



The Confederated Tribes
of the Umatilla Indian Reservation

TRANSPORTATION SYSTEM PLAN

Volume I: Transportation System Plan



FINAL
April 2023

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Approved April 24, 2023

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The development of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Transportation System Plan Update (TSP) was guided by the Project Management Team (PMT), the Technical Advisory Committee (TAC), and public input. CTUIR and Oregon Department of Transportation (ODOT) would like to thank each of these individuals who devoted their time, expertise, and local insight into the development of the plan.

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Inclusion of an improvement in the TSP does not represent a commitment by ODOT to fund, allow, or construct the Project. Projects on the State of Oregon Transportation System that are contained in the TSP are not considered "planned" projects until they are programmed into the Statewide Transportation Improvement Program (STIP). As such, Projects proposed in the plan that are located on a State system cannot be considered as mitigation for future development or land use actions until they are programmed into an adopted STIP or ODOT provides a letter indicating that the Project is "reasonably likely" to be funded in the STIP. State Highway Projects that are programmed to be constructed may have to be altered or canceled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.



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Chapter 1 — EXECUTIVE SUMMARY

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Transportation System Plan Update (TSP) identifies the projects, plans, policies, and programs needed to address gaps and deficiencies within the transportation system in the Umatilla Indian Reservation (UIR) over the next 20 years. By developing projects that promote connectivity, safety, and comfort for all people using the transportation system, CTUIR can realize its vision to support equitable access, active transportation, increased connectivity, and reduced environmental and climate impacts.

The full cost of the preferred plan is approximately \$108.7 million over the 20-year period, including \$25.8 million in high priority projects, \$57.8 million in medium priority projects, and \$25.1 million in low priority projects. If/when the identified service-based transit projects are established, the total annual operating costs of the projects would be approximately \$615,000, including \$195,000 for high priority projects, \$270,000 for medium priority projects, and \$150,000 for low priority projects. Chapter 9 contains more information on project costs and implementation. The project list by mode is provided in each modal chapter (Chapters 4-8) or as a whole in *Appendix A of Volume II*. The plan, including the high priority projects, is aspirational and will be funded through grants and additional funding sources as they become available and/or by private developers as part of future development. CTUIR plans to pursue additional funding to support the high priority plan projects over the next 20 years. *Appendix B of Volume II contains the summary sheets for each of the high priority projects*. Figures ES1 to ES4, included at the end of this chapter and in each modal chapter (Chapters 4-8), present the planned projects.

TSP Update Process

The TSP update was completed under the direction of CTUIR staff and informed by a Technical Advisory Committee (TAC) made up of regional agency representatives, as well as feedback from tribal members and other area residents and visitors. CTUIR staff and the TAC set the following vision to guide this plan.

Vision Statement

The transportation system on the Umatilla Indian Reservation provides safe, equitable, and sustainable travel choices that fulfill the needs of those living, working on, and visiting the reservation community, while also fostering cultural connections, protecting treaty rights, and preserving the rural character.

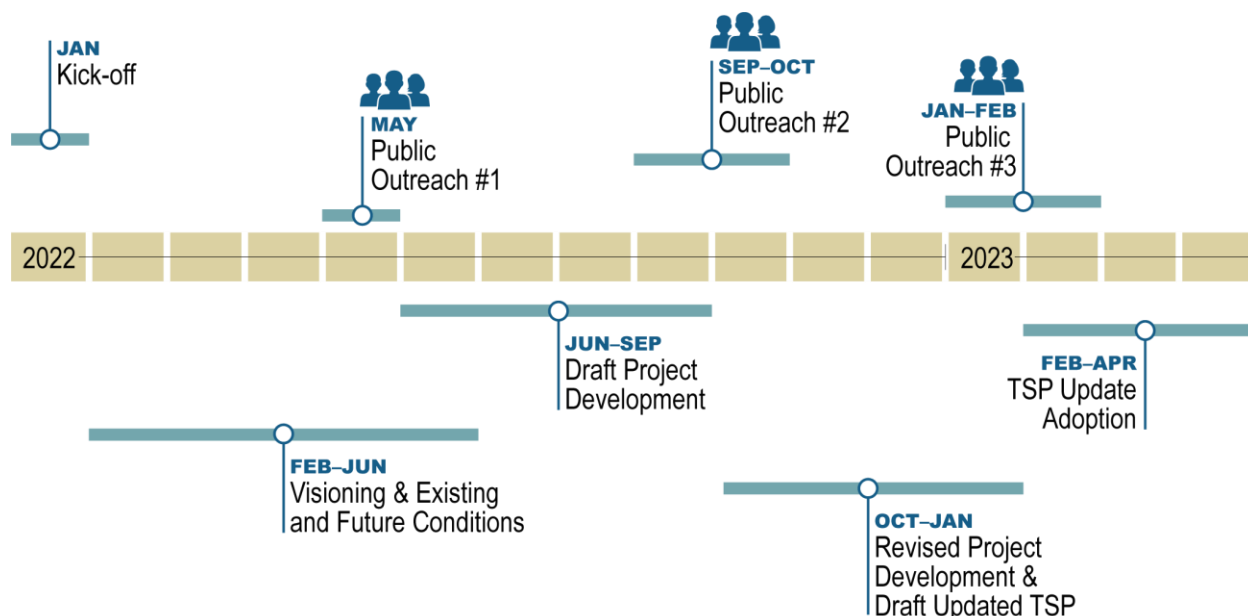
The specific project goals can be found in Chapter 3.

Figure ES1 highlights the process used to update the TSP. The TSP update process began with a review of local, regional, and statewide plans and policies that guide land use and transportation planning in the UIR. Goals and objectives and evaluation criteria were then developed in conjunction with the TAC to guide the development of planned improvements. An inventory of the multimodal transportation system was then conducted to serve as the basis for the existing and future conditions analyses.

The existing and future conditions analyses focused on identifying gaps and deficiencies in the multimodal transportation system based on current and forecasted travel demand. Feedback was gathered from the TAC and the general public to verify the existing gaps and deficiencies. For each gap and deficiency, alternatives were identified, if applicable, and evaluated to address the system needs. This process led to the development of potential projects that were then prioritized using the project evaluation criteria and organized into high, medium, and low priorities. The potential projects were brought back to the TAC and the general public for feedback before the project list was finalized.

The culmination of the TSP update process is this document, which presents the projects, plans, policies, and programs identified to address the existing gaps and deficiencies and future needs for the transportation system within in the UIR in alignment with the project vision.

Figure ES1: Transportation System Plan Update Process



Public Involvement

The project was informed by several public involvement activities that reached different groups and interests throughout the TSP update process. The opportunities were advertised via web-based communications and included upcoming meetings, online feedback opportunities, and documents for review via the project webpage on CTUIR's website.

The goal of the public involvement process was to develop a TSP that addresses the gaps and deficiencies in the transportation system while meeting the needs of the community. By providing several touchpoints throughout the project schedule, feedback could be incorporated and updated materials then brought back to verify with the members of the public.

The majority of the public involvement opportunities were pop-up outreach activities at locations and events of interest in the community. The project team and CTUIR staff provided handouts, set up posters, and/or asked members of the public to provide feedback at the following locations and events between May 2022 and January 2023:

- Mission Market
- General Council Meetings
- July Grounds Gym After School Program
- Yellowhawk Tribal Health Center
- Treaty Day
- Arrowhead Travel Plaza (focusing on freight community feedback)
- Door-to-door outreach with ODOT staff
- Senior Center luncheon

Additionally, the following specific stakeholder groups were asked to provide feedback between May 2022 and March 2023:

- Tribal Youth Council
- Kayak drivers
- Umatilla County staff
- Land Protection & Planning Commission
- Law & Order Commission
- Fish & Wildlife Commission
- Capital Improvements Committee
- Health Commission
- Economic & Community Development Committee

CTUIR also hosted three virtual open houses via the project webpage. *Appendices C, D, and K of Volume II contain summaries of the Spring 2022, Fall 2022, and Winter 2023 outreach efforts.*

Public Involvement At a Glance



Lastly, the project team met with the Land Protection Planning Commission and Board of Trustees (BOT) twice each throughout the planning process.



Projects, Programs, and Plans

In addition to identifying potential projects, the project team also identified potential policy and programmatic direction to support the transportation system based on input from CTUIR staff.

GENERAL TRANSPORTATION POLICIES

- Develop and institute policies that encourage right-sizing, and adopting appropriate technology for, fleet vehicles and equipment, and encourage the adoption of alternative fuel vehicles through policy, infrastructure, etc.
- This plan updates roadway cross-sectional standards.

ROADWAY PROGRAMS AND PLANS

The roadway system within the UIR boundary serves most trips across all travel modes. In addition to people driving, the roadway system is used by people walking, biking, riding the bus, and using other forms of transportation to travel to and from essential destinations and neighboring communities. This plan identifies 17 improvements to the roadway system, with an additional six development-driven projects which are only recommended after development occurs in the area around I-84 exit 216, plus the following programs and plans.

- Maintenance program for intersections in the northern UIR where crops limit sight distance during certain times of the year
 - Work with property owners adjacent to roads with limited sight distance to establish formal sight triangle boundaries. One example is Duff Road at Mann Road.
 - Where sight triangles cannot be established, add warning signage.
- Maintenance programs for striping
 - Complete annual striping projects to update worn striping and to add/restripe fog lines on collectors and arterials.
- Coordinate with the County and ODOT on how to address truck parking and routing when I-84 is closed.
- Coordinate with ODOT and Umatilla County on regional connecting roadways.
- Create walkable neighborhoods. Monitor the need for traffic calming measures in neighborhoods and near pedestrian and bicycle activity centers, such as the school, Mission Senior Center, July Grounds residential area, and Nixyáawii Governance Center. Potential mitigations include raised crosswalks, “Children at Play” signage, 20 MPH speed limits, and additional marked crossings.



- Update and maintain CTUIR's parking regulations based on current national guidance and local trends.
- Maintain the Tribal Transportation Program (TTP) National Tribal Transportation Facility Inventory (NTTFI) and update with routes that CTUIR may wish to include as projects move forward. Coordinate with the Bureau of Indian Affairs (BIA) as needed. *Attachment D includes the existing NTTFI as of September 2022.*
- Coordinate with the Range, Agriculture & Forestry program and other stakeholders to prepare an Upland Access Management Plan to determine a management approach for seasonal road closures, temporary timber harvest roads, and other publicly-used informal trails.
- As new development occurs, create a local street network that provides a high level of connectivity, pedestrian and bicycle facilities, and multiple alternative routes. The local street network must tie into the existing network to support emergency access and circulation. New developments shall be planned with a maximum block length of 500 feet with a pedestrian access way provided every 250 feet along the block length. Pedestrian access shall be a dedicated pedestrian access way meeting the requirements of Section 17.015(2) of CTUIR's Land Development Code (LDC).

PEDESTRIAN PROGRAMS AND PLANS

The pedestrian system within the UIR consists of sidewalks and multi-use paths, as well as marked and/or signed pedestrian crossings. These facilities are primarily provided within the Mission, July Grounds, and Gateway hubs near OR 331 and Mission Road. This plan identifies 23 improvements to the pedestrian system, plus the following programs and plans.

- New development within the Mission Hub should be required to include off-street multi-use paths to create a connected pathway system within the area.
- Parks and Transportation Coordinator
 - Create a new CTUIR staff position to oversee and coordinate multi-use path maintenance and construction, park and river access, and park maintenance.
 - Develop an Invasive Plant Management Plan (including for puncture vine ["goatheads"]) for roads and multi-use paths in coordination with other CTUIR departments.
- Parks and River Access Plan
 - CTUIR is acquiring land impacted by the 2020 flooding, including areas near Cayuse River Road, Cayuse Road, and Sampson Lane. The plan will determine a vision for creating a park(s) with potential river access. Work with property owners adjacent to the river to gain access. Explore other river access locations including previous informal access points, such as Parr Lane and the swimming hole near the railroad bridge.

BICYCLE PROGRAMS AND PLANS

The bicycle system within the UIR boundary consists of on-street bike lanes, shoulder bikeways, and unmarked shared roadways, as well as off-street multi-use paths and bicycle parking. The only marked bike lanes are on Mission Road, connecting the Mission and July Grounds hubs with residential, school, and commercial uses. This plan identifies 11 improvements to the bicycle system, plus the following program.

- Coordinate installation of future bicycle fix-it stations as part of construction of projects that will attract bicycle activity, such as commercial development, parks, civic centers, transit hubs, multi-use paths, and bike lanes.

TRANSIT PROGRAMS AND PLANS

CTUIR operates Kayak Public Transit (Kayak) which serves northeastern Oregon via fixed route local and commuter service and paratransit. CTUIR began public transportation services after observing people walking the distance between Pendleton and Mission. Over time, service has grown from one van to a fleet of cutaway vehicles operating seven year-round fixed routes (as of January 2023). In 2014, CTUIR



rebranded the service as Kayak Public Transit to help people understand that service is open to the public, not just tribal members.

Outside of the UIR boundary, Kayak also provides the Hermiston Area Regional Transit (HART) fixed route. In addition to Kayak, there are other agencies and operators that serve the UIR or adjacent areas. CTUIR maintains a list of these operators on their website at <https://ctuir.org/departments/tribal-planning-office/kayak-public-transit/other-transportation-agencies/>.

This plan identifies nine improvements to the transit system, plus the following programs.

- Work with businesses adjacent to existing or planned transit stops to sponsor transit shelters at bus stops. Coordinate with businesses and the proposed Parks and Transportation Coordinator position to determine responsibility for maintenance of transit shelters.
- Work with partner jurisdictions and agencies to ensure that Kayak is part of the development review process where there may be opportunities for new transit facilities or impacts to existing transit service.

RAIL SYSTEM

There is one Union Pacific rail line within the UIR boundary, connecting Pendleton and La Grande. The line runs east and west, parallel to Mission Road, Short Mile Road, Cayuse Road, and Bingham Roads before turning south along Meacham Creek Road and into the Blue Mountains. There are 29 rail crossings within the UIR. No projects were identified to support the rail system, but the following plan is included:

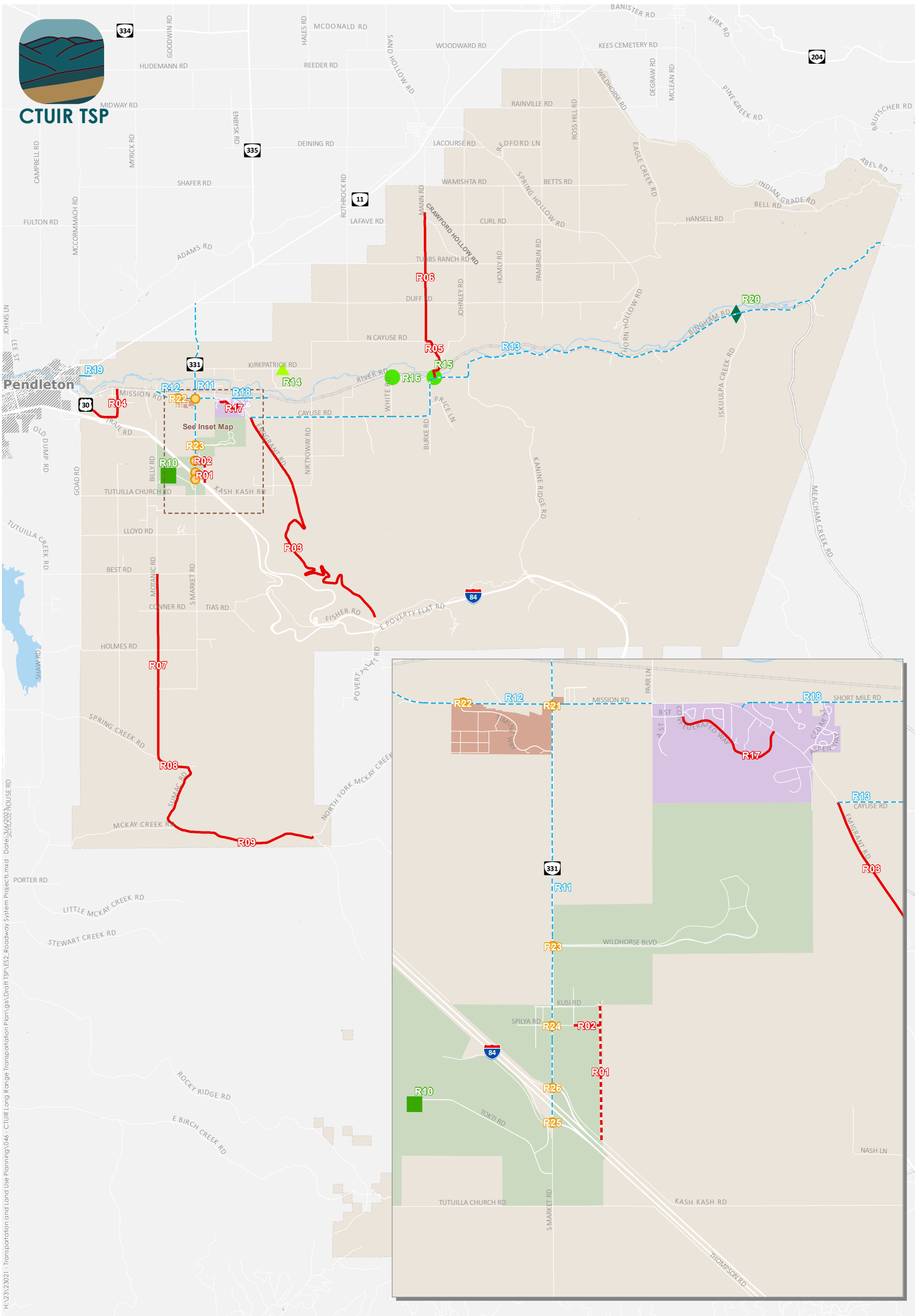
- Safe Rail Crossing Plan
 - Conduct a planning effort to establish a Quiet Zone Agreement for the Union Pacific railroad adjacent to the Mission area. The plan area would extend from the eastern boundary of the Community Water Sewer System service area to the UIR western boundary near Memory Lane.
 - The plan would include recommended safety upgrades for crossings in the plan area, including any recommended closures of specific crossings to enhance safety in the area.
- Coordinate with regional agencies on potential restoration of passenger rail service between Portland and Boise.



Photo: Kittelson & Associates, Inc.

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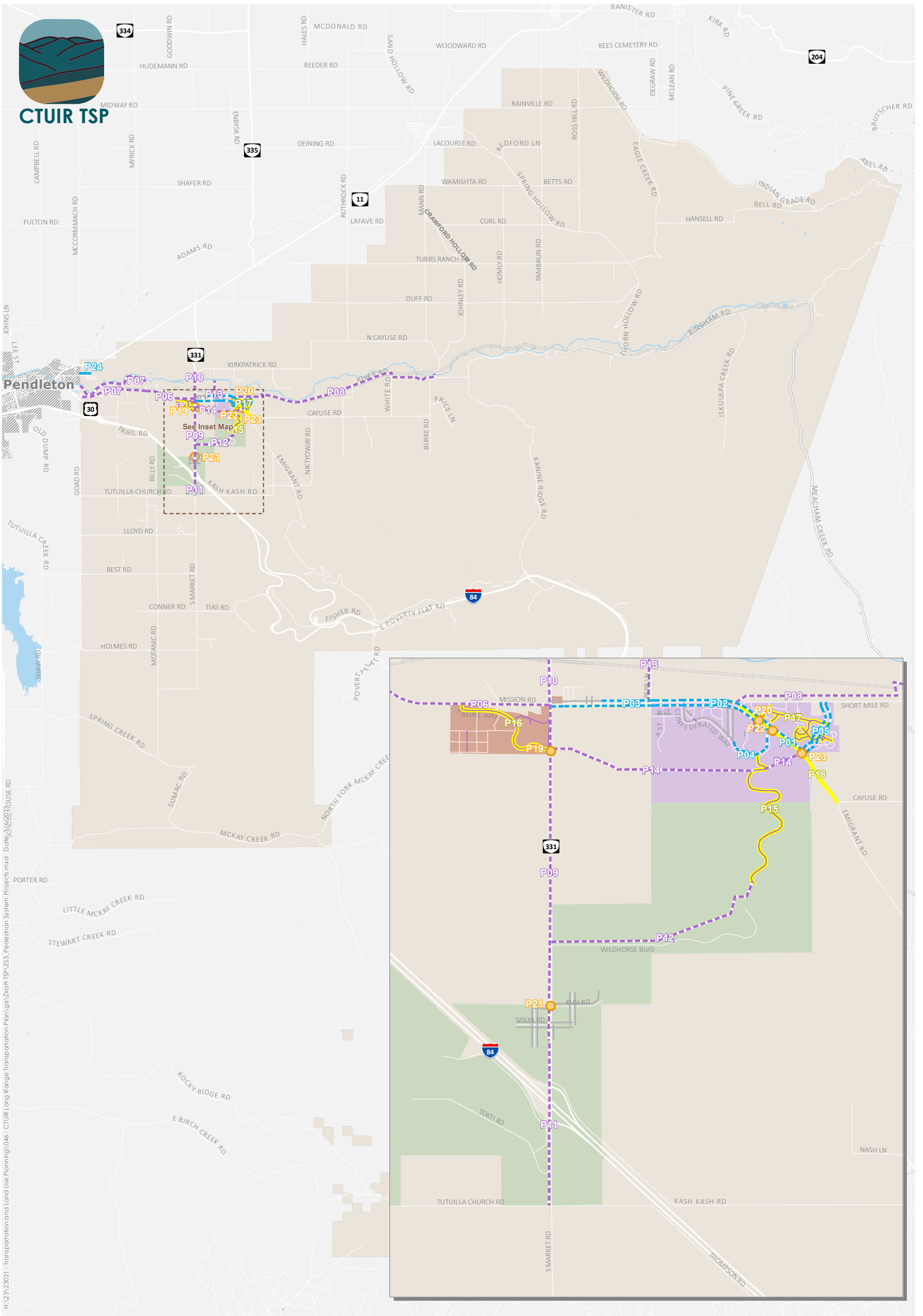


- Improvement to Existing Roadway
- - - New Roadway
- - - Traffic Calming or Speed Study
- ▲ Advisory Signage
- Intersection Reconfiguration
- Truck Overflow Parking
- ◆ Bridge Replacement
- Development-driven Intersection Project
- Development-driven Roadway Project
- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure ES2

**Roadway System Projects
Umatilla Indian Reservation**

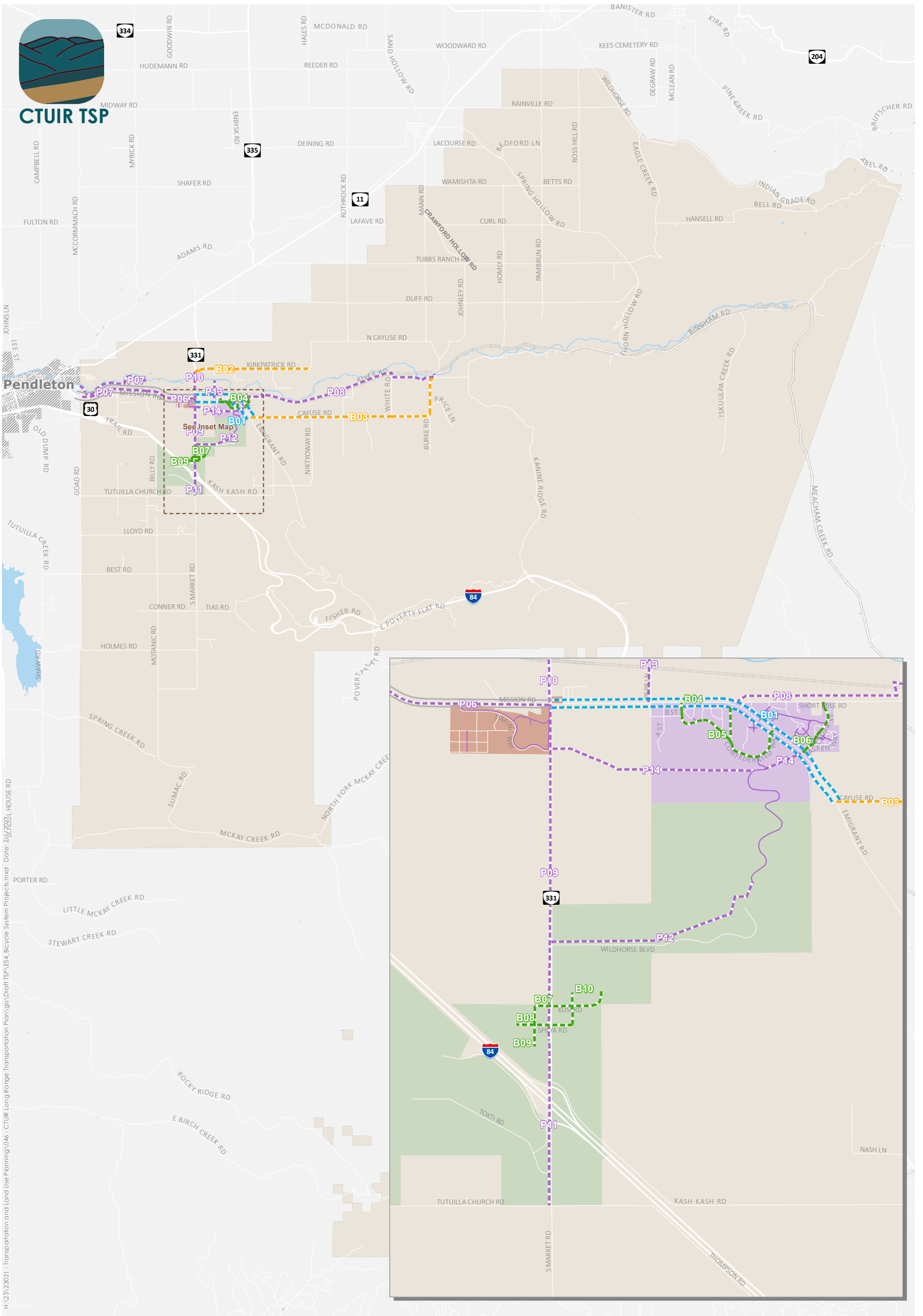


- Existing Sidewalk
- Existing Multi-use Path
- Sidewalk Project
- Multi-use Path Project
- Lighting Project
- Pedestrian Crossing Project
- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure ES3

**Pedestrian System Projects
Umatilla Indian Reservation**



- Existing Bike Lane
- Existing Multi-use Path
- - - Shoulder Bikeway (both sides of the roadway)
- - - Shared Roadway
- - - Widen and add buffered bike lanes
- - - Multi-use Path Project

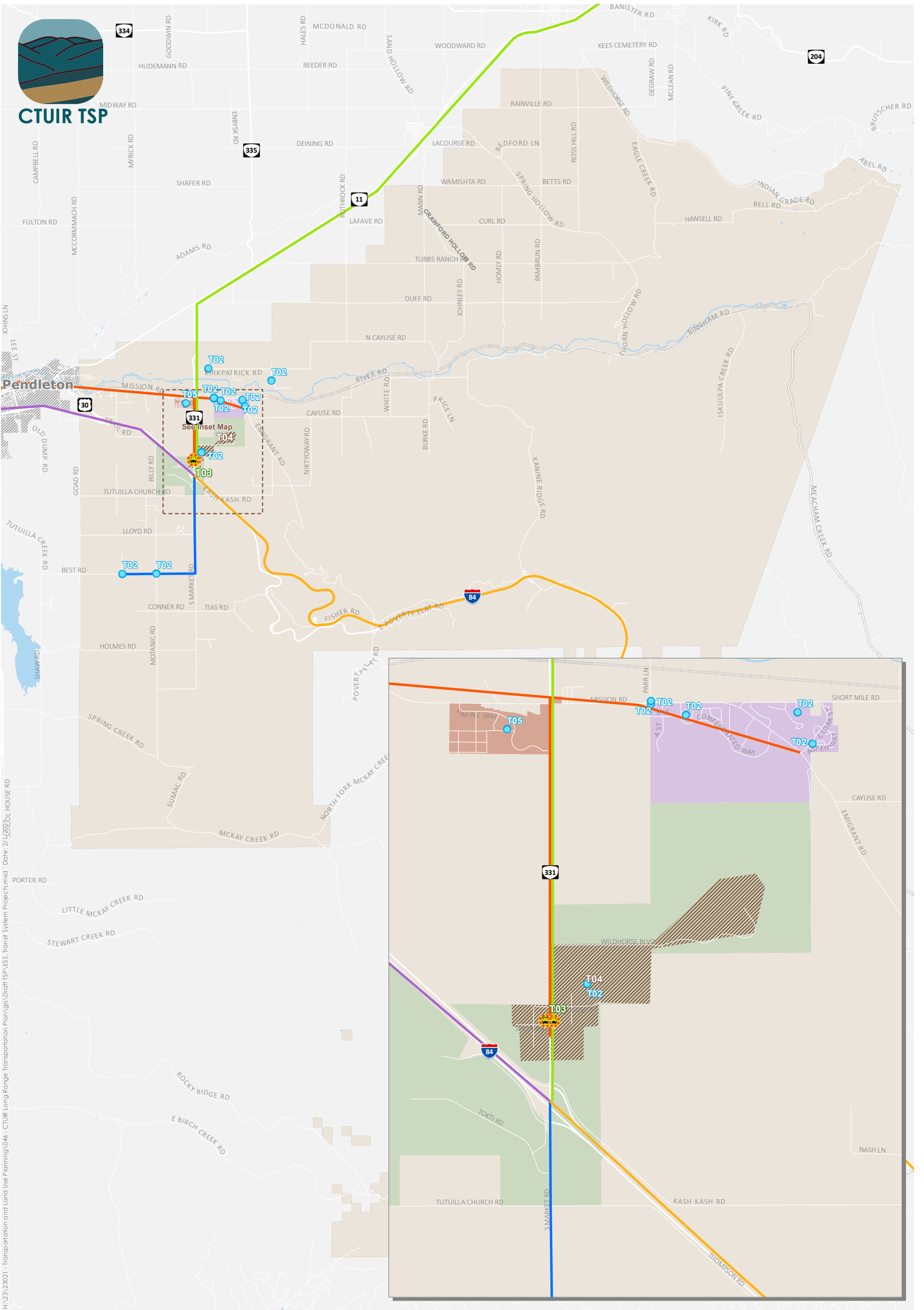
- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure ES4

**Bicycle System Projects
Umatilla Indian Reservation**

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Existing Kayak Bus Routes

- Hopper
- Arrow
- Metro
- Rocket
- Tripper
- Whistler

- Bus Stop Enhancement
- Transit Hub
- Shuttle Service Area

- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure ES5

**Transit System Projects
Umatilla Indian Reservation**

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Photo Kittelson & Associates

Chapter 2 — INTRODUCTION

The purpose of this document is to develop a long-range Transportation System Plan (TSP) for the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). This document addresses the transportation needs of the Umatilla Indian Reservation (UIR) over the next 20 years and considers key modes of travel including roadway, pedestrian, bicycle, transit, rail, and pipeline. The TSP was developed with community and other stakeholder input and considers existing and projected future transportation system needs. By developing projects that promote connectivity, safety, and comfort for all people using the transportation system, CTUIR can support equitable access, active transportation, increased connectivity, and reduced environmental and climate impacts.

Study Area

The study area for the CTUIR TSP encompasses all lands within the boundaries of the Umatilla Indian Reservation (UIR)¹, which consists of 172,000 acres of land located in northeastern Oregon, just east of

¹ While the phrases “Umatilla Indian Reservation” and “Umatilla Indian Reservation Boundary” are used throughout this Plan, the Confederated Tribes of the Umatilla Indian Reservation’s reservation and Indian country lands extend beyond what is sometimes referred to as the diminished reservation boundary. The Umatilla Indian Reservation includes all lands within the diminished boundary and all non-contiguous lands held in trust for the CTUIR. The scope of this Plan only includes lands within the diminished boundary and the non-contiguous Johnson Creek lands restored in 1940.

Pendleton. This area also includes several roads on off-reservation Trust lands, although the primary focus of the planning effort is on areas within the UIR.

Figure 1 shows the contiguous and non-contiguous areas of the UIR and CTUIR owned non-contiguous fee lands. Figure 2 illustrates the study area for the CTUIR TSP and highlights the three identified community hubs where multimodal transportation options are specifically desired. *Appendix F of Volume II contains the existing land use assessment as part of Technical Memorandum #2.*

TSP Adoption Framework

CTUIR is the sovereign tribal government and road authority on the Umatilla Indian Reservation. CTUIR has compacted transportation services from the BIA under the terms of Public Law 93-638: The Indian Self-Determination Act. This Transportation System Plan is the primary long range transportation planning document for CTUIR, and also serves as the Long Range Transportation Plan (LRTP), as defined by Code of Federal Regulations (CFR) 25 Part 170.409-411. As such, it is subject to the approval structure outlined in CFR 25 Part 170.412 requiring BIA consultation and public review; Part 170.413 requiring public notice, public involvement, and opportunity to comment; and Part 170.414 regarding project prioritization and regular review and update of the plan.

This plan must be reviewed at least annually and updated at least once every five years. This plan will also serve as the LRTP for the purposes of CFR 25 Part 170.421(a)(1), and the project list developed herein will serve as the source list for developing the cost-constrained, short-range Tribal Transportation Improvement Plan (TTIP). Future 5-year updates of this plan should include a list of project revisions, noting which projects have been completed and which have been removed due to changing community priorities. *Appendix F of Volume II documents the uncompleted projects from the 2001 TSP, as of 2022. Appendix H summarizes the modifications or removal of projects from the 2001 TSP for the 2023 TSP update and provides reasoning for these changes.*

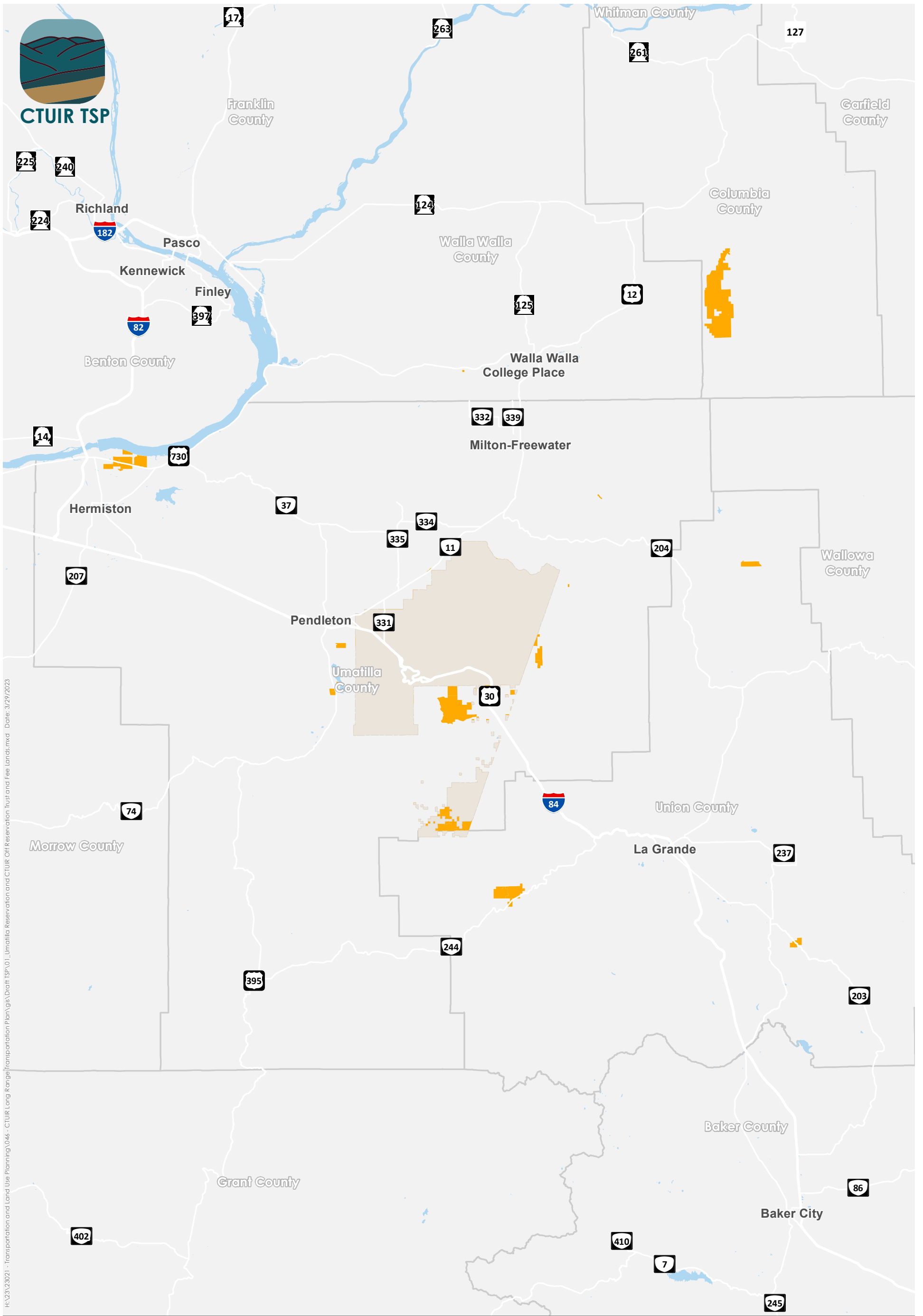
Completed Projects from 2001 TSP

As of the beginning of the TSP update process, 13 out of the 37 planned projects in the 2001 TSP had been completed.

Public engagement for updates to both plans must consist of, at minimum, notice to the public of the intent to update the plan; access to the draft plan; opportunity for the public to comment orally or in writing; and a window of at least 30 days to submit comments. A public hearing before the Land Protection & Planning Commission meets the minimum requirements laid out by the relevant CFRs and is therefore recommended as part of the adoption process. Amendments to the plan must be adopted by the CTUIR Board of Trustees and be accepted by the BIA to receive funding from federal programs such as the Tribal Transportation Program formula funds and competitive grants.

TSP Organization and Methodology

The TSP is organized into chapters. **Chapter 3** presents the goals and objectives along with the criteria used to evaluate and prioritize projects in the TSP. **Chapters 4 through 8** present the projects (broken out by travel modes) developed to address gaps and deficiencies and future needs for the transportation system within the UIR. **Chapter 4** also includes roadway cross-sectional and design standards. **Chapter 9** presents the funding and implementation plan for the TSP, including existing and potential future funding sources to finance the identified projects. This project list is not financially constrained, which means that funding for individual projects has not been secured. **Volume II: Technical Appendix** contains the Technical Memorandums and supporting documents completed throughout the TSP update process, which document data collected, analyses completed, public engagement, and the project identification process.



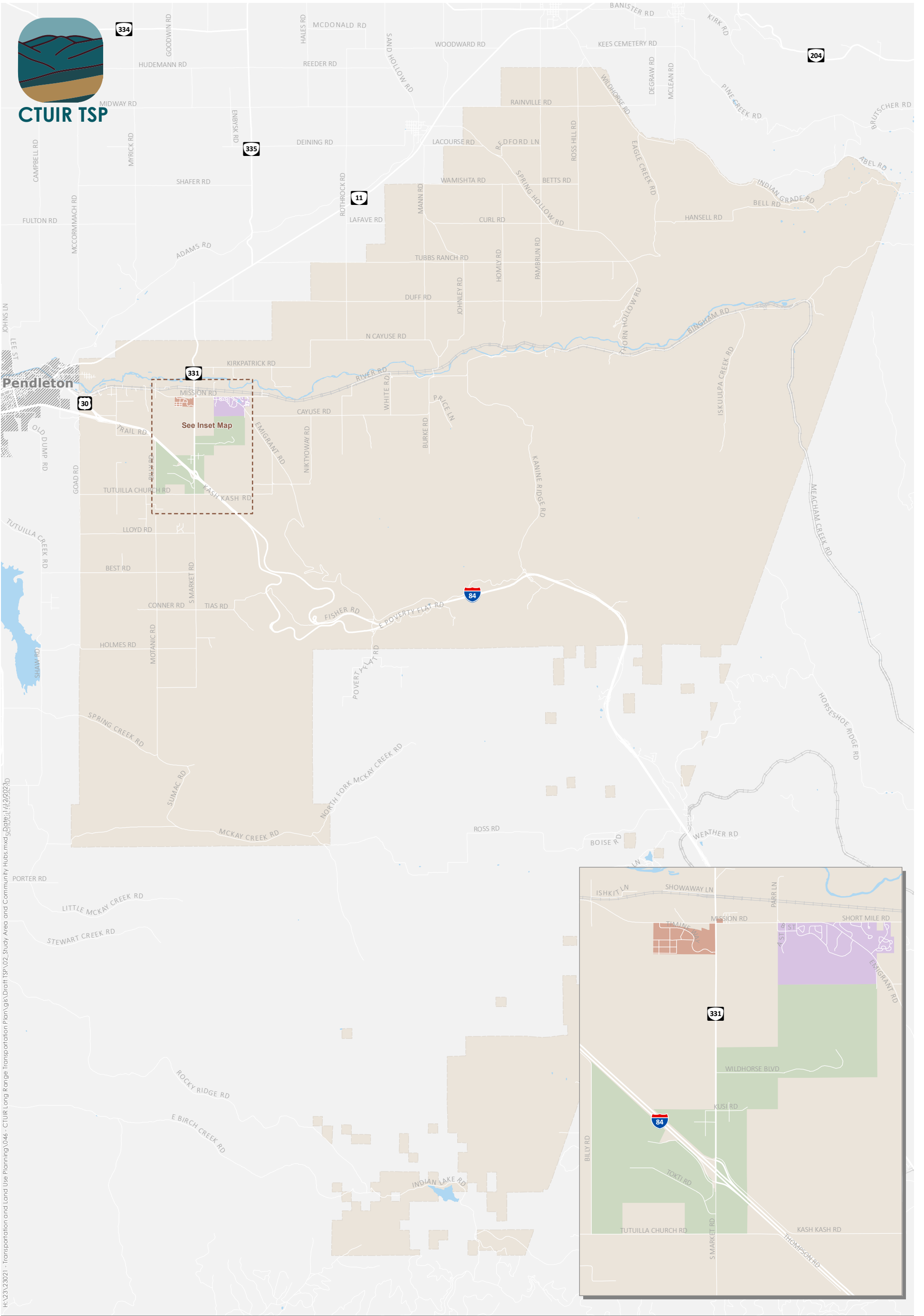
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- Umatilla Indian Reservation Boundary
- CTUIR Non-contiguous Reservation and Fee Lands



Figure 1

Umatilla Indian Reservation and CTUIR Non-contiguous Reservation and Fee Lands
Umatilla Indian Reservation



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- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB

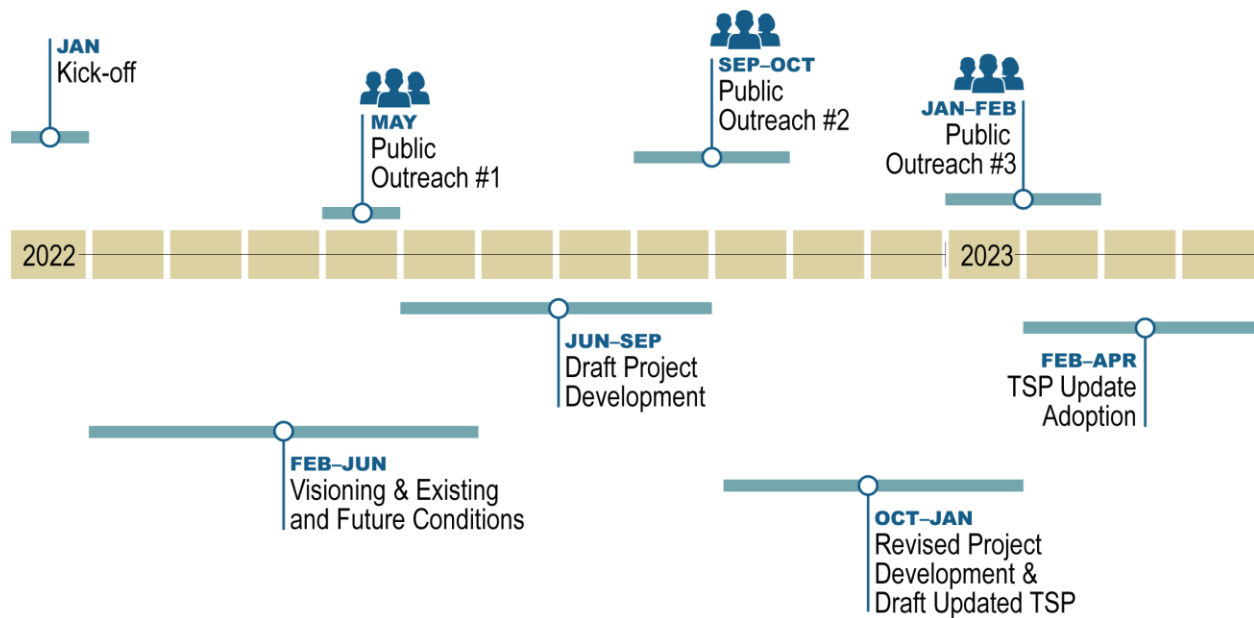


Figure 2

**Study Area and Community Hubs
Umatilla Indian Reservation**

TSP Update Process

The TSP update process began with a review of local, regional, and statewide plans and policies that guide land use and transportation planning in the UIR. Goals and objectives and evaluation criteria were then developed to guide the development of planned improvements. An inventory of the multimodal transportation system was then conducted to serve as the basis for the existing and future conditions analyses. The existing and future conditions analyses focused on identifying gaps and deficiencies in the multimodal transportation system based on current and forecasted travel demand. Feedback was gathered from the Technical Advisory Committee (TAC) and the general public to verify the existing gaps and deficiencies. For each gap and deficiency, alternatives were identified, if applicable, and evaluated to address the system needs. This process led to the development of potential projects that were then prioritized using the project evaluation criteria and organized into high, medium, and low priorities. The potential projects were brought back to the TAC and the general public for feedback before the project list was finalized. The culmination of the TSP update process is this document, which presents the projects, plans, policies, and programs identified to address the existing gaps and deficiencies and future needs for the transportation system within in the UIR in alignment with the project vision, described in Chapter 3.



Committees

The TSP update was developed in coordination with CTUIR and ODOT staff, along with key stakeholders and representatives from the community. One formal committee participated in the TSP update: the Technical Advisory Committee (TAC). The TAC consisted of representatives from CTUIR, Kayak (including a Kayak rider representative), Umatilla County, Yellowhawk Tribal Health Center, Wildhorse Resort & Casino, and State and Federal agencies. The TAC provided technical guidance and coordination throughout the project. TAC members reviewed and commented on technical memorandums and participated in three committee meetings.

Public Involvement

The project was informed by several public involvement activities that reached different groups and interests throughout the TSP update process. The opportunities were advertised via web-based communications and included upcoming meetings, online feedback opportunities, and documents for review via the project webpage on CTUIR’s website.

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- Law & Order Commission
- Fish & Wildlife Commission
- Capital Improvements Committee
- Health Commission

CTUIR also hosted three virtual open houses via the project webpage. *Appendices C and D of Volume II contain summaries of the Spring 2022 and Fall 2022 outreach efforts.*

Public Involvement At a Glance

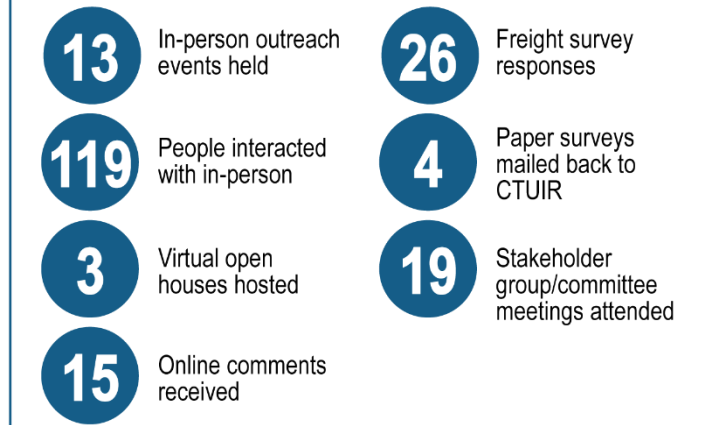


Photo: Kittelson & Associates, Inc.



Photo: Kittelson & Associates, Inc.

Lastly, the project team met with the Land Protection Planning Commission and Board of Trustees (BOT) twice each throughout the planning process.





Photo Kittelson & Associates

Chapter 3 — GOALS AND OBJECTIVES

The purpose of this TSP is to guide the CTUIR in fulfilling its transportation goals and objectives. The project team and TAC developed goals and objectives early in the TSP update process to guide the TSP's development. The goals and objectives enable CTUIR to plan for, and consistently work towards, achieving the community vision presented in the following vision statement:

Vision Statement

The transportation system on the Umatilla Indian Reservation provides safe, equitable, and sustainable travel choices that fulfill the needs of those living, working on, and visiting the reservation community, while also fostering cultural connections, protecting treaty rights, and preserving the rural character.

Goals and Objectives

The goals and objectives for the TSP are described below. The goals provide direction for where CTUIR would like to go, while the objectives provide a more detailed breakdown of the goals with specific outcomes CTUIR desires to achieve.

GOAL 1 – SAFETY

Provide a safe multimodal transportation system for all members of the Umatilla Indian Reservation community.

Objective 1A: Improve locations with a history of fatal and/or severe injury crashes

Objective 1B: Implement strategies that systemically reduce the potential for crashes

GOAL 2 – ENVIRONMENT AND CULTURAL HERITAGE

Preserve existing cultural connections and the rural landscape.

Objective 2A: Develop projects that respect the rural landscape and cultural context

Objective 2B: Develop projects that help the community achieve its economic potential

Objective 2C: Establish land-use strategies and policies that support desired development that is culturally sensitive and facilitates the exercise of tribal treaty rights

GOAL 3 – HEALTH

Develop a transportation system that supports active transportation and encourages healthy and active choices for the Umatilla Indian Reservation community.

Objective 3A: Increase the user-friendliness and comfort of active transportation options available to all members of the Umatilla Indian Reservation community

Objective 3B: Provide connections to community health centers, schools, and parks

GOAL 4 – EQUITY AND ACCESSIBILITY

Provide a multimodal transportation system that is accessible to all members of the Umatilla Indian Reservation community.

Objective 4A: Provide access to essential destinations for all members of the Umatilla Indian Reservation community

Objective 4B: Develop a plan that responds to the range of needs within the community

GOAL 5 – CONNECTIVITY

Provide a multimodal transportation system that increases connections to the key hubs within the reservation and works to overcome existing barriers to regional connectivity.

Objective 5A: Improve existing, and/or create new multimodal connections between the Mission, July Grounds, and Gateway hubs

Objective 5B: Improve existing, or create new, regional multimodal connections

GOAL 6 – COORDINATION

Develop a transportation system that works together with Federal, State, regional, and local partners.

Objective 6A: Ensure consistency with Federal, State, regional, and local planning rules and regulations

Objective 6B: Coordinate with partners to gain consensus on the planned system for the region

GOAL 7 – FINANCIAL STABILITY

Develop attainable funding solutions for transportation system improvements.

Objective 7A: Prioritize investments and maximize partnerships to provide maximum benefit and return on investment for the associated cost.

Objective 7B: Develop projects that can be realistically achieved given CTUIR's existing, and potential, funding sources, including developing projects that will be compatible with Bureau of Indian Affairs (BIA) requirements and position CTUIR for future grant sources.



Project Selections and Prioritization

The selection and prioritization of projects included in the TSP update was determined based on the goals and objectives described above, application of the project evaluation criteria, and TAC feedback. See *Technical Memoranda #3 and #5 in the Volume II Technical Appendix for additional information.*

General Transportation Policies

Mode-specific policies are provided in Chapters 4 through 8. The following policies are relevant for all modes and/or the overall transportation system within the UIR.

- Develop and institute policies that encourage right-sizing, and adopting appropriate technology for, fleet vehicles and equipment, and encourage the adoption of alternative fuel vehicles through policy, infrastructure, etc.
- This plan updates roadway cross-sectional standards.



Photos: Kittelson & Associates, Inc.



Photo Kittelson & Associates

Chapter 4 — ROADWAY SYSTEM

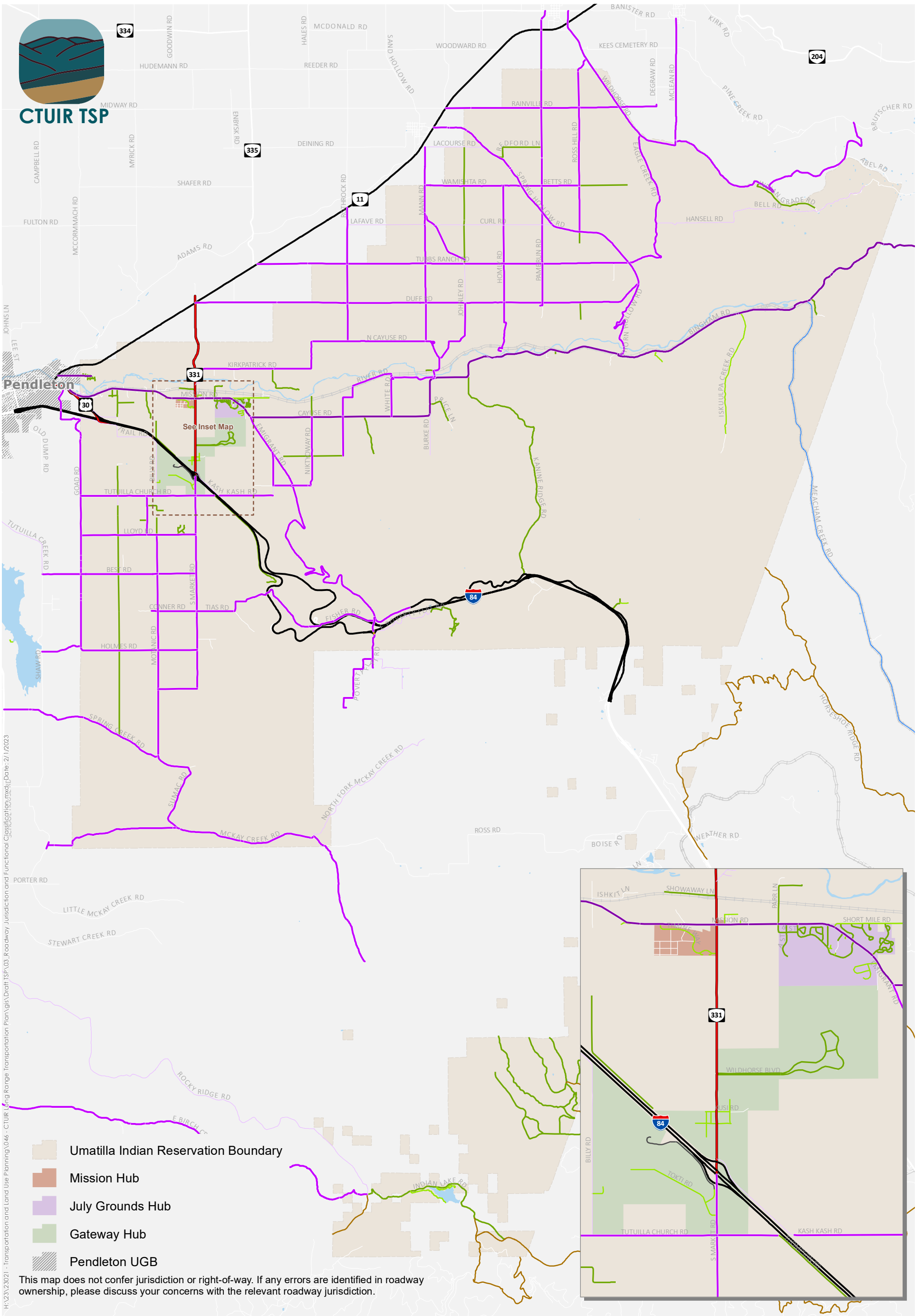
The roadway system within the UIR boundary serves most trips across all travel modes. In addition to people driving, the roadway system is used by people walking, biking, riding the bus, and using other forms of transportation to travel to and from essential destinations and neighboring communities.

Jurisdiction and Functional Classification

The roadway network is owned and operated by multiple entities, consisting of CTUIR, ODOT, Umatilla County, and the Bureau of Indian Affairs (BIA). Each jurisdiction is responsible for determining the functional classification of the streets, defining major design and multimodal features, and approving construction and access permits. Coordination is required among the jurisdictions to ensure that the streets are planned, operated, maintained, and improved to safely meet public needs. Figure 3 illustrates the jurisdiction and functional classification of streets within the UIR boundary.

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- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB

This map does not confer jurisdiction or right-of-way. If any errors are identified in roadway ownership, please discuss your concerns with the relevant roadway jurisdiction.

- | State Functional Class | County Functional Class | Ownership |
|------------------------|-------------------------|--------------------------------|
| Highway | Minor Arterials | Bureau of Indian Affairs Roads |
| Major Arterials | Major Collectors | Tribal Roads |
| Major Collectors | Local Roads | Private Roads |
| Minor Collectors | | US Forest Service Roads |
| Local Roads | | |

Ownership information was not available for roadways shown in white.



Figure 3

Roadway Jurisdiction and Functional Classification Umatilla Indian Reservation

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CTUIR ROADS

CTUIR owns and maintains most roads that serve CTUIR-affiliated facilities and housing. These roadways include Short Mile Road, Easy Street, Cedar Street, Aspen Way (and other local spur streets serving the adjacent residential area), Timine Way, Wildhorse Boulevard, Kusi Road, Coyote Road, Spilya Road, Tokti Road, and Arrowhead Road. CTUIR also owns and maintains Mission Road west of OR 331 to the western UIR border.

ODOT FACILITIES

Within the study area, ODOT owns and maintains Interstate 84 (I-84) and OR 331. I-84 is classified by the Oregon Highway Plan as an Interstate Highway, on the National Highway System and National Network, a Freight Route, and a Reduction Review Route. OR 331 (Umatilla Mission Highway) is classified by the Oregon Highway Plan as a District Highway, a Freight Route, and a Reduction Review Route.



Photo: Kittelson & Associates, Inc.

UMATILLA COUNTY FACILITIES

Umatilla County owns and maintains regionally significant roadways within the study area. Mission Road (County Road #900) is the primary east-west roadway, connecting the Mission area to the city of Pendleton to the west. Classified as a Major Collector, Mission Road consists of two travel lanes with a posted speed limit of 40 mph. Other County roads are classified as Minor Collectors, including Emigrant Road, Cayuse Road, and Kirkpatrick Road.

BIA ROADS

Within the study area, the BIA owns and maintains several local roadways that primarily serve BIA tribal agency offices and affiliated housing. These paved roads include "A" Street, "B" Street, Alder Drive, Cayuse Loop, Confederated Way, Cottonwood Lane, Umatilla Loop Road, Walla Walla Court, Whirlwind Drive, and Willow Drive. CTUIR operates and maintains BIA roads as part of the compacted roads program.



Photo: Kittelson & Associates, Inc.

PAVED AND UNPAVED PUBLIC USE ROADS

All remaining roadways within the study area are considered to be "Public Use" roads. These paved and unpaved roads may or may not have a dedicated right-of-way and are not owned or maintained by any government entity.

Freight Routes

Single-unit trucks and semi-truck and trailer combination vehicles deliver goods to and from various businesses within the UIR boundary.

FREIGHT ROUTES

The OHP identifies all Interstate Highways and certain Statewide, Regional, and District Highways as freight routes. These routes are intended to facilitate efficient and reliable interstate, intrastate, and regional truck movement through a designated freight route system. As shown in Figure 4, OR 331 is designated by ODOT as a Freight Route and primarily accommodates the movement of freight between I-84 to the south and OR 11, which provides access to Washington, to the north.

There are no CTUIR-designated freight routes in the UIR; however, Mission Road is also used for local freight-related movements. There are no known freight restrictions on any roadways within the UIR. However, the Mission Community Master Plan (MCMP) noted that trucks will attempt to utilize Mission Road's connection to Old Emigrant Hill Road during periods of inclement weather when I-84 is shut down. This road is narrow and steep and cannot accommodate all truck types, especially during times of inclement weather.

NATIONAL HIGHWAY SYSTEM

The National Highway System (NHS) is a network of highways, including Interstate Highways, that serve strategic economic, defense, and transportation facilities, such as airports, ports, rail or truck terminals, railway stations, and pipeline terminals. I-84 is designated as an NHS route within the UIR boundary.

Bridges

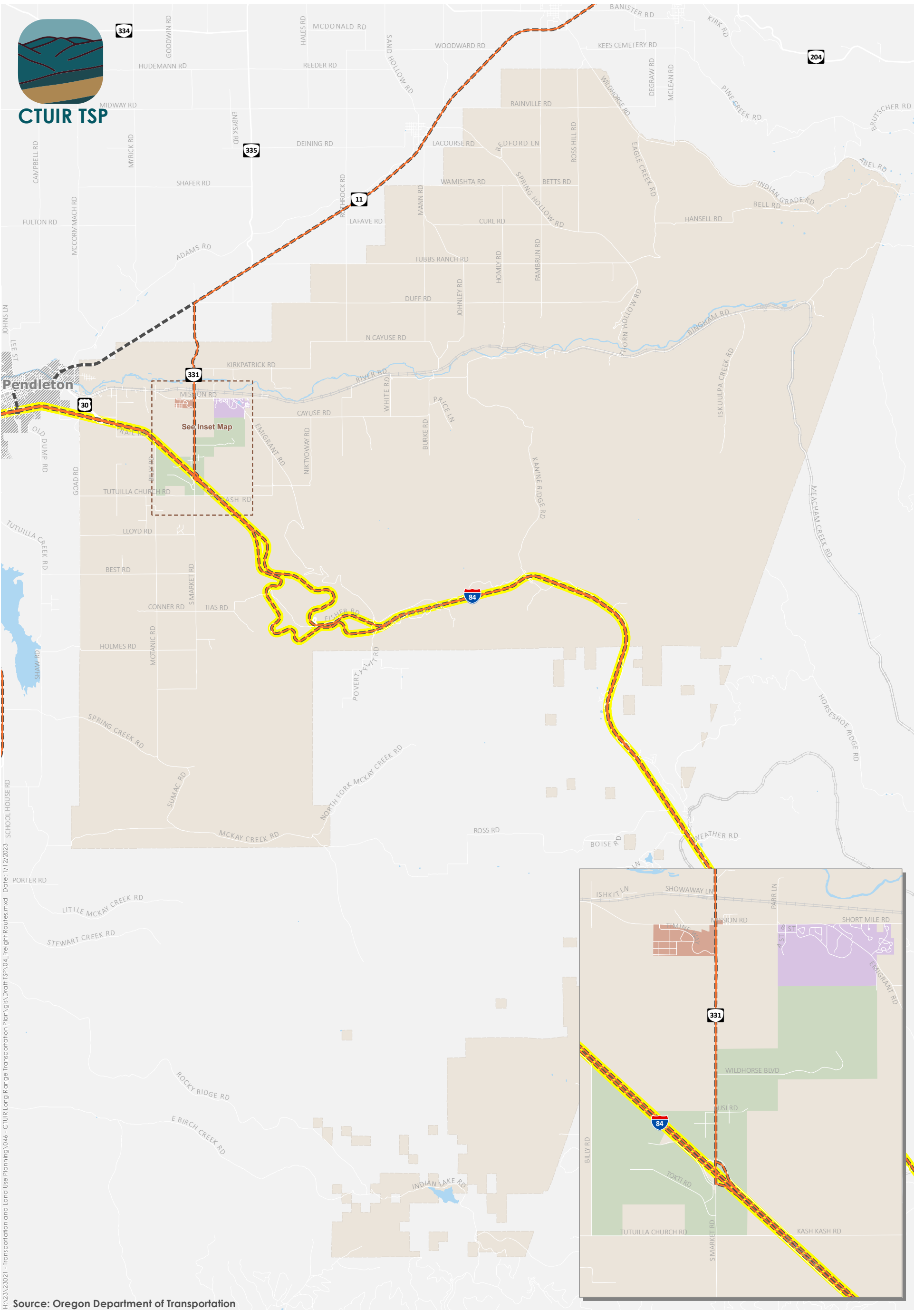
There are nine documented bridges within the UIR boundary. Table 1 summarizes the bridge owner, repair status (if known), and relevant projects in this plan for each structure. This list includes all public bridges that are over 25-feet in length and are therefore inspected and maintained to FHWA standards. CTUIR will continue coordinating with local road jurisdictions to monitor the condition of bridges on the Umatilla Indian Reservation to ensure that any deficiencies are addressed as quickly as possible.

Table 1: Bridges within the Umatilla Indian Reservation Boundary

Bridge Title	Bridge Owner	Repair Status (Year)	Relevant TSP Projects
Highway 331/Umatilla River Bridge	ODOT	Fair (2022)	R11, P10
Cayuse River Bridge	Umatilla County	Good (2021)	R05, R15
Thornhollow Bridge	Umatilla County	Demolished, reconstruction estimated for 2024	None (work in progress, funding secured)
Iskuulpa Creek Bridge	Umatilla County	Fair (2021)	R13, R20
Meacham Creek Bridge	CTUIR	Fair (2021)	R13
Umatilla River Bridge	CTUIR	Fair (2021)	R13
Sumac Road Bridge	Umatilla County	Good (2021)	R08
McKay Creek Bridge	Umatilla County	Fair (2021)	R09
Mckay Creek Forks Bridge	Umatilla County	Fair (2021)	R09
Wildhorse Creek/Johns Road	Umatilla County	Good (2021)	None
Wildhorse Creek/Ringel Road	Umatilla County	Fair (2021)	None
Spring Hollow Creek/Spring Hollow Road	Umatilla County	Fair (2021)	None
Cottonwood Creek/Cayuse Road	Umatilla County	Fair (2021)	R13
Patawa Creek/Goad Road	Umatilla County	Good (2021)	None

Table source: CTUIR staff correspondence





Source: Oregon Department of Transportation

- - - - - Oregon Highway Plan Freight Routes
- - - - - Reduction Review Routes
- - - - - National Highway Freight Routes
- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure 4

**Freight Routes
Umatilla Indian Reservation**

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Roadway Plan

Streets serve most trips within the UIR across all travel modes. This section identifies alternatives to address gaps and deficiencies in the street system as well as alternatives that will facilitate improvements to the pedestrian, bicycle, and public transit systems.

The projects developed for the roadway system include realignments, repaving, and updates to existing roadways, traffic calming, intersection reconfiguration, and more. Table 2 describes the projects for the roadway system. The priority levels shown in Table 2 are based on the project evaluation criteria as well as input from the TAC and community. Figure 5 illustrates the location of the projects. *Technical Memorandum #5 in Volume II includes assumptions used to develop the planning-level cost estimates shown in Table 2. Appendix B of Volume II contains the summary sheets for each of the high priority projects.*



Photo: Kittelson & Associates, Inc.

Table 2: Roadway System Projects

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Cost
R01	Kash Kash Road	Kusi Road to east of OR 331	Close existing access to OR 331 and reroute Kash Kash Road north to a new intersection with Kusi Road.	County	Medium	\$1,900,000
R02	Spilya Road	Eastern end of roadway to Kash Kash Road realignment	Extend Spilya Road east to Kash Kash Road realignment.	CTUIR	Low	\$385,000
R03	Emigrant Road	Cayuse Road to Poverty Flat Road	Widen, add shoulders, and repave Emigrant Road (County Road #937) from Cayuse Road to Poverty Flat Road.	County	Medium	\$21,800,000
R04	56th Street-Theater Road	Mission Road to US 30	Widen, add shoulders, and pave/repave 56th Street-Theater Road to help support rerouting of trucks and other regional/state traffic during I-84 closures.	County/BIA	Low	\$3,900,000
R05	North Cayuse Road	River Road to Mann Road	Widen, add shoulders, and pave North Cayuse Road (County Road #925) from River Road north to Mann Road.	County	Low	\$2,400,000
R06	Mann Road	Crawford Hollow Road to North Cayuse Road	Widen, add shoulders, and pave Mann Road (County Road #925) from Crawford Hollow Road south to North Cayuse Road.	County	Low	\$7,000,000
R07	Motanic Road	Best Road to Spring Creek Road	Widen, add shoulders, pave, and improve stormwater management on Motanic Road (County Road #1031) from Best Road south to Spring Creek Road.	County	Medium	\$10,000,000
R08	Sumac Road	Spring Creek Road to McKay Creek Road	Widen, add shoulders, pave, and improve stormwater management on Sumac Road (County Road #1050) from Spring Creek Road south to McKay Creek Road.	County	Low	\$6,000,000
R09	McKay Creek Road	Sumac Road to North Fork McKay Creek Road	Widen, add shoulders, add gravel, and improve stormwater management on McKay Creek Road (County Road #1050) from Sumac Road east to North Fork McKay Creek Road.	County	Medium	\$4,700,000
R10	Exit 216 Truck Overflow Parking	South of I-84 Exit 216	Parking lot for overflow truck parking from I-84 winter closures. Could include a shuttle service from parking lot to Arrowhead during events. The location is still to be determined based on direction from ODOT – one option is shown in the figures. There should be consideration of electrification during design and	ODOT	High	\$3,200,000

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Cost
			construction in preparation for future needs. Install a road camera at the I-84/OR 331 interchange to better inform winter travel coordination and truck information. Install lighting at the I-84/OR 331 interchange.			
R11	OR 331 Speed Study	UIR northern boundary to I-84	Perform a speed study along the OR 331 corridor and determine whether to modify any speed zones. Coordinate with Umatilla County to extend study north to OR 11.	ODOT	High	\$20,000
R12	Mission Road Traffic Calming	From Mustanger Lane to Parr Lane	Install speed feedback signage and other traffic calming measures.	CTUIR/ County	High	\$30,000
R13	County Road #900 (Cayuse Road and Bingham Road)	Emigrant Road to UIR eastern boundary	Perform a speed study at key intersections on the County Road #900 corridor to determine potential traffic calming or intersection safety treatments. Consider stormwater management improvements as part of any future projects.	County	Medium	\$20,000
R14	Kirkpatrick Road, vertical curve east of McKinley Lane	Intersection extents	Evaluate sight distance and install advisory signage if warranted.	County	Low	\$25,000
R15	Cayuse Road/ Cayuse River Road intersection	Intersection extents	Reconstruct northern leg to connect at a more perpendicular angle.	County	Low	\$1,200,000
R16	River Road/White Road intersection	Intersection extents	Reconstruct southern leg to connect at a more perpendicular angle.	County	Low	\$1,200,000
R17	Confederated Way	B Street to Mission Road (east intersection)	Construct flood remediation projects on Confederated Way from B Street to Mission Road (east intersection). Mitigations may include building a levy, raising the roadway, creating water retention areas, and rerouting the roadway.	BIA	High	To be determined by ongoing study
R18	Short Mile Road Traffic Calming	From Mission Road to roadway extents	Perform a speed study. Install speed feedback signage and other traffic calming measures.	CTUIR	Medium	\$30,000
R19	Riverside Avenue Traffic Calming	From UIR western boundary to roadway extents	Perform a speed study. Install speed feedback signage and other traffic calming measures.	CTUIR/ County/ Pendleton	Medium	\$30,000
R20	Iskuulpa Creek Bridge	Bridge extents	Replace the bridge, including a higher deck based on annual flooding.	CTUIR/ County	Low	\$2,100,000



Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Cost
R21 ^{3,4}	OR 331/ Mission Road	Intersection extents	Install safety and traffic operations improvements. Future traffic control could include a single lane roundabout, traffic signal, or other alternative configuration. ¹	ODOT/ County/ CTUIR	Development-Driven	
R22 ³	Mission Road/Timíne Way	Intersection extents	Install an eastbound right-turn lane and/or a westbound left-turn lane when warranted. OR Construct a single lane roundabout. OR Install a traffic signal, with necessary turn lanes, when warranted.	ODOT/ CTUIR	Development-Driven	
R23 ^{3,4}	OR 331/ Wildhorse Boulevard	Intersection extents	Install safety and traffic operations improvements. Future traffic control could include a single lane roundabout, traffic signal, or other alternative configuration.	ODOT/ CTUIR	Development-Driven	
R24 ^{3,4}	OR 331/ Spilya Road	Intersection extents	Install safety and traffic operations improvements. Future traffic control could include a single lane roundabout, traffic signal, or other alternative configuration. ¹ Consider options to modify access at Kusi Road and/or Arrowhead Travel Plaza depending on the future traffic control selected.	ODOT/ CTUIR	Development-Driven	
R25 ^{3,4}	OR 331/I-84 Eastbound Ramps	Intersection extents	Install safety and traffic operations improvements. Future traffic control could include a single lane roundabout, traffic signal, or other alternative configuration. ¹ Consider whether to install exclusive left- and right-turn lanes on the off ramp approach depending on the future traffic control selected.	ODOT	Development-Driven	
R26 ³	OR 331/I-84 Westbound Ramps	Intersection extents	Install safety and traffic operations improvements. Future traffic control could include a traffic signal, single lane roundabout, or other alternative configuration. ¹ Consider whether to install exclusive left- and right-turn lanes on the off ramp approach and an exclusive right-turn lane on the north approach depending on the future traffic control selected.	ODOT	Development-Driven	

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Cost
Total High Priority Cost						\$3,250,000
Total Medium Priority Cost						\$38,480,000
Total Low Priority Cost						\$24,210,000
Total Cost						\$65,940,000

Note: The cost estimates presented do not include costs associated with right-of-way acquisition due to its high variability depending on location, parcel sizes, and other characteristics. The cost estimates also reflect the full cost of the projects, including costs likely to be funded by others, such as ODOT or private developers.

¹Depending on the reconfiguration of the intersection, consider incorporating bus pull-outs into the project design.

²This project may be completed in conjunction with future replacement of the Exit 216 I-84 overpass.

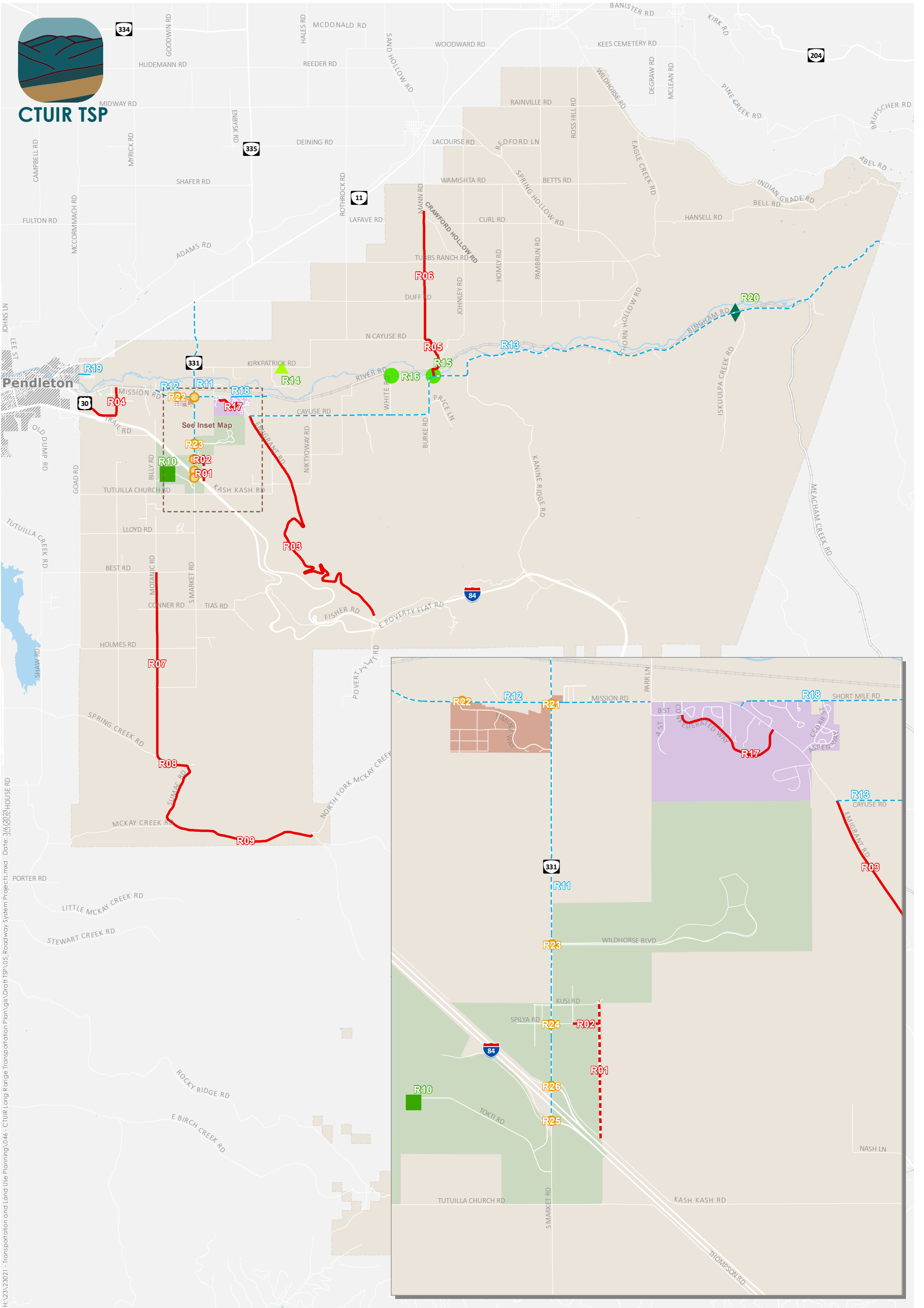
³Project will require coordination with ODOT and approval from the State or Regional Traffic Engineer. Further evaluation may be required to determine the most appropriate form of traffic control.

⁴Planning concept potentially reduces vehicle-carrying capacity of the highway; further evaluation of the project design will be required at the time of implementation to ensure compliance with ORS 366.215.



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- Improvement to Existing Roadway
- - - New Roadway
- - - Traffic Calming or Speed Study
- ▲ Advisory Signage
- Intersection Reconfiguration
- Truck Overflow Parking
- ◆ Bridge Replacement
- Development-driven Intersection Project
- Development-driven Roadway Project
- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure 5

**Roadway System Projects
Umatilla Indian Reservation**

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DEVELOPMENT DRIVEN CAPACITY AND INTERSECTION PROJECTS ON OR 331

Although the operations analysis presented in *Technical Memorandum #2: Context and Site Analysis*, provided in Volume II, did not highlight intersection capacity deficiencies based on generalized growth projections, previous planning efforts have identified potential intersection and roadway projects that may be needed to accommodate localized development or expansions of existing businesses and destinations.

These growth opportunities, such as expansion of the Coyote Business Park, further expansion of the Wildhorse Resort and Casino, and expansion of Arrowhead Travel Plaza, are not imminent, but could have local and regional impacts to the transportation system. If and when projects like this were to occur, the potential impacts and mitigation measures would have to be determined based on detailed traffic studies for the specific development scenario. Intersection solutions that have been identified through previous planning studies and preliminary traffic impact studies are included in Table 2. The identified solutions have historically included constructing roundabouts or installing traffic signals. Cost and benefit considerations for these two intersection control types are discussed below:

- **Construct a roundabout**
 - *Cost considerations:* Potentially higher construction cost and lower long-term maintenance cost.
 - *Benefit considerations:* Improved safety, including reducing the potential for fatal and serious injury crashes and lowering speeds near the intersection. Adds capacity and reduces delay.
- **Install a traffic signal**
 - *Cost considerations:* Potentially lower construction cost (depending on turn lane impacts) and higher long-term maintenance cost.
 - *Benefit considerations:* Adds capacity and reduces delay. May also reduce crash potential, but not to the same extent as a roundabout.

Due to the potential for development-related growth to influence traffic conditions along OR 331 from Mission Road to the I-84 interchange, CTUIR and ODOT will require traffic impact studies for all new development projects requiring access along the corridor and that are expected to generate more than 500 daily trips.

ROADWAY PROGRAMS AND PLANS

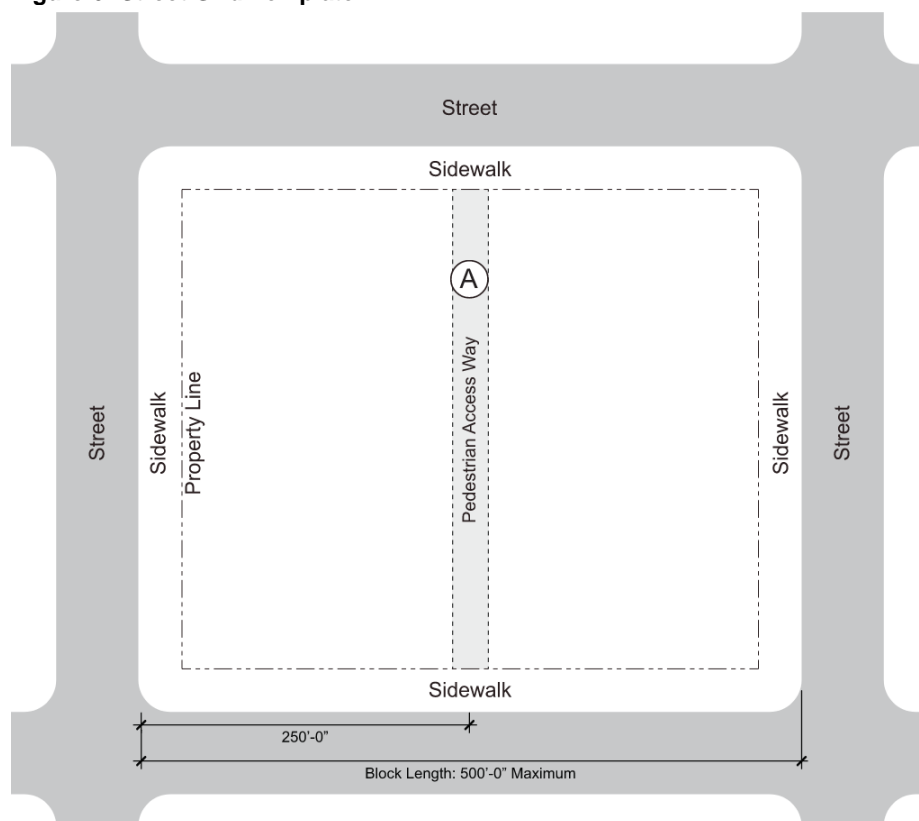
In addition to identifying potential projects, the project team also identified potential roadway-related policy and programmatic direction to support the transportation system based on input from CTUIR staff. The roadway system programs and plans are provided below:

- Maintenance program for intersections in the northern UIR where crops limit sight distance during certain times of the year
 - Work with property owners adjacent to roads with limited sight distance to establish formal sight triangle boundaries. One example is Duff Road at Mann Road.
 - Where sight triangles cannot be established, add warning signage.
- Maintenance programs for striping
 - Complete annual striping projects to update worn striping and to add/restripe fog lines on collectors and arterials.



- Coordinate with the County and ODOT on how to address truck parking and routing when I-84 is closed.
- Coordinate with ODOT and Umatilla County on regional connecting roadways.
- Create walkable neighborhoods. Monitor the need for traffic calming measures in neighborhoods and near pedestrian and bicycle activity centers, such as the school, Mission Senior Center, July Grounds residential area, and Nixyáawii Governance Center. Potential mitigations include raised crosswalks, “Children at Play” signage, 20 MPH speed limits, and additional marked crossings.
- Update and maintain CTUIR’s parking regulations based on current national guidance and local trends.
- Maintain the Tribal Transportation Program (TTP) National Tribal Transportation Facility Inventory (NTTFI) and update with routes that CTUIR may wish to include as projects move forward. Coordinate with the BIA as needed. *Attachment D includes the existing NTTFI as of September 2022.*
- Coordinate with the Range, Agriculture & Forestry program and other stakeholders to prepare an Upland Access Management Plan to determine a management approach for seasonal road closures, temporary timber harvest roads, and other publicly-used informal trails.
- As new development occurs, create a local street network that provides a high level of connectivity, pedestrian and bicycle facilities, and multiple alternative routes. The local street network must tie into the existing network to support emergency access and circulation. New developments shall be planned with a maximum block length of 500 feet with a pedestrian access way provided every 250 feet along the block length. Pedestrian access shall be a dedicated pedestrian access way meeting the requirements of Section 17.015(2) of CTUIR’s Land Development Code (LDC).

Figure 6: Street Grid Template



A Pedestrian access way shall meet the requirements of Section 17.015(2).



ACCESS MANAGEMENT

CTUIR supports the access spacing standards for County roads within the UIR. CTUIR also elects to apply these standards to the roads maintained and/or owned by CTUIR or BIA. To handle any discrepancies between functional classifications, the County standards for major and minor collectors should apply to all CTUIR rural and urban collectors. The County standards for local roads should apply to all CTUIR rural and urban local roads.

The OR 331 Access Management Plan was referenced in developing the roadway projects described in Table 2 and Figure 5. The standards in this updated CTUIR TSP will supersede the OR 331 Access Management Plan.

ROADWAY CROSS-SECTIONS AND DESIGN STANDARDS

Roadway cross sections were developed for the TSP update based on the characteristics of the existing roadways within the UIR. The design of a roadway can (and will) vary from street to street and segment to segment due to adjacent land uses and demand. The roadway cross sections are intended to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility while meeting the design standards. Figures 7 to 19 illustrate the cross-section standards for each functional classification. Unless prohibited by significant topographic or environmental constraint, newly constructed streets should meet the maximum standards indicated in the cross sections. When widening an existing street, CTUIR may use lesser standards than the maximum to accommodate physical and existing development constraints where determined to be appropriate by the CTUIR staff.

Road design standards ensure the design of a roadway supports its intended use. Road standards consist of design parameters necessary to provide a community with roadways or streets, which are relatively safe, aesthetically pleasing, and easy to administer when new facilities are planned or constructed or existing facilities are reconstructed. Figures 20 to 23 provide roadway design standards for select functional classifications.

OR 331 AREA PROJECTS

Figure 24 illustrates projects on, and around, OR 331 from Wildhorse Boulevard to the I-84 interchange. This figure incorporates the projects identified across all chapters of this TSP, including projects that were originally identified in the 2006 OR 331 Access Management Implementation Strategy and Circulation Plan.

Figure 7: Cross-section for Arterial Roadway (i.e., OR 331 or Mission Road) – Multi-use Path Option

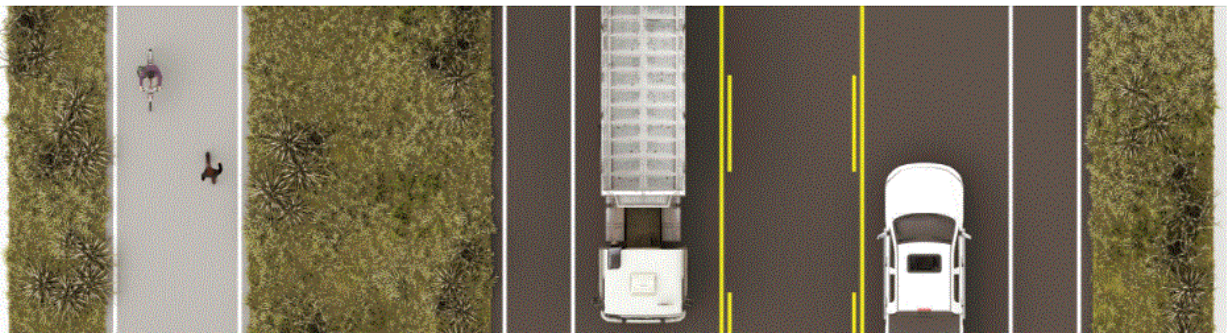
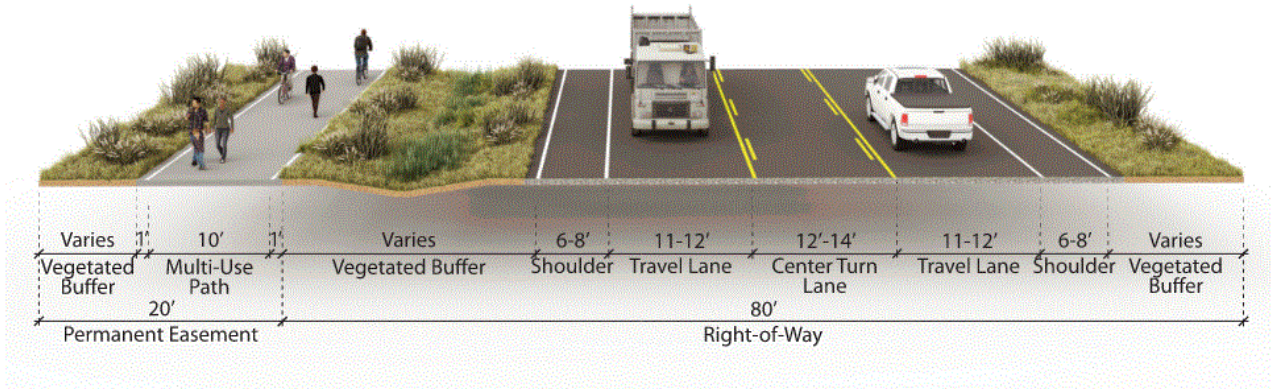


Figure 8: Cross-section for Arterial Roadway (i.e., OR 331 or Mission Road) – Curb and Gutter Option

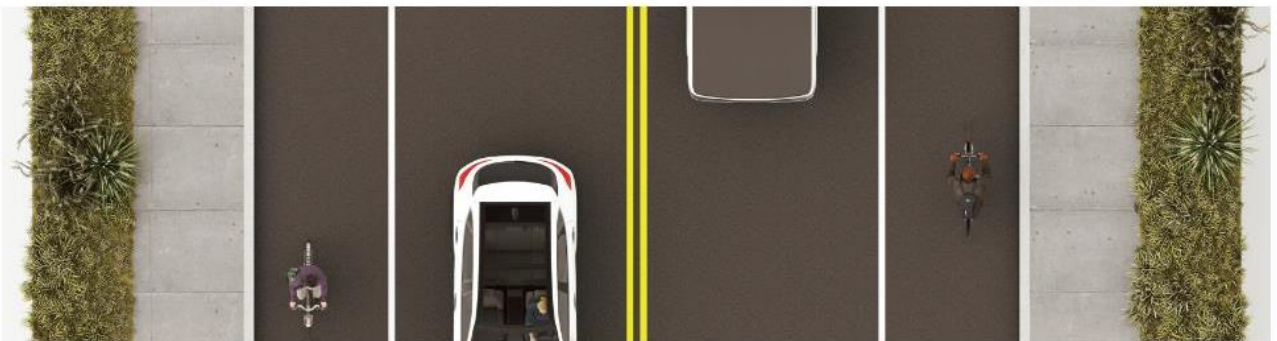
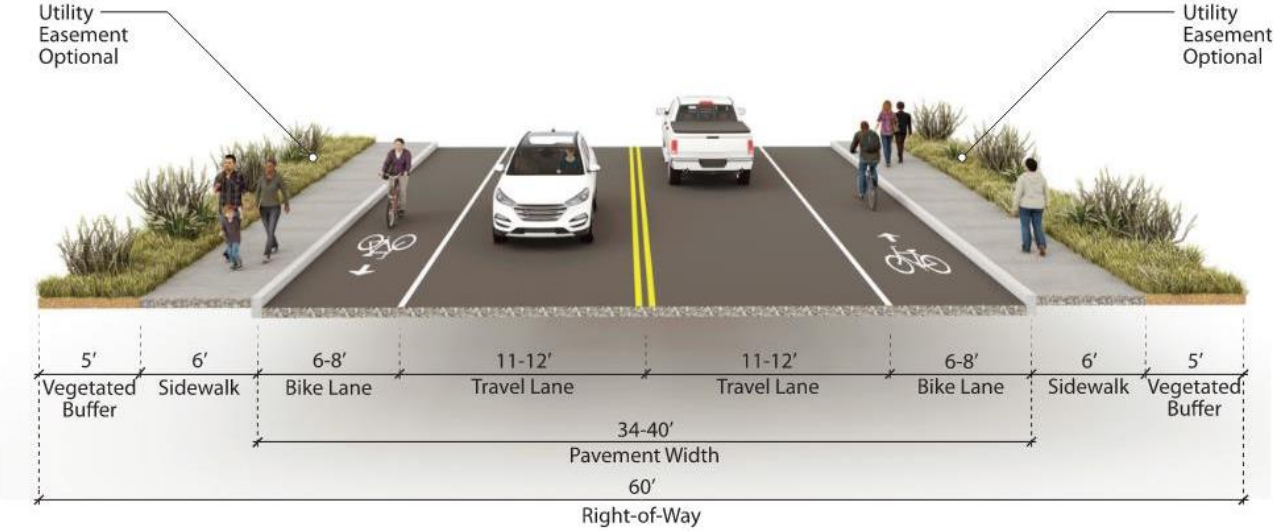


Figure 9: Cross-section for Rural Collector – Shoulder Option

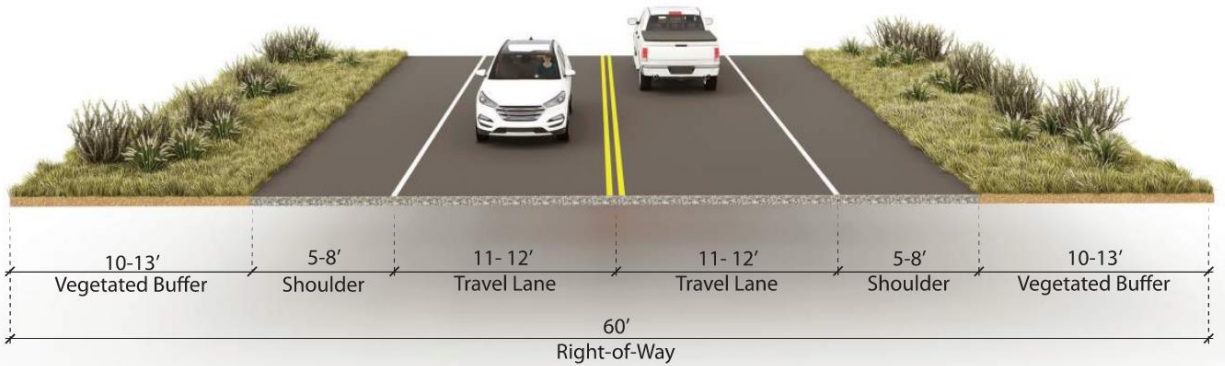


Figure 10: Cross-section for Rural Collector – Multi-use Path Option

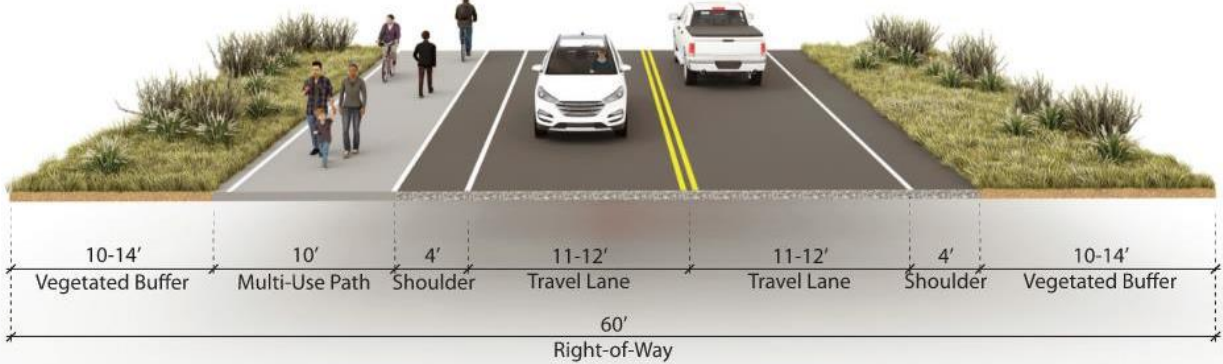


Figure 11: Cross-section for Rural Collector – Gravel Option

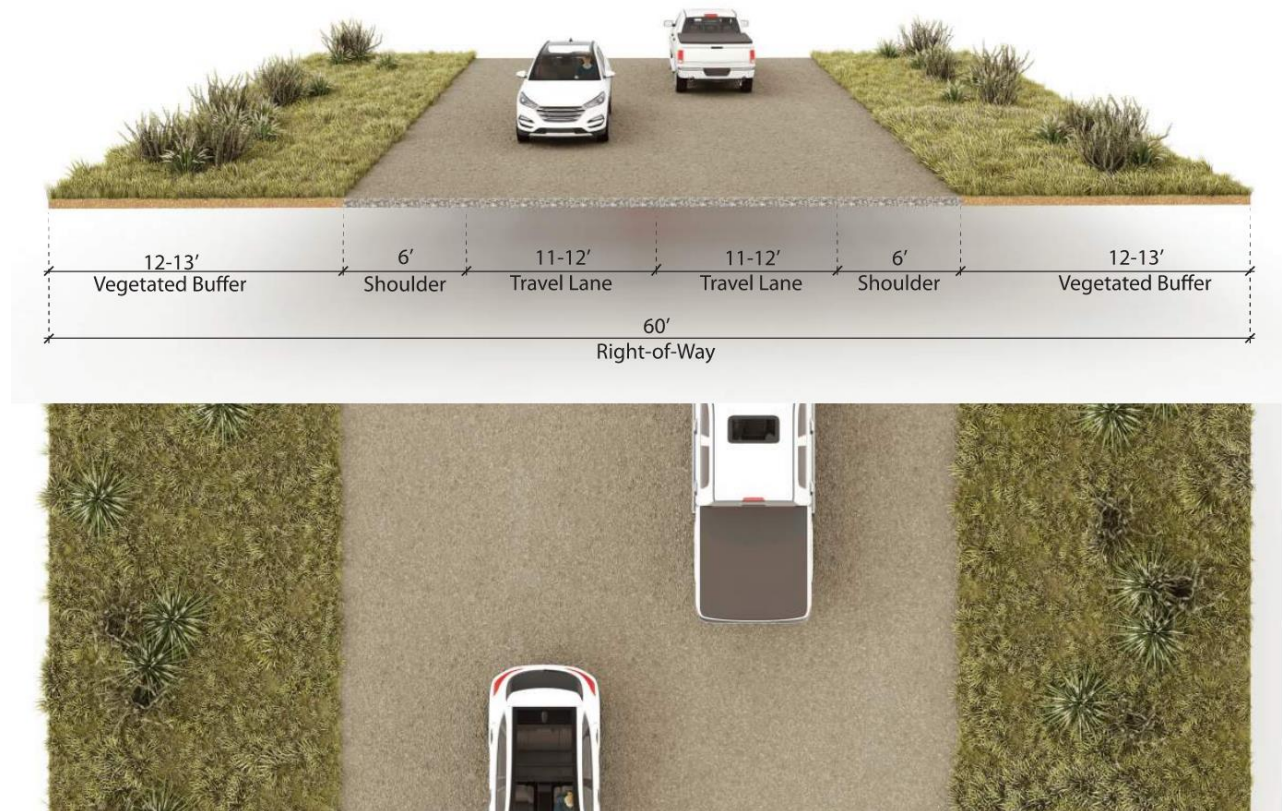


Figure 12: Cross-section for Urban Collector

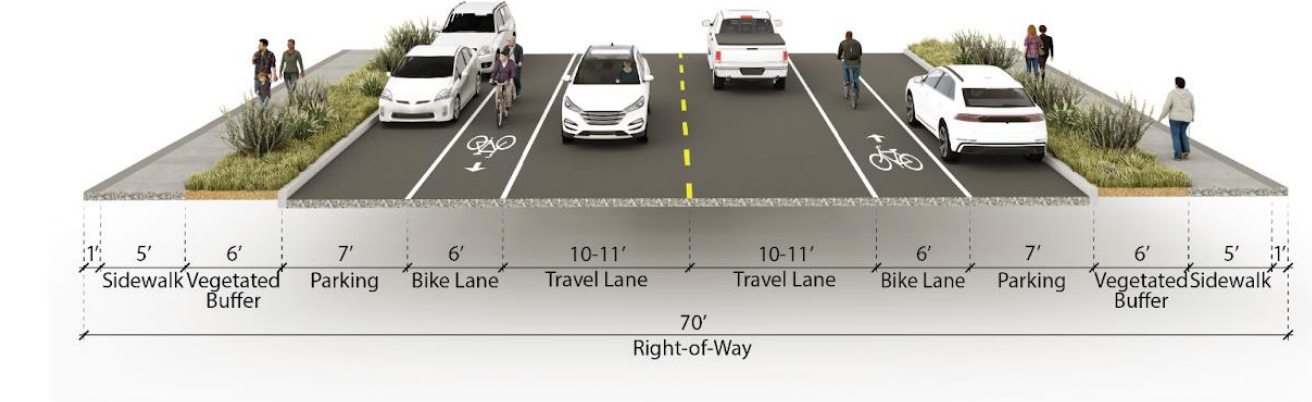


Figure 13: Cross-section for Rural Local Street

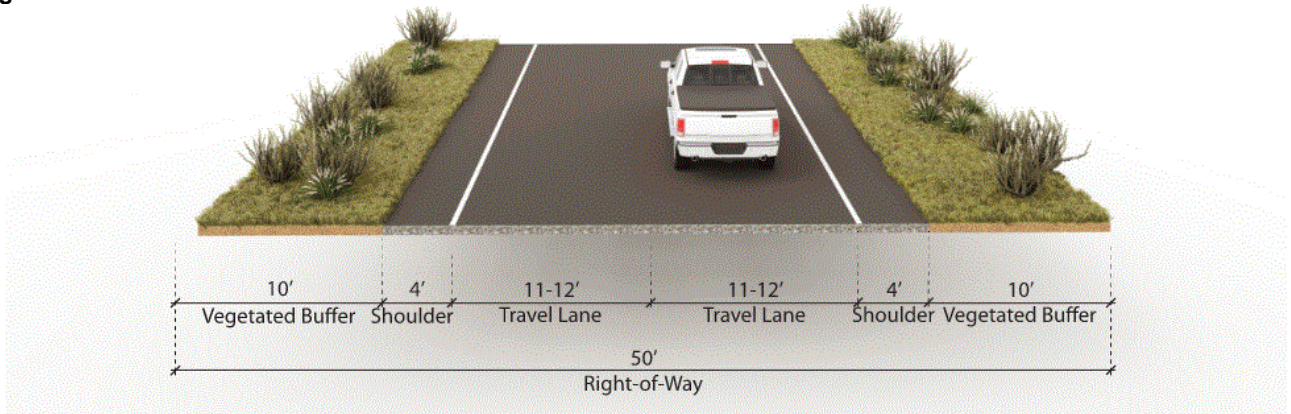


Figure 14: Cross-section for Rural Local Street – Gravel Option

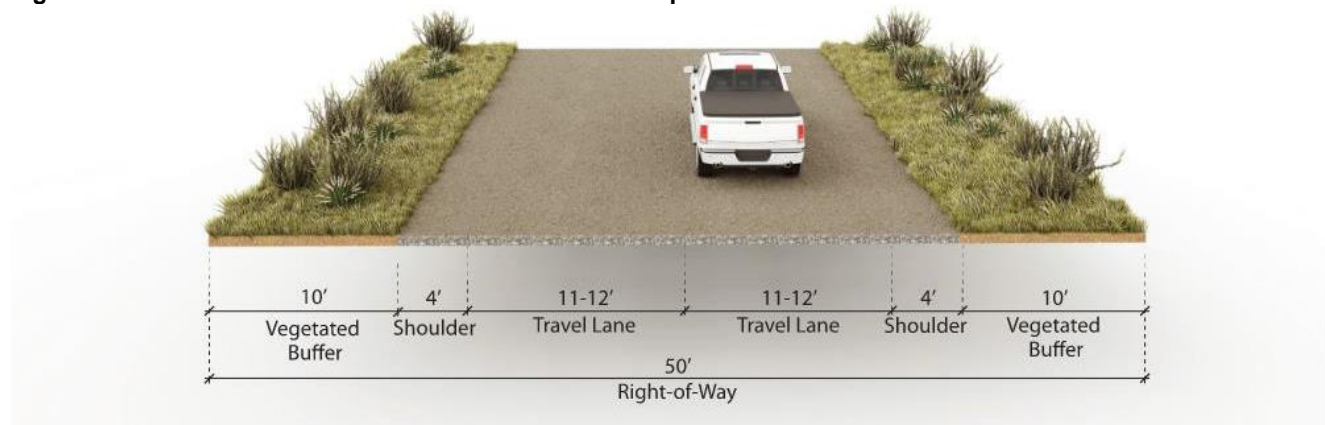


Figure 15: Cross-section for Urban Local Street – Standard Residential Street

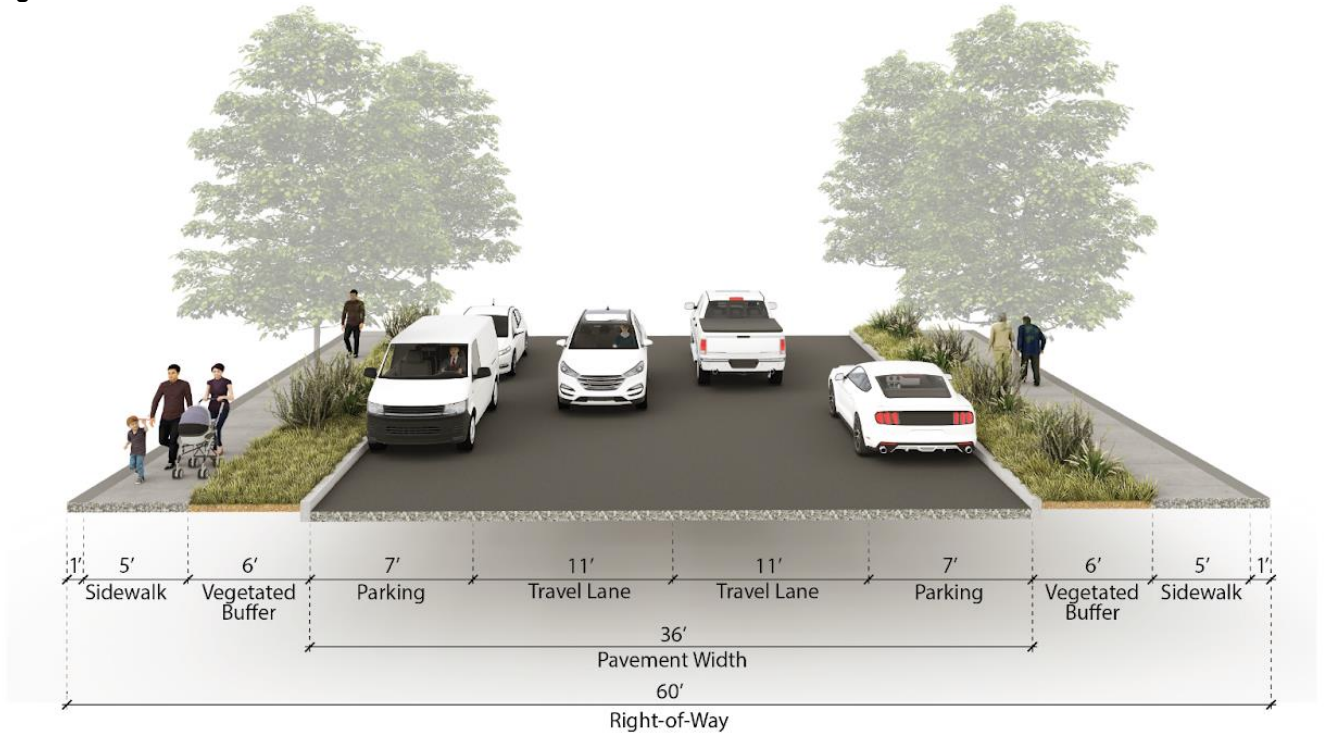


Figure 16: Cross-section for Urban Local Street – Minor Residential Street

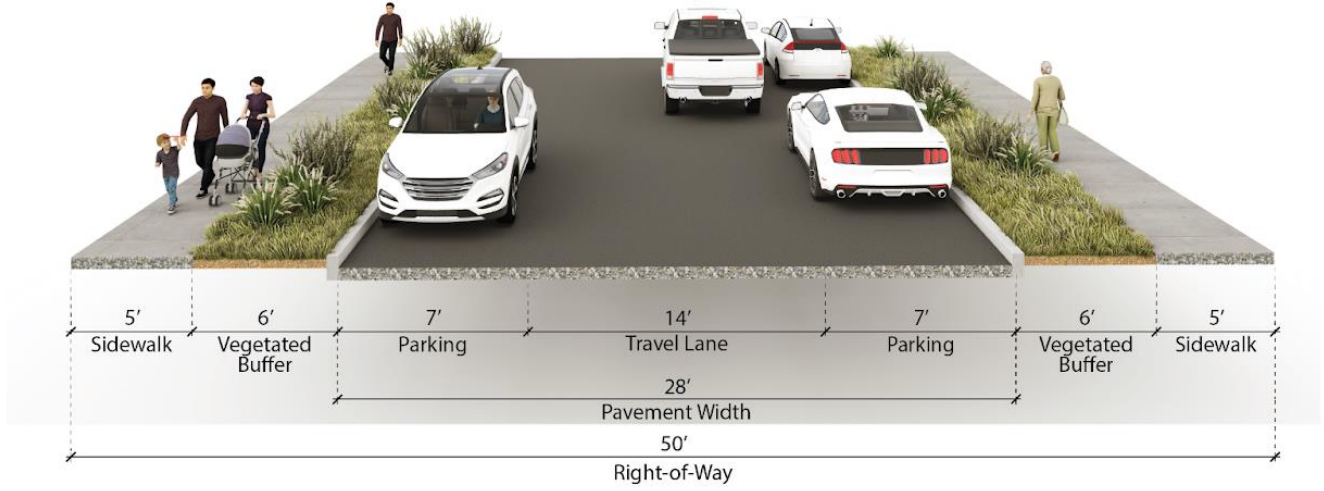


Figure 17: Cross-section for Alley



Figure 18: Cross-section for Multi-use Path

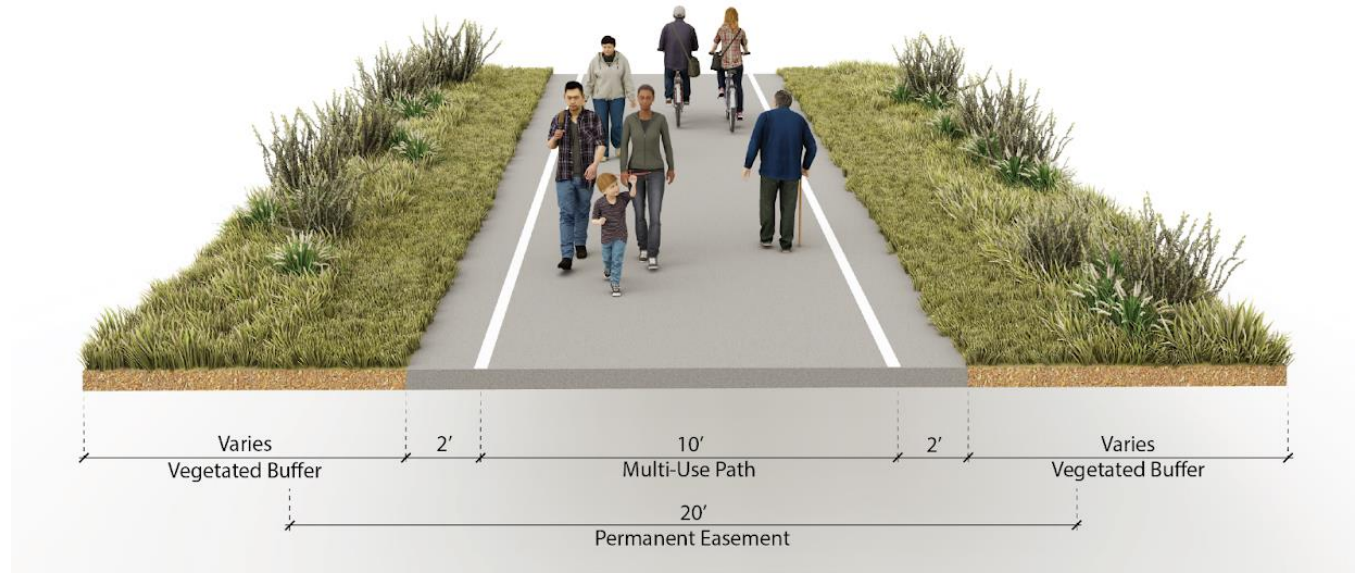
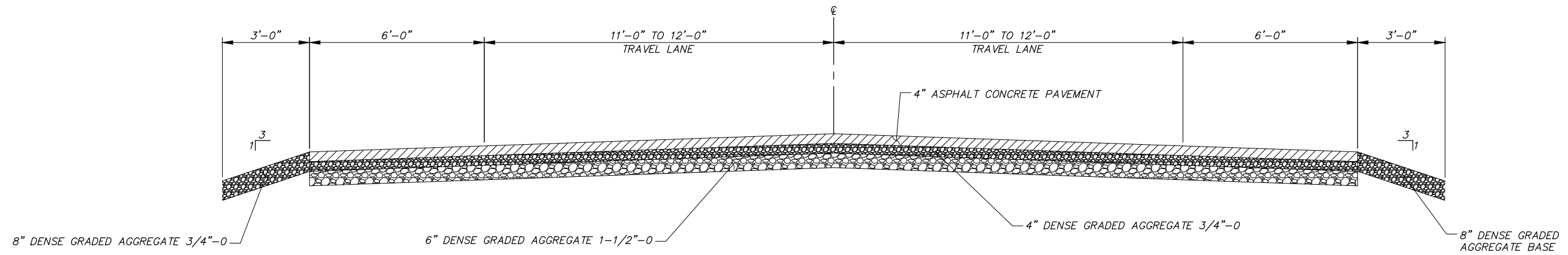
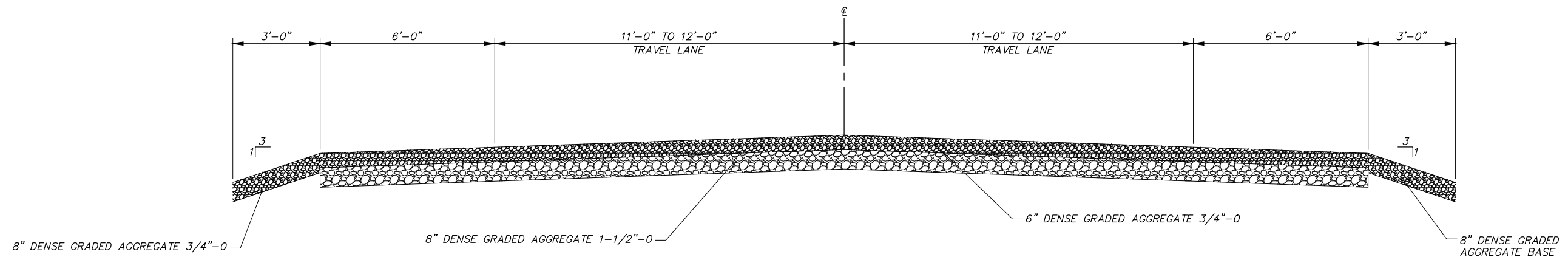


Figure 19: Cross-section for Umatilla River Multi-use Path and Horse Trail

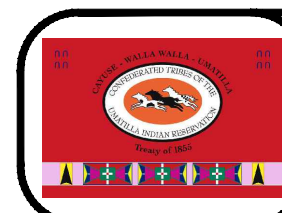




TYPICAL ROADWAY SECTION - ASPHALT
 RURAL COLLECTOR
 N.T.S.



TYPICAL ROADWAY SECTION - GRAVEL
 RURAL COLLECTOR
 N.T.S.

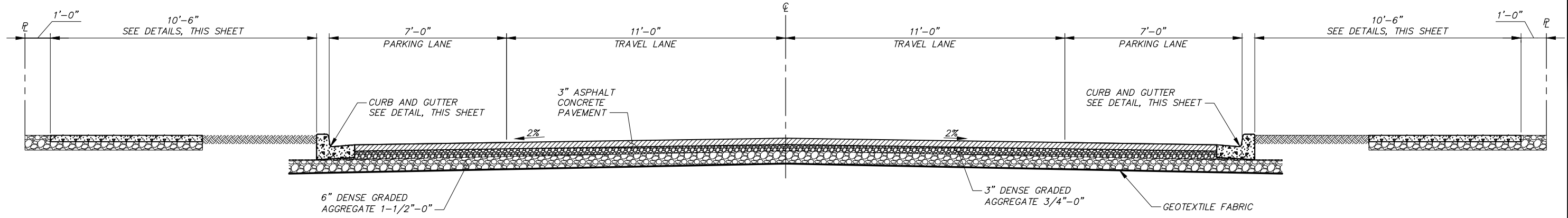


**CONFEDERATED TRIBES OF THE
 UMATILLA INDIAN RESERVATION
 STANDARD DETAILS**

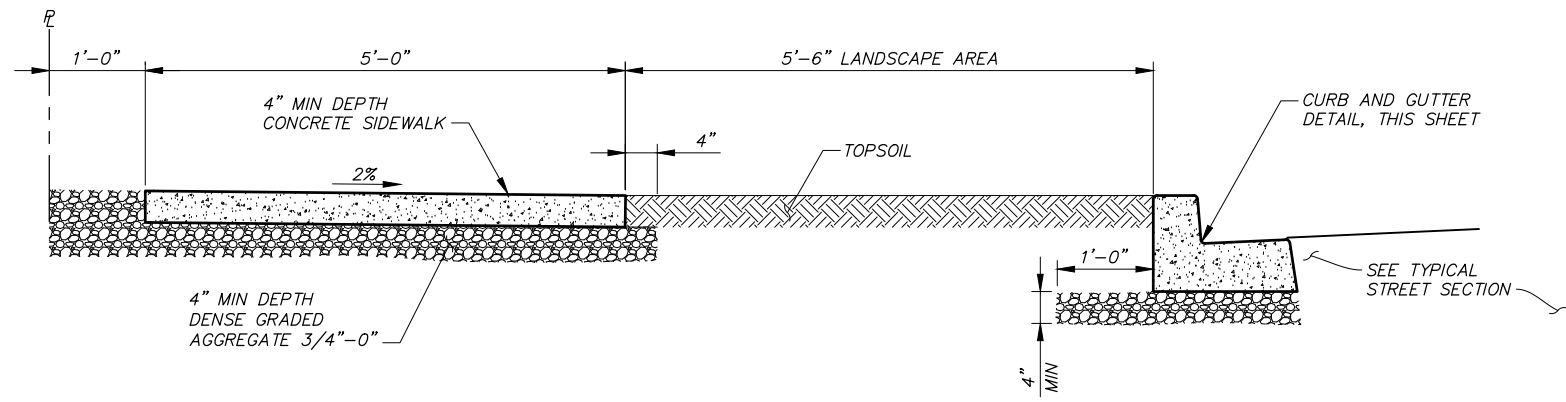
**TYPICAL ROADWAY SECTION
 RURAL COLLECTOR**

FIGURE

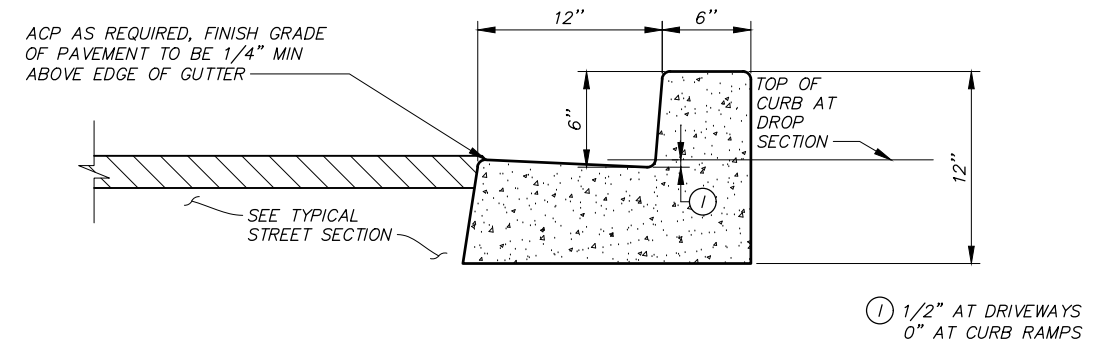
20



TYPICAL ROADWAY SECTION
LOCAL RESIDENTIAL
 N.T.S.



SIDEWALK/CURB AND GUTTER DETAIL
(FOR SETBACK SIDEWALK)
 N.T.S.



- NOTES**
1. ALL TOP EDGES HAVE 1/2" RADIUS, TYP.
 2. PROVIDE FULL SECTION EXPANSION JOINT AT 50' MIN SPACING FOR CONTINUOUS SECTIONS AND AT BEGINNING AND END OF CURVED SECTIONS.
 3. PROVIDE 1/2" DEPTH CONTRACTION JOINTS AT 10' SPACING.

CURB AND GUTTER DETAIL
 N.T.S.

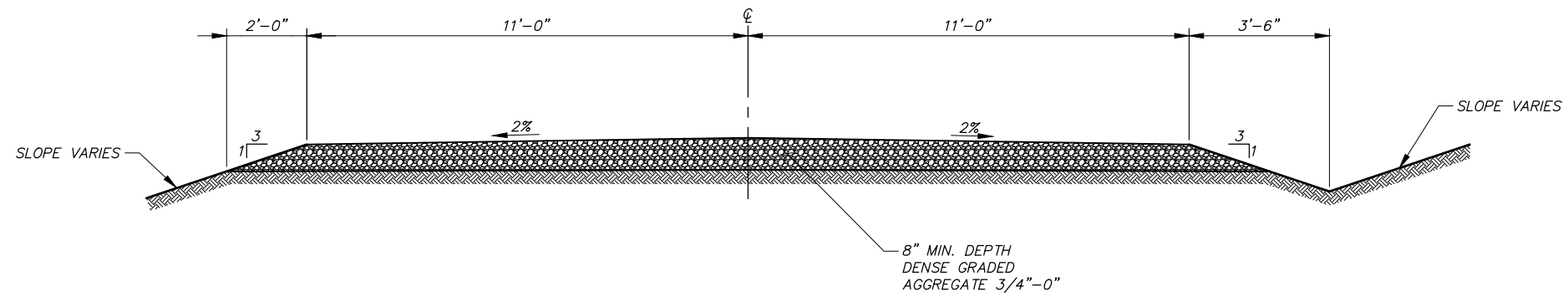
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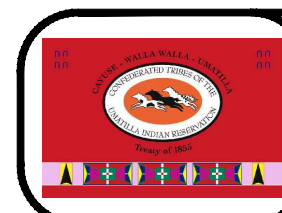
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION
STANDARD DETAILS
TYPICAL ROADWAY SECTION LOCAL RESIDENTIAL

FIGURE
21

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TYPICAL ROADWAY SECTION
LOCAL RURAL STREET
N.T.S.

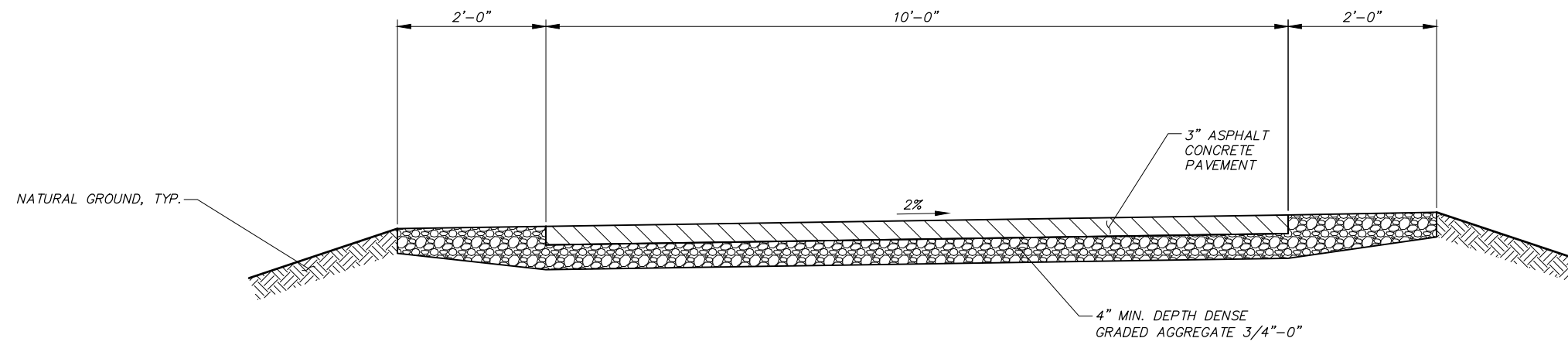


**CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION
STANDARD DETAILS**

**TYPICAL ROADWAY SECTION
LOCAL RURAL STREET**

FIGURE

22



TYPICAL SECTION
MULTI-USE PATHWAY
N.T.S.

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**CONFEDERATED TRIBES OF THE
 UMATILLA INDIAN RESERVATION**
 STANDARD DETAILS

**TYPICAL SECTION
 MULTI-USE PATHWAY**

FIGURE

23

Figure 24: Detailed Concept OR 331 from Wildhorse Boulevard to the I-84 Interchange

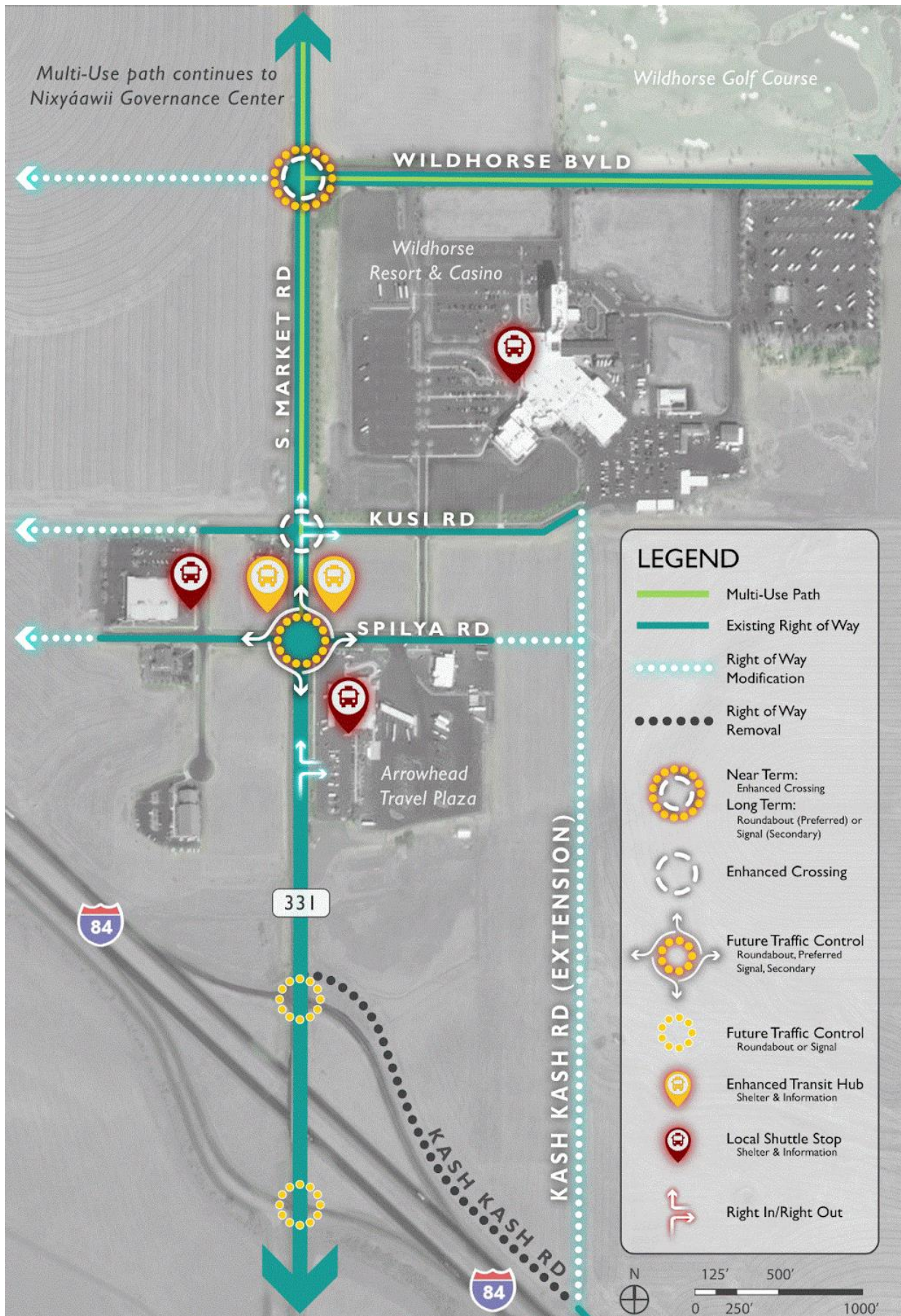




Photo Kittelson & Associates

Chapter 5 — PEDESTRIAN SYSTEM – WALKING AND ROLLING

The pedestrian system within the UIR consists of sidewalks and multi-use paths, as well as marked and/or signed pedestrian crossings. These facilities are primarily provided within the Mission, July Grounds, and Gateway hubs near OR 331 and Mission Road.

Pedestrian Plan

The projects developed for the pedestrian system include sidewalk infill and reconstruction, new multi-use path connections, pedestrian crossing treatments, and more. Table 3 describes the projects for the pedestrian system. The priority levels shown in Table 3 are based on the project evaluation criteria as well as input from the TAC and community. Table 3 also shows if a project is within a 2-mile radius of the Nixyáawii Community School. If it was, the priority was increased one level, if possible. *Technical Memorandum #5 in Volume II includes the CTUIR Safe Routes to School Plan as an attachment, which has been used to develop the projects shown in Table 3. Figure 25 illustrates the location of the projects. Technical Memorandum #5 in Volume II includes assumptions used to develop the planning-level cost estimates shown in Table 3. Appendix B of Volume II contains the summary sheets for each of the high priority projects.*

Table 3: Pedestrian System Projects

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
P01	Mission Road	East of Huckleberry Street to Cedar Street	Install six-foot sidewalks along the north side of Mission Road from east of Huckleberry Street to Cedar Street. Consider incorporating bus pull-outs into the project design.	County	High	X	\$1,500,000
P02	Mission Road	Confederated Way (western intersection) to Confederated Way (eastern intersection)	Complete the sidewalk network along the south side of Mission Road from Confederated Way (western intersection) to Confederated Way (eastern intersection). Consider incorporating bus pull-outs into the project design.	County	High	X	\$680,000
P03	Mission Road	OR 331 to Confederated Way (western intersection)	Widen sidewalks to six feet on the south side of Mission Road from OR 331 to Confederated Way (western intersection) and address the existing mailbox obstructions. Consider incorporating bus pull-outs into the project design.	County	High	X	\$490,000
P04	Confederated Way	East of Whirlwind Drive to Mission Road (east intersection)	Complete the sidewalk network along the north side of Confederated Way from east of Whirlwind Drive to Mission Road (east intersection).	BIA	High	X	\$435,000
P05	Cedar Street	Short Mile Road to Mission Road	Widen sidewalks to six feet wide on both sides of Cedar Street from Short Mile Road to Mission Road.	BIA	Medium	X	\$580,000
P06	Multi-use Path to Pendleton (Phase I)	Purchase Lane to OR 331	Construct a multi-use path on the south side of Mission Road from Purchase Lane to OR 331. This project is the first phase of a larger multi-use path connection to the City of Pendleton. Further study is needed to determine the ultimate alignment.	CTUIR	High	X	\$775,000
P07	Multi-use Path to Pendleton (Phase II)	UIR western boundary to Purchase Lane	Construct the second phase of the multi-use path to Pendleton, connecting at Purchase Lane. West of Purchase Lane, the alignment of the multi-use path connection may occur in the area between Mission Road and the south bank of the Umatilla River.	CTUIR/ County/ Pendleton	High	X	\$3,500,000

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
			Further study is needed to determine the ultimate alignment. If possible, connect to the Pendleton Riverwalk or the Riverside neighborhood. Include benches, lighting, and safety amenities (such as emergency call boxes and security cameras).				
P08	Short Mile Road Multi-use Path	Mission Road to Cayuse Bridge	Construct a multi-use path along Short Mile Road to Sampson Lane adjacent to the Union Pacific Railroad maintenance road to River Road to North Cayuse Road Bridge.	CTUIR	Medium		\$3,900,000
P09¹	OR 331 Multi-use Path (Phase I)	Mission Road to Arrowhead Travel Plaza driveway	Construct a multi-use path along one or both sides of OR 331 from Mission Road to Arrowhead Travel Plaza driveway.	CTUIR	High		\$1,900,000
P10¹	OR 331 Multi-use Path (Phase II)	Kirkpatrick Road to Mission Road	Construct a multi-use path along one or both sides of OR 331 from Kirkpatrick Road to Mission Road, depending on feasible options for crossing the Umatilla River Bridge. River access could potentially be included as part of this project.	CTUIR	High	X	\$2,900,000
P11	South Market Road Multi-use Path	Arrowhead Travel Plaza driveway to Tutuilla Church Road	Construct a multi-use path along one or both sides of OR 331-South Market Road from Arrowhead Travel Plaza driveway to Tutuilla Church Road. The Exit 216 overpass may need to be replaced to fit the desired facilities.	CTUIR	Medium		\$3,900,000
P12	Wildhorse Boulevard Multi-use Path	OR 331 to the Tamástslikt Trail	Construct a multi-use path along Wildhorse Boulevard, along the north side of the median or within the median.	CTUIR	Medium		\$675,000
P13	Parr Lane Multi-use Path	Umatilla River to Mission Road	Construct a multi-use path in the vicinity of Parr Lane and extending to the Umatilla River.	CTUIR	Low		\$305,000
P14	East-West Multi-use Path	OR 331 to Mission Road	Construct a multi-use path along the top of the bluff connecting OR 331 to Mission Road, intersecting the Tamástslikt Trail. Include lighting, benches, and security cameras or call boxes. Coordinate with Project P19 – OR 331/Timíne Way pedestrian crossing and Project P23 - Mission Road/Cedar Street pedestrian crossing.	CTUIR	High	X	\$1,600,000

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
P15	Tamástslikt Trail Lighting	Confederated Way to Tamástslikt Cultural Institute	Install lighting and security cameras to existing multi-use path system.	CTUIR	High		\$530,000
P16	Timíne Way Multi-use Path Lighting	Mission Road to OR 331	Install lighting and security cameras to existing multi-use path system.	CTUIR	Medium	X	\$320,000
P17	July Ground Multi-use Path System Lighting	n/a	Install lighting and security cameras to existing multi-use path system.	CTUIR	Medium	X	\$480,000
P18	Mission Road Lighting	Short Mile Road to Cedar Street	Install pedestrian-scale lighting.	County	High		\$195,000
P19 ¹	OR 331/ Timíne Way	n/a	Install an enhanced pedestrian crossing. Treatment may include signalization or a pedestrian hybrid beacon (if warranted), rectangular rapid flashing beacons (RRFBs), or a grade separated undercrossing of OR 331. Coordinate with Project P14 – East-West Multi-use Path.	ODOT	High	X	\$2,000,000
P20	Mission Road Mid-block Crossing	n/a	Install enhanced pedestrian crossing treatments at the existing mid-block crossing on Mission Road east of Short Mile Road. Treatment may include raised crosswalk, rectangular rapid flashing beacons (RRFBs), high visibility crosswalk markings, and/or curb extensions.	County	High	X	\$105,000
P21 ¹	OR 331/ Kusi Road	n/a	Install an enhanced pedestrian crossing. Treatment may include pedestrian hybrid beacon (if warranted), rectangular rapid flashing beacons (RRFBs), raised median island, high visibility crosswalk markings, and curb extensions.	ODOT	High		\$105,000
P22	Mission Road/ Confederated Way (east intersection)	n/a	Install an enhanced pedestrian crossing. Treatment may include raised crosswalk, rectangular rapid flashing beacons (RRFBs), high visibility crosswalk markings, and curb extensions.	County	High	X	\$105,000
P23	Mission Road/ Cedar Street	n/a	Install an enhanced pedestrian crossing. Treatment may include raised crosswalk, rectangular rapid flashing beacons (RRFBs), high	County	High	X	\$105,000



Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
			visibility crosswalk markings, and curb extensions. Coordinate with Project P14 - East-West Multi-use Path.				
P24	Riverside Avenue	From UIR western boundary to roadway extents	Install sidewalk and lighting along one side of Riverside Avenue. Cost shown is for the roadway segment within the UIR. Coordinate with planned project in City of Pendleton TSP, if possible.	CTUIR/ County/ Pendleton	High		\$540,000
Total High Priority Cost							\$17,465,000
Total Medium Priority Cost							\$9,855,000
Total Low Priority Cost							\$305,000
Total Cost							\$27,625,000

Note: The cost estimates presented do not include costs associated with right-of-way acquisition due to its high variability depending on location, parcel sizes, and other characteristics. The cost estimates also reflect the full cost of the projects, including costs likely to be funded by others, such as ODOT or private developers.
¹Project will require coordination with ODOT and approval from the State or Regional Traffic Engineer.

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PEDESTRIAN PROGRAMS AND PLANS

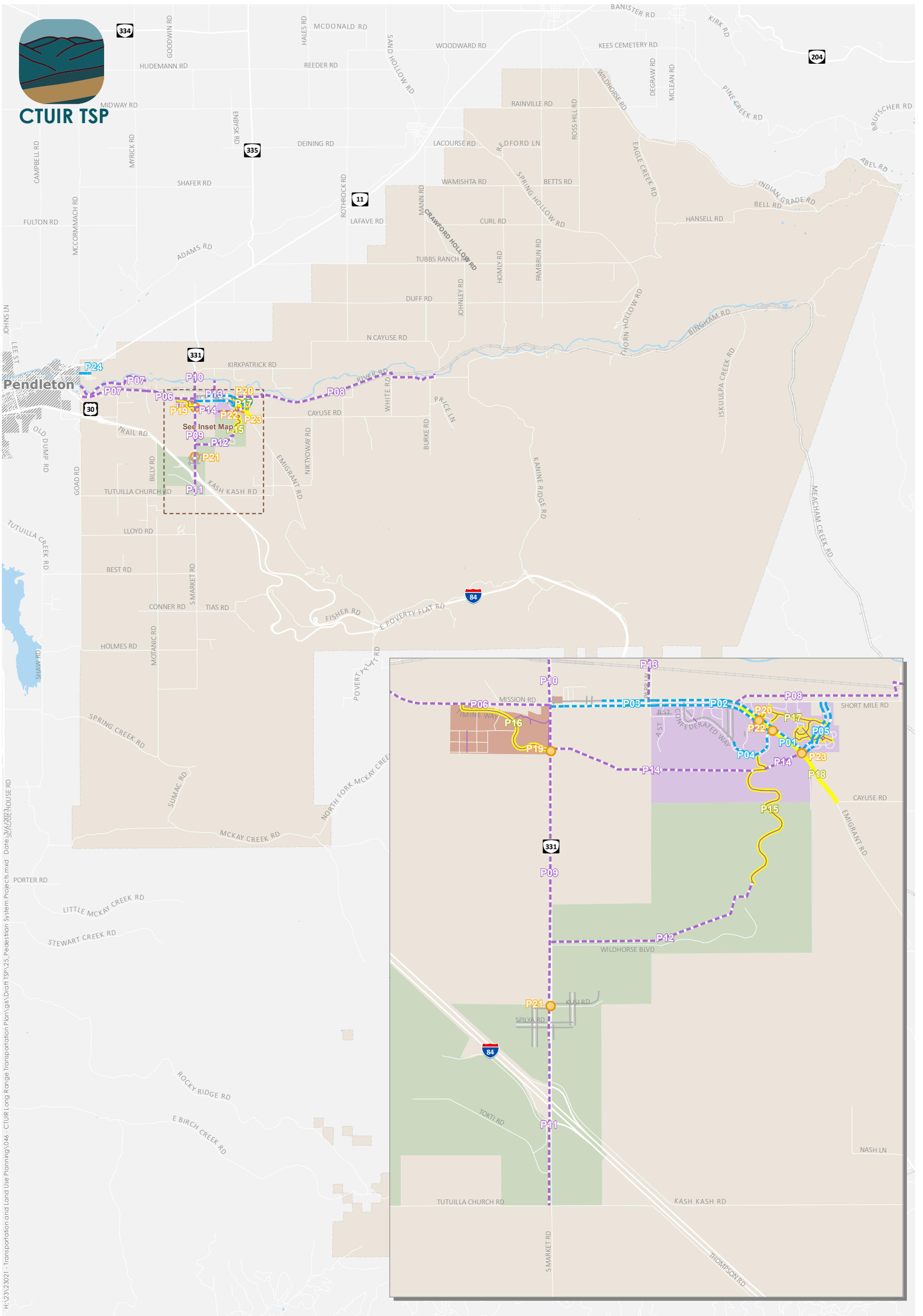
In addition to identifying potential projects, the project team also identified potential pedestrian-related policy and programmatic direction to support the transportation system based on input from CTUIR staff. The pedestrian system programs and plans are provided below:

- New development within the Mission Hub should be required to include off-street multi-use paths to create a connected pathway system within the area.
- Parks and Transportation Coordinator
 - Create a new CTUIR staff position to oversee and coordinate multi-use path maintenance and construction, park and river access, and park maintenance.
 - Develop an Invasive Plant Management Plan (including for puncture vine [“goatheads”]) for roads and multi-use paths in coordination with other CTUIR departments.
- Parks and River Access Plan
 - CTUIR is acquiring land impacted by the 2020 flooding, including areas near Cayuse River Road, Cayuse Road, and Sampson Lane. The plan will determine a vision for creating a park(s) with potential river access. Work with property owners adjacent to the river to gain access. Explore other river access locations including previous informal access points, such as Parr Lane and the swimming hole near the railroad bridge.

JULY GROUNDS ENHANCED PEDESTRIAN CROSSING

The project team created a detailed concept design graphic for the July Grounds enhanced pedestrian crossing shown in Figure 26. This figure incorporates the projects identified throughout this memorandum, not just pedestrian-related projects. It also provides an example of what an enhanced crossing could look like within the UIR beyond just this location.





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Figure 25

**Pedestrian System Projects
Umatilla Indian Reservation**

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Figure 26: Detailed Concept for July Grounds Enhanced Pedestrian Crossing





Photo Kittelson & Associates

Chapter 6 — BICYCLE SYSTEM

The bicycle system within the UIR boundary consists of on-street bike lanes, shoulder bikeways, and unmarked shared roadways, as well as off-street multi-use paths and bicycle parking. The only marked bike lanes are on Mission Road, connecting the Mission and July Grounds hubs with residential, school, and commercial uses.

Bicycle Plan

The projects developed for the bicycle system include buffered bike lanes, shoulder bikeways, and shared roadways. Table 4 describes the projects for the bicycle system. The priority levels shown in Table 4 are based on the project evaluation criteria as well as input from the TAC and community. Table 4 also shows if a project is within a 2-mile radius of the Nixyáawii Community School. If it was, the priority was increased one level, if possible. *Technical Memorandum #5 in Volume II includes the CTUIR Safe Routes to School Plan as an attachment, which has been used to develop the projects shown in Table 4.* Figure 27 illustrates the location of the projects. The figure also includes the multi-use path projects previously shown in Chapter 5 – Pedestrian System. *Technical Memorandum #5 in Volume II includes assumptions used to develop the planning-level cost estimates shown in Table 4. Appendix B of Volume II contains the summary sheets for each of the high priority projects.*

Table 4: Bicycle System Projects

Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
B01	Mission Road	OR 331 to Cayuse Road	Widen Mission Road and install buffered or separated/ raised bicycle lanes along both sides of the roadway from OR 331 to Cayuse Road. Consider incorporating bus pull-outs into the project design.	County	High	X	\$4,200,000
B02	Kirkpatrick Road	OR 331 to McKinley Lane	Widen Kirkpatrick Road and install shoulder bikeways on both sides of the roadway from OR 331 to McKinley Lane.	County	Medium	X	\$2,400,000
B03	Cayuse Road	Emigrant Road to River Road	Widen Cayuse Road and install shoulder bikeways on both sides of the roadway from Emigrant Road to River Road.	County	Medium		\$6,800,000
B04	Confederated Way	Full roadway extents	Install shared roadway signage and/or striping (sharrows).	BIA	Medium	X	\$30,000
B05	Whirlwind Drive	Mission Road to Confederated Way	Install shared roadway signage and/or striping (sharrows).	BIA	Medium	X	\$5,000
B06	Cedar Street	Short Mile Road to Mission Road	Install shared roadway signage and/or striping (sharrows).	BIA	Medium	X	\$35,000
B07	Kusi Road	Full roadway extents	Install shared roadway signage and/or striping (sharrows).	CTUIR	Low		\$25,000
B08	Spilya Road	Full roadway extents	Install shared roadway signage and/or striping (sharrows).	CTUIR	Low		\$30,000
B09	Coyote Road	Full roadway extents	Install shared roadway signage and/or striping (sharrows).	CTUIR	Low		\$20,000
B10	Arrowhead Road	Full roadway extents	Install shared roadway signage and/or striping (sharrows).	CTUIR	Low		\$15,000
B11 ¹	Bicycle Fix-it Stations	Within UIR boundaries	Evaluate where bicycle fix-it stations would be beneficial to install within the UIR, such as trailheads, community hubs, or the school.	CTUIR	High		\$10,000 per station



Project ID	Location/ Name	Extents	Description	Roadway Jurisdiction	Priority	Near a School	Cost
						Total High Priority Cost	\$4,200,000
						Total Medium Priority Cost	\$9,270,000
						Total Low Priority Cost	\$90,000
						Total Cost	\$13,560,000

¹Project not shown on the project map.



BICYCLE PROGRAMS AND PLANS

In addition to identifying potential projects, the project team also identified the following potential bicycle-related item for incorporation into CTUIR programs and plans:

- Coordinate installation of future bicycle fix-it stations as part of construction of projects that will attract bicycle activity, such as commercial development, parks, civic centers, transit hubs, multi-use paths, and bike lanes.



Photo: Kittelson & Associates, Inc.



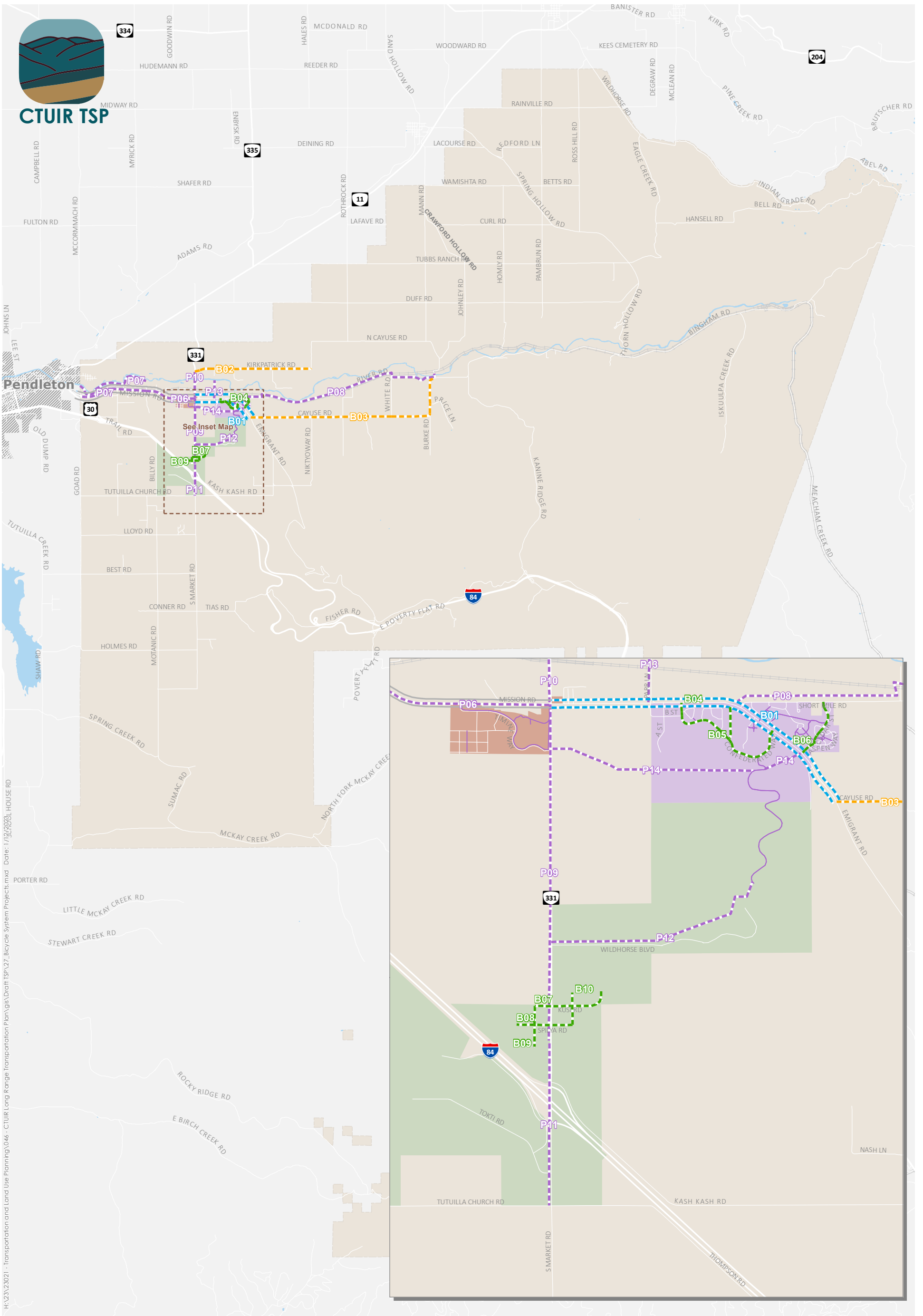
Photo: Kittelson & Associates, Inc.



Photo: Kittelson & Associates, Inc.

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- Existing Bike Lane
- Existing Multi-use Path
- Shoulder Bikeway (both sides of the roadway)
- Shared Roadway
- Widen and add buffered bike lanes
- Multi-use Path Project

- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure 27

**Bicycle System Projects
Umatilla Indian Reservation**

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Photo Kittelson & Associates

Chapter 7 — TRANSIT SYSTEM

CTUIR operates Kayak Public Transit (Kayak) which serves northeastern Oregon via fixed route local and commuter service and paratransit. CTUIR began public transportation services after observing people walking the distance between Pendleton and Mission. Over time, service has grown from one van to a fleet of cutaway vehicles operating seven year-round fixed routes (as of January 2023). In 2014, CTUIR rebranded the service as Kayak Public Transit to help people understand that service is open to the public, not just tribal members.

Outside of the UIR boundary, Kayak also provides the Hermiston Area Regional Transit (HART) fixed route and more-recently began operating the City of Milton-Freewater's service. In addition to Kayak, there are other agencies and operators that serve the UIR or adjacent areas. CTUIR maintains a list of these operators on their website at <https://ctuir.org/departments/tribal-planning-office/kayak-public-transit/other-transportation-agencies/>.

CTUIR and Kayak staff noted the following transit-specific goals to consider in 2023 and beyond:

- Increase system capacity
- Ensure safety for all users
- Protect livability and ensure equity and access
- Begin environment-electric vehicle service for the Mission Metro and campus shuttle routes

- Establish a regional outlook and future focus regional transit authority (RTA)

Transit Plan

The projects developed for the transit system include bus stop enhancements, modified service, and new service. Table 5 describes the projects for the transit system. The priority levels shown in Table 5 are based on the project evaluation criteria as well as input from the TAC and community. Figure 28 illustrates the location of the projects. *Technical Memorandum #5 in Volume II includes assumptions used to develop the planning-level cost estimates shown in Table 5. Appendix B of Volume II contains the summary sheets for each of the high priority projects.*

As CTUIR explores the transit system projects, coordination with other transit providers that serve the reservation and nearby areas will be needed. These other providers include Kayak, SafeT Transportation, Elite Taxi, Wildhorse Resort & Casino Shuttle, Greyhound, and Yellowhawk Tribal Health Center transportation through the Allied Health Service Department.



Photo: CTUIR



Photo: Kittelson & Associates, Inc.

Table 5: Transit System Projects

Project ID	Location/Name	Description	Priority	Cost
T01 ¹	Park-and-ride Locations	Coordinate with regional transit providers for park-and-ride locations that help facilitate the use of transit by community members and maximize regional connectivity.	High	TBD, depends on partnerships available
T02	Bus Stop Enhancements	Evaluate transit stops for additional amenity needs, such as shelters, lighting, and signage.	High	One-time cost: \$324,000 (\$18,000/stop for 18 bus stops)
T03	OR 331 Transit Hub	Consolidate bus stops at Arrowhead Travel Plaza, Cayuse Holdings, and the Wildhorse Resort & Casino campus into one pair of transit hubs on OR 331 north of Spilya Road, reducing need for transit vehicles to turn to and from OR 331. Coordinate with Project T04 - Wildhorse Campus Shuttle. If a roundabout is constructed on OR 331 based on development-driven projects, a single transit hub on one side of OR 331 may be appropriate.	High	One-time cost: \$400,000
T04	Wildhorse Campus Shuttle	Partner with adjacent businesses to purchase one shuttle bus to transport people from Arrowhead Travel Plaza, Cayuse Holdings, and the Wildhorse Resort & Casino campus to the OR 331 Transit Hub. Coordinate with Project T03 - OR 331 Transit Hub.	High	One-time cost: \$175,000 Annual operating cost: \$195,000
T05	Kayak Transit Hub Expansion	Install public restrooms for passengers at the Kayak Transit Hub.	Low	One-time cost: \$500,000
T06 ¹	Electric Vehicle and Shuttle Pilot	Acquire two six-passenger electric vehicles, install charging facilities, and begin electric vehicle service for the Metro and campus shuttle routes.	Medium	One-time cost: \$130,000 Annual operating cost: \$195,000
T07 ¹	More frequent transit service	Explore adding more trips per day on the highest ridership routes including Hopper, Whistler, Metro, HART, Arrow, and Rocket.	Low	Annual operating cost: \$150,000
T08 ¹	Extended hours of service	Explore additional hours of service to serve the morning and evening shifts at Wildhorse Resort & Casino.	Medium	Annual operating cost: \$75,000
T09 ¹	Extended Coverage Study	Conduct a study to understand the need for extended coverage for transit services to reach residential area near Riverside Avenue, Pendleton Airport, and Walla Walla Airport. Coordinate with surrounding jurisdictions and transit agencies who already provide services to these areas, specifically the city of Pendleton. Coordinate with local health and fitness facilities when locating new bus stops.	Medium	One-time cost: \$50,000
Total High Priority Cost				One-time cost: \$899,000 Annual operating cost: \$195,000

Project ID	Location/Name	Description	Priority	Cost
			Total Medium Priority Cost	One-time cost: \$180,000 Annual operating cost: \$270,000
			Total Low Priority Cost	One-time cost: \$500,000 Annual operating cost: \$150,000
			Total Cost	One-time cost: \$1,579,000 Annual operating cost: \$615,000

1 Project not shown on the project map.



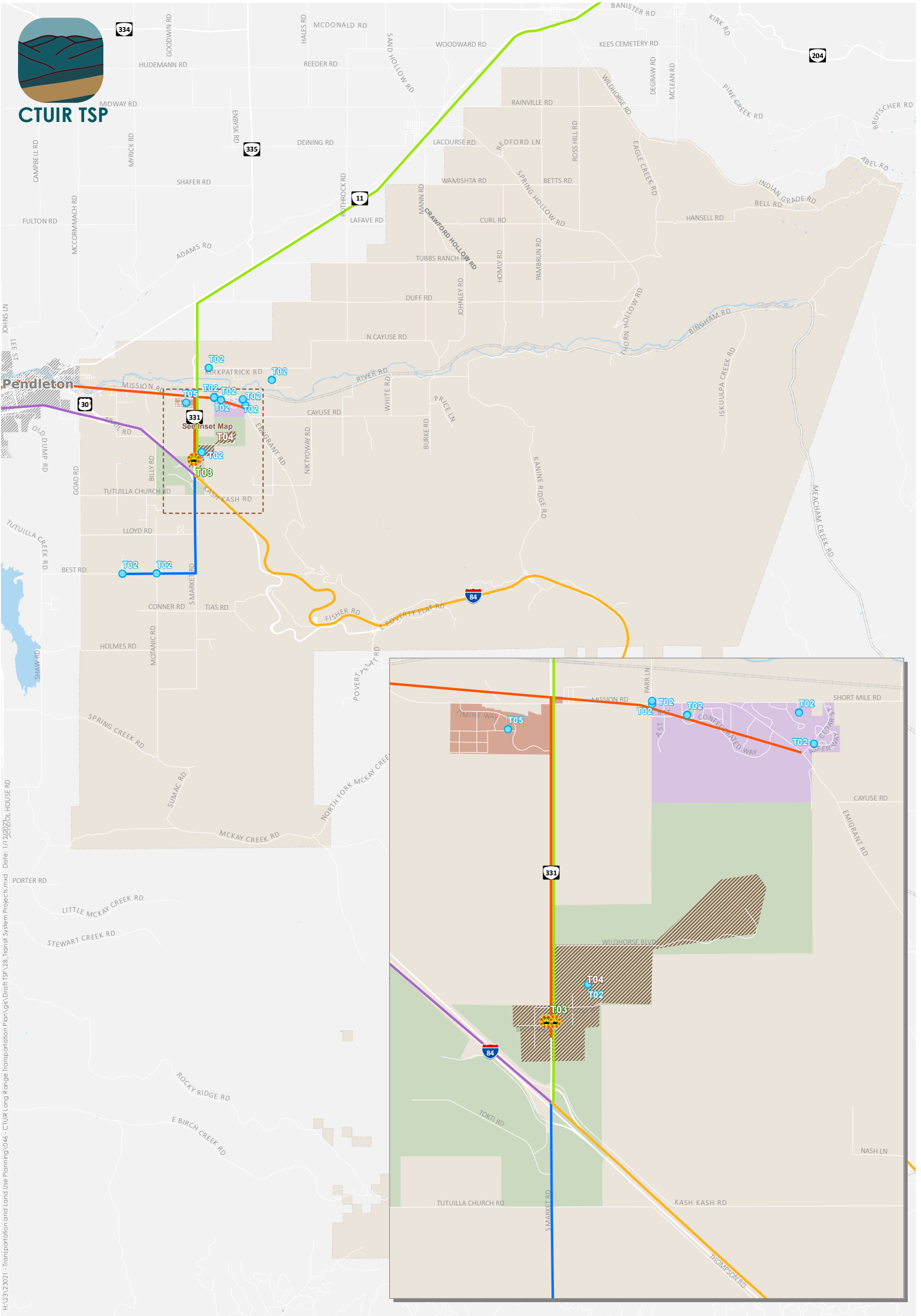
Transit Programs and Plans

In addition to identifying potential projects, the project team also identified potential transit-related policy and programmatic direction to support the transportation system based on input from CTUIR staff. The transit system programs and plans are provided below:

- Work with businesses adjacent to existing or planned transit stops to sponsor transit shelters at bus stops. Coordinate with businesses and the proposed Parks and Transportation Coordinator position to determine responsibility for maintenance of transit shelters.
- Work with partner jurisdictions and agencies to ensure that Kayak is part of the development review process where there may be opportunities for new transit facilities or impacts to existing transit service.



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Existing Kayak Bus Routes

- Hopper
- Arrow
- Metro
- Rocket
- Tripper
- Whistler

- Bus Stop Enhancement
- Transit Hub
- Shuttle Service Area

- Umatilla Indian Reservation Boundary
- Mission Hub
- July Grounds Hub
- Gateway Hub
- Pendleton UGB



Figure 28

**Transit System Projects
Umatilla Indian Reservation**

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Photo: CTUIR

Chapter 8 — RAIL AND PIPELINE SYSTEMS

No specific projects are proposed for the air, rail, water or pipeline systems. However, one plan is proposed for the rail system.

Rail System

There is one Union Pacific rail line within the UIR boundary, connecting Pendleton and La Grande. The line runs east and west, parallel to Mission Road, Short Mile Road, Cayuse Road, and Bingham Roads before turning south along Meacham Creek Road and into the Blue Mountains. There are 31 rail crossings within the UIR, which are summarized in Table 6.

Table 6: Rail Crossings within the Umatilla Indian Reservation Boundary

Location Name	ODOT Crossing Number	Jurisdiction	Type	Device Type	Crossing Surface Material
Nr Pendleton – Mission Frontage Road	2A-217.90	Local Access	Mainline at Grade	Stop	Unknown
Nr Pendleton – Mission Frontage Road	2A-218.43	County ¹	Mainline at Grade	Stop	Concrete
Nr Pendleton – Private Road	2A-218.66-P	Private	Private	Unknown	Concrete

Location Name	ODOT Crossing Number	Jurisdiction	Type	Device Type	Crossing Surface Material
Nr Pendleton – Private Road	2A-219.12-P	Private	Private	Unknown	Concrete
Nr Pendleton – Private Road	2A-219.45-P	Private	Private	Unknown	Concrete
Munra – Mckay Lane	2A-218.70	Local Access	Private	Stop	Unknown
Mission – Private Road	2A-219.71-P	Private	Private	Unknown	Concrete
Mission – Davis Lane	2A-219.90	Federal	Mainline at Grade	Stop	Paved
Mission – Umatilla-Mission Hwy	2A-221.00	State	Mainline at Grade	Active	Paved
Mission – Parr Lane	2A-221.50	Local Access	Mainline at Grade	Stop	Gravel
Mission – Private Road	2A-222.25-P	Private	Private	Unknown	Concrete
Mission – Private Road	2A-222.75-P	Private	Private	Unknown	Concrete
Minthorn – Niktyoway Road	2A-224.10	Federal	Mainline at Grade	Stop	Gravel
Minthorn – Old River Road #918	2A-225.20	County ²	Mainline at Grade	Stop	Gravel
Minthorn – Private Road	2A-225.60-P	Private	Private	Unknown	Concrete
Minthorn – Private Road	2A-225.88-P	Private	Private	Unknown	Concrete
Minthorn – Old River Road #927	2A-226.20	County ²	Mainline at Grade	Stop	Gravel
Cayuse – Private Road	2A-226.68-P	Private	Private	Unknown	Concrete
Cayuse – Cayuse-Adams Road 925	2A-227.30	County	Mainline at Grade	Stop	Combination
Cayuse – Private Road	2A-229.34-P	Private	Private	Unknown	Concrete
Thorn Hollow – Thorn Hollow Road	2A-231.10	County	Mainline at Grade	Active	Paved
Thorn Hollow – Private Road	2A-232.04-P	Private	Private	Unknown	Concrete
Thorn Hollow – Bingham Road	2A-232.40	County	Mainline at Grade	Stop	Paved
Thorn Hollow – Private Road	2A-233.44-P	Private	Private	Unknown	Concrete
Thorn Hollow – Private Road	2A-233.85-P	Private	Private	Unknown	Concrete
Thorn Hollow – Private Road	2A-234.36-P	Private	Private	Unknown	Concrete
Gibbon – Private Road	2A-234.92-P	Private	Private	Unknown	Concrete
Gibbon – Private Road	2A-235.53-P	Private	Private	Unknown	Concrete
Gibbon – Private Road	2A-236.27-P	Private	Private	Unknown	Concrete
Gibbon – Bingham Road	2A-236.60-C	County	Spur	Stop	Paved
Gibbon – Bingham Road	2A-237.30	County	Mainline at Grade	Active	Paved

Table source: CTUIR 2001 TSP and ODOT TransGIS

¹ The Umatilla County Roadway Department does not have jurisdiction over this railroad crossing. Therefore, it is assumed that the crossing is local access controlled.

² The ODOT Rail Division Crossing Log does not account for the local access crossings at Hart Lane (MP 219.12) and Williams Lane (MP 219.65). These crossings are assumed local access controlled.



Although no projects were identified to support the rail system, the following plan and policy were identified:

- Safe Rail Crossing Plan
 - Conduct a planning effort to establish a Quiet Zone Agreement for the Union Pacific railroad adjacent to the Mission area. The plan area would extend from the eastern boundary of the Community Water Sewer System service area to the UIR western boundary near Memory Lane.
 - The plan would include recommended safety upgrades for crossings in the plan area, including any recommended closures of specific crossings to enhance safety in the area.
- Coordinate with regional agencies on potential restoration of passenger rail service between Portland and Boise.

Pipeline System

There are liquid and natural gas pipelines within the UIR boundary. Figure 29 shows the existing pipeline system, in addition to other utility lines within the UIR. No future projects, programs, or plans were identified to support the pipeline system.

Figure 29: Pipeline System

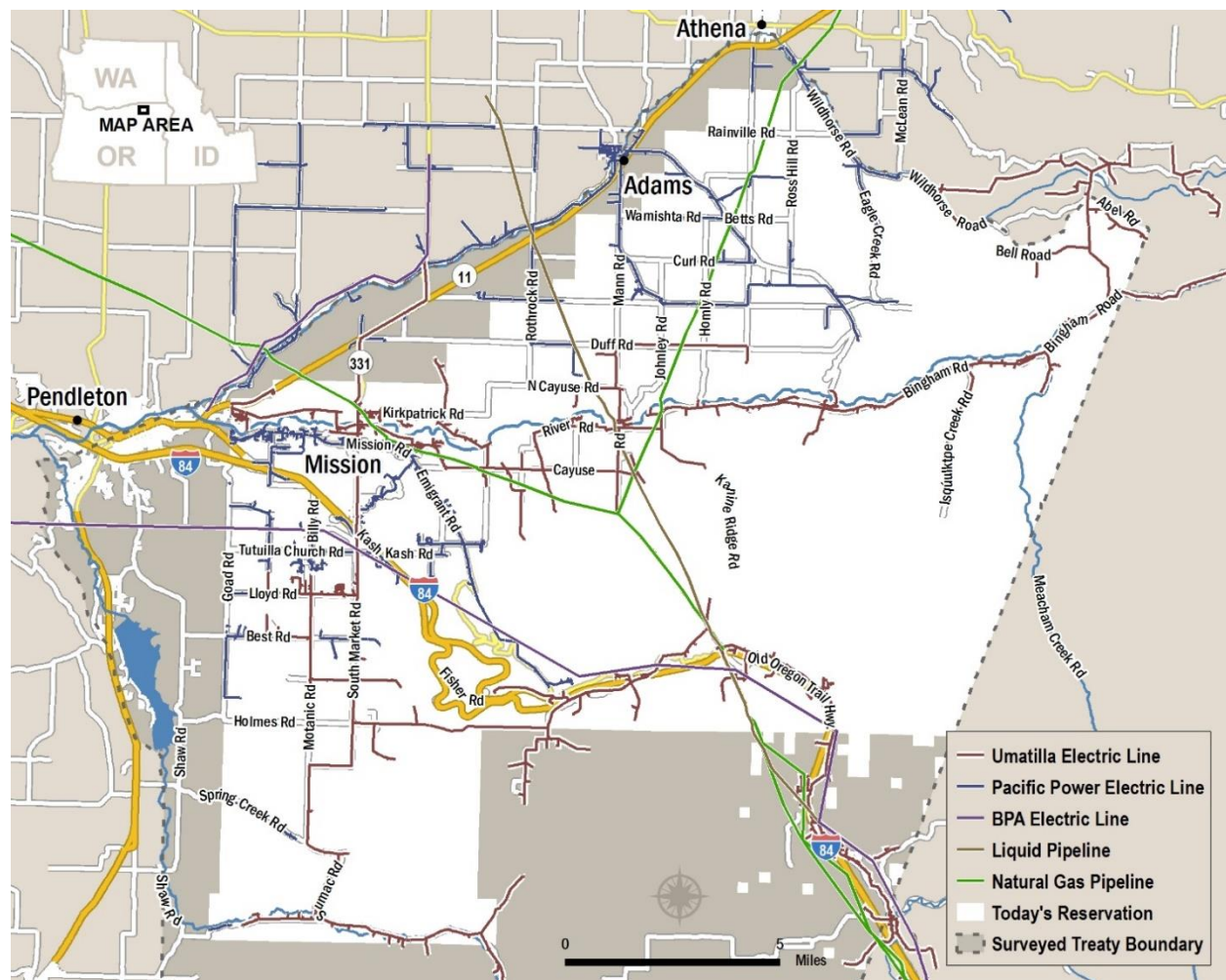


Image provided by CTUIR



Chapter 9 — FUNDING AND IMPLEMENTATION PLAN

To implement any of the projects identified in the previous sections, CTUIR will have to secure funding that covers the estimated planning-level costs as well as addresses the unknown factors and considerations that will become apparent through the design process.

Potential Transportation Funding Sources

Given limited funding, CTUIR will need to identify revenue sources to implement the capital projects identified in this plan over the next 20 years. CTUIR will likely rely upon grants, partnerships with regional and State agencies and private landowners, and other funding sources to help implement the projects. Table 7 summarizes current potential funding opportunities, including eligible project types.

Table 7: Funding Opportunities Summary

Funding Source	Intended Use	Part of CTUIR Funding Plan in 2021-2022
Federal Sources		
BIA Tribal Transportation Program	Supports transportation needs of tribes by funding planning, design, construction, and maintenance projects for public roads withing the National Tribal Transportation Facility Inventory (NTTFI)	Funding utilized
FTA Formula Grants for Rural Areas – Section 5311	Supports federally recognized Indian Tribes operating public transportation or intercity bus service. Specific relevant subsections include 5311(c) Tribal Transit Formula Grants and 5311(f) Rural Transit & Intercity Bus	Funding utilized
FTA Enhanced Mobility of Seniors & Individuals with Disabilities – Section 5310	Supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in all areas	Funding utilized
FTA Grants for Buses and Bus Facilities Formula Program – Section 5339(a)	Supports capital projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities, including technological changes or innovations to modify low or no emission vehicles or facilities	Funding utilized
FHWA Tribal Technical Assistance Program (TTAP)	Build funding for Tribes to administer and manage their transportation programs and systems	Funding utilized
FHWA Tribal Transportation Program Safety Fund (TTPSF)	Address safety issues identified by federally recognized Indian tribes through plans, data assessment, implementation of systemic roadway departure countermeasures, and other safety-focused infrastructure improvements	Interested in pursuing
BIA/Tribal Bridge Inspection Program	Record conditions in the FHWA National Bridge Inventory (NBI) and meet the National Bridge Inspection standards	Interested in pursuing
FHWA Tribal High Priority Projects (THPP) Program	Projects that will decrease the need for private vehicles on the road and increase transit ridership, promote carpooling and ridesharing, and be in coordination with regional transit-oriented development planning	Interested in pursuing
USDOT Safe Streets and Roads for All (SS4A) Grant Program	Projects and strategies to reduce roadway deaths and serious injuries, including developing a safety action plan and carrying out projects and strategies from that plan	Interested in pursuing
FHWA Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program	Focus on resilience planning, making resilience improvements to existing transportation assets and evacuation routes, and addressing at-risk highway infrastructure	Interested in pursuing

Funding Source	Intended Use	Part of CTUIR Funding Plan in 2021-2022
USDOT Rural Opportunities to Use Transportation for Economic Success (ROUTES)	Address disparities in rural transportation infrastructure by developing user-friendly tools and information, aggregating DOT resources, and providing technical assistance	Interested in pursuing
FHWA Surface Transportation Block Grant (STBG)	Preserve and improve surface transportation investments from a flexible funding source not limited by mode; 55% of the funding must support specific areas of the state based on population density	
FHWA Transportation Alternatives (TA) Set-Aside	Smaller-scale transportation projects ranging from pedestrian and bicycle facilities to construction of turnouts and overlooks to historic preservation and vegetation management	
FHWA Congestion Mitigation and Air Quality (CMAQ)	Support programs that reduce emissions from transportation-related activities	
FHWA Charging and Fueling Infrastructure Grants	Install electric vehicle charging and alternative fuel in locations on public roads, schools, parks, and in publicly accessible parking facilities	Interested in pursuing
USDOT Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program	Projects focused on advanced smart community technologies and systems to improve transportation efficiency and safety	Interested in pursuing
USDOT Reconnecting Communities Pilot Program	Planning and capital construction projects to reconnect communities that were previously cut off from economic opportunities by transportation infrastructure	Interested in pursuing
FHWA Wildlife Crossings Pilot Program	Projects that reduce the number of wildlife-vehicle collisions and improve habitat connectivity for terrestrial and aquatic species	Interested in pursuing
FHWA Highway Safety Improvement Program (HSIP)	Reduce traffic fatalities and serious injuries on all public roads	
USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	Road, rail, transit, and port projects that achieve national objectives and have significant local and regional impact	Interested in pursuing
USDOT Nationally Significant Multimodal Freight & Highway Projects (INFRA) Grants Program	Multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight	Interested in pursuing
FHWA Recreational Trails	Develop and maintain recreational trails and trail-related facilities	
FHWA National Highway Performance Program (NHPP)	Projects that improve conditions along NHS Routes	
State Sources		
Statewide Transportation Improvement Program (STIP)	Multimodal projects on federal, state, and local facilities	Funding available
Statewide Transportation Improvement Funds (STIF)	Supports public transportation services, except light rail, and can be used for creating new	Funding utilized

Funding Source	Intended Use	Part of CTUIR Funding Plan in 2021-2022
	services, maintenance of services, planning, and pedestrian and bicycle improvements that provide connections to transit facilities	
State Highway Trust Fund	Bicycle and pedestrian infrastructure improvements	
Safe Routes to School (SRTS)	Projects that improve safety for children walking or biking to school	Interested in pursuing
All Roads Transportation Safety (ARTS)	Projects that address hotspot and systemic safety issues and concerns (roadway departure, intersection safety, and bicycle and pedestrian safety); part of STIP program and utilizes federal HSIP funds	
Innovative Mobility Program	Support transportation related activities the improve access to public transportation, reduce number of trips made by car, and reduce greenhouse gas emissions	Interested in pursuing
Oregon Community Paths (OCP)	Create and maintain connections through shared-use paths	Interested in pursuing
Local Sources		
CTUIR Capital Improvements Fund	Static source of funding for CTUIR capital improvement projects for all modes	Funding utilized
Transportation System Development Charge (SDC)	Increase capacity of transportation system to accommodate growth	
Transportation Utility Fee (TUF)	Provide additional funding for transportation infrastructure	
Local Fuel Tax	Adds a tax on top of gasoline costs that support street operation, maintenance, and preservation	
Local Improvement District (LID)	Pools funds from property owners to make local transportation improvements	
Economic Improvement District (EID)	Pools funds from area businesses to make improvements in the business district.	
Urban Renewal/Tax Increment Financing (TIF)	Raises revenue from increased property values in an area to fund localized improvements	
Local Bond Measures	Asks voters for bond funding to finance a set list of infrastructure investments	
Street Utility Fee/Road Maintenance Fee	Calculates trips generated for land uses and charges owners a fee relative to the number of trips	
Grant Match Funding from Project Partners (City of Hermiston, Marrow County, etc.)	Pools funds from project agency partners to reach a funding match required to submit a grant proposal	Funding utilized

USDOT – U.S. Department of Transportation

BIA - Bureau of Indian Affairs

FTA - Federal Transit Administration

FHWA – Federal Highway Administration

Implementation Plan

Table 8 summarizes the full cost of the projects for the TSP Update. As shown, the full cost of the preferred plan is approximately \$108.7 million over the 20-year period, including \$25.8 million in high priority projects, \$57.8 million in medium priority projects, and \$25.1 million in low priority projects. If/when the identified service-based transit projects are established, the total annual operating cost would be approximately \$540,000, including \$195,000 for high priority projects, \$270,000 for medium priority projects, and \$75,000 for low priority projects.

Table 8: Planned Transportation System Cost Summary

Project Type	High Priority	Medium Priority	Low Priority	Total
Roadway	\$3,250,000	\$38,480,000	\$24,210,000	\$65,940,000
Pedestrian	\$17,465,000	\$9,855,000	\$305,000	\$27,625,000
Bicycle	\$4,200,000	\$9,270,000	\$90,000	\$13,560,000
Transit	\$899,000	\$180,000	\$500,000	\$1,579,000
Rail/Pipeline	\$0	\$0	\$0	\$0
Total	\$25,814,000	\$57,785,000	\$25,105,000	\$108,704,000
Annual Operating Cost (Transit Services)	\$195,000	\$270,000	\$150,000	\$615,000

Appendix B of Volume II contains the summary sheets for each of the high priority projects. The summary sheets provide information helpful for moving the high priority projects forward, including estimated cost, potential funding sources, responsibility jurisdictions, potential project partners, and other constraints and considerations.