

Nixyáawii Watikš

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PLANNING ASSOCIATES



Portland State
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Cayuse – Umatilla – Walla Walla
Confederated Tribes of the Umatilla Indian Reservation

Positionality Statement

Sublime Spaces Planning Associates (SSPA) is a group of six Portland State University (PSU) Master's of Urban and Regional candidates, none of whom are a member of or affiliated with a sovereign tribal nation or who identify as Native American. The team acknowledges their positionality as outsiders working with a Tribal community, and has centered their work around the Confederated Tribes of the Umatilla Indian Reservation (CTUIR)'s Comprehensive Plan and community vision goals of respecting the environment, respecting and connecting with the Tribal people, and emphasizing sustainability with a community focus on growth and prosperity.

The team recognizes that all land is Native land, therefore all planning actions encounter themes of indigeneity, Native peoples, and the dark history of colonialism and forced displacement. PSU is located on the lands of Wasco, Cowlitz, Kathlamet, Clackamas, Bands of Chinook, Tualatin, Kalapuya, and Molalla peoples.



Acknowledgments

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All photos included in this report were taken by a member of SSPA, unless otherwise noted.



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Executive Summary



Four Corners looking South

Project Context

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is a thriving tribal community. Located in Umatilla County in Eastern Oregon, CTUIR is home to approximately 2,800 tribal members.

The Mission community is an economic and cultural center for CTUIR. The “Four Corners” intersection, referred to as Mission Hub in this report, is home to Mission Market, the Nixyáawii Governance Center, numerous tribal services, and a burgeoning residential community. Prior transportation planning efforts recommend a network of multi-use

trails to connect Mission Hub to surrounding communities.

Nixyáawii Watikš will be a key trail in this network, connecting Mission to Pendleton and improving conditions for active transportation along Mission Road, a high-traffic corridor with no existing sidewalks or pedestrian amenities. However, the exact alignment of Nixyáawii Watikš remained undetermined until the Tribal Planning Office could weigh all of the influencing factors near the UIR’s western boundary.



Project Purpose

In January of 2023, Sublime Spaces Planning Associates (SSPA), a team of Portland State University Master’s of Urban and Regional Planning (MURP) students, partnered with the CTUIR Tribal Planning Office to further study a safe and accessible alignment for this multi-use trail.

The project process involved analyzing the area’s opportunities and constraints, engaging the community, and exploring various alignments and desired features. SSPA identified one recommended alignment for the Tribal Planning Office’s future planning and fundraising efforts.

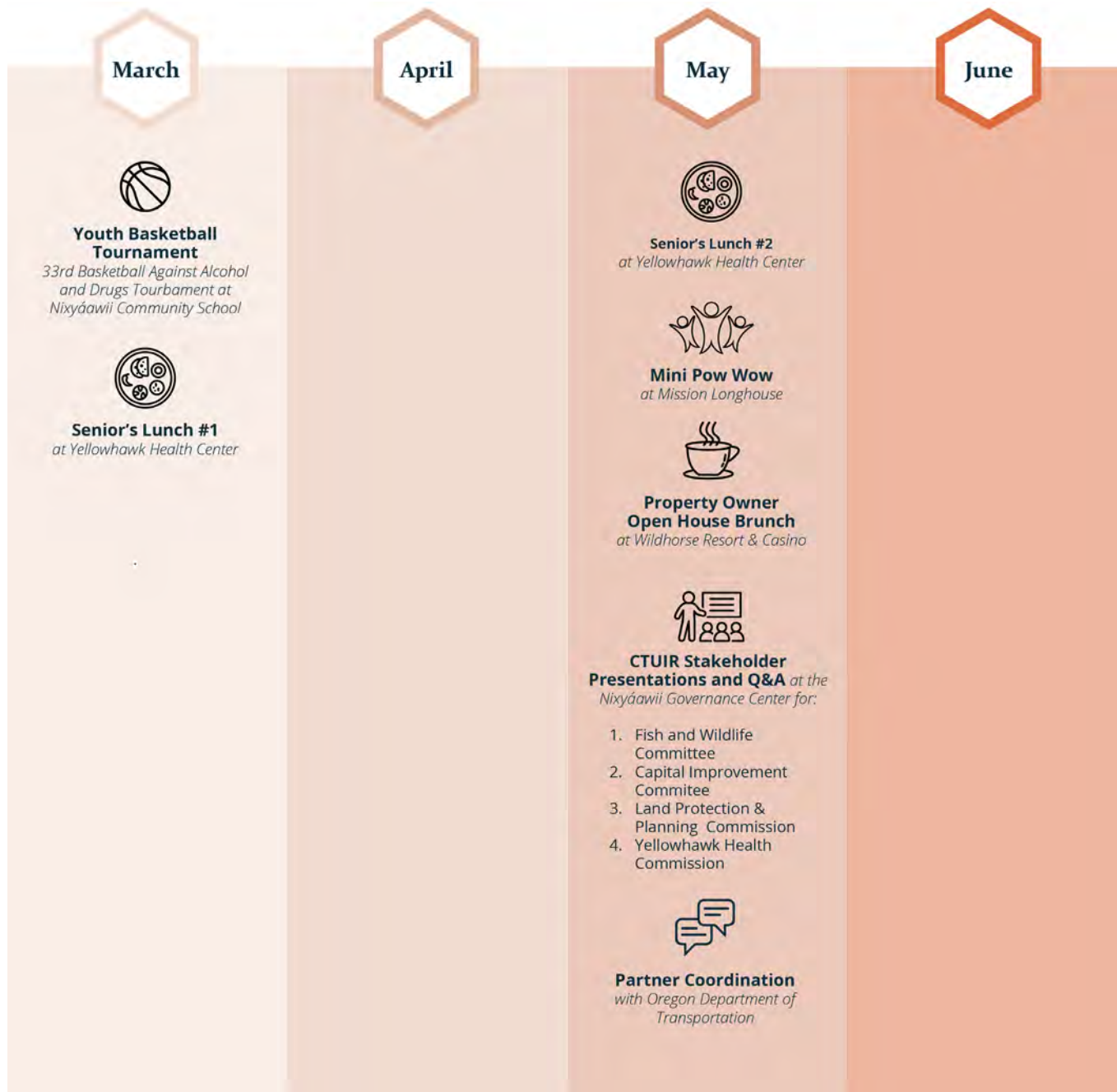
Figure 1. Project Timeline



Community Engagement Feedback

From late March to early May 2023, SSPA conducted engagement activities with the CTUIR community to gather feedback from residents at local venues, events, and Tribal Commission meetings. Participants expressed their opinions and concerns related to the trail, highlighting key themes such as safety, traffic coordination, recreational amenities, and balancing river access with natural resource protection measures. The public also provided feedback on three trail alignments, which guided SSPA in developing a final recommendation for the Nixyáawii Watikš' trail alignment.

Figure 2. Community Engagement Event Timeline



Recommendations

The recommended Nixyáawii Watikš trail alignment provides river access and connects the Riverside neighborhood to Mission Hub’s services and amenities. This report offers a comprehensive set of recommendations, including considerations for amenities, potential concerns, and next steps for collaboration with other government and planning agencies. Additionally, the report outlines an alternative alignment option following Mission Road to Pendleton.

Ultimately, Nixyáawii Watikš will encourage physical activity and enable people to enjoy the natural environment of the reservation. The trail will provide recreation opportunities to neighborhoods that have historically performed worse on key health metrics when compared to the surrounding region. Construction of Nixyáawii Watikš will improve access to essential services, promote economic opportunities, and preserve the community’s cultural and environmental heritage.

Figure 3. Recommended Riverside Alignment



Glossary



Alignment: the geographic route that a trail development can follow.

Community Engagement (Public Engagement): Organized outreach to the public, targeting members of the CTUIR community to gather questions, comments, and concerns about the project. Activities include tabling, conversations, presentations, meetings, and interactive exercises.

CTUIR: Confederated Tribes of the Umatilla Indian Reservation; this references the Tribal government, institutions, and community members.

First Foods: Foods traditionally gathered by the CTUIR community, including water, fish, game, berries, roots, and other plants and animals.

Multi-use trail or path: a pathway, separated from automobile traffic, that accommodates multiple uses, such as walking, rolling, biking, and riding horses.

Nixyáawii Watikš: a proposed multi-use path connecting Mission (the CTUIR community core) to Pendleton, Oregon.

ODOT: Oregon Department of Transportation.

Safe Routes to School (SRTS): A government program to improve, educate, or encourage children safely walking (by foot or mobility device) or biking to school.

UIR: Umatilla Indian Reservation; this references the reservation's physical land.



1

Introduction

Nixyáawii Watikš is a multi-use path project that will serve as a vital component of the active transportation network for the CTUIR, providing a means for people to walk, roll, bike, and ride horses.

Nixyáawii is an historic place name of this region, and **Watikš** means ‘tracks’ in the Umatilla language, the most commonly-spoken Indigenous language in CTUIR. This trail will be an essential link in local travel possibilities and longer-term plans for a regionally connected trail network, connecting the CTUIR’s economic and cultural center to Pendleton. SSPA worked with the planning department of the CTUIR to analyze existing conditions, conduct public engagement, and ultimately evaluate the benefits and constraints of different alignments for Nixyáawii Watikš.



*Rendering of a what a paved multi-use path might look like along the Umatilla River
(Created by SSPA using Adobe Firefly)*



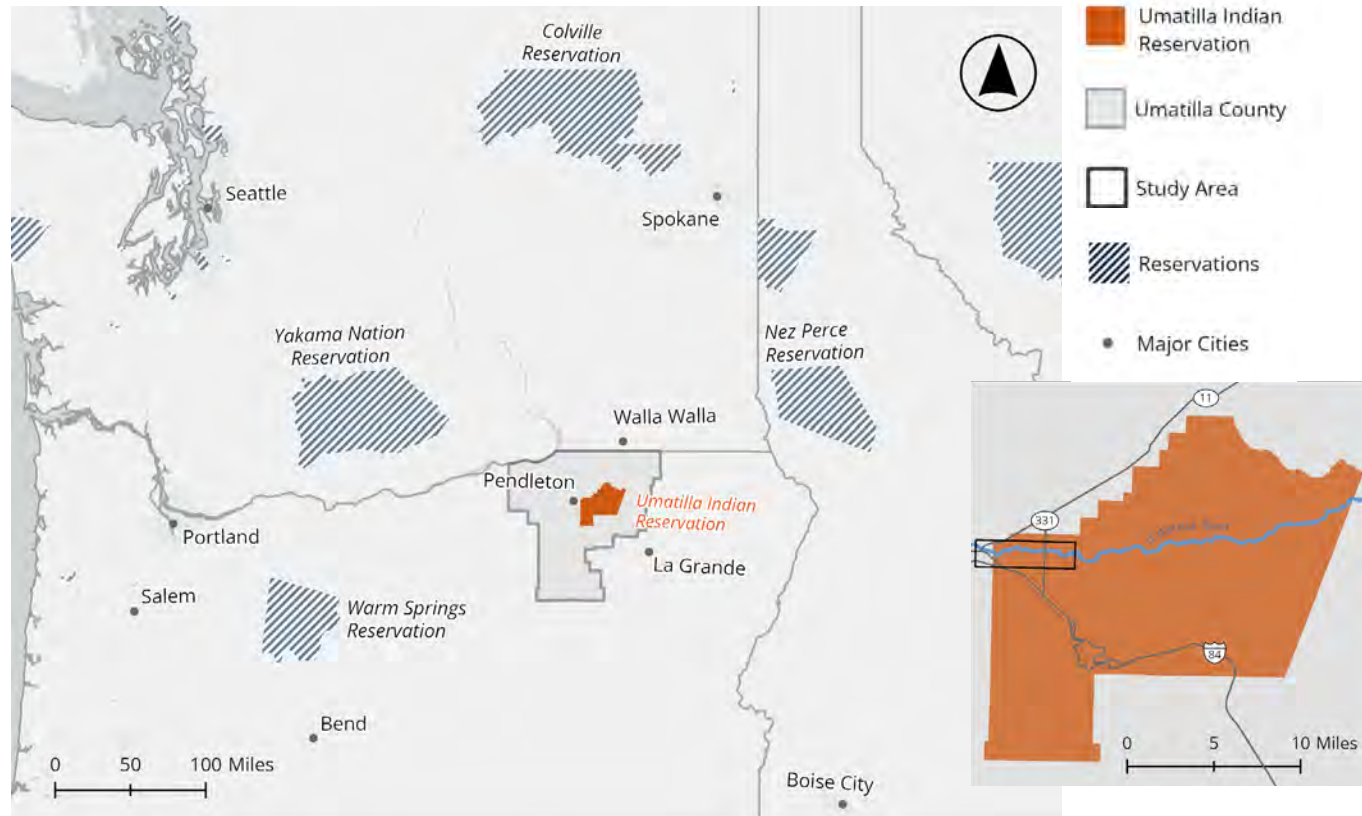
The Confederated Tribes of Umatilla Indian Reservation

CTUIR governs the Umatilla Indian Reservation (UIR) in northeastern Oregon. The UIR is home to approximately 2,800 tribal members and is located about 5 miles east of Pendleton, a city with a population of about 17,000 (Figure 4).

The Walla Walla, Umatilla, and Cayuse Tribes have ancestral ties to the Pacific Northwest, settling along the Columbia River, Umatilla River, and Blue Mountains since ancient times. Through the Treaty of 1855, the tribes ceded a significant portion of their land to the United States, reserving around 250,000 acres for their own use. CTUIR actively works to restore their historic land base and protect cultural sites within the ceded territory.

In the 20th century, Tribal communities advocated for their interests and achieved enhanced protections. CTUIR adopted a Constitution and By-Laws in 1949, establishing an elected Board of Trustees as the tribal leaders responsible for managing the reservation and addressing people's needs. The General Council, consisting of all Tribal Members aged 18 and older, and the Board of Trustees,

Figure 4. Umatilla Indian Reservation



elected by Tribal members, collaborate regularly for updates and input. Advisory committees and regulatory commissions, like the Housing Commission and Health Commission, have been established to provide policy recommendations and educate external parties. CTUIR also actively safeguards and promotes natural and cultural resources

through its Department of Natural Resources, in addition to playing a role in healthcare management.

Today, CTUIR government has a staff of nearly 500 employees and is one of the largest employers in northeastern Oregon. Tribal members continue to exert their reserved rights for fishing, hunting, gathering foods and medicines, and pasturing livestock.¹



Study Area

The Nixyáawii Watikš project focuses on analyzing the Mission Road corridor from Highway 331 to the reservation's western boundary. The broader Mission area, City of Pendleton, and Riverside community were also examined for context and potential trail connections (Figure 5). The land west of the UIR boundary falls under the jurisdiction of Umatilla County and the City of Pendleton.

Mission is the community core of CTUIR, home to several residential communities, business activity centers, and cultural institutions. Four miles to its west is Pendleton, a major cultural and economic center of the region. Nixyáawii Watikš will serve as an active transportation connector between these two culturally distinct hubs.

Figure 5. Study Area



Key Study Area Landmarks

- 1. City of Pendleton:** A major cultural, economic, and social center of the region. This includes the east end point of the Pendleton River Walk, a 3-mile trail following the south bank of the Umatilla River.
- 2. Riverside Neighborhood:** A census-designated place between Pendleton and CTUIR, north of Mission Road across the Umatilla River. Community members here may benefit from Nixyáawii Watikš, depending on alignment.
- 3. Mission Hub:** The center of CTUIR governance and public institutions, alongside new housing developments and existing and proposed retail amenities. Mission Hub is further detailed in the following section, and in Figure 6.
- 4. Union Pacific Railroad:** This railroad runs parallel to Mission Road to the north. Several crossings exist for residents to access their homes and several businesses along the corridor. The point at which the trail will cross these tracks as well as concern for user safety are important to consider.
- 5. Umatilla River:** A cultural and natural resource of the CTUIR. The river runs parallel to Mission Road and cuts through the center of the potential trail area.



Sign entering Pendleton



Mission Market at Four Corners



The Umatilla River

Figure 6. TSP Trail Segments



The study area is based on the trail area proposal from the 2023 CTUIR Transportation System Plan (TSP), which divides the potential trail site for Nixyáawii Watikš into two parts separated by Purchase Lane. It has already been determined that the Eastern Segment (P06) will begin at Highway 331 and follow Mission Road for its entire duration.

The Western Segment (P07), however, can be aligned anywhere between Mission Road and the Umatilla River until it reaches the

reservation boundary (Figure 6). While the Riverside community was not included in the original TSP trail area, it was added to this study as a result of community support. This project focuses on alignment options for the Western Segment (P07). There are opportunities for the path to divert away from Mission Road, which may avoid certain construction hurdles to deliver benefits to trail users.



Mission Hub

Mission Hub at the east end of the trail is a neighborhood within the wider Mission community that contains several key government and community institutions, as well as upcoming residential and retail development.

Currently, the only way to access the jobs, amenities, and services in Pendleton is driving, walking, biking, or riding a horse on, or along Mission Road. Figure 7 shows an in-depth illustration of Mission's existing and planned facilities.

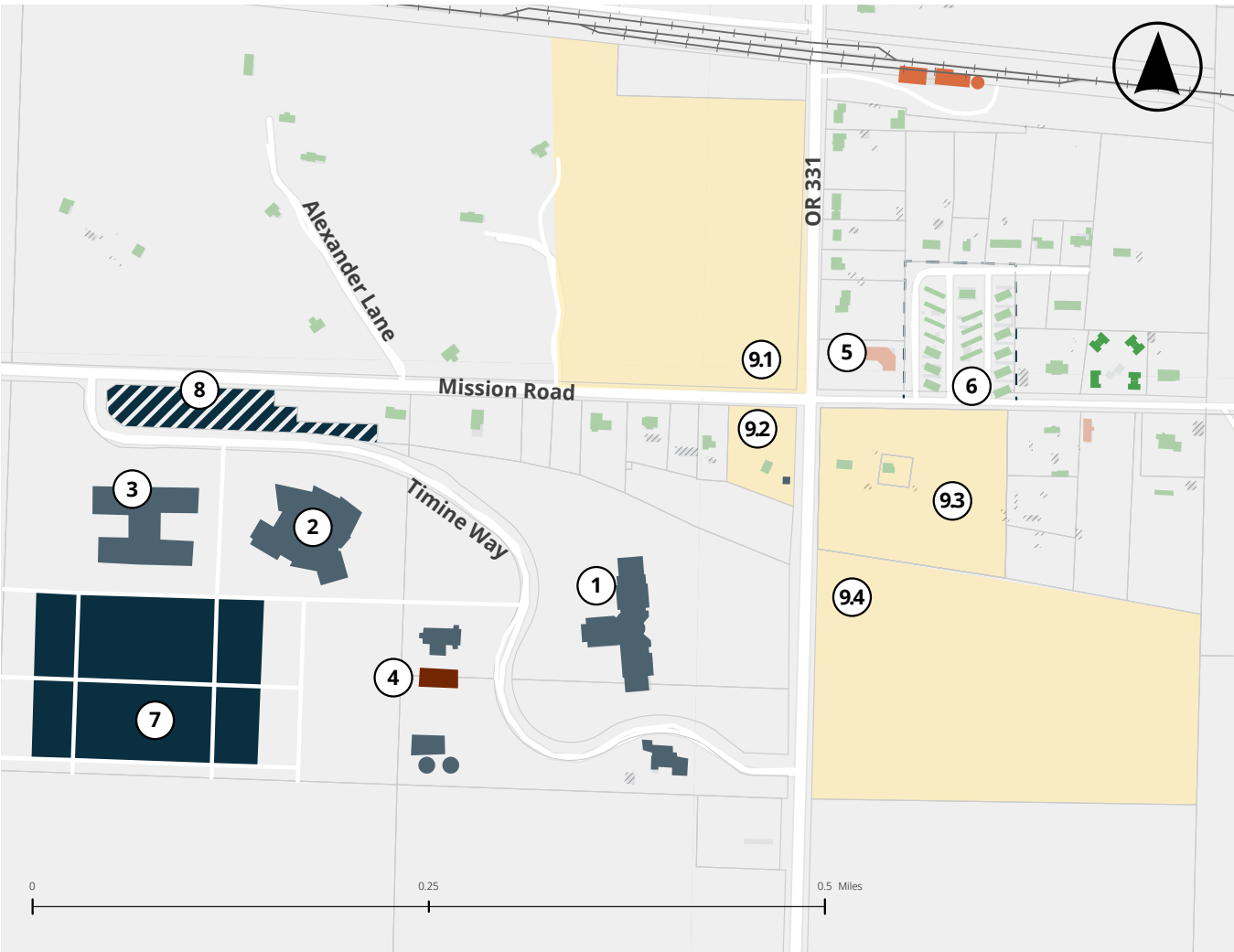


Four Corners facing southwest

- 1 **Nixyáawii Governance Center** is home to numerous CTUIR government offices and is a gathering place for official government bodies.
- 2 **Yellowhawk Tribal Health Center** provides outpatient primary care services, including medical, dental, mental health, alcohol/drug treatment, and aftercare programs. Additionally, it offers pharmacy, service medical laboratory, radiology and a DUI diversion program.
- 3 **Nixyáawii Community School** offers primary and adult education, a language program, an early learning center, administrative offices, a community center, and a head start program. It was constructed in 2019 and serves a capacity of 105 students. It is the only school located on the UIR.²
- 4 **Kayak Public Transit Hub** serves all six bus lines and includes a bus barn and rest area with benches and cooling/heating capabilities.
- 5 **Mission Market** is a convenience store and gas station offering groceries and prepared food. It underwent an expansion in 2019.
- 6 **Lucky 7** is an 18-unit manufactured home park, recently renovated in 2021.³
- 7 **Nixyáawii Neighborhood** (upcoming) is a 13-acre neighborhood of about 50 shovel-ready residential lots. Tribal members are able to enter into long-term leases for the purpose of building and owning their own homes. The Neighborhood will also be built out with paved roads, sidewalks, and a community park. Some lots on the north side will be reserved for commercial uses in order to encourage the integration of local retail and services. The project is currently in the process of leasing lots.⁴
- 8 **Timíne Way North Apartments** is a 30-unit new housing development consisting of market rate rentals in the form of apartments and townhomes. These units will be available in summer 2023.⁵
- 9 **Opportunity Sites (9.1-9.4)**: are four parcels of land near the intersection of Mission Road and Highway 331 that have been identified in planning documents as sites for potential future development sites (subject to rezoning and ownership transfer). Past plans have envisioned a mix of residential development, commercial clusters, and community event space. Most of these lots are privately owned.



Figure 7. Mission Hub Key Destinations



Existing Buildings

- Government
- Retail & Community Use
- Transit Station
- Commercial
- Apartments
- House or Duplex
- Outbuilding

New or Upcoming Development

- Nixyáawii Neighborhood
- Lucky 7 Homes
- Timine Way North Apartments
- Opportunity Site



Yellowhawk Tribal Health Center



Nixyáawii Community School



Kayak Transit Hub



Timine Way North Apartments



2

The CTUIR Community



Mini Pow Wow at the Longhouse

Demographics

The Nixyáawii Watikš project has the potential to benefit CTUIR community members.

- In 2021, an estimated 3,072 people lived on the reservation (or on off-reservation trust land).⁶
- As of 2014, CTUIR has 2,956 registered tribal members.⁷
- Approximately half of CTUIR tribal members live outside of the reservation, including about 500 members who live in Pendleton.⁸

- A growing number of tribal members live in Riverside. In 2021, an estimated 25% of Riverside's population identified as American Indian or Alaska Native.⁹

The Riverside community falls under the shared jurisdiction of CTUIR and its municipal neighbors, but is currently separated from Mission Hub by the Umatilla River. The benefits of a trail alignment that would better connect Riverside tribal members to Mission Hub are thus worth considering.

Driving is a dominant form of transportation in CTUIR, like many rural places in America. Almost 80% of people reported driving to work alone, with a mean travel time of 20 minutes.¹⁰ However, multiple rounds of public engagement (see the Past Engagement section) identified a prevalence of cycling among community members and a desire for increased recreational amenities on the reservation.

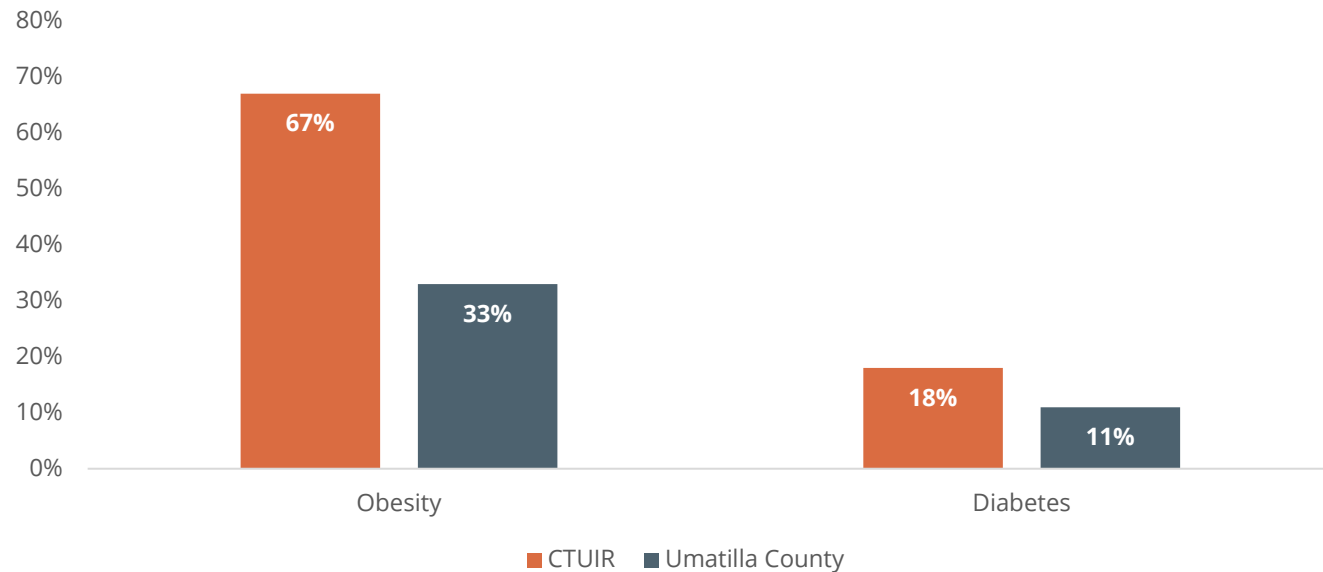


Health

A 2020-2021 Community Health Assessment was produced by the Yellowhawk Tribal Health Center to collect health-related data on CTUIR tribal members, age 18 and older.¹¹ The assessment's findings indicate that obesity, diabetes, and adequate exercise are top concerns for community members, with a high value placed on access to physical activity opportunities. CTUIR tribal members also experience higher rates of chronic health conditions compared to Umatilla County residents as a whole (Figure 8).¹²

In Yellowhawk's Community Health Assessment, respondents strongly expressed the need for additional shared outdoor recreation spaces and pathways that are separate from vehicle traffic, catering to walking, biking, and horse riding. Nixyáawii Watikš presents an opportunity to address these needs and create safer outdoor environments for physical activity within the CTUIR community.

Figure 8. Comparative Health Metrics



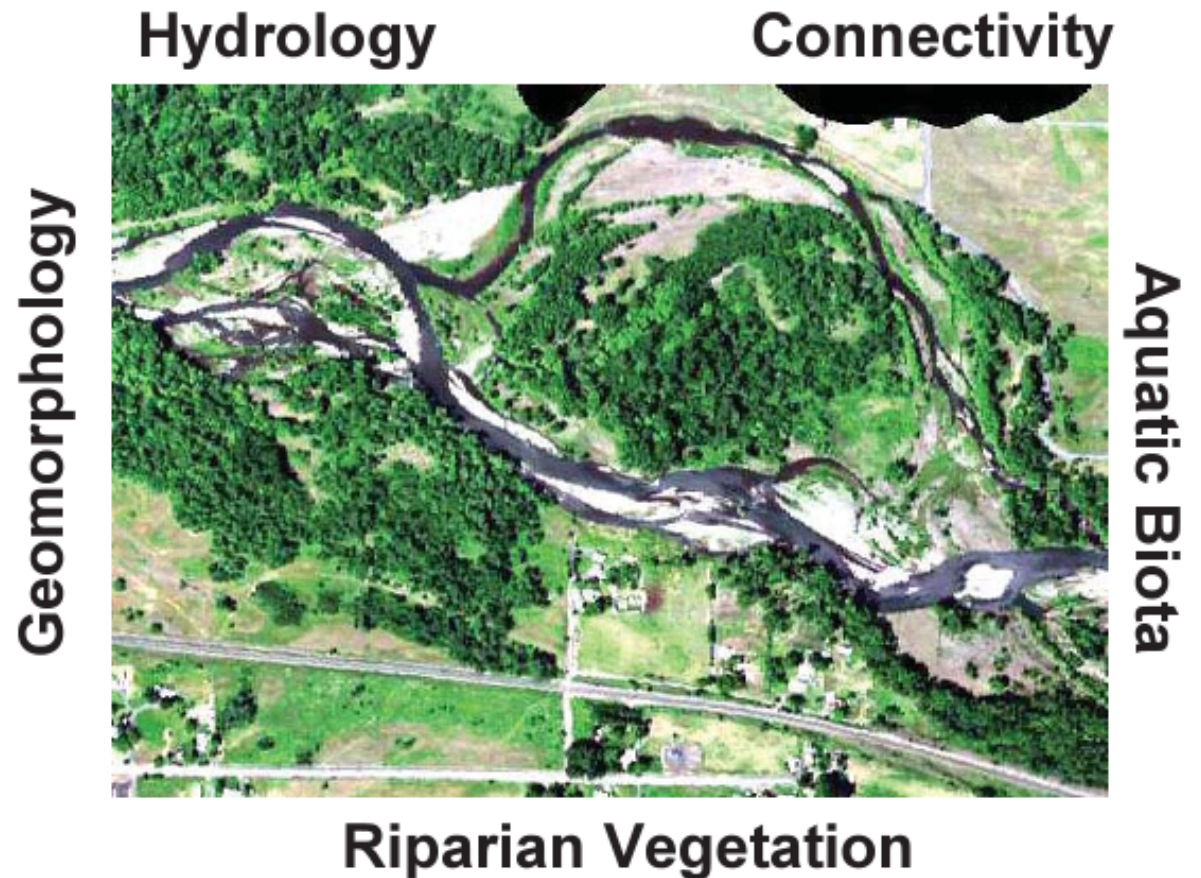
Natural Resources

The Umatilla River is a tributary of the Columbia River System and holds sacred and vital importance to the Tribes of the Columbia Plateau. For 13,000 years the river and the surrounding Columbia Plateau region have provided abundant natural resources to the tribes like salmon, lamprey, steelhead, sturgeon, elk, and deer. Fishing was the main livelihood, and the tribes also relied on hunting and gathering for survival.¹³

The CTUIR's 2008 Umatilla River Vision plan guides river restoration and management, ensuring the protection of culturally significant "first foods." Trail development near the river must adhere to the goals and methods outlined in this River Vision. Lamprey is a "first food," and faced functional extinction due to the pesticide "rotenone". Ongoing restoration efforts since the 1990s have contributed to a significant increase in lamprey in the Umatilla River population.¹⁴

Nixyáawii Watikš has the potential to improve access for tribal members to continue traditions of gathering, but additional consideration should be given to mitigate potential poaching and illegal resource extraction.

Figure 9. Key water quality management components outlined in CTUIR's 2008 Umatilla River Vision



Horses

The Umatilla River region was home to diverse horse breeds, including Cayuse, Appaloosa, Pintos, Paints, and Mustangs prior to colonization of the Pacific Northwest. The Cayuse Tribe owned large horse herds that roamed the foothills of the Blue Mountains and utilized extensive grazing areas across the Umatilla Basin, Columbia River, and Cascades. Horses played a vital role in expanding Shahaptian and Cayuse culture, providing mobility and facilitating connections with other Indian cultures in different regions.

The name “Nixyáawii” pays homage to a village that once existed on the northern side of the project area, renowned for its celebrations and horse racing.¹⁵ Horses continue to hold cultural significance for the CTUIR, and are still used for transportation and ceremonial practices. This trail will be located in the same area where tribal members rode horses from the reservation to attend the first Round-Up. The trail could honor the Tribe’s relationship with horses by improving access for tribal members riding between Mission and Pendleton.

Figure 10. Native Americans Ride in Pendleton Round-Up Parade



Source: Oregon Historical Society



Cultural Resources

Preserving cultural resources is crucial within the rural, Indigenous lands encompassing the Nixyáawii Watikš study area, which have been inhabited by Native people since time immemorial. The protection of traditional gathering areas reflects the need for cultural resource preservation, which includes the preservation of natural resources that play a role in indigenous identity and culture.

Cataloging these valuable cultural resources and artifacts is costly, and existing data is highly protected to discourage damage or illicit trade. Adjustments to the trail alignment may be necessary to accommodate the presence of resources and artifacts, but the installation of barriers and signage can also contribute to their protection. Depending on factors such as alignment, trail safety, and more, Nixyáawii Watikš has the potential to improve CTUIR members' access to traditional gathering areas along the river. Cultural resource staff and preservation experts from the CTUIR's Department of Natural Resources should be consulted during the permitting and construction phases of the trail.



The team talking with Carey Miller, CTUIR's Historic Preservation Officer and Senior Archaeologist



3

Planning Context:

Why Plan Now?

Figure 11. CTUIR Planning Projects Timeline



Plans for a multi-use trail that connects the Mission Community to the City of Pendleton date back to the CTUIR's **2001 Transportation System Plan**. Despite long-standing community desire for the trail, progress was halted by staffing limitations and the substantial barriers formed by the river, hillsides, railroad, and constrained parts of Mission Road. Recent planning efforts have generated renewed interest in establishing this connection.

The **2010 CTUIR Mission Community Master Plan**, last updated in 2018, provides active transportation recommendations for the Nixyáawii Governance Center area. The plan recommends a 1.5-mile multi-use trail connecting the Governance Center to the Wildhorse Resort and Casino. This connection will enhance overall connectivity between destinations in the CTUIR community, particularly when considered in conjunction with the Nixyáawii Watikš alignment.

A Safe Routes to School Plan was completed by CTUIR in 2020 to prioritize projects aimed at reducing barriers to walking and biking to the Nixyáawii Community School. The plan produced a suite of recommendations for infrastructure improvements within this project's study area, including regional pedestrian crossing enhancements, bike lane improvements, and a multi-use pathway alongside Mission Road.

In the **2023 CTUIR Transportation System Plan (TSP)** the Nixyáawii Watikš project is referred to as P06 and P07, and is listed as a high-priority project in the list accompanying the Pedestrian System section. This is the most recent guiding planning document which provided the impetus for suggesting an alignment for the trail segment. The 2023 TSP provides several renderings of what potential trail alignments may look like, including the river-adjacent alignment shown in Exhibit 9 (Appendix A). The TSP also outlines seven goals and accompanying objectives that guide the CTUIR's transportation investments.



Past Engagement

In 2022, the Tribal Planning Office conducted two rounds of community engagement for the updated Transportation System Plan. Community feedback emphasized the need for a trail along Highway 331 and Mission Road, linking the CTUIR Governance Center, the Wildhorse Resort & Casino, Pendleton Riverwalk, and Nixyáawii Community School. The Riverside neighborhood specifically highlighted the importance of improved connectivity to tribal services, as they currently lack direct transportation connections due to the Umatilla River.

Governmental organizations and Tribal commissions supported the goal of enhancing connectivity, safety, and accessibility. They also raised concerns regarding potential risks to pedestrians and horses from vehicular traffic, challenges posed by goathead plants for cyclists, potential impacts on protected fish populations with increased river access, trail maintenance, and other environmental considerations.

Common themes identified through previous community engagement:

- **Safety** – Better lighting, shelter, and emergency services along trails and sidewalks. Greater distances separating active transportation from the traffic on Mission Road.
- **Wayfinding** – Better signage and communication about proximity to destinations.
- **Multimodality & Mobility** – Better protection and encouragement of walking, rolling, biking, horseback riding, and more. Potentially including electricity-assisted mobility options on high-quality trails.
- **Accessibility and Connectivity** – More convenient access to both near locations (the market, the governance center) and farther-off destinations (the river walk, the casino).
- **River Access** – Expanded access for recreation and fishing, though some are concerned about potential misuse and needs for impact mitigation.



4

Land and Infrastructure



Mission Road facing south

Zoning

The UIR primarily consists of agricultural and low-density, rural residential zoning. Some areas near Mission Hub and along Mission Road are additionally zoned for potential commercial and/or public uses, but these are typically uncommon. As a result, there have been limited opportunities for compact, pedestrian-friendly, or mixed-use development in the UIR.

However, zoning practices are starting to change with the development of the new

Nixyáawii neighborhood and multi-family housing near the Governance Center. These recent plans propose the introduction of a Neighborhood Services zone, allowing for a mix of residential and small-scale commercial or office uses, particularly in the Mission Hub area, to centralize activities and improve the accessibility of services. Nixyáawii Watikš, starting at Mission Hub, intends to support and capitalize on this anticipated growth to create a more walkable environment.



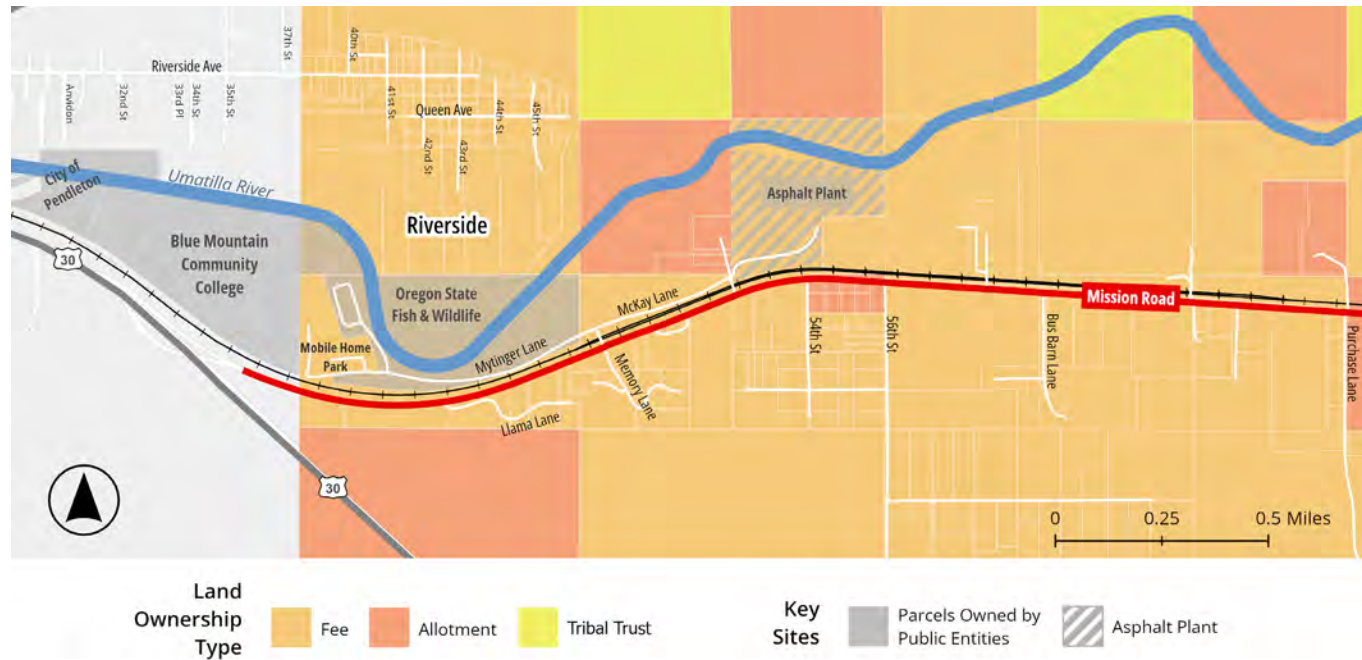
Property Ownership

Due to the history of complex, shifting, and exploitative federal policy regarding tribal land rights, UIR land consists of a 'checkerboard' of different land ownership types that influence their usage and development.

The vast majority of parcels that the trail may cross are fee lands that are not owned by CTUIR. Future trail planning efforts are likely to involve public easement procurement and options that limit the number of parcels the trail intersects with. There are several parcels of land owned by public entities near the west end of Mission Road, including those owned by Oregon State Fish & Wildlife, Blue Mountain Community College, and the City of Pendleton. While not owned by CTUIR, securing easements along these properties may be easier than along private residential property.

The Pioneer Asphalt plant, located east of McKay Lane, is unsuitable for potential easements due to the environmental and safety hazards it poses for trail users. This prohibits the trail from being routed north of the railroad tracks anywhere east of the plant.

Figure 12. Land Ownership and Key Sites



Tribal Trust: land held in trust by the U.S. federal government for use and benefit of the Tribe.

Allotment: land held in trust by the U.S. federal government for use and benefit of an individual.

Fee Lands: individually-owned parcels of land that fall under county/state jurisdiction; CTUIR is authorized to administer zoning on this land within UIR boundaries.

Tribal Fee Lands: fee land owned by CTUIR, often due to not yet being transferred into trust (a lengthy and difficult process).



Roads

CTUIR's street network is centered on higher-speed roads that allow residents to quickly traverse the rural landscape. Nixyáawii Watikš will provide better access for residents looking to traverse this same corridor without a vehicle.

Mission Road

Mission Road is a two-lane arterial with a posted speed limit of 40 mph. It is 4.5 miles long, with 3 miles within the trail area. The road is generally 24 feet wide with 10-foot shoulders on either side. The public right-of-way extends 60 feet, measured from the centerline. This leaves 18 feet of remaining right-of-way on either side. There is also typically a 45-50 foot distance between Mission Road's northern edgeline and the railroad trackbed.

For roughly 500 feet on either side of Memory Lane, Mission Road widens to 55 feet to accommodate two turning lanes. This reduction in space and remaining right-of-way, as well as closer proximity to the railroad, poses a constraint for trail construction.

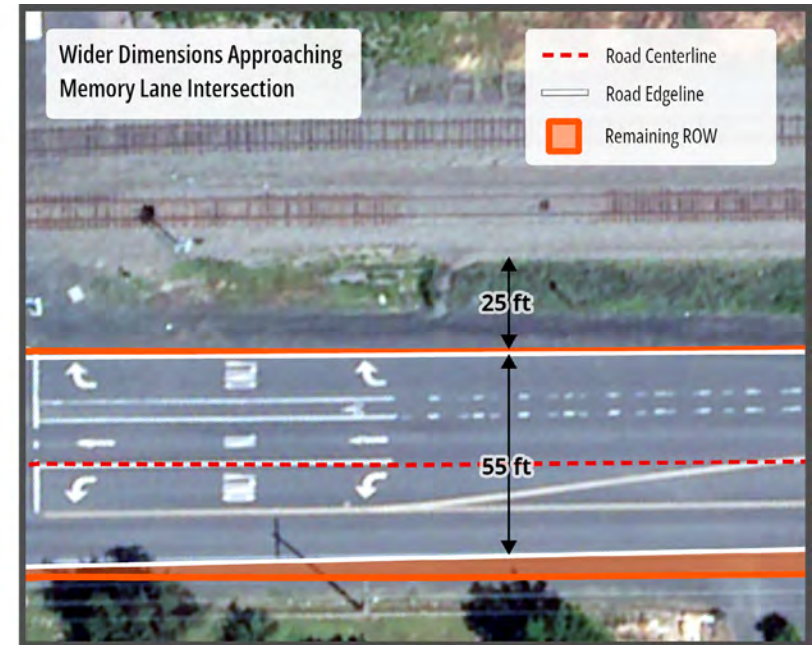
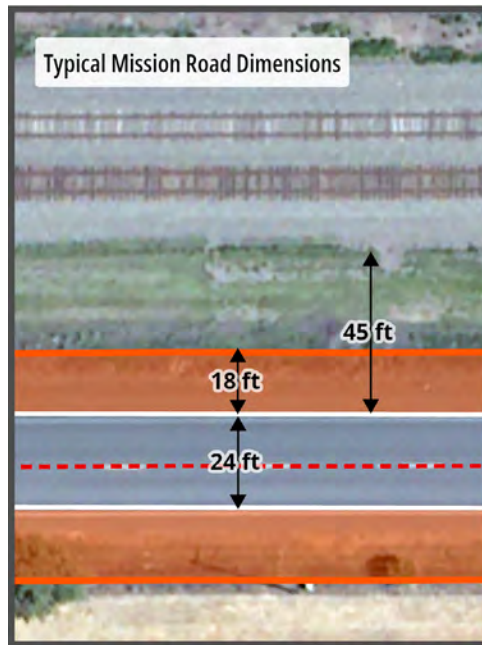


Mission Road facing south



Mission Road facing west

Figure 13. Mission Road Dimensions





Mytinger Lane facing west

Parallel Minor Roads

Near the western end of the UIR two minor roads run parallel to Mission Road: Mytinger Lane and McKay Lane. Both roads are 24 feet wide within a 60-foot right-of-way. They mostly border open space, except for the west end of Mytinger Lane, which provides access to the Oregon Fish and Wildlife facility and a mobile home park to the north. These roads offer an opportunity for the multi-use path to divert from Mission Road, providing more space and distance from fast-moving traffic.

Intersections

Within the Western Trail Area of Mission Road, Memory Lane is the only intersection with pedestrian crossing infrastructure. This intersection features a marked crosswalk, as well as traffic and pedestrian signals. West of Purchase Lane, there are three intersections that include active rail crossings, one of which is located at McKay Lane. However, the rail crossing at McKay Lane is presently blocked off and is only available for emergency use by the asphalt plant.

Highways

The study area is surrounded by several highways maintained by the Oregon Department of Transportation (ODOT). Mission Road merges with Highway 30 near the western UIR boundary. Space for a multi-use path to lead into Pendleton is limited at this point due to highway infrastructure and a steep hillside. Additionally, a Pendleton River Walk connection would need to cross Highway 11.



Figure 14. Roads within Trail Area



1 Mission Road merges with U.S. 30
Source: Google Earth



2 Memory Lane and Mission Road facing east
Source: Google Earth



3 Inactive railroad crossing at McKay Lane
Source: Google Earth



Transit

CTUIR developed the Kayak Public Transit (Kayak) system to provide local and intercity transit. With 6 routes (Hopper, Whistler, Metro, Arrow, Rocket, and Tripper), there are currently 18 bus stops within the UIR boundary, centered around the Kayak Transit Hub within the Nixyáawii Governance Center. However, there are no Kayak stops between the western UIR border and the Governance Center. Depending on the recommended alignment for Nixyáawii Watikš, there may be opportunities to add additional Kayak stops along Mission Road to benefit trail users and adjacent residents.

Railroad

The Union Pacific Railroad owns the sole rail line within the UIR, which connects Pendleton to La Grande. Running parallel to Mission Road, this line is primarily used for freight and poses alignment challenges due to safety risks associated with crossing or being close to the railroad. Currently, only the Memory Lane crossing has a crossing arm, while the rest rely on stop signs, raising concerns about accessibility, safety, and noise for potential active transportation users. With an average buffer width of 45-50 feet between Mission Road and the railroad trackbed, coordinating proximity requirements with relevant stakeholders may be challenging but will be crucial for trail alignment decisions.



Kayak Transit Bus



Union Pacific Railroad tracks



Railroad crossing at Mission Road & Memory Lane (Source: Google Maps)

Biking Infrastructure

Bicycle infrastructure within the UIR includes on-street bike lanes, shoulder bikeways, unmarked shared roadways, off-street multi-use paths, and some bicycle parking. Along Mission Road within the trail area, cycling infrastructure is limited to a narrow shoulder bikeway. Nixyáawii Watikš has the unique opportunity to benefit cyclists seeking a safer route between Pendleton and Mission Hub.

Transportation Safety

The TSP's pedestrian risk factor screening and bicycle risk factor screening found that most of the study area along Mission Road is in the top 20% risk factor areas for pedestrians and bicyclists, showcasing a need for protection and accommodation for these vulnerable modes of transportation.



Biker on Mission Road shoulder



Marked shoulder bikeway along Mission Road



Regional Multi-Use Path Network

Nixyáawii Watikš complements CTUIR's expanding multi-use trail network, particularly Timíne Way. Timíne Way is an eight-foot wide paved path within the Nixyáawii Governance Center, connecting existing governance buildings but lacking external connections. Nixyáawii Watikš will bridge this trail to communities spanning from Mission Hub to Pendleton. Furthermore, Nixyáawii Watikš has the potential to link with other proposed trail networks in the area, including projects P09, P10, and P14 (Figure 15).



Timíne Way multi-use path
Source: Google Earth

Figure 15. Regional Multi-Use Path Network



— Existing Multi-Use Path - - - Planned Multi-Use Path



Environmental Constraints

The trail area is primarily located within the 100-year flood plain, and climate change has increased the frequency of extreme weather patterns and rainfall.¹⁶ While it may be challenging to avoid flood-prone areas during trail construction, mitigating measures should be considered to ensure safe trail usage and sustainability.

The topography around Mission Road poses a challenge for trail construction. To the west of Memory Lane, a steep, sloped hillside narrows the available space for an adjacent multi-use path. This narrowing is most significant near the UIR boundary, where Mission Road merges with Highway 30. Along a 600-foot stretch, the road is flanked by steep cliffs on both sides, leaving only the mandated 6-foot shoulder width. If the trail were to follow Mission Road and connect to Pendleton, road widening through hillside boring would be necessary.



Hillside along Highway 30

Source: Google Earth



5

The Planning Process

Community Outreach and Engagement

The project's community engagement activities build upon prior efforts and information from CTUIR, and aim to establish an ongoing collaboration process with nearby communities. SSPA recognizes that these engagement efforts extend beyond this project, laying the foundation for future interactions and fostering relationships between CTUIR and stakeholders. This project's community engagement served three purposes:



Tabling at the Mini Pow Wow

1. To gain a deep understanding of the community's vision, needs, priorities, and concerns to inform trail plan alternatives,
2. To build awareness about the potential opportunities and challenges of the Nixyáawii Watikš and its implications for the area's future, and
3. To collect community input to ensure that the trail plan addresses cultural, economic, environmental, health, and other needs, with a particular focus on vulnerable populations.



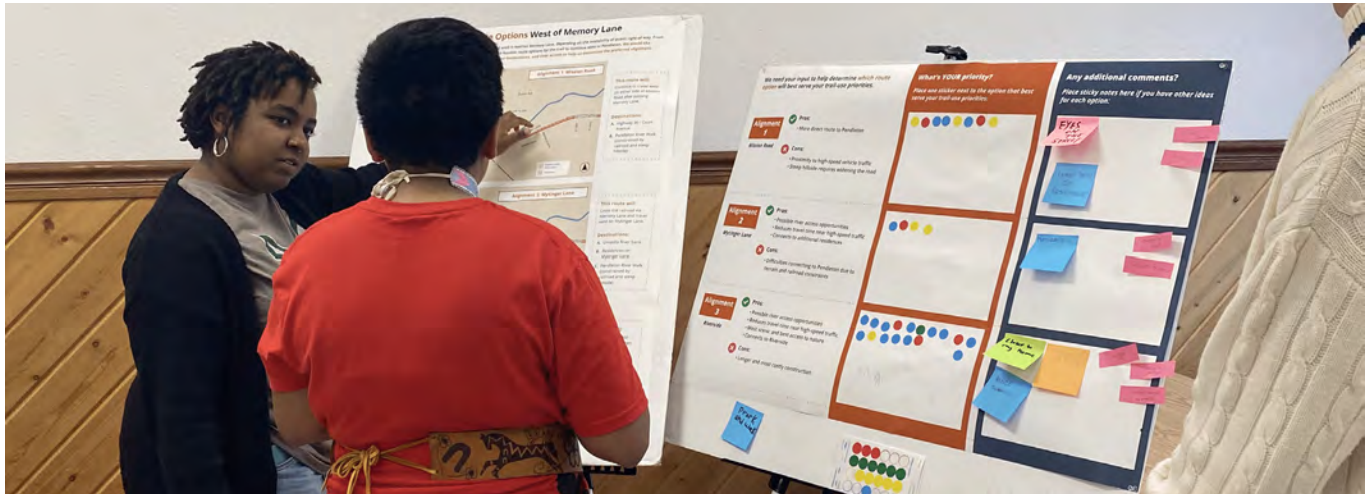
SSPA developed strategies to overcome barriers and ensure flexibility in engagement activities with the support of CTUIR's Planning and Cultural Resources staff. The community outreach and engagement efforts were guided by the following principles:

1. Seek input through asking, not assuming.
2. Meet the community where they are at, minimizing participation effort needed on their part.
3. Avoid duplication of past engagement efforts.
4. Focus on achievable outcomes and meaningful conversations.
5. Provide multiple avenues for input, including physical and virtual options.
6. Tailor materials for different ages and stakeholder groups.
7. Engage in training and research to understand the history and culture of the Umatilla Indian Reservation.
8. Balance engagement activities with volunteering and reciprocity.

SSPA engaged with a diverse range of stakeholders, including CTUIR community members, path-adjacent property owners, public agencies, and Tribal Commissions and Committees. Their community engagement efforts involved a variety of events and promotional methods. Below is a summary of the key activities and methods of promotion conducted. Refer to Appendix A for complete engagement materials and results.



Tabling at the BAAD Tournament



Alignment engagement at the Children's Mini Pow Wow



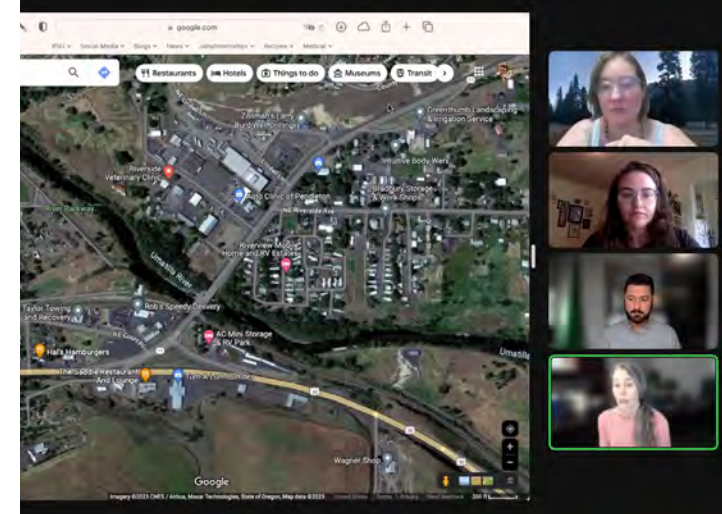
Presenting to the Yellowhawk Tribal Health Commission



Property Owner Open House



Senior's Lunch



ODOT Stakeholder Meeting

Engagement Activities

1. Visited the Yellowhawk Health Center's senior's lunch program in March and May, gathering general feedback and specific trail recommendations from tribal elders and other community members.
2. Tabled at the following community events to collect verbal feedback and invite participants to vote and comment on interactive materials:
 - The 33rd Annual Basketball Against Alcohol and Drugs (BAAD) Youth Basketball Tournament (March 2023)
 - Children's Mini Pow Wow (May 2023)
3. Distributed printed zines containing project information, a trail priority survey, and coloring books to encourage participation from different age groups.

4. Organized a property owner open house in May 2023 to inform nearby property owners about the proposed trail, allowing them to express their interests and concerns directly.
5. Presented at the following Tribal Committee and Commission meetings on project updates, gathering support and feedback from relevant stakeholders:
 - Fish and Wildlife Committee
 - Land Protection and Planning Commission
 - Capital Improvement Committee
 - Yellowhawk Health Commission
6. Presented to Oregon Department of Transportation, Region 5 Planning Manager to share recommended alignment and solicit input on trail construction feasibility past the UIR boundary.

Methods of Promotion

1. Published press release articles in the Confederated Umatilla Journal to promote engagement activities and provide updates on the trail plan.
2. Delivered Open House flyers directly to path-adjacent property owners, building their awareness of the project and opportunities for input.
3. Leveraged promotion and communications from the CTUIR Planning Office to reach a broader audience and facilitate community outreach.



Key Takeaways from Engagement

These engagement events allowed participants to share their opinions and concerns about different aspects of the trail. The team diligently documented and analyzed the feedback to inform the selection of the preferred trail alternative. However, it should be noted that the results are not statistically representative, meaning that the feedback is not predictive of the opinions of the CTUIR community as a whole.

Overall, the project was met with support by all community groups and commenting methods. Common themes that emerged from community feedback include:



Discussing trail safety with tribal police

1 Safety

- Traffic safety concerns regarding Mission Road for pedestrians and cyclists.
- Preference from a majority of respondents for the trail to be away from the railroad.
- Worries about secluded areas of the trail becoming unsafe.
- Suggestions for bicycle officer patrols and lighting for safety.
- Desire for safety features such as cameras and call boxes.
- Concerns about privacy impact on nearby private property owners.
- Concern about potential flooding near the river.
- Suggestions for water depth signs and reinforcement of river banks.

2 Connectivity and Recreation

- Suggestions to connect the trail with existing trails near Wildhorse Casino or residential areas east of Highway 331.
- Support to improve accessibility and safe travel options for Riverside.
- Incorporation of facilities for e-bike use, fishing access, and water recreation activities.
- Preference for a scenic route over a direct one.
- Desire for rest areas, picnic tables, and amenities to support family and group activities.
- Interest in adding art to the trail.

3 Environmental Conservation

- Concerns about air pollution from the asphalt plant and the rail.
- Concerns about potential human interactions with wildlife and the environment.
- Suggestion for wildlife-friendly, above-the-ground lighting along the trail.
- The Fish and Wildlife Committee's concerns about trail options placed near the Umatilla River may conflict with its river and fishery conservation initiatives.



Alignment Development

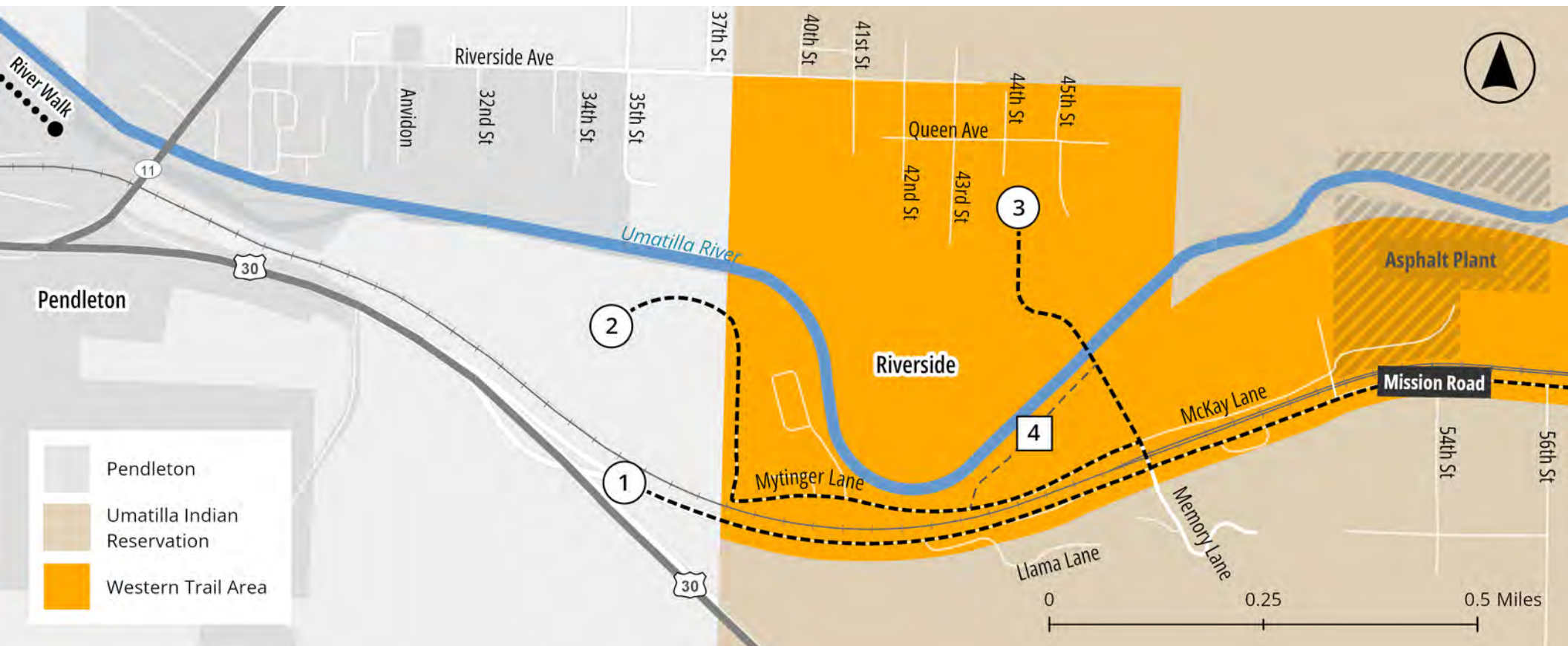
SSPA developed three trail alignments based on existing conditions research, early community engagement, and consultation with the CTUIR Planning Office. To create a final recommendation, these alignments were shared with community members and government stakeholders for feedback, as

well as assessed through SSPA's evaluation framework (see the Evaluation section for more details).

The location of the asphalt plant significantly influenced the development of these draft alignments. The size and hazardous nature of this site significantly limits the area within

which the trail can diverge from Mission Road to the north. As a result, the trail must travel adjacent to Mission Road until at least McKay Lane (the western edge of the plant), at which point more opportunities for route variation open up as the trail approaches Pendleton.

Figure 16. The three developed alignments



Draft Alignments

① *Mission Road*

Route: Continues along Mission Road to Pendleton

Why Included: Utilizes the most existing right-of-way and mimics the current commuting route to Pendleton.

② *Mytinger Lane*

Route: Turns north at Memory Lane, heads west along Mytinger Lane, then could either proceed to Pendleton following the Union Pacific Railroad or the Umatilla River.

Why Included: Offers more trail space, less travel time spent along a high-traffic road, and possible river access.

③ *Riverside Connection*

Route: Turns north at Memory Lane, then crosses the river to Riverside. Eventually this alignment would connect to Pendleton by way of Riverside Avenue.

Why Included: While not originally part of the proposed trail area in the TSP, the strong interest for a trail connection expressed by Riverside residents made it imperative to consider an alignment that would include this community.

River Access Possibilities

While a full riverbank trail was found not to be feasible, the team explored ways to promote river views and/or access in order to support this desire expressed by many community members. It was proposed that the alignments include possible River Access Add-on Paths (shown in Figure 16 as alignment 4) that utilize the publicly-accessible western section of the existing riverbank trail (residing on land owned by Oregon State Fish & Wildlife).

Additional Alignments Researched

Riverbank Path: This alignment would have followed the unofficial path along the Umatilla River's southern bank, offering scenic views, river access, and avoiding vehicle traffic and the active railroad. However, the path mostly crosses private residential property, including an asphalt plant involved in hazardous activity. Due to the difficulties of acquiring the land and creating a safe public trail in this area, this alignment was deemed infeasible.



Warning sign where riverbank path arrives at asphalt plant

Path North of River: The proposed alignment would have followed an existing unofficial path north of the Umatilla River, extending from Highway 331 to Queen Avenue in Riverside. It offered scenic views and distance from vehicles and rail, and was utilized by cyclists. However, the path primarily crossed large, open parcels of land, making it distant from roads and human activity. Due to limited accessibility and compromised trail-user safety, this route was deemed unsuitable.



Evaluation

SSPA used the 2023 TSP as a framework to evaluate the three draft alignments for Nixyáawii Watikš. The team developed 3-4 objectives for each of the 7 TSP goals: Safety, Environmental and Cultural Heritage, Equity and Accessibility, Connectivity, Coordination, Financial Stability, and Community Health. After thorough field assessments, community engagement events, a property owner open house, several commission meetings, and additional spatial analysis, the team assigned point values to each alignment for each objective. The point scale ranged from -2 (least desirable) to +2 (most desirable), zero being a neutral score with no significant negative or positive effects. Scores were then totaled, compared, and used to inform final recommendations. See Appendix B for the full scoring matrix.

Figure 17. Abridged evaluation matrix with grand totals

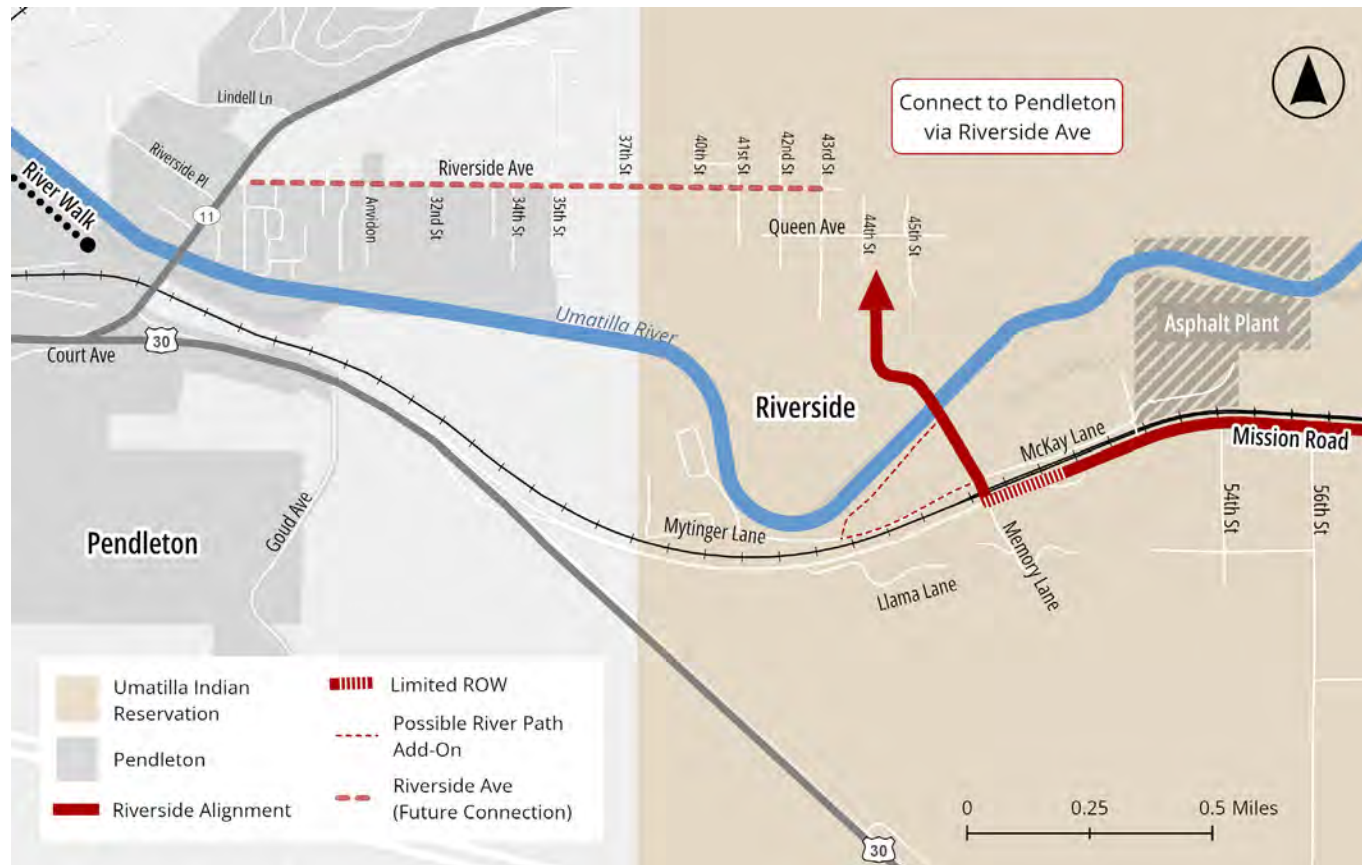
	Alignment #1 Mission Road	Alignment #2 Mytinger	Alignment #3 Riverside
Goal 1. Safety	-3	-2	0
Goal 2. Environmental and Cultural Heritage	3	2	2
Goal 3. Equity and Accessibility	2	3	3
Goal 4. Connectivity	3	5	7
Goal 5. Coordination	-3	-2	-2
Goal 6. Financial Stability	1	1	-3
Goal 7. Community Health	-2	2	4
Grand Total	1	9	11



6

Preferred Route: *Riverside Connection*

Figure 18. Riverside Alignment



The Riverside Connection received the most community support during the public engagement process. This alignment offers clear benefits for the Riverside neighborhood, providing improved access to the river, additional recreational opportunities, and connection to the Nixyáawii Governance Center’s amenities and resources.

Although this alignment presents some challenges, broad community support for better connections and river access make the Riverside Alignment ideal for a preferred recommended connection between Mission, Pendleton, and Riverside. The capital cost of constructing a bridge is high, but not necessarily prohibitive for this alignment. Further research revealed that the hillside boring required for the alternate Mission Alignment would be similarly expensive.

This recommendation provides the CTUIR’s planning office with aggregated existing conditions research, information, and outreach results that will bolster future fundraising efforts and more comprehensive environmental analysis, and maintain project momentum in terms of community support and enthusiasm.



Opportunities

- **Connects Mission to Riverside:**
Creates a direct connection to Riverside's growing CTUIR population, serving homes and families that currently have to travel on busy, indirect roads to get into the Mission Area.
- **Trail Network Benefits:** Connects community members along Mission Road and in Riverside to fill a major gap in the UIR's active transportation network. This alignment is a significant step forward in ultimately creating a complete and varied regional trail network, connecting Pendleton's and Mission Hub's existing trails.
- **Tribal Member Access to River:**
Directly addresses community desire to better access the Umatilla River, an essential cultural and environmental resource for the CTUIR. Positive feedback about the alignment highlighted that it provided river access that is currently limited in an official capacity across the UIR. The Riverside alignment also resonated with children and younger adults excited about the trail's potential recreation benefits.



View of Riverside community



Umatilla River southern bank





Union Pacific Railroad Tracks

Challenges

- **Community, Committee, and Stakeholder Coordination:** An ongoing partnership will be required between landowners along Mission Road, Mytinger Lane, and the Riverside neighborhood. While community engagement throughout the process has been overwhelmingly positive, alignment possibilities may be derailed by landowner opposition. Committee leader feedback on the Riverside alignment was more grounded and measured, taking into account potential constraints and outlining key concerns to keep in mind moving forward. Constant collaboration and guidance from Tribal Commissions will be required for successful implementation.
- **Funding Constraints:** Bridge construction and environmentally-friendly trail planning may make the project more expensive than other alternatives. However, additional analysis indicates that this may not be significantly more costly than the Mission and Mytinger alignments.
- **Logistics of Crossing River:** Environmental analysis and community/landowner outreach will be required to determine the best bridge crossing location from several initial options (see the River Crossing Options section for more details).
- **Constrained Space at Memory Lane Intersection:** Mission Road widens to approximately 55 feet as it approaches Memory Lane. This leaves very limited space for an adjacent trail. There is only 5 feet of remaining public right-of-way on the south side and none to the north. Additionally, the distance between the road's northern edgeline and railroad trackbed reduces to approximately 25 feet.
- **Railroad Safety for Trail Users:** This alignment runs alongside the Union Pacific Railroad for some of its duration. A generous buffer distance will be needed to ensure trail user safety and accommodate railroad right-of-way. Additionally, a directly parallel path raises visibility concerns for trail users, so additional reinforcement measures should be incorporated into design.





Figure 19. River Crossing Options

River Crossing Options

SSPA recommends that the Riverside Connection alignment follow Mission Road until Memory Lane, then proceed north and cross the Umatilla River, entering Riverside around 45th Street. This is the most advisable option due to the existing signaled intersection and marked railroad crossing at Mission Road and Memory Lane. Additionally, early engagement with Riverside residents points to 45th Street being a favorable connection point.

Environmental analysis will be required to determine if this preferred route can feasibly and sustainability support the construction of a bridge across the river. Alternative routes are presented on the following page in the event that constraints associated with the preferred route are difficult to overcome.



Alternative River Crossing Options

- 1** The trail could alternatively cross at and follow McKay Lane, proceeding across the river north of Memory Lane. This would bypass the challenging area where Mission Road widens and space is limited for trail construction. However, this option would require re-establishing the railroad crossing at McKay Lane, which is currently not equipped for public use. Additionally, extending the trail to McKay Lane runs up against the western edge of the asphalt plant, raising potential health and safety concerns for trail users. It would be crucial to engage in discussions with the asphalt company to address these concerns and ensure their willingness to accommodate trail users near their property.
- 2** The trail could continue to the end of Mytinger Lane before heading north to cross the river. This option has the potential benefit of connecting residents of the mobile home park at the end of Mytinger Lane. Additionally, this would involve securing an easement from Blue Mountain Community College, who owns the parcel of land to the west of Mytinger Lane and has expressed support for the trail. However, coordinating with property owners to connect to Riverside near 35th Street might be more challenging.
- 3** The trail could travel along the south side of the Umatilla River and cross farther west near Anvidon Street. This pathway does not currently exist, but would have the benefit of intersecting with very little residential private property. It may be able to utilize land owned by the community college and the City of Pendleton, and quickly connect with Riverside's street grid after crossing the river.



View of McKay Lane from Mission Road, including rail crossing and edge of asphalt plant

Source: Google Earth



Mytinger Lane near the mobile home park before road veers north



Field at end of Anvidon St, overlooking bank of Umatilla River



Pendleton and River Walk Connection

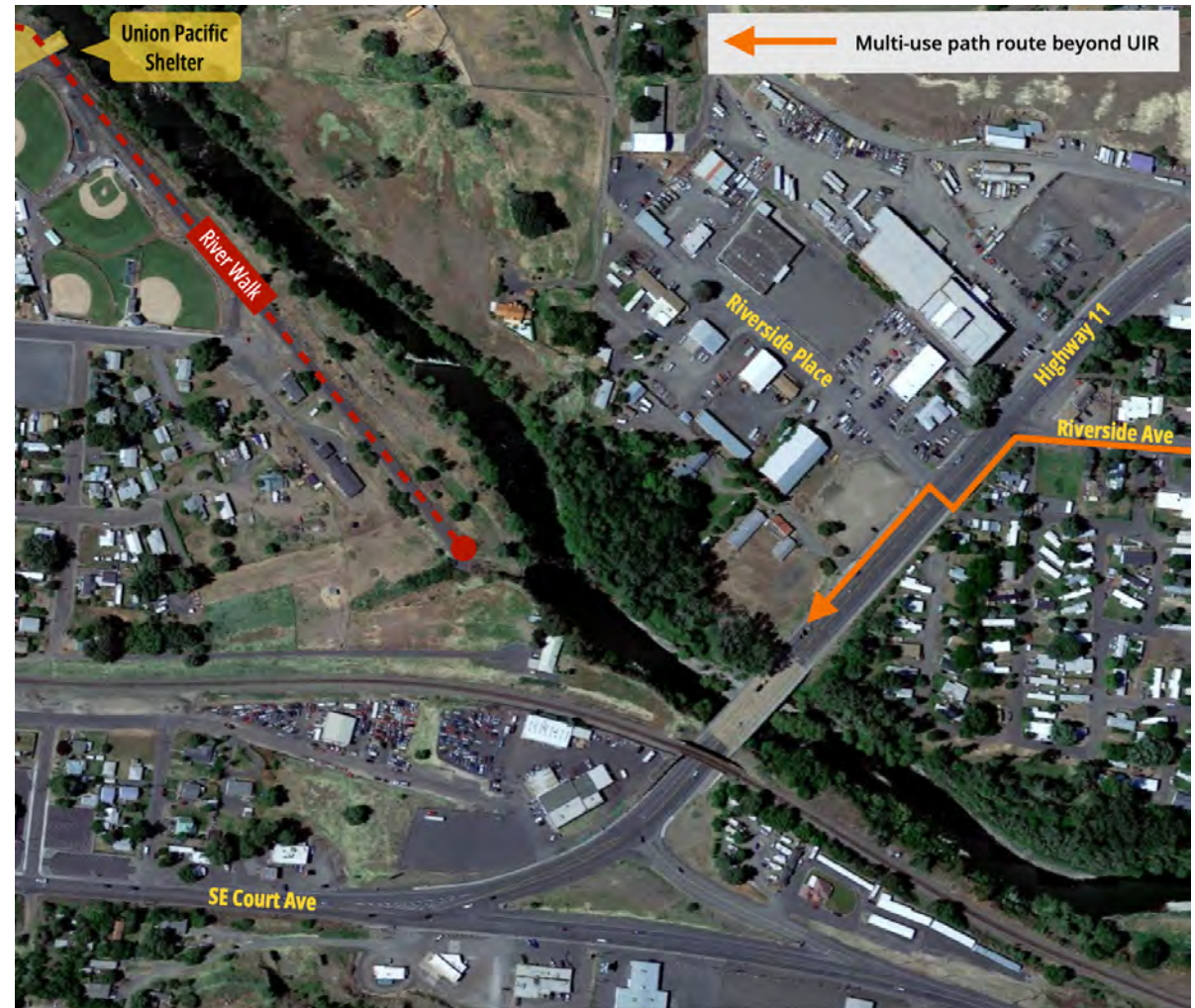
Through spatial analysis and consultation with ODOT, the following possible route was identified for entering Pendleton:

1. Travel east along Riverside Avenue and merge onto Highway 11
2. Cross Highway 11 at Riverside Place, supported by the installation of a rapid flashing beacon or other protected crossing method
3. Travel southwest on Highway 11, supported by enhanced bike and pedestrian treatments along the road

There are two priority options for achieving the final connection to Pendleton's River Walk.

1. Proceed along SE Court Avenue into the city center, then utilize signage to direct trail users to the River Walk. The challenge with this option is the lack of pedestrian- and bicycle-friendly built form where Highway 11 and Highway 30/SE Court Avenue converge. ODOT is interested in improving this intersection, but noted past difficulties implementing these developments.
2. Construct a bridge across the Umatilla River that connects to the Union Pacific Shelter along the River Walk. This shelter is an old abutment that may be able to be restored to support bridge infrastructure.

Figure 20. Final connection to Pendleton via Highway 11



Pendleton River Walk



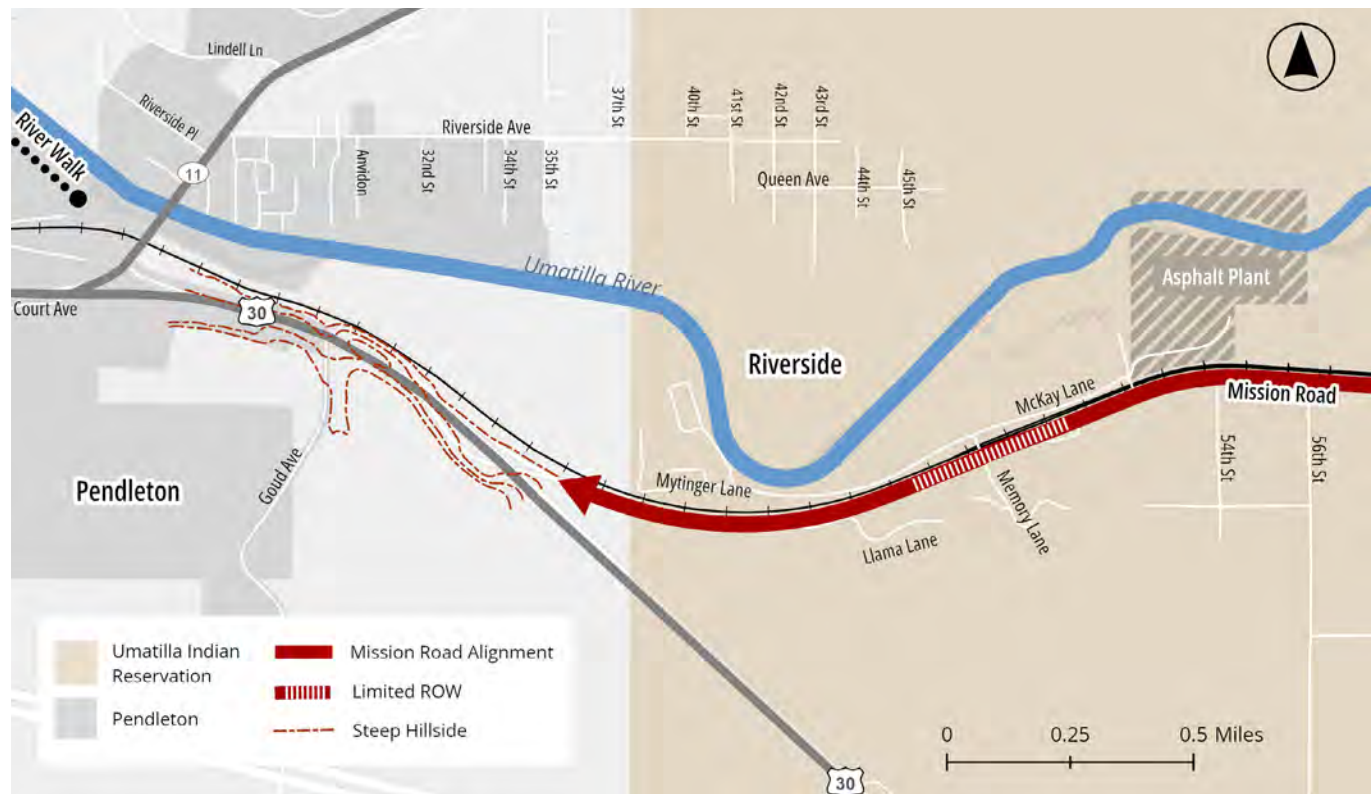
Alternative Route: Mission Road

An alternate alignment where Nixyáawii Watikš runs entirely along Mission Road from Mission to Pendleton provides its own opportunities and challenges. This Mission Road Alignment offers a direct connection to Pendleton, benefits from existing infrastructure such as a bike lane, requires little to no private property acquisition, and minimizes disturbances to the Umatilla River (see Figure 21). On the other hand, its proximity to high-speed traffic, safety concerns near the railway, and engineering challenges on a steep hillside pose significant drawbacks. Consequently, considering the need for extensive traffic calming measures, the potential risks associated with the railway, and the additional engineering requirements, the Mission Road Alignment is recommended as an alternative route.

Opportunities

- **Direct Connection to Pendleton:** The Mission Road Alignment offers a more direct connection to Pendleton, which is advantageous for improving accessibility and convenience for trail users.
- **Existing Bike Lane and Foot Traffic:** The presence of an existing bike lane on Mission Road and the current foot traffic

Figure 21. Mission Road Alignment



from pedestrians walking on Mission Road provide increased visibility and perceived safety for trail users.

- **Minimal Disturbance to the River:** The Mission Road Alignment's avoidance of river proximity aligns with the Umatilla River Vision's goal of preserving the river in its natural state. While this is a long established community priority,

other alternatives may also offer ways to minimize disturbances to the river ecosystem and fisheries.

- **Existing Public Right-of-Way:** The Mission Road Alignment requires minimal negotiation with nearby landowners given the opportunity to utilize the existing 10-foot shoulder on Mission Road.



Challenges

- **Proximity to High-Speed Traffic:** The most common concern raised by the community regarding the Mission Road Alignment is its proximity to high-speed traffic. This alignment requires extensive traffic calming measures to ensure the physical safety of trail users. Given the potential risks involved, alternative routes with safer traffic conditions may be prioritized over the Mission Road Alignment.
- **Safety Concerns of Railway:** The Mission Road Alignment's proximity to the railway presents additional safety concerns. Although it is anticipated that the majority of the trail will likely follow Mission Road, the community has expressed a strong desire for a section that diverges from running parallel to the railway. While mitigating measures can be implemented, such as barriers and warning signs, the risks associated with continued railway proximity may warrant consideration of an alignment with better safety conditions.
- **Pollution Exposure:** Proximity to vehicle traffic raises concerns about pollution exposure, as emissions from vehicles can have detrimental effects on the health of trail users. Mitigation measures such as planting vegetation buffers should be considered.
- **Limited Right-of-Way for Amenities:** The available right-of-way may restrict the ability to incorporate desired trail amenities, requiring creative solutions and optimization of the space. Additionally, as mentioned previously, there is limited remaining right-of-way to the east and west of Memory Lane, where Mission Road widens to accommodate turning lanes.
- **Engineering Challenges on Steep Hillside:** Directly west of the reservation, Mission Road merges with Highway 30 (jurisdiction of ODOT). At this juncture, the steep hillside on both sides of Highway 30 currently only accommodates the state-mandated 6 feet of shoulder space (see Figure 22). The additional boring and engineering work needed to ensure enough space for the trail could make the Mission Road Alignment not as feasible compared to an alignment with more favorable topography.
- **Coordination with ODOT:** Due to the potential requirement for the trail to pass the state highway intersection, coordination with ODOT is necessary to address regulatory compliance and obtain necessary permissions.



Railroad warning sign

Figure 22. Highway 30 surrounded by steep hillside

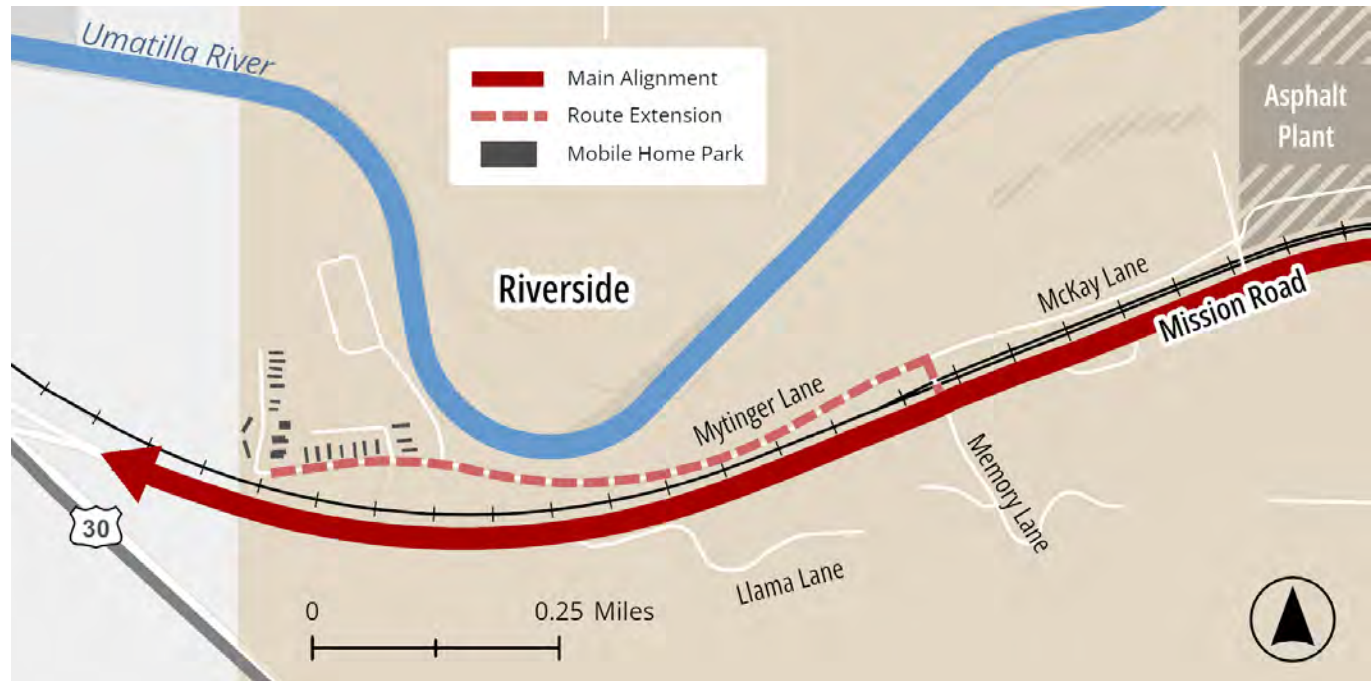


Potential Mytinger Lane Extension

A river path extension along Mytinger Lane provides an option for improving the Mission Road Alignment to meet the community's recreational needs (see Figure 23). This extension is based off of the Mytinger Lane Alignment, incorporating community feedback regarding its potential benefits. This proposed addition would create a side track on Mytinger Lane after crossing the railway on Memory Lane, separating a portion of the trail from traffic on Mission Road. The extension would provide more space for the inclusion of amenities and provide more residents with safe pedestrian access.

While incorporating a river access point is a possibility, careful consideration of landownership and the implementation of appropriate river protection measures would be essential. Lighting and safety features should be used to ensure its safety and visibility since the extension is located further away from the main traffic on Mission Road. This river path extension along Mytinger Lane would enhance the trail experience of the Mission Road Alignment by offering trail users a more tranquil and scenic experience.

Figure 23. Mytinger Lane Extension



7

Trail Considerations



*Rendering of a multi-use path on the Umatilla River
(Created by SSPA using Adobe Firefly)*

Types of Trails

Multi-use trails are designed to accommodate a variety of users, including pedestrians, cyclists, and equestrians. The mixture of permitted trail uses are determined during the planning phase of a trail project, and are a critical consideration in striking a balance between user needs and project goals.

Width

Trail width is an important design consideration, and the American Association of State Highway and Transportation Officials (AASHTO) guidelines are frequently used as a standard for multi-use trails. While a minimum width of 10 feet is standard, 12 to 14 feet is preferable for trails near high-traffic areas. The width of the trail will likely vary along the trail based on proximity to Mission Road and available right-of-way.

Providing separate, parallel paths to accommodate different user groups may be desirable in some cases. For example, a primary, well-paved path may be set aside for bicyclists only, with softer shoulders reserved for pedestrians and equestrians. The character of the trail will likely differ between the segments that run along Mission Road and those that do not.



Types of Trail Users

Developing a multi-use path that caters to diverse user groups requires thoughtful planning of surface types, vertical clearances, and trail amenities. Although certain trail usages may seem incompatible at first, careful planning can create successful trails that accommodate a variety of users. Nixyáawii Watikš should be designed to meet the community's needs and desires, providing amenities that benefit and protect pedestrians, cyclists, and equestrians.



Pedestrians in action on the Pendleton Riverwalk

Pedestrians: Pedestrian activities include walking, hiking, jogging, running, bird watching, and dog walking. Their design needs are generally simpler compared to other groups. Most pedestrians prefer softer surfaces like rubber, mulch, or crushed stone to minimize impact on their knees. However, power walkers, wheelchair users, and stroller users may prefer more compact surfaces. Amenities that improve pedestrian comfort might include comfortable benches, shaded rest areas, and convenient washroom facilities, which can enhance the pedestrian experience (see Amenities for more information). If dogs are permitted, the trail should provide dog-friendly drinking fountains, bag dispensers, and trash cans to encourage responsible pet ownership. Overall, providing pedestrian amenities will reduce litter and minimize unwanted impacts on neighbors.

Bicyclists: Different subgroups of cyclists include commuters, recreational riders, and touring enthusiasts. The AASHTO's Guide for the Development of Bicycle Facilities establishes the national standard for bikeway design, which will need to be followed given current plans for the project to receive federal or state transportation funds. In addition to the amenities provided for pedestrians, the trail should include secure bicycle racks, bike repair facilities, and accessible bicycle lockers where possible.

Equestrians: Equestrians prefer trails with loose or compacted earth surfaces since hard surfaces like asphalt, concrete, and coarse gravel can injure horse hooves. Horses typically prefer water crossings instead of bridges, and including mounting platforms at bridge ends enables riders to dismount and lead their horses across, if feasible. This is an important factor to consider when planning the recommended alignment, which crosses the Umatilla River to the Riverside neighborhood. Along with standard amenities like parking and staging areas for human users, the trail should provide water sources for horses and secure hitching posts at rest areas and restrooms to ensure the comfort and convenience of equestrian trail users. Involving local equestrian groups is highly recommended to gather their input and expertise to create an equestrian-friendly trail that addresses local concerns.¹⁷



Cultural & Environmental Resource Protection

The trail route should avoid fragmenting habitats, as it can lead to increased wildlife-vehicle-collisions, additional competition, and even starvation among species with limited range. Small and simple tools should be used during trail construction to prevent excess noise and habitat damage.

The trail design should protect underbrush and discourage users from straying off the designated path. This can be achieved by implementing barriers and preserving existing vegetation as natural barriers. When planting trees, the trail should use deciduous trees to provide shade and evergreens to provide wind protection.

Open landscapes like marshes and grasslands are ecologically significant and require protection. The plants in these environments are adapted to withstand sunlight, wind, heavy rain, and temperature fluctuations. The trail's design should incorporate native plants for better adaptation, reduced pesticide and fertilizer requirements, and a healthier ecosystem. Invasive species or weeds along the trail corridor should be managed using alternative methods such



Vegetation along southern bank of Umatilla River

as pulling and mowing. Collaboration with the Department of Natural Resources should also be considered to implement best weed management practices.

Trails should follow the existing grade, which helps prevent erosion and flooding while safeguarding the landscape and watershed. Protecting and planting vegetation along the river also prevents erosion and filters water pollutants. Since much of the trail area is flood-prone, adequate strategies and facilities should be put in place to manage trail

closures and repairs.

The trail design should include clear markings when traversing farmland and ranches, while also incorporating buffers such as low-maintenance vegetation or terrain elevation to minimize conflicts with private property. Similar protective measures should be employed to protect areas with sensitive cultural amenities, so as to dissuade disturbance without calling attention to their presence.¹⁸



Accessibility

Signage and Wayfinding

Effective placement of signs and surface markings is crucial for improving trail safety and enjoyment while protecting the environment. These signs serve as important communication tools, directing users and highlighting key features and landmarks along the trail. Signage and surface markings should be clear, simple, and easily visible to all trail users. Examples include:

- **Regulatory and Warning Signs:** placed near crossings, low-visibility areas, and cliffs, following guidelines established by the Manual on Uniform Traffic Control Devices, while ensuring that the number of signs is limited to prevent overwhelming users.
- **Wayfinding Signs:** provide guidance to trail users, including directional arrows and informational signage indicating distances to parks, trails, businesses, amenities, as well as interpretive signs at trailheads offering trail maps, rules and regulations, hazard warnings, ecological information, historical facts, and contact details for trail maintenance.
- **Mile Markers:** enhance the user experience by providing distance tracking, emergency location references, and should be designed for visibility



Signs on the Thun Trail in Pennsylvania Explaining Trail Etiquette (Source: Trail Link)

and durability, either embedded in the pavement or mounted on poles.

Establishing consistent signage is vital to prevent confusion from differing standards in trail networks crossing multiple jurisdictions. Collaboration among stakeholders in regional trail networks can result in a consistent family of signs that covers the entire system, guiding trail users and confirming their route. Consistent branding enhances visibility and recognition of the integrated trail system. A balanced approach is required to provide a standard look and feel, promote the system, and respect individual trails and jurisdictions.

Trailheads

A trailhead is a designated access point where users begin or end their trail journeys and familiarize themselves with the trail or network. It serves as a gateway between trails and nearby communities, showcasing local culture and history through interpretive signage, historical markers, and public art.

Trailheads should provide trail users with accessible paths, clearly posted crossings, handicapped parking spaces, restaurants, and gates or barricades to separate motorized traffic from pedestrians.¹⁹



Rest Areas

The CTUIR community has expressed a desire for providing and improving trail amenities at rest areas. Potential amenities include well-placed benches for relaxation and enjoyment of the surroundings and picnic tables for group activities. Designating specific river access points for fishing and water activities can also dissuade unwanted uses where the trail runs along the river. These enhancements will enrich the trail experience, fostering recreation and community interaction.



Rest stop in Napa, California
Source: Napa Valley Register

Hard Trail Surfaces

- **Asphalt:** Suitable for bicyclists but not equestrians. Requires routine maintenance and has a lifespan of 7 to 15 years. Consider potential environmental issues during construction.
- **Concrete:** Expensive but long-lasting, with a lifespan of 25 years or more. Suitable for flood-prone locations. Less popular among runners due to the pressure on the lower limb. Consider integrating nearby soft-surface treads for runners and equestrians.
- **Crushed Stone:** Resistant to abrasion and integrates well with the natural terrain. Can accommodate most trail users with proper crushing and compaction.
- **Soil Cement:** Cost-effective alternative to asphalt, but requires proper drainage to avoid erosion.
- **Boardwalk:** Ideal for wetland segments, offering proper drainage and minimal impact on fragile ecosystems. Expensive to install and maintain, and can be slippery when wet.

Soft Trail Surfaces

- **Natural Earth:** Low-maintenance, requiring simple care for drainage, erosion repair, and vegetation management. Can be constructed and maintained by volunteers.
- **Wood Chips:** Blends with natural surroundings and can serve as a parallel tread for runners and equestrians. Requires regular upkeep and is not wheelchair accessible. Surface replacement needed every two years.

If initial expense is an issue, starting with a softer surface like soil or crushed stone is a reasonable choice. Upgrading to a harder surface can be considered once more financing is secured.²⁰



Wood chip Pre's Trail in Eugene, Oregon
Source: Eugene Cascades and Coast



Trail Amenities

A key element of the project’s community engagement included activities where the community shared their thoughts on the amenities they would most value for Nixyáawii Watikš.

Lighting

Consistent lighting along the trail will significantly reduce the risk of collisions between users and of collisions with objects along the path. It also enhances visibility, allowing users to identify potential hazards and ensuring a safer trail experience. Well-lit areas deter crime and allow extended trail use without constant monitoring. Wired lighting may not be suitable for riparian corridors near the Umatilla River, but alternative options include:

- **Solar:** Environmentally friendly, self-powered, and low maintenance, ideal for sunny regions with minimal operating costs.
- **LED:** Highly efficient, providing bright light with low power consumption and longer lifespan than incandescent bulbs.
- **Reflective Striping:** Enhances existing light sources by attaching white, flat, narrow reflectors to increase visibility, especially for trails adjacent to Mission Road with existing lighting infrastructure. It can also divide trail traffic or mark boundaries.



LED Louvered Bollard at Amazon Park Running Trail in Eugene, Oregon (Source: LEDs Magazine)

Lights should be strategically placed at key locations, such as overpasses, trailheads, bridges, street crossings, and intersections. Low-level bollard lights and flat lenses can effectively direct light onto the trail, minimizing light pollution and wildlife disturbance. Fixtures should be sized to accommodate trail users, properly spaced based on tree placement and path curvature.²¹

Public Art

Public art can represent and reflect the identity and character of the CTUIR community. Murals and/or sculptures can

showcase the area’s history and cultural heritage. Public art can also incorporate experiential elements like herb pots, bird feeders, and native plant gardens, creating a sensory trail experience. Consistent design for benches and signage creates a recognizable brand. Artistic ramps, railings, sculptures, and pathway designs can mimic the trail’s flow, enhancing visual appeal. CTUIR could collaborate with local artists with trail art projects given their knowledge of the area, cost-effectiveness, and the promotion of the local arts scene.²²



Fencing

Fencing separates trail features to ensure safety and deter trespassing. Fencing is vital for separating the trail from active railroad tracks to ensure safety and deter trespassing. Coordination with railroad maintenance and local utilities will be required to select the appropriate fence type and materials. In constrained areas, a combination of separation techniques allows for narrower setbacks.

In addition to fences, effective solutions also include vegetation, ditches, and berms, especially with wider setbacks. Vegetation acts as a visual and physical barrier, with trees and shrubs being particularly effective. It may take time for vegetation to become fully grown, and temporary barriers may be necessary. Ditches along rail corridors can also deter trespassing, but the design should consider drainage needs for both the trail and tracks. Barriers at slope tops should be employed to prevent injuries.²³



Art-enriched fencing installed on the Whittier Greenway Trail (Source: Streetsblog Los Angeles)

Road and Rail Crossings

Crossing design is a central consideration for a trail's character and safety. Road crossings are best employed where existing intersections can be found. Rail crossings are safest as separate crossing areas, though it is most cost-effective to integrate rail crossings into existing intersections. It is important to consider that many trail users, such as cyclists desiring to maintain momentum, may have a low tolerance for long delays at crossings. In

addition, children using the trail may not be aware of traffic rules, so crossings should be adequately marked and simple to navigate. For Nixyáawii Watikš should consider utilizing existing rail crossings to simplify crossing considerations, though this will require collaboration with private landowners who live along the roads serviced by existing crossings.²⁴



Trail Maintenance & Management

Trail maintenance surfaced as a key concern in Tribal Commission outreach. Discussions with the City of Pendleton on upkeep strategies employed for the Pendleton Riverwalk may provide region-specific experience regarding potential methods to preserve the trail quality. High school students from Nixyáawii Community School suggested volunteer opportunities for trail maintenance could be an effective strategy, especially if targeted towards sports activities like cross country practice. Engaging volunteers allows individuals with diverse interests, skills, and availability to contribute to the trail, often through community maintenance days and events.

Volunteering reduces maintenance costs and fosters a sense of community ownership and accountability. However, sustaining volunteer momentum can be challenging after the initial excitement of a new trail diminishes or personal circumstances change. Moreover, volunteers generally lack the expertise for complex repairs, and insurance considerations span injuries, property damage, and third-party incidents. Formal volunteering structures, such as an “adopt-a-trail” program could help by rotating different groups and sponsor organizations for ongoing cleanup efforts.



Umatilla riverbank looking south

Maintaining trails along a railway involves additional requirements and design approval. Close collaboration with stakeholders and a clear operations and management strategy will preempt negative impacts and safety risks resulting from railroad activities. Agreements with railroad stakeholders should explicitly define responsibilities for damages arising from their activities.²⁵

Public-private partnerships often provide benefits for trail management and maintenance, often through Memorandums Of Understanding or Agreements (MOUs or

MOAs). These agreements clarify roles and obligations among government agencies, volunteer groups, and other trail-related organizations. Such partnerships can also facilitate government organizations to acquire maintenance duties for trail corridors. Legal agreements (including easements, leases, and licenses) should be used to regulate the rights and permissions of trail users. Easements can be customized to accommodate specific needs, such as private property crossings, farm crossings, and managing utilities.²⁶





Property Owner Open House at the Wildhorse Resort & Casino

Local Coordination

An important consideration is to begin an official process of coordination with the City of Pendleton, County of Umatilla, and ODOT Region 5. The Pendleton connection must meet the same community needs for comfort and access, and the project will be compromised if that connection is not up to par. Talking points to help guide initial discussions with coordination partners are included in Appendix C.

Continued Engagement

The CTUIR Tribal Planning office should continue to engage with key stakeholders and the broader community. Additional engagement work should focus on designs, materials, amenities, and maintenance strategies. Community concerns identified in this report should also be addressed in future outreach and planning. Once an alignment has been officially chosen, further targeted engagement should take place. In particular, the residents of the mobile home park on the

west end of Mytinger Lane should be included as the process moves forward.

One potential strategy for future outreach is convening a stakeholder advisory committee. This would offer the opportunity for community members to guide the Nixyáawii Watikš planning process. This committee should include residents from surrounding communities, tribal officials, and other government stakeholders.





SSPA delivered these alignment recommendations to the dedicated staff at the CTUIR Tribal Planning Office with the completion of this report. This plan aims to generate momentum and create opportunities for Nixyáawii Watikš' implementation. We extend our heartfelt gratitude to all the individuals involved in this collaborative process.



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