowed to a property at less than the designated spacing standards, but only where a right of access exists, that property does not have reasonable access, and the designated spacing cannot be accomplished. If possible, other options should be considered such as joint access.
- If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

1999 Oregon Highway Plan Spacing Standards for Regional Highway (feet)					
Posed Speed	**Rural Expressway**	**Rural**	**Urban Expressway**	**Urban**	**STA**
≥55	5,280	990	2,640	990	-
50	5,280	830	2,640	830	-
40 & 45	5,280	750	2,640	750	-
30 & 35	-	600	-	600	
≤25	-	450	-	450	

Action 3A.3

Manage the location and spacing of traffic signals on state highways to ensure the safe and efficient movement of people and goods. Safe and efficient traffic signal timing depends on optimal intersection spacing. It is difficult to predetermine where such locations should exist, although half-mile intersection spacing for Statewide and Regional Highways is desirable.

Action 3A.4

In general, traffic signals should not be installed on rural high-speed highways because they are inconsistent with the function of these highways to provide for safe and efficient high-speed travel. Although a rural traffic signal may be warranted in a particular instance to control traffic due to existing conditions, ODOT and local governments must avoid creating conditions that would make future traffic signal installations necessary in rural areas. Amendments to local comprehensive plans or land use ordinances that would require a traffic signal on rural highways are inconsistent with the function of the highway.

Action 3.A.5

Some private approach roads may have characteristics similar to public road approaches. Such similarities may allow a private approach road to operate as a public road approach. For a private approach road to be considered for a signal, it must have the following attributes:

- High traffic volumes, typically 200 vehicles or more during the peak period;
- Design geometry consistent with that of public road intersections including curbs, appropriate lane widths, pavement markings and vertical alignment; and
- An adequate approach throat length to assure that the movement of entering vehicles is not impeded by on-site queuing.

Signalization of a private approach road shall be dependent upon meeting signal spacing criteria considering the likelihood that nearby locations may be signalized in the future as development occurs in the area. Signal spacing concerns may require that a route be established to a nearby public street that can be signalized at its intersection with the state highway, or a shared private driveway may be required to serve the needs of multiple properties. If a private approach road is considered, it should also be required to connect to the existing or planned local street system and allow use by surrounding properties.

Policy 3B: Medians

It is the policy of the State of Oregon to plan for and manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development patterns that are consistent with approved transportation system plans.

Action 3B.1

Plan for a level of median control for the safe and efficient operation of state highways, consistent with the classification of the highway. Corridor plans and transportation system plans shall identify planned median treatments.

Action 3B.2

Design and construct nontraversible medians for:

- Modernization of all rural, multi-lane Expressways, including Statewide (NHS)

Action 3B.3

Consider construction of nontraversible medians for:

- Modernization of all urban, multi-lane Statewide (NHS) Highways;
- Multi-lane highways undergoing 3-R or 4-R improvements; and
- Highways not undergoing modernization where a median could improve safety.

In the four instances listed above, consideration shall occur when any of the following criteria are present:

  - Forecasted average daily traffic is anticipated to be 28,000 vehicles per day during the 20-year planning period;
  - The annual accident rate is greater than the statewide annual average accident rate for similar roadways;
  - Pedestrians are unable to safely cross the highway, as demonstrated by an accident rate that is greater than the statewide annual average accident rate for similar roadways; and/or

Action 3B.4

Full and directional median openings shall be:

- Restricted to locations that conform to ODOT's spacing standards and
- Designed with a left-turn bay and deceleration lane.

Full median openings will be given preference to a public road connection, which is part of a continuous and comprehensive public road network.

Action 3B.5

Continuous two-way left-turn lanes are primarily used on urban highways. On urban Expressways, continuous two-way left-turn lanes are minimal; they will be approved in the future only as part of staged construction of nontraversable medians, and a strategy/plan to replace existing continuous two-way left-turn lanes with nontraversable medians will be developed.

Policy 3D: Deviations

It is the policy of the State of Oregon to manage requests for deviations from adopted access management standards and policies through an application process to ensure statewide consistency.

Action 3D.1

Implement a procedure by which an applicant may request consideration of a deviation from access management standards and policies.

Action 3D.5

Establish criteria for when minor deviations may be allowed.

Policy 3E: Appeals

It is the policy of the State of Oregon to manage appeals of both denied requests for approach roads and denied requests for deviations from adopted access management standards and policies through an appeals process to ensure statewide consistency.

Action 3E.1

Implement an appeals process by which an applicant may request further consideration of a deviation request denied by a Region Access Management Engineer through ODOT's Administrative Hearings Procedure.

Appendix E—OAR 734-051-0155 Compliance Tables

Appendix E – OAR 734-051-0155 Compliance Tables

OAR 734-051-0155 Compliance Table		
OAR 734-051 Reference	**OAR 734-051 Access Management Plan Requirements**	**How the Issue is Addressed**
0155(5)(a)	Are prepared for a logical segment of the state highway and include sufficient area to address highway operation and safety issues and development of adjoining properties including local access and circulation.	**Sections 1 and 3** define the US 730 study area including all adjacent developable lands located within the immediate vicinity of the highway.
0155(5)(b)	Describe the roadway network, right-of-way, access control, and land parcels in the analysis area.	Descriptions of the transportation network, land use parcels, right-of-way, and highway access are provided in **Section 3** and **Appendix "C"**.
0155(5)(c)	Are developed in coordination with local governments and property owners in the affected area.	To ensure that the US 730 Corridor Refinement Plan would be consistent with the policies, goals, and needs of affected agencies, a Project Planning Management Team (PPMT) was established at the outset of the planning process. The PPMT was made up of representatives from the ODOT, Umatilla County, Morrow County, and the City of Umatilla. In addition to the PPMT, public open house meetings were held throughout the course of the refinement plan process to allow property owners and interested citizens with comment opportunities. **Appendix "A"** summarizes the PPMT and public meetings held over the course of the project.
0155(5)(d)	Are consistent with any applicable Interchange Area Management Plan, corridor plan, or other facility plan adopted by the Oregon Transportation Commission.	There are no adopted Interchange Area Management Plans or corridor plans that are applicable to the US 730 refinement plan. However, the refinement plan recommendations were reviewed for consistency with all adopted City and County TSPs and comprehensive plans. **Section 2** provides a review of all applicable policies and planning elements.
0155(5)(e)	Includes policies, provisions and standards from local comprehensive plans, transportation system plans, and land use and subdivision codes that are relied upon for consistency and that are relied upon to implement the Access Management Plan.	All US 730 access management recommendations were reviewed for consistency with applicable local planning documents. **Section 6** includes references to those local policies and standards that need updating to ensure future consistency with the US 730 plan and ODOT access management standards.
0155(5)(f)	Contain short, medium, and long-range actions to improve operations and safety and preserve the functional integrity of the highway system.	Near-term, mid-term, and long-term transportation improvement projects have been identified for the OR 201study corridor and are documented in **Section 6**.
0155(5)(g)	Consider whether improvements to local street networks are feasible.	Future city and county roadway improvements/additions have been identified in **Section 6**.
0155(5)(h)	Promote safe and efficient operation of the state highway consistent with the highway classification and the highway segment designation.	A future circulation and access management plan has been developed to for the US 730 study corridor in order to preserve its the long-term function, capacity, and safety.

0155(5)(i)	Consider the use of the adjoining property consistent with the comprehensive plan designation and zoning of the area.	Future forecast traffic volumes have been developed assuming reasonable buildout of the adjacent properties consistent with the applicable comprehensive plan and zoning designations. **Section 4** outlines the development assumptions for this property.
0155(4)(j)	Provide a comprehensive, area-wide solution for local access and circulation that minimizes use of the state highway for local access and circulation.	Future parallel roadway corridors have been developed for the study corridor in order to minimize local street traffic on the highway and provide alternate access opportunities for adjacent highway property. A summary of the parallel roadway network is provided in **Section 6**.