BEFORE THE WALLOWA COUNTY PLANNING COMMISSION

An application on behalf of the Joseph Branch Trail Consortium for a Conditional Use Permit pursuant to Wallowa County Land Development Ordinance ("LDO") Sections 15.020 and 9.020 for a Pedestrian, Bicycle, and Equestrian Trail	APPLICANT'S NARRATIVE IN SUPPORT OF ITS APPLICATION

1. Introduction

The Joseph Branch Trail Consortium ("JBTC") respectfully submits this application to develop an approximately six-mile, mixed-use, non-motorized trail (the "Trail"), between Joseph and Enterprise. The Trail will be developed adjacent to the existing Wallowa Union Railroad Corridor railroad tracks and constructed with a compacted rock base finished with a fine gravel surface, providing access for all ages and abilities. The Trail is proposed as an initial pilot section of a longer trail that could stretch between Elgin and Joseph.

The Trail will modify existing public infrastructure to:

- Improve the quality of life for residents by providing cyclists, pedestrians, and equestrians a safe place to exercise away from vehicles, thereby encouraging healthy communities through increased physical activity by both individuals and groups, as required by Statewide Planning Goal 12 (See sections 3.1 & 3.2 below).

- Promote the economic development of existing and future businesses in our region (see section 3.4 below).

- Respond to a community need for expanded access to outdoor recreational opportunities by providing some of Wallowa County's first flat-grade (less than 4%) trails open to all ages and abilities, including access for those with disabilities (see section 3.5).

- Because the Trail will help preserve the existing Wallowa Union Railroad, Wallowa County citizens will retain and expand the benefits derived from the publicly owned railroad corridor, including potential expansion of the Eagle Cap Excursion Train into the Wallowa Valley, and a return of the railroad to commercial service, if needed.

Trail users will primarily be Wallowa County residents. The median age of our community is 55 years, with 28% of our population over 65 years of age. County Health Rankings for 2018 reported that only 57% of Wallowa County residents had adequate access to locations for physical activity, substantially lower than the state average of 77%.[1] In addition, 40% of adults

[1] See http://www.countyhealthrankings.org.

indicated they need affordable places to exercise and 29% identified the need for more opportunities to reduce stress (see Section 4.3 below).

The Oregon Parks and Recreation Department's 2013-2017 Statewide Comprehensive Outdoor Recreation Plan for Wallowa County reported that survey respondents identified hard surface trails, off-street bike trails, and access to nature as high priority needs in our community. The Trail will give all members of our community a free, close-to-home place to access a nature trail, regardless of their physical ability. It will also be the only completely safe bicycle and pedestrian route between Joseph and Enterprise.[2]

As of 2018 in the United States, there are currently 350 rail-with-trails, with 930 miles located along active rail lines. The Trail design was developed for the Wallowa Union Railroad Authority ("WURA") and JBTC using current best practices as described in both the "Joseph Branch Rail with Trail Concept Plan" by Oregon Parks and Recreation Department and refined in the "Pre-design Engineering and Environmental Review Report" by Anderson Perry & Associates, Inc. **Exhibit 1**. Funding to construct the trail is anticipated to come primarily from state and federal funds already allocated to build trails in Oregon. No local tax dollars will be used to construct or maintain the trail.

The Joseph Branch Trail Consortium appreciates your consideration of this application.

2. Project Background

History of the Project: In 1999, the Oregon Parks and Recreation Commission ("OPRC") began discussions regarding the future of the Joseph Branch railroad line and the concept of converting the line to a public recreation trail. Early in 2000, discussions between OPRC, the Wallowa County Board of Commissioners, and the public resulted in the decision to preserve the rail corridor for future transportation needs.

The Trail vision was put forward by citizens of Union and Wallowa Counties, who suggested the formation of WURA during discussions in 2000 and 2001. The "Save Wallowa & Union County's Railway" committee's primary goal was to preserve the rail line between the Cities of Elgin and Joseph.

Wallowa and Union counties purchased the rail line and formed WURA, which gained ownership of the line in 2001 and successfully retired its debt in 2013, securing a significant community asset worth nearly $10,000,000.

The Friends of the Joseph Branch, a 501(c)(3) organization formed in 2002, operates the Eagle Cap Excursion train from the new Elgin depot, finished in 2013, to the Minam crossing.

In 2012, The Wallowa Union Historic Trail Consortium, a 501(c)(3) organization, was formed (the name was changed to the JBTC in 2013) to promote the use of the railroad Right-of-Way ("ROW") with a rail-with-trail project.

[2] State law requires counties plan for and provide alternative modes of transportation, including footpaths and trails. ORS 366.514; OAR 660-012-0020(2)(d).

In 2013, the JBTC worked with WURA to create an agreement with the Oregon Parks and Recreation Department ("OPRD") and Eastern Oregon University ("EOU") for completion of a feasibility study for developing a trail adjacent to the rail line from Elgin to Joseph. A memorandum of understanding ("MOU") was executed by WURA, OPRD, and EOU to explore the possibility of a Joseph to Enterprise rails-with-trail project. WURA, OPRD, EOU, and JBTC developed a Joseph Branch Rail-with-Trail Concept Plan in 2015. The Concept Plan found constructing a multimodal recreational trail in the railroad ROW to be physically, politically, and financially feasible.

In February 2016, WURA adopted the recommendations of the Concept Plan and agreed to the JBTC Board of Directors developing a pilot project trail segment.

In 2016, all adjacent landowners (approximately 72) between Joseph and Enterprise were invited to give their feedback on the Trail in two formats. The first format was in a public meeting held at the Joseph Community Center and was a question and answer session with both WURA and JBTC representatives. The second format was individual, private interviews with those who requested them. Approximately 11 interviews were conducted, most at the landowner's residence. Adjacent landowners were also invited to give feedback on the second draft of the Wallowa Union Railroad Corridor and Joseph Branch Trail Management, Signage, and Maintenance Plan ("Maintenance Plan"). The third draft of the Maintenance Plan incorporated this feedback. The JBTC understands a successful Trail project will include open and ongoing communication with adjacent landowners.

Selection Criteria for First Segment of the Trail (Joseph to Enterprise): JBTC selected the development of the Joseph to Enterprise Trail segment as a priority for the following reasons:

- The Joseph to Enterprise segment was selected by members of the public.

- The cities of Joseph and Enterprise are the two most populated centers in Wallowa County and this segment could show the most use by multiple user types.

- Bicycle commuters traveling between Joseph and Enterprise currently need to travel either on Highway 82 or Hurricane Creek Road. The Trail will provide a safe alternative transportation route for these commuters by separating bicycle from motor vehicle traffic.

Summaries of Public Opinion Survey Results: The following summaries describe the methods and results from three surveys that assessed local opinion regarding a trail from Elgin to Joseph.[3]

- Survey 1 (Random Voters in Union and Wallowa Counties): All registered voters in Union and Wallowa Counties living in the Elgin, Wallowa, Lostine, Enterprise, and Joseph zip codes were identified and 550 voters were randomly selected to receive the survey; 149 surveys were returned (27%). Overall 62% of respondents support building the entire Trail and an additional 9% support building only certain trail segments. Seventeen percent of voters oppose the entire trail.

[3] The survey results are available at www.eou.edu/rails-with-trails/.

- Survey 2 (General Public): An open survey collected voluntary information from those who attended project workshops, meetings, those who offered comments about the Trail through the project website or other means, and anyone else with an interest in the Trail. The survey was also advertised through various local media including the Wallowa County Chieftain and the La Grande Observer. Three hundred and forty seven completed questionnaires were received; 85% supported development of the entire trail, 7% supported building only certain trail segments and 7% opposed the entire trail.

- Survey 3 (Wallowa County Chamber of Commerce). Survey 3 was administered to the Wallowa County Chamber of Commerce membership in September 2016. Members were asked: "To what extent is your level of support for the Joseph Branch Rails with Trail Project"? Of 125 respondents, 73% were supportive, consisting of those who indicated "Strong Support (56%)" or "Support (17%)" for the entire trail. An additional 11% supported segments of the trail and 10% opposed the trail.

In summary, a substantial majority of respondents to three surveys support the development of the Trail.

Maintenance Plan for the Trail: The Trail will be maintained by the JBTC board and volunteer members (who will pay an annual membership fee), stewardship groups like Trailkeepers of Oregon and Oregon Equestrian Trails, and local Adopt-A-Trail organizations, like the Enterprise-Joseph Lions Club. The JBTC will seek funding for a part-time seasonal employee during the height of Trail use in the summer. Maintenance will also be supported by WURA.

The design of the Trail surface (likely a crushed granite rock) will require little maintenance. The primary maintenance needs will be trailheads (bathrooms), trash cans, litter patrol, and weed control. The Enterprise Trailhead will be developed and maintained in partnership with the Oregon Department of Fish & Wildlife ("ODFW").

3. Benefits of the Trail

3.1 Quality of life and activity levels increase in communities that have trails that are primarily for recreational use.

Trails can measurably improve a community's quality of life by providing opportunities for social connection, as well as safe places for physical activity and commuting. Trails offer opportunities for events like fun runs, walks, and rides, which raise health awareness, build community, and fundraise for local groups. When residents use trails frequently, they become an integral part of community life. While some benefits cannot be measured in dollars, they can be measured in other ways. The following research demonstrates some of these benefits:

- A 1987 study of the Burke-Gilman Trail found that Police officers reported that the trail has had little, if any, adverse effects on adjacent property owners. Actual trail use is twice what trail developers projected. Residents adjacent to the trail are positive about the trail, especially when compared to conditions before the trail was opened. A former

opponent of the trail stated that the "trail is much more positive than I expected. I was involved in citizens groups opposed to the trail. I now feel that the trail is very positive; [there are] fewer problems than before the trail was built; [there was] more litter and beer cans and vagrants when railroad was in."[4]

- In Bloomington, IN, property owners adjacent to trails most commonly identified convenience and access to recreation, physical fitness, social connection, and connection to the natural environment as benefits of living near trails.[5]

- In 2015, a survey of nine rails-to-trails and rails-with-trails that pass through agricultural lands around the United States was performed to understand their challenges and the factors that made them successful. No trails reported an increase in crime, trespass and vandalism after trail construction. One farmer along the Fred Meijer Heartland Trail in Michigan said she was "very concerned about trespassing before the trail was built, but have had no problems with the trail or trail users. She said she was uncomfortable with the change but is now a trail user and sees it as a very positive thing for the community."[6]

- In Whatcom County, Washington, 95 percent of trail users, many of whom are cyclists, hikers, and trail runners, identified that trails are important to their decision to stay in the area.[7]

- A trail study in Taos, New Mexico found that low-income residents were more likely to use trails when they had easy access to them (lived near a trail).[8]

- Along three trails in rural northern and eastern Nebraska and western Iowa, 74 percent of respondents indicated they used the nearby trails for recreation daily, weekly or occasionally. Sixty-eight percent said the trails had a positive impact on their community.[9]

- Along the Washington and Old Dominion Trail in Virginia, 95 percent of trail users come from counties adjacent to the trail. Nearly all (93 percent) respondents identified health benefits from the trail as having high importance.[10]

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[4] Zarker, G., J. Bourey, B. Puncochar, P. Lagerwey. 1987. *Evaluation of the Burke-Gilman Trail's Effect on Property Values and Crime*. Seattle Engineering Department Office for Planning.
[5] Corning, S., R. Mowatt, and H. Chancellor. 2012. "Multiuse Trails: Benefits and Concerns of Residents and Property Owners." Journal of Urban Planning and Development 138(4): 277-285.
[6] Alta Planning. *Santa Paula Branch Line Recreational Trail Compatibility Survey*. April, 2015. Rails to Trail Conservancy.
[7] Headwaters Economics. 2014. Whatcom Mountain Bike Coalition, 2014 WMBC Rider Survey, available at: http://headwaterseconomics.org/wp-content/uploads/Trail_Study_79-whatcom-mountain-bike-rider-survey.pdf.
[8] RRC Associates. 2016. Enchanted Circle Trails: Final Survey Results. Prepared for Taos Land Trust; Headwaters conomics. Boulder, CO: RRC Associates.
[9] Greer, D.L. 2001. Nebraska Rural Trails: Three Studies of Trail Impact. School of Health, Physical Education and Recreation, University of Nebraska at Omaha.
[10] Bowker, J., Bergstrom, J., Gill, J., and Lemanski, U. 2004. The Washington & Old Dominion Trail: An Assessment of User Demographics, Preferences, and Economics. USDA Forest Service, University of Georgia and National Park Service.)

- In Missoula, Montana, 86 percent of residents had used city parks in the previous 12 months. Seventy-three percent of respondents used hiking trails, 56 percent used paved commuter trails, and 49 percent used natural area/wildlife habitat within the past year.[11]

In conclusion, trails were identified by survey respondents in various parts of the country as contributing to multiple positive aspects of their quality of life. Based on the replication of the responses above around the United States, WURA and JBTC believe these qualities will also be realized in our communities.

3.2 The Trail will be a safe place for families and their children to walk, run, and ride their bikes.

Wallowa County families with children under 10 years old have few places to bike, hike, or walk together. For these younger children, hiking on angled mountain trails or bicycling on roads can make recreation difficult and unsafe. And parents walking or jogging with strollers, or cycling with baby trailers have very limited safe choices. While Wallowa County has side roads that generally carry less traffic, these roads are utilized by large farm equipment, and their rough surfaces can make biking and use of strollers difficult. Moreover, cars kick up dust, gravel, and mud, detracting from the experience for all.

The following demographic data support the Trail as both a place to provide physical activity and a safe recreation venue for children and families.

- US Census Data for 2017 revealed 338 children under the age of 5 live in Wallowa County, with an additional 973 youth between the ages of 6 and 18. Together, these 1,311 residents represent 18 percent of Wallowa County's population, and our future. By creating infrastructure that provides safe recreation, Wallowa County demonstrates that it is a community that cares about its youth and their families, both their safety and their health. This investment in families could be a factor in one day encouraging the youth to remain here as adults.

- According to the Oregon Health Authority, in 2012 Wallowa County had a 17 percent obesity rate among 6-9 year olds, which is the highest in Oregon.[12] Both children and their parents, in Joseph and Enterprise initially, will benefit from the physical activity that the ease of access to this Trail will provide.

- The National Highway Traffic Safety Administration (NHTSA) found that "children less than 10 years old are not mature enough to make the decisions necessary to safely ride in the street."[13] In 2016, children and young adults between the ages of 0 and 19 had the third highest rate of bicycle-car crash fatalities for all age groups.[14] For families with

[11] Leisure Vision and PROS Consulting. 2011. Parks and Recreation Needs Assessment Survey: Findings Report. Missoula County and City of Missoula, Montana.
[12] Oregon Health Authority, Public Health Division. *Oregon Healthy Growth Survey*. 2012 Report.
[13] https://icsw.nhtsa.gov/people/injury/pedbimot/bike/kidsandbikesafetyweb/.
[14] NHTSA. 2016. *Traffic Safety Facts: Bicyclists and Other Cyclists.* May 2018.

children learning to ride bicycles, having a safe Trail will encourage and facilitate more physical activity.

- The number of drivers using cell phones, including texting, and increased technology in vehicles requiring drivers to take their eye away from the road can be a fatal combination. In the journal *Public Health Reports*, a study published in 2013 analyzed trends in the United States from 2005 to 2010 of fatalities of bicyclists due to distracted motor vehicle accidents. The study found a 17 percent increase from 2005-2010 in bicycle fatalities from distracted vehicle drivers around the U.S.[15]

In conclusion, the Joseph Branch Rail with Trail will create some of the only flat-grade trail in Wallowa County that children and families could safely ride and walk away from vehicles.

3.3 The trail will provide needed health benefits.

Regular physical activity is associated with a number of positive health outcomes, such as increase in life expectancy and reduced risk of cardiovascular diseases, diabetes, colon and breast cancer, among others. Urban and rural trails offer the possibility for greater physical activity, not only among those who are already active, but also for those who need a safe environment to become active.

The following summaries address the potential health benefits and health economics impact of increased physical activity resulting from trail use.[16]

- In Morgantown, West Virginia, 60 percent of trail users report they exercise more regularly since they began using trails, and 47 percent of trail users report getting their recommended physical activity through trail use alone. Twenty-three percent of respondents did not exercise regularly before using the trails.[17]

- Walking trails in rural, southeastern Missouri increase exercise among people most at risk of inactivity.[18]

- Several communities and states have measured the savings in health care costs due to residents' exercise on trails, and compared these benefits to the costs of building the trails. Although it can be challenging to isolate physical activity associated only with trails, researchers have found the benefits from reduced health care costs far outweigh the cost of trail construction.[19]

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[15] Stimpson, Wilson, and Muelleman. Fatalities of Pedestrians, Bicycle Riders, and Motorists Due to Distracted Driving Motor Vehicle Crashes in the U.S., 2005–2010. Public Health Report. 2013 Nov-Dec; 128(6): 436–442.
[16] Investigations 1-4 adapted from Measuring Trails Benefits: Public Health, http://headwaterseconomics.org (Spring 2016).
[17] Gordon P. et al. 2004. Use of a community trail among new and habitual exercisers: a preliminary assessment." Preventing Chronic Disease 1(4): 1-11.
[18] Brownson, R., et al.. 2000. "Promoting Physical Activity in Rural Communities: Walking Trail Access, Use, and Effects." American Journal of Preventive Medicine 18(3): 235-242.
[19] See, e.g:
- Abildso, C., S. Zizzi, S. Selin, and P. Gordon. 2012. "Assessing the cost effectiveness of a community rail-trail in achieving physical activity gains." Journal of Park and Recreation Administration 30(2): 102-113.

In conclusion, access to a safe, readily accessible and well-designed trail results in an increase in physical activity, social interaction and improved health outcomes, which is accompanied by a reduction in health care expenditures.

3.4 The Trail will provide a range of economic benefits to the community.

"Time and time again, when leaders invest in outdoor recreation the result is healthier communities and healthier economies."[20] Approximately $130,000 has been invested in this Trail's development to date, including actual and in-kind funds. Funding has come from the following: Cycle Oregon, Oregon Parks and Recreation Department, the Northeast Oregon Economic Development District, the Environmental Protection Agency's Community Planning Grant, Travel Oregon, Eastern Oregon University, Nez Perce Trail Foundation, Regional Solutions Center, and local members of the JBTC. The Oregon Department of Transportation ("ODOT") has expressed an interest in funding the Trail construction to provide a safe alternative transportation route for cyclists, improve community health, and connect to ODOT's Wallowa Lake Bike and Pedestrian Trail through the City of Joseph Bike and Pedestrian route.[21] The Northeast Oregon Economic Development District's (NEOEDD) Comprehensive Economic Development Strategy for 2018-2023 identified the Joseph Branch Rail with Trail as a Vital Project.

There are over 22,000 miles of rail-to-trails and rails-with-trails in the United States and the economic impact of some of these trails on their surrounding communities has been studied. Based on this research, JBTC believes the trail will provide economic benefits to Wallowa County in the following ways:

- **The Trail will be a substantial construction investment**. Construction will provide a projected direct economic impact. The estimated cost for this pilot segment from Joseph to Enterprise is approximately $3.6 million. During construction, ODOT estimates that for every $59,000 spent on construction, one temporary full-time job is created. For the Joseph to Enterprise segment, 61 full time temporary jobs are estimated to be created for the construction.

- Deenihan, G. and B. Caulfield. 2014. "Estimating the Health Economic Benefits of Cycling." Journal of Transport & Health 1(2): 141-149.
- Wang, G., C.A. Macera, B. Scudder-Soucie, T. Schmid, M. Pratt, and D. Buchner. 2005. "A cost-benefit analysis of physical activity using bike/pedestrian trails." Health Promotion Practice 6: 174-179.
- Grabow, M., M. Hahn, and M. Whited. 2010. Valuing Bicycling's Economic and Health Impacts in Wisconsin. The Nelson Institute for Environmental Studies Center for Sustainability and the Global Environment at University of Wisconsin-Madison.
- BBC Research & Consulting. 2014. Community and Economic Benefits of Bicycling in Michigan. Prepared for the Michigan Department of Transportation.

[20] Outdoor Industry Association Report. 2017. "The Outdoor Recreation Economy." Outdoor Industry Association. p.3.

[21] DKS Associates Transportation Solutions, Alta Planning and Design, Anderson Perry and Associates, Angelo Planning Group. 2015. Wallowa Lake Bicycle and Pedestrian Plan. Prepared for ODOT, Wallowa County, and Oregon Parks and Recreation Department; Alta Planning and Design, DKS Associates Transportation Solutions, and Winter Brook. 2009. City of Joseph Bike and Pedestrian Plan. Prepared for the City of Joseph.

- **The Trail will enhance existing industries and catalyze new ones**. In the Pacific Northwest, outdoor recreation spending accounts for $149.6 billion annually and provides 1.2 million jobs.[22] In Oregon, bicycling contributes approximately $400 million in annual spending on bicycling related items like gear, food, accommodations, and event fees. Of this $400 million, only $15.3 million was spent in Eastern Oregon.[23] The Trail will be some of the first bicycle-friendly infrastructure in Wallowa County. This will necessarily increase the demand for bicycle and pedestrian goods and services in Wallowa County.

- **Increased property values**. Research shows that the presence of trails near a property can increase its overall property value as trails are an attractive feature to many homeowners. This economic indicator of increased property value also indicates that the concerns about increase litter, noise, loss of privacy, and crime are not realized after the trail is developed.[24]

3.5 Access to outdoor recreation close to communities has been identified as a community need.

Wallowa County has many trails in the mountains and canyons. Yet, it lacks access to outdoor recreation in the valley, closer to the community centers, as identified in the following local public surveys.

- Oregon Parks and Recreation Department's 2013-2017 Statewide Comprehensive Outdoor Recreation Plan ("SCORP") is Oregon's basic five-year plan for outdoor recreation. Wallowa County residents identified hard surface trails, off-street bike trails, and access to nature and wildlife viewing areas as high priority needs in their communities.[25]

- In 2015, the Wallowa Land Trust ("WLT") performed surveys of approximately 95 Wallowa County residents from a broad spectrum of backgrounds, from ranching and natural resources to tourism, to gain direction for WLT's conservation priorities. A consistent theme across their interviews was connectivity for people and more public access for recreation like trails where people can connect. The Joseph Branch Rail with

[22] Outdoor Industry Association Report. 2017. "The Outdoor Recreation Economy." Outdoor Industry Association. p.3.
[23] Dean Runyan. 2012. *The Oregon Bicycle Travel Survey: Making Oregon a Better Place to Ride.* Travel Oregon.
[24] The following studies all concluded that trail systems had, on balance, a positive effect on property values and perceived quality of life.
- Karadeniz, D. 2008. *The Impact of the Little Miami Scenic Trail on Single Family Residential Property Values (Unpublished Master's Thesis).* University of Cincinnati School of Planning.
- Zarker, G., J. Bourey, B. Puncochar, P. Lagerwey. 1987. *Evaluation of the Burke-Gilman Trail's Effect on Property Values and Crime*. Seattle Engineering Department Office for Planning.
- Greer, D. 2000. *Omaha Recreational Trails: Their Effect on Property Values and Public Safety*. University of Nebraska at Omaha, School of Health, Physical Education and Recreation.
- Asabere, P. and F. Huffman. 2009. "The relative impacts of trails and greenbelts on home price." The Journal of Real Estate Finance and Economics 38(4): 408-419.

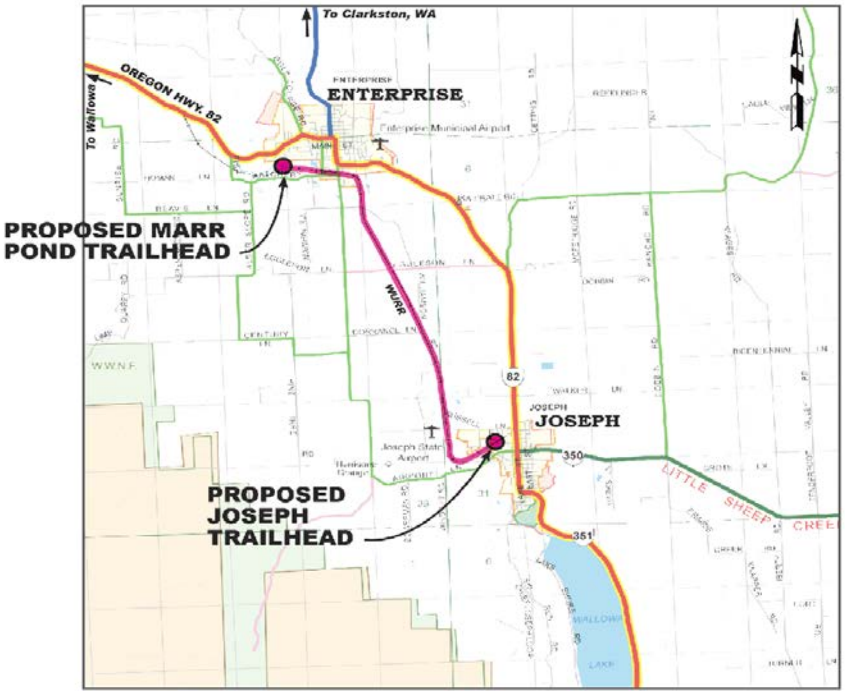
[25] Oregon Parks and Recreation Department. 2013. Statewide Comprehensive Outdoor Recreation Plan: Ensuring Oregon's Outdoor Legacy.

Trail was one trail identified that could help achieve this connection. Overall, public access to recreation was one of the most important conservation priorities identified by respondents.[26]

4. Project Description

The Joseph Branch Rails with Trail is planned along the existing ROW of the Joseph Branch of the Wallowa-Union Railroad, as shown below:

Figure 1 - Trail Map



The ROW is held by WURA in fee simple and generally parallels Highway 82 about 1.25 miles west of the Highway. It traverses rural land, the majority of which is used for livestock grazing and/or hay production. Attached maps show current zoning and land uses along the ROW. **Exhibit 2**.

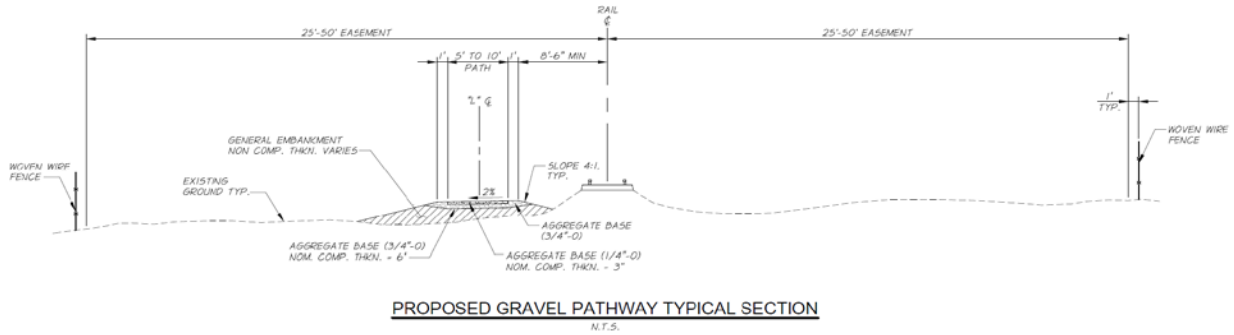
The Trail is proposed to be a multimodal transportation facility that will allow all forms of non-motorized traffic. It will be approximately six miles long, with trailheads at Marr Pond in Enterprise and the Wallowa-Union Railroad Grain Elevator in Joseph. Restrooms will be constructed at the trail ends. A complete segmented graphic showing the entire route is enclosed as **Exhibit 3**.

The Trail will be 10 feet wide with a compacted gravel base. This width will facilitate the multi-use nature of this trail, allowing users to pass one another safely, as well as provide for

[26] Wallowa Land Trust. *Analysis of Partner and Stakeholder Input*. February, 2016. Wallowa Land Trust Strategic Land Conservation Plan.

emergency vehicle access. The Trail may be narrower in locations where environmental or bridge constraints dictate the width.

Figure 2 - Concept Trail Profile



A number of wetlands were identified within the ROW, although most are associated with the existing ditch systems. Riparian vegetation can be found near Joseph where the ROW crosses the Wallowa River. There are approximately 13 proposed culvert extensions, nine of which are major and four of which are minor. There are also approximately nine bridges within the ROW. Improvements to existing culvert systems and new bridges over streams will be required to construct the Trail. The precise designs of these improvements are not finalized. The bridges are anticipated to be cantilevered off of existing railroad crossings where possible and when not, rail-car bridges are likely to be used. Culverts will be extended and improved, with new rip-rap armor to prevent erosion. The following images demonstrate these concepts:

Figure 3 – Concept Culvert Extension

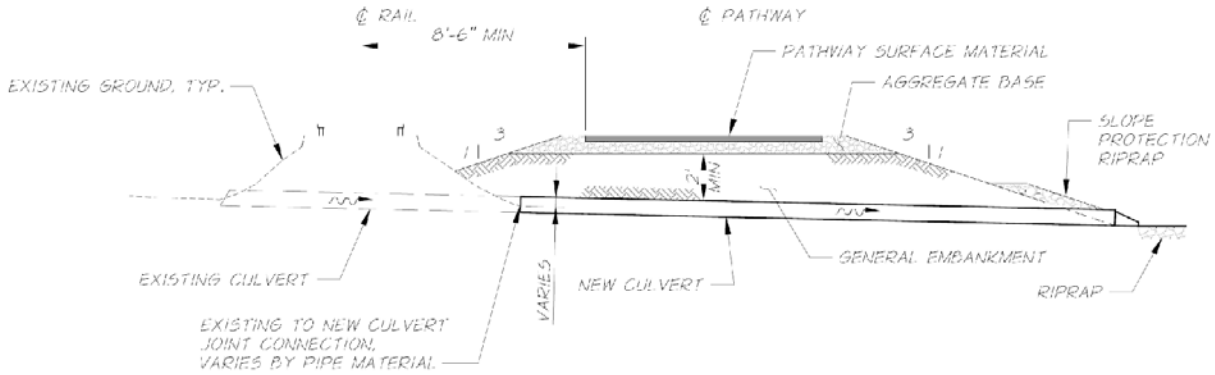
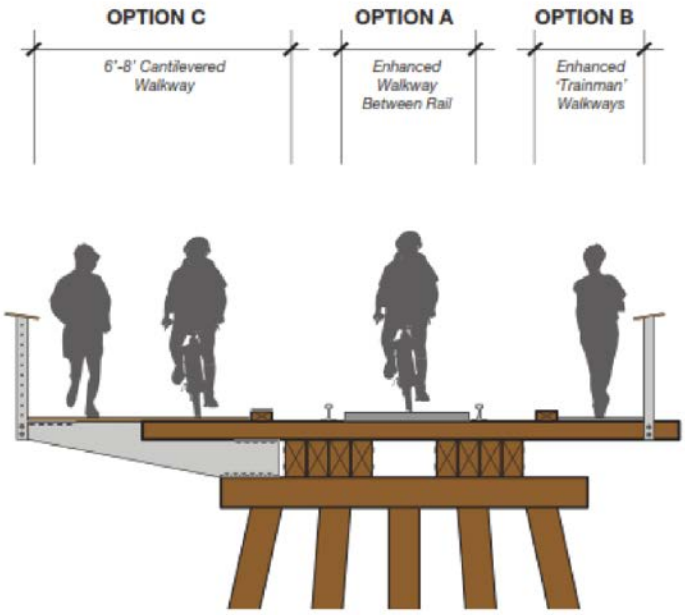


Figure 4 - Cantilevered Walkway Concept



Most of the ROW is separated from abutting properties by fences of a variety of types. These will be evaluated for their ability to prevent conflicts between livestock and pets, and to deter trespass. Where these fence sections are inadequate, either based on JBTC's own evaluation or reasonable property-owner requests, they will be replaced with a fence at least 4 feet in height composed of both woven-wire and barbed-wire.

5. Applicable Zoning

The trail will traverse several zoning districts. These include Exclusive Farm Use ("EFU"), Existing Lot ("EL-1"), Rural Residential ("R-1"), Select Residential ("R-4"), and M-1 ("Industrial"). The EFU zoning district is regulated by state law; specifically, EFU uses are limited by ORS 215.283. This statute provides that a non-motorized transportation facility is conditionally permitted in EFU:

> "(3) Roads, highways and other transportation facilities and improvements not allowed under subsections (1) and (2) of this section may be established, subject to the approval of the governing body or its designee, in areas zoned for exclusive farm use subject to:
>
> (a) Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or
>
> (b) ORS 215.296 (Standards for approval of certain uses in exclusive farm use zones) for those uses identified by rule of the Land Conservation and Development Commission as provided in section 3, chapter 529, Oregon Laws 1993."

Therefore, the Project can be permitted conditionally in the EFU zone.

The remaining non-resource zones, listed above, do not address transportation infrastructure. Therefore, the Planning Commission (the "Commission") can find that the zoning code does not specifically regulate bicycle, pedestrian, and equestrian infrastructure. Rather, LDO Section 32.030, "Uses Permitted Conditionally," requires a permit for transportation improvements not incorporated into the County's Transportation System Plan (the "TSP"), the criteria for which are addressed below. That section does not specify a review authority, but the Commission can find that it is the review authority because Section 32.030 provides that the use is permitted "conditionally," and therefore, the Commission can approve a conditional use for the trail on non-resource lands.

6. Applicable Criteria – EFU Zone

The property through which the Trail is proposed is largely zoned for Exclusive Farm Use ("EFU"). Uses permitted in EFU zones are set forth in state law. ORS 215.283(3), incorporated in section 15.020, provides allowances for transportation facilities and improvements within an EFU zone as follows:

> **"Roads, highways and other transportation facilities and improvements not allowed under subsections (1) and (2) of this section may be established, subject to the approval of the governing body or its designee, in areas zoned for exclusive farm use subject to:**
>
> **(a) Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or**
>
> **(b) ORS 215.296 for those uses identified by rule of the Land Conservation and Development Commission as provided in section 3, chapter 529, Oregon Laws 1993."**

Subsection (b), above, provides that the Land Conservation and Development Commission ("LCDC") may enact rules allowing for transportation improvements on rural land without a goal exception. Non-motorized transportation facilities are permitted on rural lands, including EFU-zoned land, as "bikeways, footpaths and recreation trails not otherwise allowed as a modification or part of an existing road." OAR 660-012-0065(3)(h). Thus, state law allows trails in EFU zones if the project satisfies the criteria of ORS 215.296.

Under the LDO, the trail is permitted conditionally in the EFU zone subject to a conditional use permit issued under LDO Article 9, as well as the criteria of ORS 215.296. These criteria are addressed below:

"ORS 215.296

(1) A use allowed under ORS 215.213 (2) or (11) or 215.283 (2) or (4) may be approved only where the local governing body or its designee finds that the use will not:

(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or"

RESPONSE: The focus of ORS 215.296 is on the impacts of the proposed conditional use on agricultural practices in the proximate surrounding area. *Hood River Valley PRD v. Hood River* County, 67 Or LUBA 314 (2013). The JBTC commissioned a complete agricultural land use impact study (the "Impact Study"), prepared by Scientific Ecological Services of Ontario, Oregon, which evaluated the Project and the surrounding land uses to determine whether or not the Project will "force a significant change in accepted farm or forest practices on surrounding lands." **Exhibit 4**. For purposes of this study, the impact area was identified as properties which directly abut the railroad Right-of-Way. Properties that do not abut the Right-of-Way will not be impacted by the Trail because trail users will not pass by those properties. The Impact Study found that the Trail will not "force a significant change in accepted farm or forest practices on surrounding lands." **Exhibit 4** at 16.

As an initial matter, the Commission should find that the trail has already been in use by 20,000 customers of the Joseph Branch Railrider Cycling ("Railriders") since 2014, as noted in the Impact Study, and should find that the public is already walking, biking, and horseback riding on the Trail. And, the Commission should find that surrounding properties already abut public rights-of-way where people can walk, bike, horseback ride, and drive. Therefore, the Commission should evaluate the impacts of the Trail on surrounding property in consideration of the activity already occurring within the ROW, which includes pedestrians, cyclists, the Railriders, and horseback riders.

The Impact Study analyzed relevant literature and while trail impact studies are few, in one study of the Missouri River State Trail, 'residents' perceptions were substantially improved over time concerning privacy, theft, vandalism, trespass, litter, liability, maintenance, and fire."[27] Further, trail data indicate that petty crime, nuisances, and trespass from trail users is rare. A large survey on crime of 372 rail trails in urban, suburban, and rural settings was undertaken in the late 1990s, covering 7,000 miles of trail with 45 million users. The study included 5,282 miles of rural trails. Crime against persons on rural trails was negligible, and far lower than on urban and suburban trails, verified by multiple letters documenting crime rates on trails from sheriff departments which had trails in their jurisdictions. The study also found that all of these rates of crime are substantially lower than the corresponding off-trail rates.[28]

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[27] Kaylen, M. S., Bhullar, H., Vaught, D., & Braschler, C. (1993). Rural landowners' attitudes towards the Missouri River State Trail. *Journal of Leisure Research, 25*(3), 281–189.

[28] Tracy, T., & Morris, H. (1998). *Rail-trails and safe communities: The experience on 372 trails.* Washington, DC: Rails-to-Trails Conservancy. Retrieved from https://safety.fhwa.dot.gov/ped_bike/docs/rt_safecomm.pdf.

Similarly, the State of Oregon Statewide Trail Plan includes the following discussion of data regarding crime on trails:

> "A comprehensive study sponsored by the Rails-to-Trails Conservancy examined the incidence of crime at 372 rail-trails across the United States. Overall, the study shows that rail-trails are safe places for people to recreate (see Table 7 below). In 1995, only eleven of 372 rail-trails experienced any type of major crime, such as mugging, assault, rape and murder. When contrasted with general major crime statistics in urban, suburban and rural areas, rail-trails have experienced very low major crime rates.

TABLE 7: Crime Rates: Comparing Statistics For the Nation vs. Rail Trails[25]
(Rates from 1995 per 100,000 population/users)

Crime	Urban		Suburban		Rural	
	U.S.	Rail-Trails	U.S.	Rail-Trails	U.S.	Rail-Trails
Mugging	335	0.53	102	0.00	19	0.00
Assault	531	0.58	293	0.02	203	0.01
Forcible Rape	43	0.04	29	0.00	26	0.01
Murder	11	0.04	4	0.01	5	0.01

> "The study also reported incidents of minor crimes at the 372 rail-trails (see Table 8). It also cites several local law enforcement agencies that state heavy trail usage acts as a deterrent in formerly isolated areas.

TABLE 8: Rail-Trails Reporting Minor Crimes[26]

Crime	Urban	Suburban	Rural
Burglary	0%	.01%	.01%
Trespassing	5%	3%	4%
Graffiti	26%	17%	12%
Littering	24%	24%	25%
Sign damage	22%	22%	23%
Unauthorized motorized use	18%	14%	23%
A total of 36 urban, 82 suburban and 254 rural rail-trails were surveyed in 1995.			

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> "A study of the Burke-Gilman Trail in Seattle reported that homes bordering the trail actually had lower rates of burglary and vandalism than the neighborhood average."[29]

Substantial evidence provided with this Application demonstrates that concerns regarding vandalism, litter, trespass, and other nuisances are not born out by the available literature. See

[29] *Oregon Trails 2005-2014: Non-motorized Trails Plan* 28–29, available at https://www.oregon.gov/oprd/PLANS/docs/trails/NonMotorized.pdf.

Exhibit 4 at 11–12. However, the Applicant understands that adjacent owners may nevertheless remain concerned about such impacts unless and until, after some time of operation, it can be demonstrated to them that the Trail has few impacts on their properties. To that end, the Applicant proposes the following conditions of approval:

Condition 1: The trail shall be closed between 9pm and 5am.

Condition 2: The Applicant shall cause to be established a telephone line and email address to receive reports regarding activities on the Trail. Reasonably reliable reports shall be logged and disclosed annually to the County Planning Director for no less than two (2) years from the opening of the Trail.

Condition 3: No more than two (2) years after the Trail is opened to the public, the Applicant shall request a Review of Conditions from the County Planning Director, which shall be processed as an Administrative Review. If the Director finds that no changes in the conditions of approval are necessary, the Director shall approve the Review of Conditions. If the Director finds that a change or addition to the conditions of approval is necessary, or if the Applicant requests a change to the conditions of approval, the Planning Director shall, in consultation with the Applicant, make a recommendation to the Planning Commission, which shall consider whether the conditions should be changed as proposed by the Planning Director. At all levels of review, the scope of the Review of Conditions shall be limited to the conditions necessary for safe operation of the Trail and shall not consider whether or not the Trail should remain in operation.

Some trail users will bring their dog(s) with them. Concerns about conflicts between dogs and livestock were identified by the Impact Study as requiring mitigation. Also, the issue of livestock dogs on adjacent private lands menacing or attacking passing trail users was raised as a concern during Concept Plan development and public meetings. It is expected adjacent landowners with dogs will confine their dogs to their properties. A combination woven-wire and barbed wire fence no less than four (4) feet in height will be installed where existing fences are inadequate or based on reasonable landowner requests. To ensure that dogs are unable to enter surrounding properties, the Applicant proposes the following conditions of approval:

Condition 4: JBTC shall adopt a policy that dogs on the Trail shall be leashed at all times.

Condition 5: Signs shall be posted at both ends of the trail indicating that (1) dogs are required to be leashed at all times, (2) dog owners are obligated to pick up dog waste, and (3) trail users are advised that adjacent landowners have the right to protect their property from dogs that enter land adjacent to the trail.

Condition 6: A combination of barbed-wire and woven wire fence no less than four (4) feet in height shall be constructed where separation between livestock and dogs is necessary and where adequate fences are not already in place.

There is no substantial evidence that concerns about dogs amount to a "significant change" in accepted farm or forest practices. Nevertheless, the Applicant takes such concerns very seriously and proposes the above conditions of approval to ensure that potential conflicts are prevented, and to provide the County an opportunity to review the performance of the conditions after a relatively short period of operation.

As the conclusions above are supported by substantial evidence, the Commission should find that this criterion is met.

"(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use."

RESPONSE: As explained in **Exhibit 4**, the dominant agricultural use surrounding the ROW is the raising of livestock and livestock feed. There is no evidence that the movement of people through the ROW by the Railriders has increased the costs of accepted farm or forest practices which abut the ROW.

One concern commonly raised regarding trail systems is the potential for premises liability caused by construction of the trail. In such cases, those trails are constructed via easements over private property. In this case, however, the trail is proposed to be located within WURA's ROW, which is publicly owned, meaning that owners of adjacent property cannot be held legally responsible for injuries to persons or property which occur on the Trail (assuming, of course, that such injuries were not caused by adjacent property owners). Moreover, Oregon law specifically immunizes from premises liability owners who allow recreational use of their land. ORS 105.682–688. Similarly, owners of property adjacent to rights-of-way are not liable for injuries to trespassers unless such injuries are caused by willful or wanton conduct. *Stewart v. Kralman*, 240 Or App 510, 517, 248 P.3d 6 (2011).

Therefore, the Commission should find that this criterion is met.

"SECTION 9.020, Review Criteria: After taking into account location, size, design, and the general nature of the proposed use; the hearing body must determine that the development will comply with all of the following criteria to approve a Conditional Use Permit.

01. The proposed use will be consistent with the purpose of [and is allowed conditionally in] the zone in which the use proposed."

RESPONSE: The purpose of the EFU zone is set forth in WCLDO 15.010 as follows:

> "The purpose of the Exclusive Farm Use Zone is to provide areas for the continuation of existing commercial agricultural activities and permit the establishment of only those new uses which are compatible with agricultural activities. The intention of the Exclusive Farm Use Zone is to guarantee the preservation of the areas classified as farm use free from conflicting non-farm uses."

As explained in the above purpose statement, the EFU zone allows land uses that are compatible with agricultural activities. The Project will not convert any available farm land to a non-farm use and utilizes an existing rail alignment that has been part of the community for generations.

For the above reasons, the Commission should find that this criterion is met.

> ***"02. The use will not create excessive traffic congestion, noise, dust, glare from lights, or other conditions that may be hazardous."***

RESPONSE: Each of the issues identified in this criterion are discussed separately, below.

- Traffic Congestion. The proposed Trail will not be open to automobile traffic and therefore will not increase traffic congestion. Currently there is no safe pathway between Enterprise and Joseph for non-motorized transportation. The Trail will provide a safe alternative for non-motorized traffic off of county roads. For these reasons, the Trail is likely to reduce automobile traffic on county roads.

- Noise. With the exception of maintenance and emergency vehicles, motorized vehicles will not be permitted on the Trail. Pedestrians, bicycles, and horses produce little to no appreciable noise and certainly not noise that could be considered excessive. And, the Trail will be open only between 5am and 9pm, meaning that the Trail will generate no appreciable nighttime noise.

- Dust. The trail will be compacted gravel and other vegetation will be diligently managed, reducing dust from what currently exists on the ROW.

- Glare from Lights. The Trail will not be lit and will be open between 5:00 AM and 9:00 PM, reducing and/or eliminating the need for flashlights or bicycle lights.

- Other Conditions. There is no evidence that the proposed Trail could create any other hazardous conditions.

For the above reasons, the Commission should find that this criterion is met.

> ***03. The proposed use will not overburden the public services of water, sewer, storm drainage, electrical service, fire protection, and school.***

RESPONSE: The proposed Trail will not require water, sewer, storm drainage, electrical service, or additional fire services because it does not require the construction of structures.

Toilet facilities are proposed at the trailhead as accessory uses, but are not subject to a conditional use permit requirement. It will not increase school enrollment because it does not provide additional housing.

For the above reasons, the Commission should find that this criterion is met.

04. The site is suitable to accommodate the proposed use, such as: topography, soils, and parcel size.

RESPONSE: The Wallowa Union Railroad Corridor is ideally suited to the proposed Trail. It provides a well-compacted trail bed that will make construction substantially cheaper and easier than in other locations. It has a very modest grade suited to trains, which makes the trail accessible and useful for individuals of all abilities. Finally, by using an existing right-of-way, the project will not require any land or easements to be acquired through purchase or condemnation, and will not require heavy construction techniques.

For the above reasons, the Commission should find that this criterion is met.

05. The proposed use will not interfere with uses permitted on adjacent parcels.

RESPONSE: Surrounding uses have developed to accommodate the existing railroad, which until the late 1990s saw active use by trains carrying lumber and other goods. The railroad currently supports the Eagle Cap Excursion Train and the Railriders. The Railriders are a common sight on the tracks, operating five days per week between May and October. This activity will continue and will complement the Trail. Pedestrian, bicycle, and equestrian uses will have substantially less impact to surrounding uses than trains in terms of noise, dust, vibration, and light. The Trail will be physically separated from adjoining agricultural uses by existing or new fencing on either side of the Trail, which will help ensure that dogs do not escape onto adjacent land. Finally, as bicycles, pedestrians, and equestrians are already permitted on County roads, which abut thousands of acres of farmland, there is no credible basis upon which to find that the impacts of the proposed Trail will interfere with permitted uses on adjacent parcels to any degree greater than do existing county roads.

For the above reasons, the Commission should find that this criterion is met.

06. The application satisfies the pertinent criteria of Article 36, Salmon Habitat Restoration.

SECTION 36.015, MANAGEMENT PLANS: Management plans shall be required prior to approval of watershed, streambank, and in-stream project applications. Plans shall conform to the requirements as provided by the Planning Department for this purpose."

RESPONSE: A complete wetland delineation has been conducted that identifies all streams and wetlands within the Project boundaries. **Exhibit 5.** Existing stream crossings are identified in **Exhibit 5** at 19. The JBTC has prepared a "Management, Signage, and Maintenance Plan" (the "Management Plan") that explains how these stream crossings will be maintained, as follows:

> "10.7 Ditches, Culverts, and Bridges Regular inspections of ditches, culverts, and bridges will be made to identify cleaning needs to remove debris and silt that will plug or otherwise cause washouts, flooding, or other problems. Logging a record of when and where debris and silting accumulate will help develop a regular maintenance schedule to prevent future problems. The trail will be designed to minimize possible water damage to the trail surface, and to reduce erosion and sedimentation and dumping of water on adjacent private or other lands, while attempting to maintain natural drainage patterns." **Exhibit 6** at 24.

The Management Plan also explains how the Trail will actually improve aquatic environments and water quality:

> "The Joseph Branch Trail will positively impact aquatic organism passage because numerous culverts in the railroad corridor are in various stages of disrepair. Out-of-date or poorly maintained culverts can impair the passage of fish and other aquatic organisms. By constructing the trail and repairing culverts, the trail will provide improved passage for aquatic animals. Wildlife habitat and connectivity will be improved by repairing culverts and irrigation ditches, which are currently leaking water away from habitat areas.
>
> "Runoff from poorly maintained irrigation ditches will be remediated in some locations along the trail. Additionally, gravel portions of the trail will aid in water infiltration. These improvements are anticipated to decrease turbidity and improve water quality.
>
> "Trail construction specifications will be designed to have a low impact on the surrounding environment to meet, possibly exceed, minimum environmental protection requirements in the areas of habitat enhancement and local sourcing materials.
>
> "If the Project requires mitigation for impacts to wetlands and waterbodies, the Marr Pond Trailhead site could be used as a mitigation area."

Exhibit 6 at 32.

A complete survey of future stream crossings is enclosed as **Exhibit 5**. Stream crossings will, where possible, be cantilevered from existing rail crossings, as demonstrated by Figure 4, above.

Where existing crossings cannot support a cantilevered bridge, a new stream crossing will be provided parallel with the existing one, as shown below:

Figure 5 - Concept Timber Trail Bridge

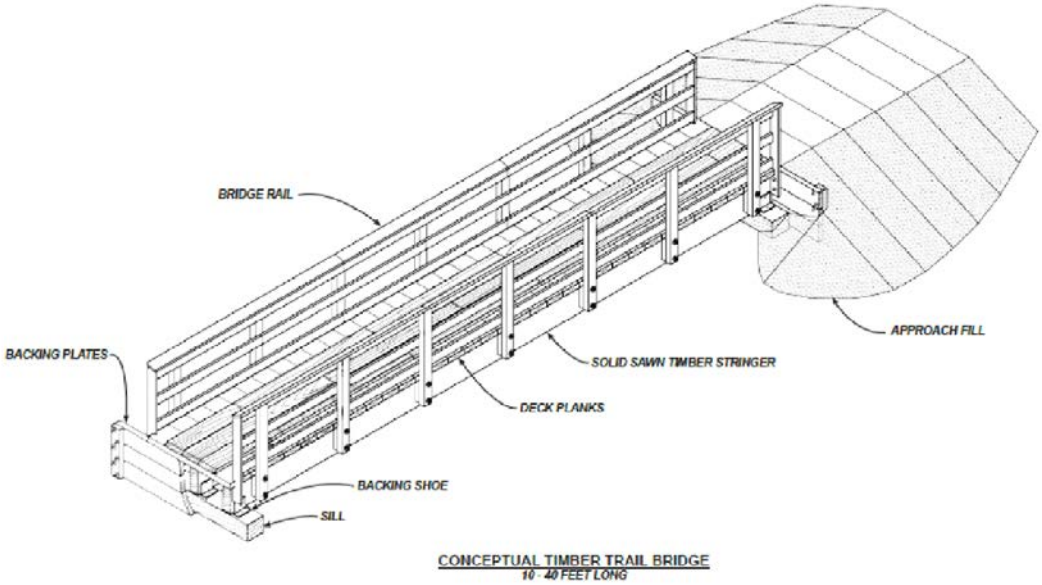
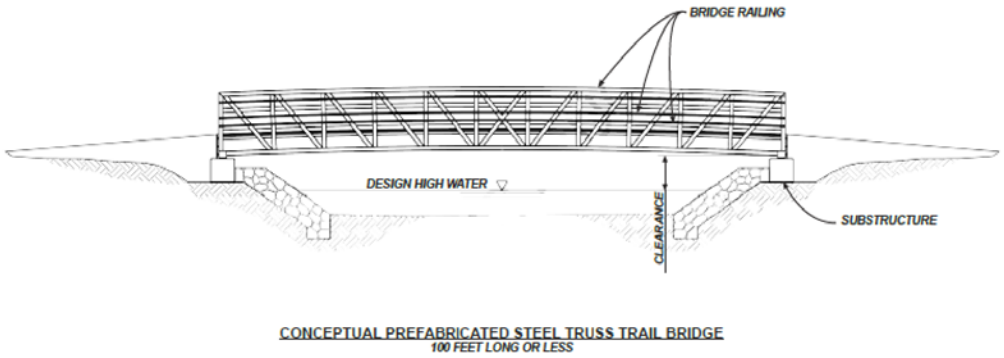


Figure 6 – Concept Prefabricated Steel Truss Trail Bridge



The current proposal does not include any in-water or streambank work; crossings will be constructed above the streambank. However, streambank stabilization or armoring may be required where cantilevering is not possible.

Engineered trail plans have not yet been prepared, but will be in order to obtain a grading permit, as required by the County. In order to satisfy this criterion, the Applicant proposes the following condition:

> **Condition 7: Prior to beginning substantial construction of the Trail, the Applicant shall apply for a zoning permit pursuant to Article 12, consistent with Article 36.**
>
> *"SECTION 36.020, DEVELOPMENT PLANS: Development plans shall be required as provided for in this ordinance and shall include consideration of the following:*

01. Provisions for protection of water quantity including:

A. Roads shall be maintained and designed to avoid quick runoff and improve infiltration.

B. Roads shall be relocated outside riparian areas and placed on less compactable soils.

C. Healthy riparian plant communities shall be developed and/or maintained.

D. In forested areas, protect the shaded snowpack (tree spacing) through measures prescribed in the Wallowa County/Nez Perce Salmon Recovery Plan.

E. Implement and maintain measures to decrease sediment input."

RESPONSE: The proposed Trail alignment is narrow and is designed to allow runoff to infiltrate within the ROW, as demonstrated in **Exhibit 1**. In particular, the trail will consist of a base of non-compactable soil covered with a ¾-0 aggregate base approximately six inches deep, and topped with a ¼-0 gravel surface. The Trail will be constructed at a 2% grade facing away from the railroad tracks to ensure drainage is directed away from the rail bed. The Trail will be partially permeable because it will be constructed with gravel. Gravel, vegetation, and ditch systems located on either side of the Trail within the ROW will catch remaining runoff from the Trail and allow such runoff to infiltrate into the ground. This will prevent runoff from flowing onto surrounding private property.

With the exception of stream crossings and culverts, the Project shall be constructed outside of vegetated riparian areas and will be placed on soils that are already compacted from railroad use. Final Trail engineering shall ensure that water quantity is controlled consistent with section 36.020.01, above.

For the above reasons, the Commission can find that these standards can be met with the imposition of Condition 7, above.

"02. Provisions for protection of water quality including:

A. Develop and/or maintain thermal cover in riparian areas by planting and/or protecting conifers.

B. Provide filter strips along roads to help catch sediment.

C. Implement dust limitation measures on roads.

D. Design and maintain roads to prevent direct runoff from road(s) into streams which may include relocation of a road to better sites.

E. Protect water corridors/road fords with rock of appropriate size.

F. Develop and/or enhance watershed vegetation to protect banks from erosion.

G. Reduce fuels through controlled and/or seasonal grazing management.

H. Identify, monitor, and correct noxious weed problems in consultation with the Wallowa County Weed Control Department.

I. Improve any existing septic systems to Department of Environmental Quality Standards.

J. Follow current use regulations and water quality standards when utilizing herbicides and/or pesticides.

K. Avoid runoff into streams of fertilizer/herbicides and/or pesticides."

RESPONSE: With the exception of stream crossings and culverts, the Project shall be constructed outside of vegetated riparian areas and will be placed on soils that are already compacted from railroad use. Final Trail engineering shall ensure that water quality is controlled consistent with section 36.020.02, above. Substantial use of fertilizer, herbicides, and pesticides is not proposed. **Exhibit 6** at 23. Also, there is no existing septic system within the project boundaries.

With respect to subsections B and C, filter strips will be used as needed during construction to prevent dust runoff into existing ditches. The trail is proposed to be graveled; therefore, additional dust mitigation measures are not necessary.

With respect to subsection H, JBTC will work with WURA and the Wallowa County Weed Control Department to ensure that noxious weeds will be sufficiently controlled. Moreover, the Commission can find that by making weed control easier and more frequent, the Project will decrease the level of noxious weeds within the railroad Right-of-Way.

For the above reasons, the Commission can find that these standards can be met with the imposition of Condition 7, above.

> *"03. Provisions for protection of stream structure including:*
> *A. Add and/or preserve large woody debris in streams.*
> *B. Prohibit further channelization along stream.*
> *C. Develop mitigation strategies for necessary channelization and/or bank protection.*
> *D. Avoid building in a floodplain.*
> *E. Develop hardened fords for machinery and livestock use.*
> *F. Avoid excess flow, peak flow, and bank erosion."*

RESPONSE: All streams will be bridged; the Project will not include any work within identified streams; therefore, subsections A, B, C, E, and F do not apply. The Project does not include any structures; therefore, subsection D is satisfied. However, to the extent that construction of bridge approaches may impact streams, final Trail engineering will ensure that appropriate provisions for stream protection are installed.

For the above reasons, the Commission can find that these standards can be met with the imposition of Condition 7, above.

> *"04. Provisions for protection of stream substrate including:*
> *A. Provide passages through swimming hole dams.*
> *B. Prohibit dredging in streams."*

RESPONSE: This section does not apply because the Project does not involve any in-stream work.

> *"05. Provisions for protection of habitat including:*

A. Preserve and/or restore riparian vegetation.
B. Avoid pesticide use.
C. Avoid planting competing fish species."

RESPONSE: As explained above, the Trail surface will be constructed outside of existing riparian vegetation where possible. Where the project must impact existing riparian vegetation, all efforts will be made to preserve such vegetation to the extent practicable.

No pesticides or planting of fish species is proposed. Some herbicides will be used as described in the vegetation management plan. **Exhibit 6** at 23.

For the above reasons, the Commission can find that these standards can be met with the imposition of Condition 7, above.

7. Applicable Criteria EL-1, R-1, R-4, and M-1 Zones

"SECTION 32.030, USES PERMITTED CONDITIONALLY: All uses shall conform to Section 32.015. 01. Construction, reconstruction, or widening of highways, roads, bridges or other transportation projects that are:

(1) not improvements designated in the Transportation System Plan or

(2) not designed and constructed as part of a subdivision or planned development subject to site plan and/or conditional use review, shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria. For State projects that require an Environmental Impact Statement (EIS) or EA (Environmental Assessment), the draft EIS or EA may be reviewed and used as documentation for findings to comply with all the following criteria:

A. The project is designed to be compatible with existing land use and social patterns, including noise generation, safety, and zoning.

RESPONSE: The Trail has been specifically designed to be compatible with surrounding land uses and social patterns for the following reasons:

- Noise Generation: The Trail will not generate substantial additional noise because motorized vehicles will not be allowed on it, except for maintenance and emergency vehicles. Such noises that are generated will generally be from human conversation. Dogs do not tend to bark when not within their own territory or protecting their owners, so noise from dogs on the Trail is anticipated to be minimal. Noise from a particularly "barky" dog will be temporary as such dogs will move through the Trail, not dwell upon it. The 9pm to 5am hourly limitations will also ensure that noise from Trail users will not interrupt nighttime activities of surrounding residents.

- Safety: Evidence from rural trails in other locations demonstrate that they are substantially safer than non-trail land uses, as explained above.

- Zoning: Non-motorized transportation is permitted in all County zones. There is no evidence that the Trail will have any worse impacts than non-motorized activities on existing county roads. In fact, the Commission can find that any such impacts caused by the Trail will be less than typical county roads because of hours of operation limitation, fencing, and leashing requirements, none of which are enforced on County roads.

- Social Patterns: Like much of the County as a whole, the surrounding social patterns are defined by families and individuals living on large acreage parcels. This context is currently devoid of a safe and convenient non-motorized vehicle transportation facility between Enterprise and Joseph that is protected from motor vehicles, and there is a clear need for such option, which this Trail provides. There is also a need for more convenient and affordable places to exercise, as identified by the Northeast Oregon Network's Comprehensive Needs Assessment for Wallowa County.[30] Moreover, 70% of County voters and over 80% of the general public support the Trail.[31]

- Surrounding Land Uses: A complete discussion of the impact of the Trail and surrounding farm uses is presented above. In addition, the Commission can find that use of an existing railroad ROW, rather than attempting to acquire new trail easements, greatly reduces the impact of the Trail on surrounding land uses from what would occur if a new right-of-way were needed. And, the historic use of the ROW for rail and current use by the Railriders, pedestrians, cyclists, and equestrians means that surrounding landowners are already accustomed to people and activities within the ROW.

The Commission should find that this criterion is met for the above reasons.

B. The project is designed to minimize avoidable environmental impacts to the following identified resources: wetlands, wildlife habitat, air and water quality, cultural, and scenic.

RESPONSE: The Trail is designed to minimize avoidable environmental impacts to the listed resources as follows:

- Wetlands: The project will not require substantial wetland filling, except where such filling is unavoidable. A complete wetland delineation has been completed, which includes section-by-section map of existing wetlands. **Exhibit 5**. The final Trail alignment will be located outside of the identified wetlands except where water features and drainages must be crossed, or where it is not practicable to avoid a wetland because of the size or shape of that wetland. Where impacts to wetlands are unavoidable, they will be done consistent with a Joint Permit issued by the U.S. Corps of Engineers and Oregon Department of State Lands. The installation of new culverts, where necessary, will improve existing stream and wetland quality by bringing such culverts up to current standards.

[30] Northeast Oregon Network, Wallowa County Comprehensive Needs Assessment 68 (2016).

[31] Joseph Branch Rail-with-Trail Public Opinion Survey Report 13 (August 15, 2015), *available at* https://static1.squarespace.com/static/536e7564e4b054112dbe6b05/t/589259a917bffc9050cfb682/1485986223684/Public+Opinion+Survey+Report.pdf.

- Wildlife Habitat. The Management Plan describes the surrounding habitat as follows:

  "The habitat along the right of way is not "pristine", rather it is a disturbed area that has been drastically modified by heavy equipment and consists largely of borrow pits and a man-made berm or roadbed cuts through hillsides with a rock bed placed under the tracks. As such it is similar to the habitats on adjacent agricultural lands in the valley."

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  "There may be some displacement of deer along the right of way as a result of increased use, these are mostly white-tailed deer whose populations are robust and there is plenty of habitat on adjacent lands. Oregon Department of Fish and Wildlife (ODFW) staff note that many valley landowners would prefer to have fewer deer. ODFW staff also explained the right of way is not an essential wildlife corridor because it is composed of habitats similar to lands on either side and it does not connect otherwise isolated habitats. While big game do use the right of way, it is not a corridor in the sense that it connects isolated areas of other habitat. While the right-of-way does provide forage for wildlife, the proposed project will not likely change the production of forage or the use by wildlife there.

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  "ODFW reports the Joseph Branch Trail Project between Joseph and Marr Pond is proposed for already disturbed land and will not adversely impact wildlife and particularly not any Sensitive/Strategy Species."

  Exhibit 6 at 32–33.

  Given the diminished quality of wildlife habitat within the ROW, the Trail will have few additional impacts, if any, on wildlife.

- Air and Water Quality. Non-motorized transportation has no adverse impacts on air quality. To the extent that the Trail will replace some motor vehicle trips with non-motorized trips, it will have a positive impact on air quality.

  The project will improve water quality for the following reasons, described in the Management Plan:

  "The Joseph Branch trail will positively impact aquatic organism passage because numerous culverts in the railroad corridor are in various stages of disrepair. Out-of-date or poorly maintained culverts can impair the passage of fish and other aquatic organisms. By constructing the trail and repairing culverts, the trail will provide improved passage for aquatic animals. Wildlife habitat and connectivity will be improved by repairing culverts and irrigation ditches, which are currently leaking water away from habitat areas.

  "Runoff from poorly maintained irrigation ditches will be remediated in some locations along the trail. Additionally, gravel portions of the trail will aid in water infiltration. These improvements are anticipated to decrease turbidity and improve water quality.

"Trail construction specifications will be designed to have a low impact on the surrounding environment to meet, possibly exceed, minimum environmental protection requirements in the areas of habitat enhancement and local sourcing materials.

"If the project requires mitigation for impacts to wetlands and waterbodies, the Marr Pond Trailhead site could be used as a mitigation area."

Exhibit 6 at 32.

- Cultural. Pre-Design Engineering Report (**Exhibit 1** at 21–22) indicates that the Trail will not have an adverse impact on cultural resources, as follows:

"In June 2016, AP conducted a cultural resource inventory for the Joseph to Enterprise Rail-with-Trail Pilot project. The inventory occurred on ODFW land and WURA railroad ROW. An intensive pedestrian survey of the entire APE was performed for this project. Fieldwork was conducted on June 6 and 7, 2016, by Stephanie O'Brien, MA, RPA (Principal Investigator) and Tiffany Wiley, BS (Archaeological Technician). Potential impacts to archaeological resources as a result of construction include excavation, sediment disturbance, sediment compaction, and other ground-disturbing construction activities. A copy of the report is located at the SHPO in Salem.

"A structure at the Marr Pond proposed trailhead has been proposed for demolition as part of this project. This structure is a wood and corrugated metal picnic structure and shed. No maps or other archival data were located to determine the age and potential significance of this structure.

"One archaeological site (refuse scatter) was located and recorded during the inventory. This site was not evaluated for NRHP eligibility. Further research may be needed to make an eligibility recommendation for the site. Until the site can be evaluated, avoidance is recommended. The site boundary should be flagged by a professional archaeologist, and heavy equipment should be kept out of the site boundary.

"No isolates were discovered during the inventory.

"One historic aboveground property was recorded during the inventory. The Joseph to Enterprise trail segment is recommended as a contributing feature to the larger Joseph Branch of the railroad, which is potentially eligible to the NRHP under Criterion A of the National Register Criteria for Evaluation for its role in shaping the economic history of the region and expanding agricultural possibilities in Wallowa County through the means of transportation. The proposed project is not anticipated to have adverse effects to the Joseph Branch railroad as all development will be limited to the ROW on either side of the railroad; however, as specific design plans are developed, additional research may be necessary if components of the project will alter any historic features of the line, particularly the rail bridges."

Allowing use of the ROW for pedestrian use will help preserve and protect the historic Joseph Branch of the Oregon Railroad and provide for its continued viability as a transportation facility.

- Scenic: The Project does not include new structures within the right-of-way[32] and therefore, will not impact any of the County's scenic resources. Rather, it will provide additional opportunity for pedestrians, bicyclists, and equestrians to enjoy the County's scenic resources without interruption by motorized vehicles.

For the above reasons, the Commission can find that the Trail will have no adverse noise impacts, no adverse impact on wildlife habitat, and will have positive impacts on air, water, cultural, and scenic resources.

C. The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.

RESPONSE: The Project is for a new bicycle, pedestrian, and equestrian path within an existing transportation facility (the Wallowa Union Railroad). Currently, WURA does not actively prohibit pedestrian, bicycle, or equestrian use adjacent to the Trail.

By creating a clear, paved pathway, the Project will improve the safety, function, and accessibility of the Wallowa Union Railroad ROW. In addition, signage**,** operational standards, and new fencing will dramatically increase the safety of the ROW for both trail users and adjacent landowners. It will also ensure that vegetation within the ROW is better maintained and fish passages are improved with culvert replacements.

For these reasons, the Commission can find that this criterion is met.

D. The project includes provision for bicycle and pedestrian circulation as consistent with the comprehensive plan and other requirements of this article."

RESPONSE: The Project is for bicycle and pedestrian transportation and will not allow motorized transportation except for maintenance and emergency vehicles. This criterion is met.

8. Conclusion

This Application satisfies all applicable criteria. For this reason, as well as the reasons described above, the Commission should approve the Application.

[32] Bathrooms are proposed at the trail ends, but the Commission can find that they have no substantial scenic impacts.

Exhibits

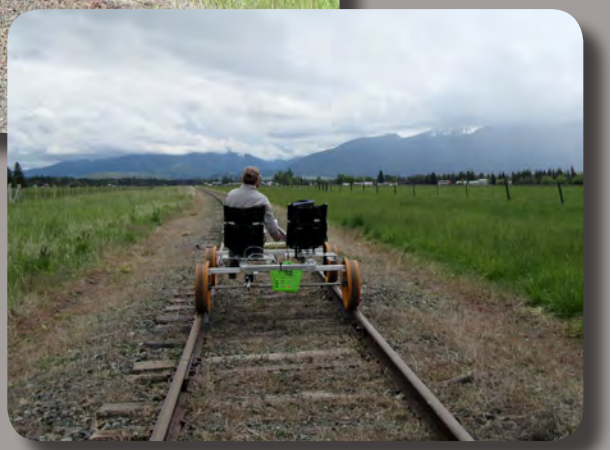
1. Pre-Engineering Study
2. Zoning Maps
3. Segmented Route Maps
4. Farm Use Impact Assessment
5. Wetland Delineation
6. Management Plan

Pre-design Engineering and Preliminary Environmental Review Report

Wallowa Union Railroad Authority

Joseph To Enterprise Rail-With-Trail Pilot Project

2016



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PRE-DESIGN ENGINEERING AND PRELIMINARY ENVIRONMENTAL REVIEW REPORT

JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT

2016

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Introduction

The Joseph Branch Trail Consortium (JBTC) and Wallowa Union Railroad Authority (WURA) are proposing to construct a multimodal trail in the railroad corridor in northeast Oregon between Joseph and Enterprise along the Joseph Branch Rail Line with trailheads at Marr Pond in Enterprise and at the southern terminus of the railroad in the wye owned by WURA in Joseph (see Figure 1, Proposed Pilot Project and Trailhead Locations). This Report assesses pre-design and preliminary environmental conditions associated with the proposed multimodal trail for WURA. This project is funded by a U.S. Environmental Protection Agency community planning grant administered by the Northeast Oregon Economic Development District (NEOEDD).

The project includes the approximately 6-mile section of existing railroad right-of-way (ROW) from Joseph to Enterprise. The trail will traverse a working landscape through open farmland with the Wallowa Mountains rising to the south. This section is anticipated to include two trailhead developments, 13 culverts, 470 linear feet of bridge crossings, and 14 road crossings. The railroad ROW provides sufficient space to allow an improved trail to be developed (see Figures 2, 3, and 4, Aerials 1, 2, and 3, for the proposed project location).

Report Goals

The purpose of this Report is to provide additional information on land use, public outreach, environmental considerations, and preliminary trail design. This Report is also intended to summarize project activities and research that have been completed by groups including NEOEDD, WURA, and JBTC since development of the pilot project was approved.

This Report does not recommend a trail design, placement, or surface type. Instead, it provides alternatives with different costs to be selected by WURA and JBTC based on funding and other considerations.

As of the writing of this Report, the precise design of the trail has not yet been determined. The JBTC and WURA's preferred alternative is thought to be approximately 1.5 miles of 10-foot wide trail, with a compacted gravel surface at locations nearest to Enterprise and Joseph, with a 5-foot wide segment of a compacted gravel surface for the remainder of the 6 miles. A 10-foot wide trail has been recommended by Federal Highway Administration (FHWA) personnel during a September 2016 site visit. This Report explores several trail width and length options and depicts a single option for trail location in relation to the railroad tracks.

The exact placement, sizing, and surfacing of the trail is anticipated to be modified as the design process progresses. Because of this, both the wetland delineation and cultural resources inventory surveyed both sides of the railroad tracks in the ROW to ensure information would be available to inform future modifications of the trail design.

Background

In 1999, the Oregon Parks and Recreation Commission (OPRC) began discussions regarding the future of the Joseph Branch railroad line and the concept of converting the line to a public recreation trail. Early in 2000, discussions between OPRC, the Wallowa County Board of

Commissioners, and the public resulted in the decision to preserve the rail corridor for future transportation needs.

The Joseph Branch rail-with-trail vision was put forward by citizens of Union and Wallowa Counties, who suggested the formation of WURA during discussions in 2000 and 2001. The "Save Wallowa & Union County's Railway" committee's primary goal was to preserve the rail line between the Cities of Elgin and Joseph.

The two County Boards of Commissioners purchased the rail line and formed WURA through an Oregon Revised Statute (ORS) 190 Intergovernmental Agreement. WURA gained ownership of the line in 2001 and successfully retired the substantial debt in 2013, securing a significant community asset worth nearly $10,000,000.

The Friends of the Joseph Branch, a 501(c)(3) organization formed in 2002, operates the Eagle Cap Excursion train from the new Elgin depot, finished in 2013, to the Minam crossing.

In 2012, The Wallowa Union Historic Trail Consortium, a 501(c)(3) organization, was formed (the name was changed to the JBTC in 2013) to promote the use of the ROW with a rail-with-trail project.

In 2013, the JBTC worked with WURA to create an agreement with the Oregon Parks and Recreation Department (OPRD) and Eastern Oregon University (EOU) for completion of a feasibility study for developing a trail adjacent to the rail line from Elgin to Joseph. For the purposes of advancing public discussion of the possibility of a Joseph to Enterprise Rail-with-Trail project, a memorandum of understanding (MOU) was agreed to by WURA, OPRD, and EOU.

WURA commissioned OPRD staff and EOU students to develop a Joseph Branch Rail-with-Trail Concept Plan. The Concept Plan found the possibility of constructing a multimodal recreational trail in the railroad ROW to be physically, politically, and financially feasible. The Concept Plan was completed in December 2015.

In February 2016, WURA adopted the recommendation of the Concept Plan and the JBTC Board of Directors and agreed to develop a pilot project trail segment.

The pilot trail segment selected for development is located between Joseph and Enterprise, Oregon. JBTC prepared a scope of work (SOW) and an MOU, signed in May 2016, for developing the trail segment. The MOU and SOW outlined WURA's, EOU's, and JBTC's responsibilities in developing the Joseph-to-Enterprise trail segment as a pilot project. While the immediate focus is on the Joseph-to-Enterprise trail segment, planning efforts also include implementing a long-term trail financing plan, ongoing efforts to involve adjacent landowners in trail planning, and continuing to build positive working relations with potential trail user organizations and local, state, and federal agencies to garner expert advice, counsel, and support.

Purpose and Need

The principle purposes of the Joseph Branch Trail are to help save and create jobs, increase public safety, and expand and connect existing trails and scenic bikeways and byways. Trail development will revitalize host community downtown areas through the synergy created by collaborating to accomplish a "big project." Economic impacts of the 63-mile Joseph Branch Trail will result from

increases in the length of visitors' stays and dollars spent in northeast Oregon and the number of jobs directly related to trail activities. The trail will be used as a transportation corridor safely connecting northeast Oregon's federal lands to small communities, the communities to each other, and to other trails in the region and neighboring states in new and exciting ways. The 63-mile Joseph Branch Trail proposed by WURA is a new amenity that would represent a cornerstone of a multi-faceted economic and community development effort in northeast Oregon.

The Joseph-to-Enterprise trail segment was selected for pilot project development due to its immediate impact. Most of Wallowa County's population is located in and around these two communities. This area of Wallowa County is where most visitors currently spend their time and where the bulk of recreationists stage for trips into the Eagle Cap Wilderness and Hells Canyon Recreation Area.

Land Use Review

General

As a part of the Concept Plan, a preliminary Land Use Assessment was conducted. In the Concept Plan, modifications to existing comprehensive plans and transportation system plans (TSPs) were determined to be project components that would require further research with regional land use planners. Plans under review for this project include the City of Joseph TSP, City of Enterprise TSP, and Wallowa County TSP/Comprehensive Plans. In addition, numerous meetings have occurred with the Wallowa County Planner, Union County Planner, the Oregon Department of Land Conservation and Development (DLCD) Representative, JBTC, and NEOEDD.

With the multiple ideas and information sources available, a strategy is being developed to guide changes needed in various land use plans to accommodate trail development. Preliminary strategy suggestions are included in this Report.

The trail pilot segment will follow a portion of the Joseph Branch railroad line. Railroad assets are managed by WURA according to policies established in the Intergovernmental Agreement. Using a portion of the railroad ROW for a trail was recognized as a possible use at the time of purchase.

The Joseph Branch Trail is recognized as an essential part of a developing regional trail system connecting the communities of Joseph, Enterprise, Lostine, Wallowa, and Elgin. Transportation plans for Joseph, Enterprise, and Wallowa County include the Joseph Branch Trail as a possible recreation and transportation enhancement. While WURA and the JBTC is proposing to eventually construct a 63-mile trail, the immediate project is to build a trail segment from a trailhead on WURA property in Joseph to a trailhead at Marr Pond owned by the Oregon Department of Fish and Wildlife (ODFW). Construction of the trail and the development of the trailheads will include construction of a multimodal trail; rehabilitation or replacement of stream crossing and culvert structures; the addition of minor accessories such as benches, garbage receptacles, and signage; and parking and restroom facilities at the trailheads.

The railroad ROW where the trail will be constructed is zoned the same as adjacent properties, which may include Industrial, Residential, Timber Grazing, and Exclusive Farm Use (EFU) zones. The railroad is a public transportation corridor that passes through several base zoning districts administered under the County's and Cities' Comprehensive Plans. The potential for development of

the Joseph Branch Trail has long been included in these TSPs. Additional land use process will be required to allow for public comment on proposed trail facilities and to comply with the TSPs as components of the County's and Cities' land use provisions and zoning districts standards.

Preliminary Railroad Right-of-Way Land Use Considerations

The following is a list of items for consideration prior to finalizing the requirements for land use.

- The majority of the land adjoining the 6-mile trail segment is privately owned and used for agricultural purposes with scattered residences. Much of this land is zoned Exclusive Farm Use. At the northern end of the pilot trail segment adjacent to Marr Pond, the railroad ROW is zoned M-1 (Industrial). Commercial, residential, and industrial properties are located adjacent to railroad property in the Cities of Enterprise and Joseph.
- Since the railroad ROW is a transportation facility, building a trail by it is anticipated to include developing a TSP amendment to adopt the trail as a TSP element.
- DLCD's December 10, 2015, Guide to Trails in EFU and Forest Zones defines the appropriate land use review process for siting trails in these areas. The Guide notes that whether trails are an allowed use or a use that is subject to discretionary review depends on circumstances. Applicable sections of the Guide (compiled by Terry Edvalson) are as follows:

  When a trail is proposed to be linear and pass through multiple properties, it should be reviewed as a transportation facility subject to ORS 215.296 review. This could be a quasi-judicial conditional use review, or more likely, a legislative review as part of the adoption of a TSP.

  Trails as Transportation Facilities

  While trails as transportation facilities are not specifically identified as an allowed use in EFU or forest zones in statute, ORS 215.213(10) and 215.283(3) state that "other transportation facilities" not allowed under subsections (1) and (2) **"may be established, subject to the approval of the governing body or designee subject to either 1) the adoption of an exception or 2) *ORS 215.296* for those uses identified by rule" of the DLCD.**

  The wording "may be established, subject to the approval of the governing body or its designee" indicates a discretionary review and is identical to the lead-in wording for the lists of uses in subsection (2) of ORS 215.213 and 215.283 - sometimes referred to as the list of conditional uses. The reference to "ORS 215.296 for those uses identified by rule" of DLCD specifically indicates that the uses listed in the rule require review against ORS 215.296.

  OAR 660-012-0065, Transportation Improvements on Rural Lands, addresses transportation improvements and facilities that are allowed in rural areas, including not just EFU zones, but also forest, rural residential, and other rural and nonresource zones. Section (3) states that a specific list of improvements and facilities, including use (h) **"bikeways, footpaths and recreation trails not otherwise allowed as a modification or part of an existing road"** are consistent with Goals 3 ("Improve coordination among the

cities of Wallowa County, the Oregon Department of Transportation (ODOT), the U.S. Forest Service (USFS), the FHWA, and the county") and Goal 4 ("Increase the use of alternative modes of transportation (walking, bicycling, and public transportation) through improved access, safety, and service"). Section (5) states that in EFU and forest zones, certain of the listed uses, not including (h) "shall, in addition to demonstrating compliance with the requirements of ORS 215.296" comply with what is referred to as a "super" 215.296 process. The only reason why there is no specific reference in section (3) to an ORS 215.296 review is because the list applies to uses in all resource, rural, and nonresource zones, while only EFU and forest zones require review for compliance with this standard.

The ORS 215.296 review process could occur as part of a quasi-judicial or a legislative review. A legislative review involving a TSP should notify individual landowners along a proposed route, within the standard notification distance. Subsequent refinements to a proposed trail route could involve an amendment to a TSP or a quasi-judicial conditional use review. A new trail or trail link in a new or existing ROW requires an ORS 215.296 review.

WCLUP, Article 15 Exclusive Farm Use Zone Section 15.020, Buildings and Activities Permitted Conditionally, states: "in the Exclusive Farm Use Zone, the following uses and activities and their accessory buildings and uses are permitted subject to the provisions of Article 9 (Public Hearing Review).

"Section 09. Other than on lands designated as high value, private parks, playgrounds, hunting and fishing preserves, and campgrounds. Existing facilities may be maintained, expanded, or enhanced."

"Section 10. Parks, playgrounds, or community centers owned and operated by a government agency or a nonprofit community organization.

"Section 29. Roads, highways, and other transportation facilities and improvements not allowed under subsections 27 and 28 of this section may be established subject to the approval of the governing body (or its designate) in areas zoned for Exclusive Farm Use subject to:

a. "Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or

b. "ORS 215.296 for those uses identified by rule of the Land Conservation and Development Commission as provided in Section 3, Chapter 529, Oregon Laws 1993."

WCLUP, Article 16 Timber Grazing Zone, Section 16.020, Activities Permitted Conditionally states: "In the Exclusive Farm Use Zone, the following uses and activities and their accessory buildings and uses are permitted subject to the provisions of Article 9, Conditional Use Permit.

"Section 27. Roads, highways, and other transportation facilities and improvements not allowed under Section 16.020, (24) and (25) may be established subject to the approval of the governing body or its designate in areas zoned for exclusive farm use subject to:

a. "Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or

b. "ORS 215.296 for those uses identified by rule of the Land Conservation and Development Commission as provided in Section 3, Chapter 529, Oregon Laws 1993."

The possibility of constructing a trail in the Wallowa Union Railroad ROW is documented in the Wallowa County, City of Joseph, and City of Enterprise TSPs.

The possibility of constructing a trail was proposed in 1997 by the OPRD but abandoned when a local decision was made to retain the railroad to support future economic development opportunities.

Planning for trail amenities (limited parking, signage, garbage cans, etc.) and access points to the trail from County roads and City streets will be developed in cooperation with Wallowa County planning departments and the Cities of Joseph and Enterprise.

Railroad Zoning Considerations

The WCLUP showed that lands in the rail corridor are zoned same as contiguous lands. Wallowa County's Article 14 (see below) states that the zone boundaries are at the center line of transportation facilities and rivers.

"SECTION 14.025, ZONE BOUNDARIES: Zone boundaries are section lines; subdivision lines; lot lines; center lines of streets, alleys, river, or railroad right-of-way or such lines extended."

Marr Pond Trailhead Land Use Considerations

ODFW is offering to develop the Marr Pond recreation area as a Joseph Branch trailhead. ODFW has developed plans for additional parking, restroom facilities and trails on the property to enhance its utility as a recreation amenity.

Marr Pond is zoned M-1 industrial. Harold Black, Wallowa County Planner, indicated recreational uses are allowed, because they have impacts no greater than other permitted uses for this zone. Permitted uses for the M-1 zone are shown below.

SECTION 22.015, PERMITTED USES: The following uses, substantially similar uses, and their accessory uses are permitted in the industrial zone subject to administrative review.

01. Retail, wholesale, or service business establishment.

02. Lumber yards and retail, including mill works.

03. Machine shops.

04. Bottling works.

05. Equipment storage yards.

06. Hauling, freighting, and trucking yards or terminals.

07. Wholesale businesses, storage buildings, or warehouses.

08. Manufacturing, compounding, assembling, or treating products.

09. Concrete or ready-mix plants.

10. Resource uses of the Exclusive Farm Use and Timber Grazing Zones.

11. Home-based occupation where a new dwelling is not proposed in conjunction therewith.

12. Hospitals, healthcare, and medical facilities.

13. Correctional, emergency services, and law enforcement facilities.

14. Other industrial uses as long as the impacts on surrounding properties and uses are no greater than that of the above

*** INDUSTRIAL - M-1 PC Approved 04-29-03 - Version 5 - BOC Adopted 05-21-03 ARTICLE 22/PAGE 2 OF 4 permitted uses.

A Conditional Use Permit is not anticipated to be needed to develop trailhead facilities on this property.

If additional parking and trail access is desired in Enterprise, there is also the potential for WURA to purchase Tax Lot 800 near Hurricane Creek Highway, where the owner would consider selling an easement .

Joseph Trailhead Land Use Considerations

The Joseph trailhead will be located within the wye at the southern terminus of the railroad on property owned by WURA. The property is in an industrial zone in the City of Joseph, which includes zoning provisions for trail development. Utilities are available for development of restroom facilities at this site.

The former Wallowa County Grain Growers scale house and grain silo are also located within the wye on WURA property. According to the Wallowa County Assessor's office, the silo is currently owned by Valley Bronze, while the scale house is owned by Melvin Brink. .

If an easement is needed to access the trailhead in the wye, John Hillock is willing to consider selling an easement that would parallel the tracks from Russell Lane, through Tax Lot 2100 to the wye with the possibility of additional parking area.

Land Use Strategy

This section was completed based on information available at the time of the writing of this Report.

1. City and County TSPs will need to be amended to include the trail in their goal sections. If the work to complete amendment of the TSPs expands beyond what volunteers and City and County staff can accomplish, a Transportation Growth Management grant could be applied for in the summer of 2017.

The following step-by-step land use strategy is recommended for the Joseph-to-Enterprise trail segment:

1. Identify volunteers to work with local planning authorities, JBTC, and WURA to complete an addendum to the existing TSPs, and assist with public hearings as necessary. Provide as much of the required information as possible using existing Concept Plan drawings, project descriptions, proposed facility types and amenities descriptions (signage, trailheads, benches, etc.).
2. Identify sections of the TSPs needing an amendment.
3. Use the TSP amendment process to incorporate the proposed uses into Transportation Section (Goal 12) of the County and City plans, including any changes to permitted or conditional uses for a particular zone. In Joseph, their Bicycle/Pedestrian Plan already amended the definition of Goal 12 Transportation in the Comprehensive Plan by saying that the industrial zone would be changed to automatically accommodate projects listed in their Bicycle/Pedestrian Plan. The trail feasibility is mentioned, but not the trail itself or trailheads, so they would need to be added. An addendum to the TSP could be accomplished by following the model of the Bicycle/Pedestrian Plan addendum done using the local legislative process for the proposed trail at Wallowa Lake.
4. Propose potential language.
5. Hold a public hearing with the Planning Commission and County Commission and City Councils as necessary.
6. County Commissioners and City Councils adopt the addendum as part of their TSP. Once a proposal is submitted, the legislative process takes approximately three months.

Landowner and Public Outreach

A primary goal of this project is to engage the communities along the pilot Joseph-to-Enterprise trail segment in community planning analysis and envisioning future community development.

Landowner Outreach

A meeting was held on May 19, 2016, at the Joseph Community Center, and all adjacent landowners were invited to attend. Over 20 individuals attended. A review of next steps was presented, and comments and questions from landowners were solicited. Large print outs of the tax lot maps were made available for landowners to draw on and list their concerns.

A letter was sent to each adjacent landowner on August 3, 2016. Of the 83 adjacent property owners, nine responded that they would like to be personally interviewed.

A uniform Landowner Interview Process and Interview form was created. The goals were to discuss the following information during each landowner interview:

a. Tax lot map showing property (used to locate buildings and areas requiring special attention)
b. Copies of Anderson Perry & Associates, Inc. (AP) aerials showing proposed trail siting locations (three maps)
c. Copies of materials in landowner's project file
d. Concerns/example mitigation strategies
e. Public safety study results

Appendix A, Landowner Outreach Materials, shows some of these materials. Individual landowner outreach has been initiated and the interviews are ongoing. As of the writing of this report, all of the preliminary interviews have been completed, but there may be new requests in the future.

Public Outreach

A panel discussion was held in Enterprise at the Cloverleaf Hall on June 23, 2016. A citizen support panel spoke in support of the project's benefits. A presentation was made on project specifics including potential amenities, design options, and funding strategies. Preliminary mapping and scoping materials were made available for comment. Comments were generally focused on funding, timing, and concerns such as weeds and privacy. Over 30 individuals attended.

Agency Outreach

Meetings and discussions were held with City and County planners, and County commissioners and City mayors were briefed on project updates. State and federal agencies such as the U.S. Forest Service, U.S. Bureau of Land Management, ODOT, and the Western Federal Lands Highway Division were engaged via phone calls, email communications, and in-person meetings. Interested parties had the opportunity to be kept up to date on project developments at ongoing WURA and JBTC meetings.

Environmental Review

To begin the environmental review process, environmental professionals; including a wetland biologist, archaeologist, and environmental scientist; visited the site to document existing conditions and make preliminary determinations about project area features.

Sue Brady, Anderson Perry & Associates, Inc. (AP) wetland biologist, completed a wetland delineation on both sides of the railroad tracks (in the ROW). The wetland delineation was submitted to the Oregon Department of State Lands (DSL) for concurrence. This report is available for review upon request (AP, 2016a).

Stephanie O'Brien, AP archaeologist, conducted a desktop survey, literature review, and pedestrian site survey on both sides of the railroad tracks (in the ROW). Information gathered was compiled in a cultural resources inventory, which was submitted for concurrence to the Oregon State Historic Preservation Office (SHPO). Portions of this report are available for review upon request; however, some elements will likely be redacted due to the sensitive nature of cultural resources (AP, 2016b).

The following information provides additional information on the environmental context of this project and summarizes some of the findings of the wetland delineation and cultural resources inventory.

General Environmental Conditions

The project is located in the Wallowa River watershed of northeastern Oregon, in the Blue Mountain ecoregion. This region is characterized by a moderate climate, with cold, moist winters and hot, dry summers. The topography in the study area for the environmental review is flat floodplain and has an elevation of approximately 4,150 feet above sea level at the southern end in Joseph, and approximately 3,730 feet above sea level at the northern end in Enterprise.

The majority of the project area is within the Wallowa Lake - Wallowa River subwatershed (HUC 12 - 170601050109), with a small portion of the northern end of the study area in the Lower Prairie Creek subwatershed (HUC 12 - 170601050105). The legal description is Township 2 South, Range 44 East, Sections 1, 2, 12, 13, and 24; and Township 2 South, Range 45 East, Sections 19 and 30, Willamette Meridian (see Figures 5A through 5C, Tax Lot Maps). The area includes portions of Tax Lots 16400 (railroad alignment) and 1500 (Marr Pond trailhead area) on Tax Map 02S44E, and land marked "Rails" on Tax Map 02S45E.

Soils within and adjacent to the study area have been impacted by agriculture, construction and maintenance of the railroad and roads, and residential and commercial development.

The land in the study area is flat and is located in the Wallowa River floodplain. The various parts of the study area receive water from precipitation, overbank flow during seasonal high water events, hyporheic flow from the river, and/or irrigation. Surface and subsurface hydrology in the study area have been extensively altered by agricultural practices, including irrigation and ditching, as well as the construction of the railroad grade and embankments.

Disturbance within the study area is primarily a result of agricultural activities, industrial and commercial activities, and construction and maintenance of the railroad grade. Lands outside the study area have been altered by past and current activities associated with agriculture, commercial and residential development, and the construction and maintenance of roads.

Geomorphology and Geology

The study area is located within the Blue Mountain province, characterized by "individual terranes of distinctive rocks running in crescent-shaped curves from the southwest to the northeast" (Orr and Orr, 2012:143). These terranes existed as volcanic archipelagos and ocean crust in areas much further south before shifting, colliding, and assembling with North America in the late Paleozoic and Mesozoic eras to form the Blue Mountain province (Orr and Orr, 2012).

The study area is part of the Wallowa terrane, formed by the eruption of volcanic islands during the Permian and Triassic periods. These eruptions and the flow and slides of volcanic material formed the Seven Devils and Wallowa Mountains, along with the later accumulation of limestone and shale atop the volcanic material (Orr and Orr, 2006). From the Paleozoic through the Mesozoic eras, the Wallowa terrane was intruded by the Wallowa batholith, forming the core of the Wallowa Mountains. In the Miocene, flows of Columbia River basalt poured over eastern Washington and northeastern Oregon, forming overlapping platforms. Then, in the Pleistocene, glacial advances and retreats shaped the moraines, lakes, and cirques that characterize the Wallowa Mountains today (Orr and Orr, 2012).

This area of the Wallowa Valley consists of Holocene alluvial deposits and sediments including sand, gravel, and silt that form floodplains and fill channels of present streams, as well as talus and slope wash in some areas. Soils contain abundant organic material and thin peat beds. These sediments were deposited on broad benches adjacent to the Snake and Malheur Rivers by the Bonneville Flood during the late Pleistocene (United States Geological Survey, 2016).

Soils

Modern soils in the vicinity of the pilot project study area are mapped as Eggleson gravelly loam, Cheval silt loam, and Matterhorn gravelly fine sandy loam (United States Department of Agriculture Natural Resources Conservation Service, 2016). Descriptions are as follows:

- Cheval silt loam, 0 to 2 percent slopes is a somewhat poorly drained soil formed in mixed alluvium and is found on floodplains. Native vegetation typically consists of grasses, sedges, and rushes. This soil has a hydric rating of 7 (predominantly non-hydric).
- Eggleson gravelly loam, 0 to 2 percent slopes is a moderately well-drained soil formed in mixed alluvium and is found on floodplains. Native vegetation typically consists of cottonwood, Englemann spruce, and woody and herbaceous understory species. This soil has a hydric rating of 0 (non-hydric).
- Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes is a somewhat excessively drained soil formed in alluvium or glacial outwash, and is found on stream terraces. Native vegetation typically consists of Douglas fir, ninebark, ponderosa pine, and woody and herbaceous understory species. This soil has a hydric rating of 0 (non-hydric).

Vegetation

The majority of the study area is covered by herbaceous vegetation, primarily grasses. Shrub thickets and trees are found in the riparian corridor at the river crossings, and, to a lesser degree, in the swales between the railroad embankments and adjacent fields. In the portions of the study area passing through the more developed areas in the Cities of Enterprise and Joseph there are large areas with no vegetation, and what vegetation is present consists primarily of weedy grasses and other herbaceous species.

Wetlands and Waterbodies

Impacts to wetlands and waterbodies were considered in the development of preliminary trail design alternatives.

Wetlands

The National Wetland Inventory map shows several wetlands mapped within or near the project corridor, all associated with the flat floodplains surrounding the river channels and ditches (U.S. Fish and Wildlife Service [USFWS], 2016).

Wetlands are located at the toe of the railroad embankment and are either confined by an adjacent berm or extend into the adjacent agricultural field or river floodplain. Vegetation consists primarily of various grasses and other herbaceous species, with some wetlands also supporting shrubs and/or trees.

Seventeen wetland areas, totaling 2.07 acres within the 67-acre study area, were identified based on field observations, as well as seven non-wetland waterbodies. Both sides of the railroad tracks were surveyed to help inform the engineering design.

The wetland investigation was conducted by Sue Brady on June 20, 21, and 22, 2016. Wetland Determination Data Forms from the Arid West Regional Supplement (U.S. Army Corps of Engineers [USACE], 2008) were used to record information gathered from the sample plots. Procedures outlined in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0) (USACE, 2008) were used to determine the presence and extent of wetlands within the study area. The methodology outlined in the manuals is based on three essential characteristics of wetlands: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Generally, field indicators of all three characteristics must be present to make a positive wetland determination, except in specific situations as outlined in Chapter 5: Difficult Situations in the Regional Supplement.

The following wetlands were delineated within the study area (see Table 1). Detailed descriptions of these 17 wetlands can be reviewed in the Wetland Delineation Report. Wetlands are shown on Figures 2, 3, and 4 in relation to the proposed trail. The total of 2.07 acres includes wetlands on both sides of the railroad tracks. The actual amount of wetlands impacted by the project depends on the final placement of the trail and is anticipated to be a much lower acreage.

TABLE 1
WETLANDS DELINEATED WITHIN THE STUDY AREA

Wetland Number	Hydrogeomorphic Wetland Class[1]	Cowardin Class[2]	USACE Category and Basis	Sample Plots	Acres in Study Area
1	Riverine Flow-through	PFO	Cat. 7 - Adjacent to Wallowa River	1	0.10
2	Depressional	PFO	Cat. 7 - Adjacent to Wallowa River	2	0.03
3	Flats	PEM	Cat. 7 - Adjacent to	3	0.02

Wetland Number	Hydrogeomorphic Wetland Class[1]	Cowardin Class[2]	USACE Category and Basis	Sample Plots	Acres in Study Area
			Marr Pond		
4	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	4	0.01
5	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	5	0.04
6	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	6	0.06
7	Riverine Flow-through	PEM	Cat. 7 - Adjacent to Wallowa River	7	0.09
8	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	8	0.53
9	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	9	0.20
10	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	10	0.16
11	Flats	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	11	0.26
12	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	12	0.08
13	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	13	0.19
14	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	14	0.08
15	Riverine Flow-through	PSS	Cat. 7 - Adjacent to Wallowa River	15	0.14
16	Riverine Flow-through	PFO	Cat. 7 - Adjacent to Wallowa River	16	0.05
17	Riverine Flow-through	PEM/PFO	Cat. 7 - Adjacent to Wallowa River	17	0.03
				Total	**2.07**

[1]*Adamus, 2001*

[2]*Cowardin et al., 1979*

Waterbodies

The Wallowa River is present in the project area, and crosses the rail alignment in two places. In addition, Lower Alder Slope Ditch, Island Ditch, and several unnamed ditches and river side channels cross the rail alignment. The Wallowa River is a perennial waterway that originates in the Wallowa Mountains, and generally flows northwest to join the Grande Ronde River approximately 40 river miles (RM) downstream of the project area.

Several non-wetland Waters of the State/U.S. are present within the study area, as follows:

- The Wallowa River is a perennial stream that has been modified by irrigation diversions, channelization, levee construction, and other activities associated with agricultural practices. The river flows roughly south to north, ultimately draining into the Grande Ronde River approximately 40 RM downstream of Enterprise. The Wallowa River is impacted by the study area four times:

  - At the northern end of the project area, the Wallowa River runs along the south side of the study area boundary, at the toe of the slope of the railroad embankment. The channel is approximately 15 feet wide at this location; however, less than 3 feet of this width is contained within the study area. Approximately 65 linear feet (0.003 acre) of channel is within the study area boundary.

  - The Wallowa River side channel crossing is located approximately 0.28 mile north of Green Valley Road. Within the study area, the channel is approximately 15 feet wide, with moderately stable vegetated banks. Approximately 101 linear feet (0.03 acre) of channel is within the study area.

  - Wallowa River Crossing No. 1 is located approximately 400 feet north of Green Valley Road. Within the study area, the channel is approximately 8 feet wide, with moderately stable vegetated banks. Approximately 80 linear feet (0.01 acre) of channel is within the study area.

  - Wallowa River Crossing No. 2 is located near the southern end of the study area, at the toe of the slope of the railroad embankment. The river flows parallel to the railroad for approximately 500 feet, then makes a right-angle bend to the north to flow under the railroad bridge. Within the study area, the channel is approximately 45 feet wide, with moderately stable vegetated banks. Approximately 554 linear feet (0.32 acre) of channel are contained within the study area.

- Newby Creek is an intermittent stream located near the southern end of the project, just west of Wallowa River Crossing No. 2. This stream drains from farmland to the south and joins the Wallowa River approximately 300 feet northeast of the study area. The channel is approximately 3 feet wide, with incised banks. The channel was dry at the time of site visit, and it appears that this water is captured in a farm pond immediately south of the railroad. Approximately 42 linear feet (0.003 acre) of channel are contained in the study area.
- Several irrigation ditches cross the study area, all associated with the Wallowa River and its tributaries:

  - Island Ditch crosses the study area just south of Green Valley Road. Within the study area, the channel is approximately 10 feet wide, with moderately stable vegetated banks. Approximately 101 linear feet (0.02 acre) of channel is contained within the study area.

  - Lower Alder Slope Ditch crosses the study area just north of Airway Road. Within the study area, the channel is approximately 10 feet wide, with moderately stable vegetated banks. Approximately 98 linear feet (0.01 acre) of channel is contained within the study area.

  - Ditch 1 crosses the study area just south of the intersection of Dorrance Road and Williamson Lane, and is associated with Wetland 11. This ditch is 5 to 10 feet wide within the study area and is sinuous with somewhat unstable vegetated banks.

Approximately 174 linear feet (0.02 acre) of channel is contained within the study area.

- Ditch 2 crosses the study area approximately 0.4 mile south of the intersection of Airway Road and Dorrance Road, and is associated with Wetland 16. This ditch is 1 to 5 feet wide within the study area and drains east from Wetland 16. Approximately 60 linear feet (0.003 acre) of channel is contained within the study area.

Endangered Species Act Species

According to StreamNet (2016), Chinook salmon use the Wallowa River up to approximately East Dorrance Road for spawning, rearing, and migration, while steelhead use the entire reach between Enterprise and Joseph for spawning and rearing. Bull trout are unlikely to be present in this reach of the Wallowa River. The entire length of the Wallowa River is included in the designated critical habitats for bull trout, steelhead, and Chinook salmon, and is considered Pacific Salmon Essential Fish Habitat and Essential Salmonid Habitat.

Endangered Species Act (ESA)-listed species are present in the Wallowa River, and additional species may be present upland as well. A Biological Assessment (BA) will be completed, if required.

The Joseph Branch rail-with-trail segment would positively impact aquatic organism passage, because numerous culverts are in various states of disrepair. Out-of-date or poorly maintained culverts can impair the passage of fish and other aquatic organisms. By constructing the trail and replacing/repairing culverts, the trail will provide improved passage for aquatic animals. Wildlife habitat and connectivity will be improved by repairing culverts and irrigation ditches, which are currently leaking water away from habitat areas.

Hazardous Materials

NEOEDD identified three sites along the trail corridor that are listed on the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) database.

The first is Site No. 4771, the Minam Richfield Station. This site was added to the database based on a 1960 Oregon History Project photo. The site was adjacent to Highway 82 and the railroad. The highway was previously routed along the river and went under the railroad on an approach to crossing the Wallowa River. The highway was rebuilt, and a substantial amount of fill was added to bring the highway up to the same level as the railroad. The Minam Richfield Station site is, therefore, covered with a substantial amount of fill dirt.

The second is Site No. 4904, the Union Pacific Railroad (UPRR) diesel spill. In 1984, there was a train derailment at milepost 64.25 in which 2,500 to 3,500 gallons of diesel were released, with approximately 1,205 gallons recovered during the response action.

The third is Site No. 2790, the Enterprise Roundhouse. In 2001, a citizen complaint resulted in the site being added to the ECSI database. The complaint indicated potential groundwater contamination from a diesel release related to a former roundhouse operation.

DEQ spills manager, David Anderson, said that the DEQ database is mainly valid for approximately the past 15 years. It well may be that miscellaneous solvents or hydrocarbons are present at very low to nearly undetectable levels in the ROW, as well as, potentially, residual appropriately applied pesticides. But the regular grading of the ROW by UPRR would have turned the soil and created an environment for hydrocarbon materials to evaporate. David Anderson also confirmed that such incremental exposures and minor disturbances over time would have allowed for both incremental evaporation and dissipation.

No further hazardous materials assessment is anticipated to be required for trail development.

Cultural and Historic Resources

Overview

In the Concept Plan, OPRD did a preliminary evaluation of cultural and historic resources in the area. This was a desktop survey and provided a high-level overview of each community and resource in the area.

The 2014 SHPO report on this area can be reviewed in Addendum B, Wallowa Valley Cultural and Heritage Resources Report. Heritage resources were measured using criteria of heritage excellence established in the All-Star Heritage Community Program of the OPRD. Historic properties were assessed using the historic survey guidelines of SHPO. Other cultural resources considered were libraries, art centers, art galleries, theaters, community centers, Century Farms and Ranches, granges, and other cultural organizations, historic tours, and farmer's markets/stands.

Twenty-eight historic properties in the five cities (Joseph, Enterprise, Wallowa, Lostine, and Elgin) are listed in the National Register of Historic Places. Several ranger and guard stations throughout Wallowa County, along with the Nez Perce Traditional Site and Wallowa Lake (Old Chief Joseph Gravesite and Cemetery), are listed. The Old Chief Joseph Gravesite and Cemetery is also a National Historic Landmark. Because the travel corridors and river systems have been used by people since time immemorial, the rail corridor has a high probability of containing archaeological resources. Oregon Travel Experience has one Heritage Tree designation in Wallowa County. The Indian Village Grove near the Nez Perce National Historic Trail is a grove of ponderosa pines with oval scars that provide evidence of the traditional spring camp of the Nez Perce. Oregon Travel Experience also has two historical markers in the Wallowa Valley, both near Wallowa Lake. One discusses the Nez Perce and the other describes the geology of the lake.

This information is valuable to the project goals; however, specific information about resources that could potentially be impacted by trail development was required to determine how extensive the cultural resource permitting requirements would be to fulfil state and federal laws mandating the protection of such resources.

Cultural Resources Inventory Summary

In June 2016, AP conducted a cultural resource inventory for the Joseph to Enterprise Rail-with-Trail Pilot project. This included evaluating the cultural setting, historic context, available

literature, and also conducting a field assessment. This information is summarized below, and can be read in its entirety in the Cultural Resources Inventory (AP, 2016b). Some of the findings of this inventory are confidential; however, all parts included below are not.

Cultural Setting

The cultural setting is provided below, because although no cultural resources from this period were found, it is thought that information kiosks about this period of history could be a beneficial part of trail development.

The cultural setting of Oregon represents the meeting of three cultural and natural regions, each based within a distinct geographic region (Ray, 1936; Walker, 1998). Two cultural regions divide the area of Oregon east of the Cascades. To the south is the Great Basin cultural area, which represents the earliest evidence of humans in the state, and to the north is the Columbia Plateau cultural area.

Historical evidence indicates that, at least as of the nineteenth century, the Wallowa Valley fell within Nez Perce territory. Enterprise and the Wallowa Valley are part of the traditional territory of the Nez Perce Tribe and were part of the 1855 Treaty Area, delineated on the west by the Blue Mountains. Cayuse, Umatilla, and Walla Walla groups were also present in the vicinity. Various seasonal camps, fishing sites, and root digging sites were located at or near present-day Wallowa, Lostine, Enterprise, Joseph, and in the vicinity of Wallowa Lake (Suphan, 1974:44). Of these, ten consisted of temporary Nez Perce village sites between Wallowa Lake and the City of Wallowa (Chalfant, 1974).

The Nez Perce, or Niimíipu (meaning "the people"), inhabited territory centered on the middle Snake and Clearwater Rivers and the Salmon River in central Idaho and extended into northeastern Oregon and Washington. The Wal-lam-wat-kain, or Wallowa, band of Nez Perce traditionally lived in the vicinity of the project area until the late nineteenth century. The band was also known as the Joseph band and was led by Old Chief Joseph and Chief Joseph through this period.

The Cayuse homeland extended primarily along the Umatilla, Walla Walla, and Grande Ronde Rivers and north and east along the Touchet and Tucannon Rivers (Stern, 1998). The Umatilla Tribe's territory ran along the Columbia River and lower courses of other tributary streams, including the Umatilla River and Willow Creek (Stern, 1998; Suphan, 1974). The Cayuse people have long been associated with the Umatilla and Walla Walla people and, as of 1855, have resided together on the Confederated Tribes of the Umatilla Indian Reservation. The three groups utilized some of the same territory, sometimes at the same time; therefore, no strict boundaries existed between the groups (Suphan, 1974; Swindell, 1942). The three groups practiced seasonal rounds, traveling between winter village sites along the Columbia River and summer camp sites in the nearby mountains to take advantage of prime fishing, hunting, and gathering as the seasons changed (Stern, 1998).

Beginning in protohistoric times, the Cayuse adopted the horse and, along with the Nez Perce, Flathead, and others, traveled seasonally to the Great Plains to hunt for buffalo. Some Umatilla and Walla Walla groups also joined these expeditions, while others continued to mainly utilize the riverine environment. Some changes arose in these Indian groups from exposure to the

Great Plains' influence, and these changes were then introduced to the groups' western neighbors (Ray, 1939; Stern, 1998).

Historic Context

Contact with Euroamericans in the eastern Oregon region first occurred in 1805 when Lewis and Clark and their expedition traveled the Clearwater, Snake, and Columbia Rivers. Trappers and traders followed, and through the early nineteenth century, the British-owned Northwest Fur Company (NFC), the Hudson's Bay Company, and the Pacific Fur Company (PFC), owned by John Jacob Astor, competed for dominance in the region and established and bought forts along the Columbia and Snake Rivers. In 1813, the PFC failed and its assets were purchased by the NFC. The establishment of Fort Nez Percés (later Fort Walla Walla) by traders Donald MacKenzie and Alexander Ross of the NFC in 1818 gave the company a strong foothold in the Columbia River area. In 1821, the NFC was forcibly merged by the British government with the Hudson's Bay Company (Dodd, 1977).

The construction and acquisition of Forts Boise and Hall in 1834 and 1837, along with the clearing of a wagon trail to Fort Hall, caused an increase in traffic through the area. Spurred by the "Great Revival" of the 1820s and 1830s, and following the overland trail originally established by the trading companies, missionaries Reverend Jason Lee, Henry H. Spalding, and Marcus Whitman led the movement to establish missions throughout present-day Oregon, Washington, and Idaho to proselytize the area's Native American people (Dodd, 1977). In 1840, a group that may have included trappers Robert Newell and Joseph Meek arrived at Fort Walla Walla and became one of the first wagon groups to reach the Columbia River over land (Mead, 2006). Beginning in the 1840s, this route became known as the Oregon Trail.

In 1836, Marcus Whitman and his wife Narcissa established a Presbyterian mission in the Walla Walla Valley, introducing a program of Christian evangelism and guided culture change for native people in the area. However, frictions between local Cayuse groups and the Whitmans soon arose, compounded by the influx of white settlers passing through the area on the Oregon Trail and into Oregon and Washington territories. A devastating measles epidemic in 1847, and the belief that the Whitmans were responsible for it, culminated in a Cayuse uprising in which Marcus and Narcissa Whitman and eleven other white settlers were killed (Stern, 1998:413-414). The Cayuse War ensued and, while five members of the Cayuse tribe were eventually handed over to be tried for the murder of the Whitmans, sporadic conflicts continued until 1855 when a treaty was signed, setting aside a reservation for the Cayuse, Walla Walla, and Umatilla tribes in the Cayuse region of the Umatilla Valley (Stern, 1998).

In May 1877, events began to unfold that would spur what would become known as the Nez Perce War or Chief Joseph's War, which began in the Wallowa Valley and ended near Bear Paw Mountain, 40 miles from the Canadian border. Despite government assurances that they would retain their land, continuing encroachments from white settlers on Nez Perce land (granted in the 1855 Treaty with the Nez Perce) in the Wallowa Valley and other places had led to tension. A meeting was held at Fort Lapwai and General Oliver O. Howard gave the Nez Perce bands a 30-day ultimatum to move to the Lapwai Reservation or to be moved there by military force. By June 2, 1877, Chief Joseph, then leader of the Wallowa Band of Nez Perce, and others began the long move and had reached Lake Tolo near present-day Grangeville, Idaho. However, a small

group of warriors angered by the move and motivated by revenge for the killings of their relatives attacked and killed a number of white settlers. This and a subsequent raid spurred the dispatch of General Howard and his soldiers to pursue what they saw as "hostile" Nez Perce. On June 17, 1877, the Nez Perce and U.S. military forces met at White Bird Canyon and a battle ensued when a civilian volunteer shot at a Nez Perce truce party for unknown reasons. The Nez Perce then began a long defensive war as they fled 1,300 miles, winning numerous battles along the way, until their eventual defeat and relocation, some to the Lapwai Reservation and some to the Colville Reservation (Ray, 1942; Walker, 1998).

Settlers traveling on the Oregon Trail continued to migrate into the Willamette Valley and surrounding areas until the area was close to overflowing. This forced later settlers to homestead the eastern parts of the state, which had been passed over in earlier times. In 1861, gold was discovered in the vicinity of present-day Baker City, spurring a gold rush. The first permanent settlement in eastern Oregon southwest of the Blue Mountains was located at the now-defunct town of Auburn, southwest of present-day Baker City (Gaston, 1912; Hiatt, 1893). The growth of this town prompted the carving out of Baker County from the larger Wasco County, which at that time consisted of the entire eastern edge of Oregon. Baker County then encompassed the area now occupied by Baker, Malheur, Union, and Wallowa Counties. In 1864, Union County was created and, in 1887, Wallowa County was created from Union County (Mead, 2006).

From the 1860s onward, the passage of miners and emigrants through the area caused settlements to spring up along the Oregon Trail and adjoining roads as settlers sought to capitalize on this traffic. The City of Enterprise was founded in 1886, spurred by the call for a more local trading point and by a period of traffic along the road connecting the Oregon Trail to the Idaho mining districts through the Wallowa Valley (Bailey, 1982:47-48; Western Historical Publishing Company, 1902). The town had previously been known as Bennet's Flat, then as Franklin and Wallowa City, but in 1887, "Enterprise" was suggested and decided on by majority vote (McArthur and McArthur, 2003; Reavis, n. d.; Western Historical Publishing Company, 1902). In 1888, Enterprise became the County seat and a courthouse was built in 1909. Timber, livestock, and agriculture served as the main economies for the region.

The City of Joseph had previously been known as Silver Lake and Lake City. When the post office was established, these two names were thrown out due to other cities in Oregon having the same name. Matt Johnson suggested Joseph for the Nez Perce chief, Chief Joseph, and in 1880 the name was accepted (McArthur and McArthur, 2003). The City was platted in 1883, with the economy based in agriculture, particularly grain and stock. When the railroad to the City was completed in 1908, timber bolstered the economy (Bailey, 1982).

The Oregon Railroad and Navigation (OR&N) Company was originally founded by Henry Villard and was composed of several railroads and steamships, as well as several lock companies along the Willamette River (Culp, 1978:43). Villard purchased and constructed railroad lines along the Columbia River up through 1883, and in 1882 a spur line was completed from Umatilla to Oro Dell, near La Grande. The next year, Villard was forced to resign as chairman of OR&N due to significant debts amassed in trying to expand the rail lines into eastern Oregon. In 1898, UPRR purchased a majority stake in the line, and it became a subsidiary of the Union Pacific Oregon-

Washington Railroad and Navigation in 1910. In 1936, the line came under full ownership by UPRR (Deumling, 1972).

The main trunkline to La Grande was completed in 1884, followed by the 23 miles to Elgin in 1890. The 63-mile line from Elgin to Joseph (known as the Joseph Branch) began construction in 1905. The line was completed by 1908 (Eagle Cap Train Rides, 2016). Before the railroad arrived, farmers had to travel far on rugged terrain to the nearest flour mill and grist in Walla Walla, Washington. Because of the long travel, stock-raising became the most predominant form of agriculture. However, this changed when the railroad was put in and introduced the ability to sustain large-scale commercial agriculture. The railroad also allowed establishment of the timber industry in the area, and mills were established in all the major towns of the area (Barklow, 2003). The train also supported passenger travel, taking 3 hours to travel from La Grande to the Wallowa Valley (Bear Creek Press, 2004). The railroad was a major player in the economy of the region until the Great Depression, when many of the lumber mills were closed and freight trains were reduced in frequency along the line. By the late 1940s, road freight became more dominant and mail service to the area was transferred to truck rather than train routes. Passenger services were discontinued shortly thereafter. Freight trains continued to run through at least the 1960s (Barklow, 2003). The line was sold to WURA in 2003 (Eagle Cap Train Rides, 2016). In 2009, the line was used to store freight cars for the UPRR for several years.

Train depots at Enterprise and Joseph were originally built in 1908 and 1910, respectively. The Joseph Depot was eventually razed; however, the Enterprise Depot is still extant, though it was relocated to a property along Highway 82 in 1972 (Bear Creek Press, 2004).

Literature Review

A literature search of the area of potential effect (APE) and the area 2 miles around it was conducted using the Oregon Archaeological Records Remote Access database by Stephanie O'Brien on May 17, 2016. The search indicated that 26 inventories have been conducted within 2 miles of the APE, resulting in the discovery of the archaeological sites below (see Table 2). None of these cultural resources are located within or directly adjacent to the APE.

TABLE 2
CULTURAL RESOURCES LOCATED WITHIN 2 MILES OF THE APE

Cultural Resource Type	Site or Isolate Type	Site Class	NRHP Eligibility
Site	Lithic Scatter	Pre-Contact	Not Eligible
Site	Refuse Scatter	Historic	Not Eligible
Site	Industrial (Flume to Mill Pond)	Historic	Not Eligible
Site	Public Works (Wooden water pipe)	Historic	Not Eligible
Burial	Old Chief Joseph Gravesite	Historic	Listed
N/A	Rock Cairn (Possible)	Unknown	N/A
Isolate	Basalt Flake	Pre-Contact	Not Eligible

NRHP = National Register of Historic Places

Survey

In June 2016, AP conducted a cultural resource inventory for the Joseph to Enterprise Rail-with-Trail Pilot project. The inventory occurred on ODFW land and WURA railroad ROW. An intensive pedestrian survey of the entire APE was performed for this project.

Fieldwork was conducted on June 6 and 7, 2016, by Stephanie O'Brien, MA, RPA (Principal Investigator) and Tiffany Wiley, BS (Archaeological Technician). Potential impacts to archaeological resources as a result of construction include excavation, sediment disturbance, sediment compaction, and other ground-disturbing construction activities. A copy of the report is located at the SHPO in Salem.

The APE for this project consists of the ROW on each side of the existing railroad track from Joseph to Enterprise, a parcel located at Marr Pond in Enterprise, and a parcel also considered railroad ROW located north of the existing railroad track in Joseph. The APE is located in Township 2 South, Range 45 East, Sections 30 and 19 and Township 2 South, Range 44 East, Sections 1, 2, 3, 12, 13, and 24. A total of 7 miles along the railroad ROW was inventoried along with the two adjacent parcels referenced above, totaling 97.2 acres.

The inventory assesses pre-design and preliminary cultural resource conditions associated with the proposed path to guide project development. This project may involve federal funds or permits at a later point of development, in which case, Section 106 of the National Historic Preservation Act (NHPA) will be implemented. This document provides recommendations based on observed cultural resource conditions to guide future cultural resource work for the project. The inventory was also implemented to ensure compliance with state-mandated ORS 358.920(1)(a).

Findings

A structure at the Marr Pond proposed trailhead has been proposed for demolition as part of this project. This structure is a wood and corrugated metal picnic structure and shed. No maps or other archival data were located to determine the age and potential significance of this structure. Additional research may be necessary to determine if it is 50 years or older and, if so, it will have to be assessed for NRHP eligibility.

One archaeological site (refuse scatter) was located and recorded during the inventory. This site was not evaluated for NRHP eligibility. Further research may be needed to make an eligibility recommendation for the site. Until the site can be evaluated, avoidance is recommended. The site boundary should be flagged by a professional archaeologist, and heavy equipment should be kept out of the site boundary.

No isolates were discovered during the inventory.

One historic aboveground property was recorded during the inventory. The Joseph to Enterprise trail segment is recommended as a contributing feature to the larger Joseph Branch of the railroad, which is potentially eligible to the NRHP under Criterion A of the National Register Criteria for Evaluation for its role in shaping the economic history of the region and expanding agricultural possibilities in Wallowa County through the means of transportation. The proposed project is not anticipated to have adverse effects to the Joseph Branch railroad as all

development will be limited to the ROW on either side of the railroad; however, as specific design plans are developed, additional research may be necessary if components of the project will alter any historic features of the line, particularly the rail bridges.

Cultural Resources Results and Recommendations

The inventory of the Joseph to Enterprise Rail-with-Trail Pilot project resulted in the recording of one archaeological site and one historic aboveground property. The archaeological site was not evaluated for NRHP eligibility or significance. Further research may be needed to make an eligibility recommendation for the site. Until the site can be evaluated, avoidance is recommended. The site boundary should be flagged by a professional archaeologist, and heavy equipment should be kept out of the site boundary to comply with ORS 358.920(1)(a).

If the proposed project development necessitates federal funds or permits, Section 106 of the NHPA will be implemented and additional work may be necessary. Specifically, the structure at Marr Pond proposed for demolition will need to be researched to determine if it is 50 years or older and, if so, will have to be assessed for NRHP eligibility. Additionally, a historic baseline survey may be required to assess impacts to historic structures within and adjacent to the APE. Additional research may also be required to determine if specific design elements will alter any contributing features of the Joseph Branch railroad.

Preliminary Design Alternatives

To begin the engineering pre-design process, a transportation engineer visited the site to make preliminary determinations about project area features. The results of this visit were a review of typical sections and refined cost estimates. All cost estimates are included as Appendix B, Cost Estimates.

Trail Location Option

The preliminary design for the trail placement (in relation to the railroad tracks) was selected based on avoidance of wetlands, waterbodies, safety (reduction of crossings), ROW considerations, and preliminary information from landowners. See Figures 2 through 4 for an aerial overview of the trail. See Figure 6, Typical Cross Sections, for additional trail details. Beginning at the proposed Joseph trailhead (which is proposed to be located on the east side of the railroad tracks), the trail will immediately cross the railroad tracks at the same location, which will be improved for cars to cross and park in the parking lot. After being located on the west side of the railroad tracks, at the third roadway crossing it crosses to the east side of the tracks and continues to be located on that side for the majority of the length of this segment until it reaches School Street in Enterprise. At this location, it is proposed the trail crossover to the west side of the tracks and remain on the west side of the tracks until it reaches the Marr Pond trailhead, which is located on the east side of the railroad tracks. This last crossing to reach the trailhead is not located at an existing roadway crossing. To assess the safety implications and necessary permissions for each location where the trail crosses the railroad track, an ODOT Railroad-Highway Public Safety Application will need to be completed (see Figure 7, Typical Trail/Roadway Crossing Detail). A blank form is attached in Appendix C.

Trail Surface Options

Option A

Option A consists of 3 miles of a 10-foot wide paved pathway, 1.5 miles each from Joseph and Enterprise. The remaining pathway consists of a 10-foot wide gravel surface, approximately 3.3 miles total (see Figure 6). The total estimated cost for this option, including contingencies and preliminary and construction engineering, in 2016 dollars, is $3,941,000. A major advantage to this option is providing a 10-foot wide pathway along the entire length. The disadvantage to this option is the high cost due to the length of paved pathway, and keeping the pathway 10 feet wide for the entire length will require additional fill and earthwork needs. See the Option A cost estimate in Appendix B.

Option B

Option B consists of 3 miles of a 10-foot wide paved pathway, 1.5 miles each from Joseph and Enterprise. The remaining pathway consists of a 5-foot wide gravel surface, approximately 3.3 miles total (see Figure 6). The total estimated cost for this option, including contingencies and preliminary and construction engineering, in 2016 dollars, is $3,497,000. An advantage to this option is providing a partially paved pathway length from each town. The disadvantage to this option is the high cost due to the length of paved pathway. Not keeping the pathway 10 feet wide for the entire length is a major cost savings but may deter pathway usage. See the Option B cost estimate in Appendix B.

Option C

Option C consists of 2 miles of a 10-foot wide paved pathway, 1 mile each from Joseph and Enterprise. The remaining pathway consists of a 5-foot wide gravel surface, approximately 4.3 miles total (see Figure 6). The total estimated cost for this option, including contingencies and preliminary and construction engineering, in 2016 dollars, is $3,221,000. An advantage to this option is the cost savings by not installing as long of a paved pathway as Option A and B. However, this could also be seen as a disadvantage to users and may deter pathway usage. Estimated costs were also provided with Option C for installing woven wire dog-proof fence along both sides of the railroad ROW. See the Option C, With and Without Fence, cost estimates in Appendix B.

Estimated costs were also provided with Option C for installing woven wire dog-proof fence along both sides of the railroad ROW. The total estimated cost for this option with fence, including contingencies and preliminary and construction engineering, in 2016 dollars, is $3,934,000. See the Option D with Fence cost estimate in Appendix B.

Option D

The JBTC and WURA have indicated that this is the preferred alternative; however, this may change based on available funding and requirements. Option D consists of 2 miles of a 10-foot wide gravel pathway, 1 mile each from Joseph and Enterprise. The remaining pathway consists of a 5-foot wide gravel surface, approximately 4.3 miles total (see Figure 6). The total estimated cost for this option, including contingencies and preliminary and construction engineering, in

2016 dollars, is $2,850,000. An advantage to this option is the cost savings by not installing any paved pathway. However, this could also be seen as a disadvantage to users and may deter pathway usage. Pathway maintenance and upkeep for the lengths closest to towns will be increased with this option. See the Option D cost estimate in Appendix B.

Estimated costs were also provided with Option D for installing woven wire dog-proof fence along both sides of the railroad ROW. The total estimated cost for this option with fence, including contingencies and preliminary and construction engineering, in 2016 dollars, is $3,567,000. See the Option D with Fence cost estimate in Appendix B.

Bridge Options

Three bridge crossing options were considered and are discussed below.

Timber Bridge

Timber bridges were considered for all water crossings where a culvert would not be better suited. Timber bridges would be used in spans between 10 to 40 feet. Six timber bridges are estimated to be needed. See Figures 2 through 4 for the timber bridge locations and Figure 8, Conceptual Timber Trail Bridge

Steel Bridge

A steel bridge was considered for the river crossing west of Joseph. Due to the large span required over the river, a steel bridge would be more suitable than a cheaper wooden alternative. The span at this location is approximately 75 feet. See Figure 4 for the steel bridge location and Figure 9, Conceptual Prefabricated Steel Truss Trail Bridge.

Alternate Bridge (Cantilever or Rail Car)

These options were not considered in depth. These would require examination of bridge rating reports and information on the availability of rail cars. These options could potentially be used to reduce the cost of the project.

Culvert Extension Options

There are approximately 13 culvert extensions of which nine are major and four are minor. See Figure 10, Typical Culvert Extension Detail.

Trail/Roadway Crossing Options

There are approximately 12 trail/roadway crossings. It is planned that when the trail needs to switch sides of the track, it will occur at existing roadway crossings whenever possible. The proposed layout has two exceptions where new crossings may be needed. This will prevent the need to go through the process to establish new public railway crossings. A typical trail/roadway crossing detail is shown on Figure 7.

Trail Surface Options

Two different trail surfaces were considered: asphalt and gravel. Asphalt surface costs approximately 5 times as much as gravel. Due to the high cost of asphalt, the preferred alternative of Option D uses gravel surfacing for the entire trail. Figure 6 shows the typical cross sections for both trail surface options.

Marr Pond Trailhead Option

ODFW has offered the use of the Marr Pond property (Map 02S440300, Tax Lot 1500) near Enterprise for use as a trailhead. The property borders the ROW and an existing access trail used by the public, who walk the track to Marr Pond from Fish Hatchery Road or access the pond via a road from Enterprise. The pond is stocked for fishing, offers wildlife viewing, and is well used. The property currently has limited parking and no defined trails. ODFW is proposing to remove a picnic structure/shed to increase parking, improve the access road, and to develop typical trailhead amenities.

The Marr Pond proposed trailhead conceptual design and location in Enterprise is shown on Figure 1.

Joseph Trailhead Option

WURA will provide railroad-owned land (Tax Lot Map 02S45E30) adjacent to the railroad ROW for development of a trailhead. The trailhead will be funded and developed with typical trailhead amenities from other grant resources for which WURA is eligible to apply. WURA's property is located in the interior of the rail line's wye immediately north of the Joseph rodeo grounds. User demand is anticipated for equestrian use along the length the trail.

The proposed Joseph trailhead conceptual design and location is shown on Figure 1.

Amenity Options

Trash cans and benches are likely to be needed. It is anticipated that they could be placed at each major road crossing (seven locations total).

Woven wire fencing (considered) would increase the estimated option cost estimates by approximately $715,000. The Option D with Fence cost estimate includes fencing costs (see Appendix B).

Next Steps

The following sections describe some recommended next steps that may be needed to advance the pilot project.

Land Use

1. Develop TSP amendment language.
2. Conduct hearings.

3. Obtain adoption of amendments.

Outreach

1. Complete adjacent landowner surveys.
2. Continue to update the public on the project development and provide volunteer opportunities.

Management

1. Finalize the draft Operation and Management Plan for the trail.

Fundraising

1. Continue developing private/local fundraising sources and recruiting volunteers.
2. Continue applying for federal, state, and private development grants to fund trail design and construction. Complete the additional information requests from the pending Federal Lands Access Program grant application.

Design and Construction

1. Commission a topographical survey of the railroad corridor and create a digital terrain model that represents the complete three-dimensional topography of the site to be used for design engineering and permitting.
2. Conduct an additional survey of the trailheads to determine required easements and ownership of the Joseph trailhead.
3. Complete 30 percent, 60 percent, and final design, as funding allows. This includes Plans, Technical Specifications, and Contract Documents.
4. Complete the permitting process (see below), bid the project, and construct.

Permitting

1. Once design is complete, apply for a Joint Permit for areas where the trail crosses jurisdictional Waters of the U.S. (including wetlands). Both federal and state permits may be required for work below the ordinary high water elevation of those areas. In Oregon, waterways are regulated by both the USACE and the DSL. One Joint Permit Application should be prepared and submitted to both agencies to obtain the appropriate permit. The USACE would issue a federal permit for this action; therefore, the USACE, acting as the lead federal agency, must consider the potential impacts the project might have on the environment under the National Environmental Policy Act.
2. When final design is complete, land use approvals will include a floodplain development permit.
3. If wetland impacts are unavoidable, determine impacts, and submit mitigation plan if required.

4. If federal funding is obtained, complete ESA consultation. A BA will likely need to be prepared to assess impacts to federally listed threatened and endangered species and will be presented by the lead agency for the purpose of initiating consultation with National Marine Fisheries Service and the USFWS.
5. If federal funding is obtained, the lead agency should initiate Section 106 consultation using the results of the cultural resources inventory as a starting point.
6. Obtain County building permits, grading permits, and erosion control permits where applicable.
7. If more than 1 acre of disturbance is associated with this project, a DEQ Construction Stormwater 1200-C Permit may be required.

Anticipated Schedule

An application has been submitted to the FHWA for Federal Access to Public Lands funding that could be available during the 2020-21 federal fiscal year. The schedule for this project is dependent upon acquiring construction funding. The following implementation plan could be achieved assuming funding is received by January 2020. The timeline would be moved up if funding was required more quickly, and if full funding is not obtained by January 2020. The steps recommended below would be undertaken in order as funding allows.

	Item	Completion Date
1.	Complete TSP amendment process	March 2017
2.	Obtain funding	January 2020
3.	Complete design (including survey and easements)	January 2021
4.	Acquire permits for the project	July 2021
5.	Bid project	August 2021
6.	Begin construction	September 2021
7.	Finish construction and close out Joseph-to-Enterprise trail segment	September 2023

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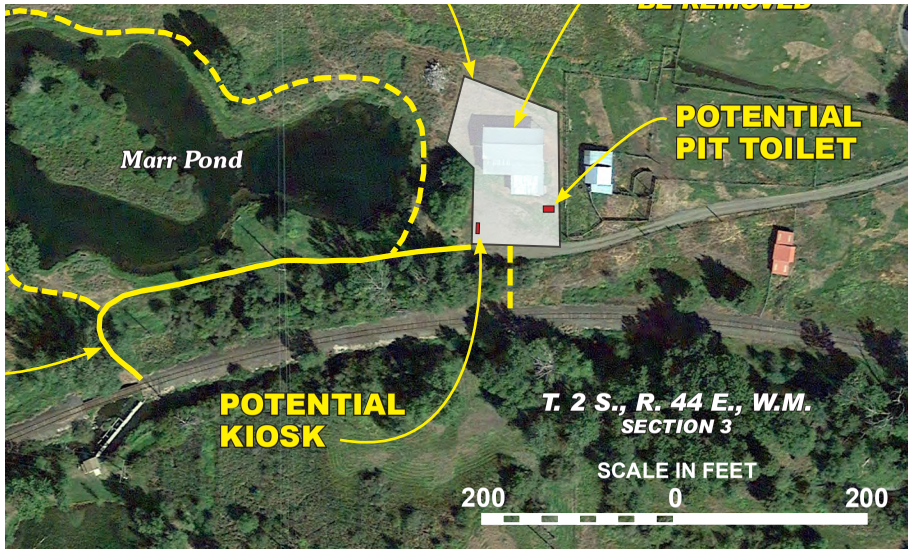
Figures



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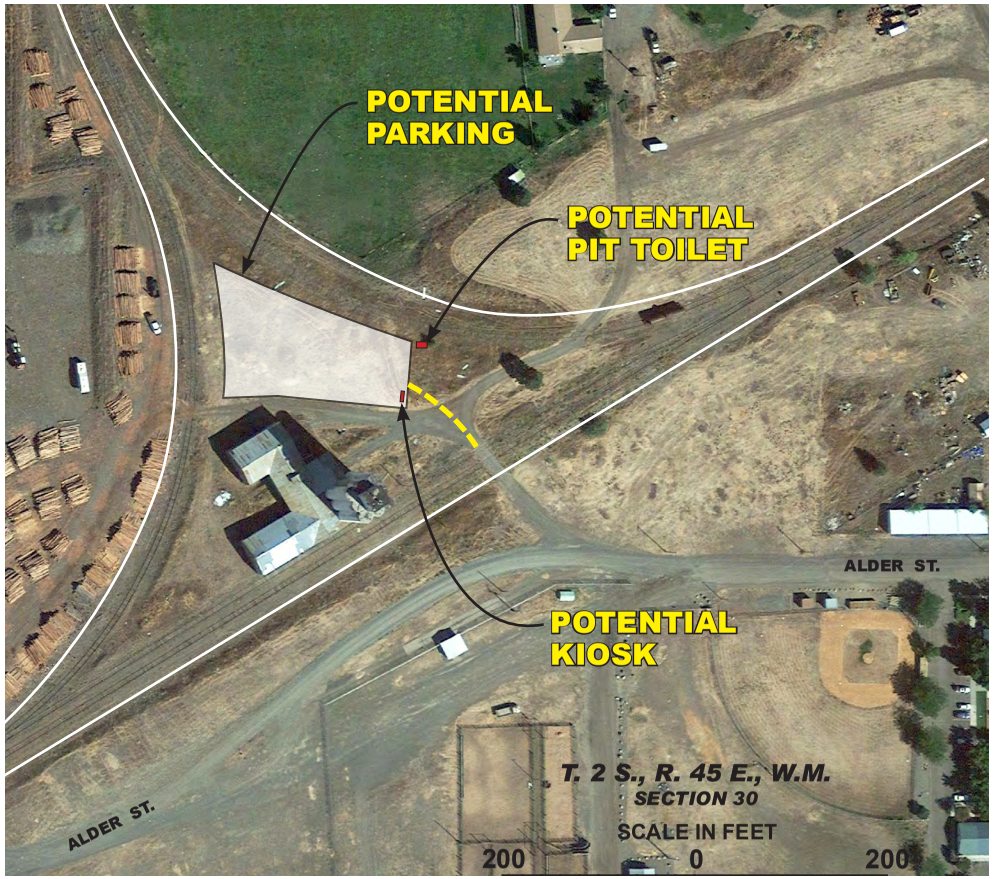

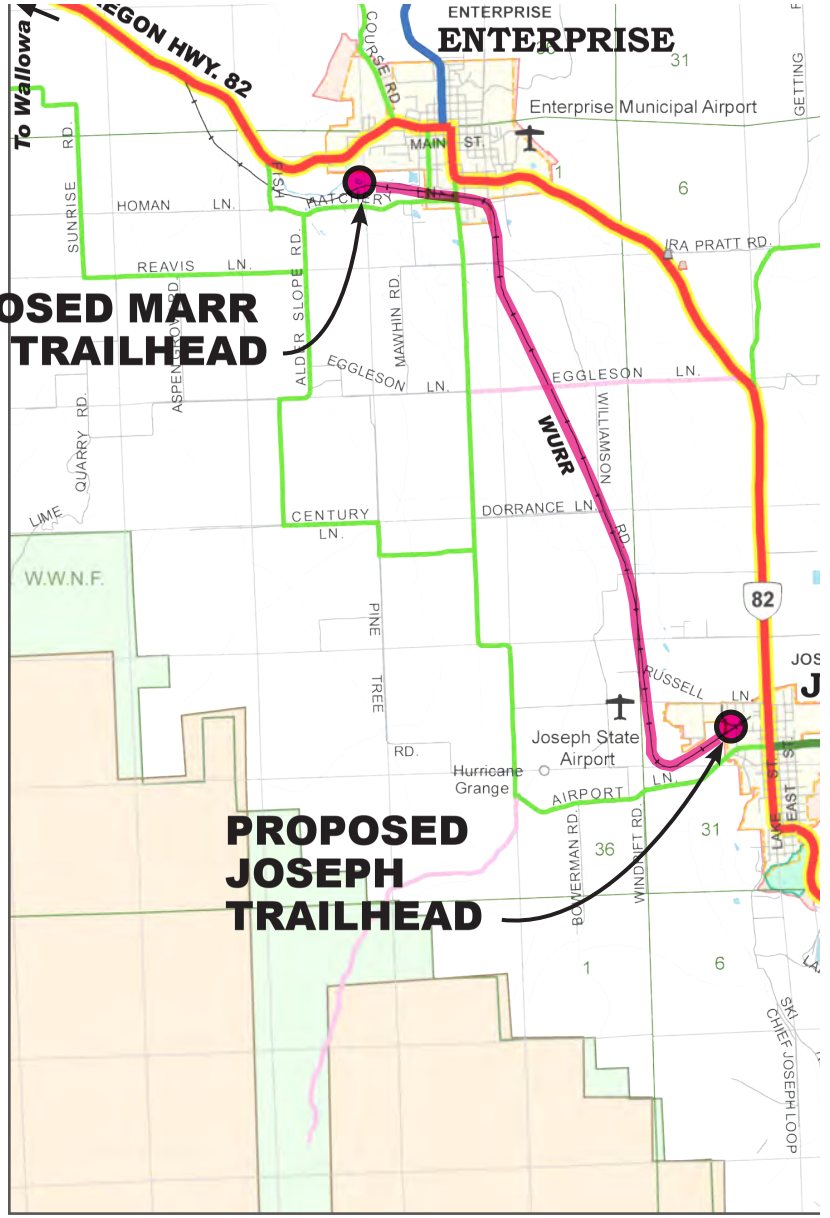

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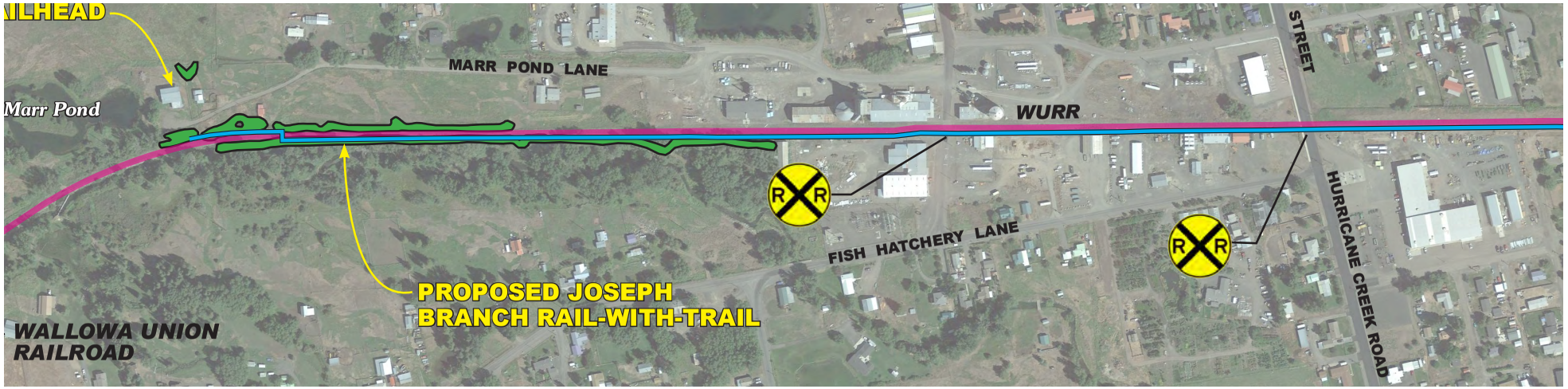

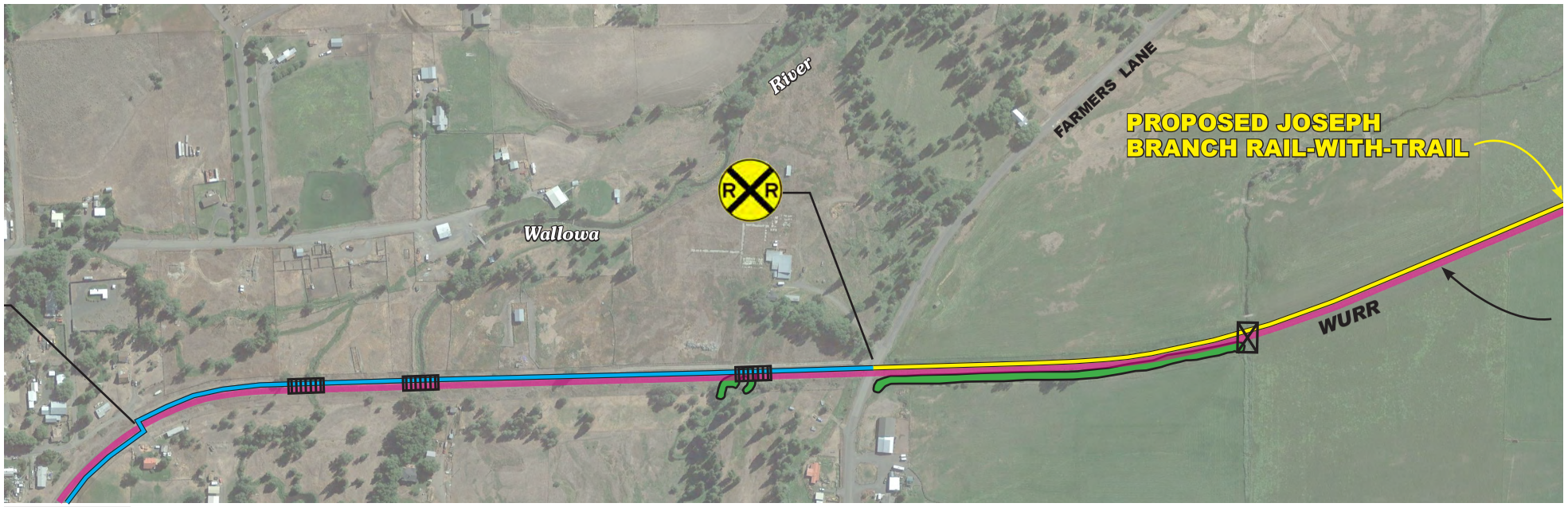

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- STEEL BRIDGE
- CULVERT EXTENSION

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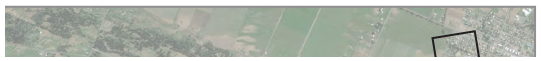

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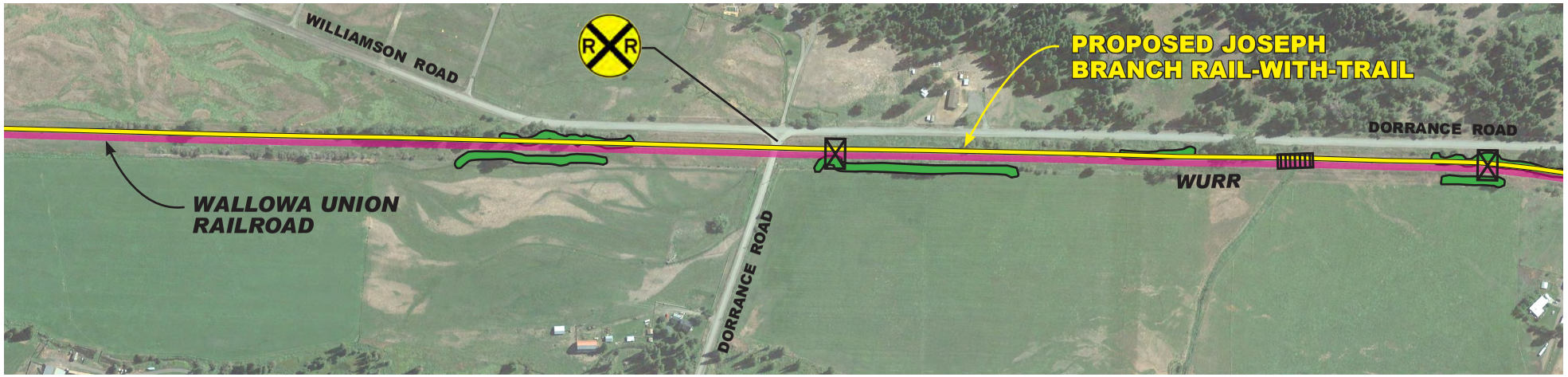

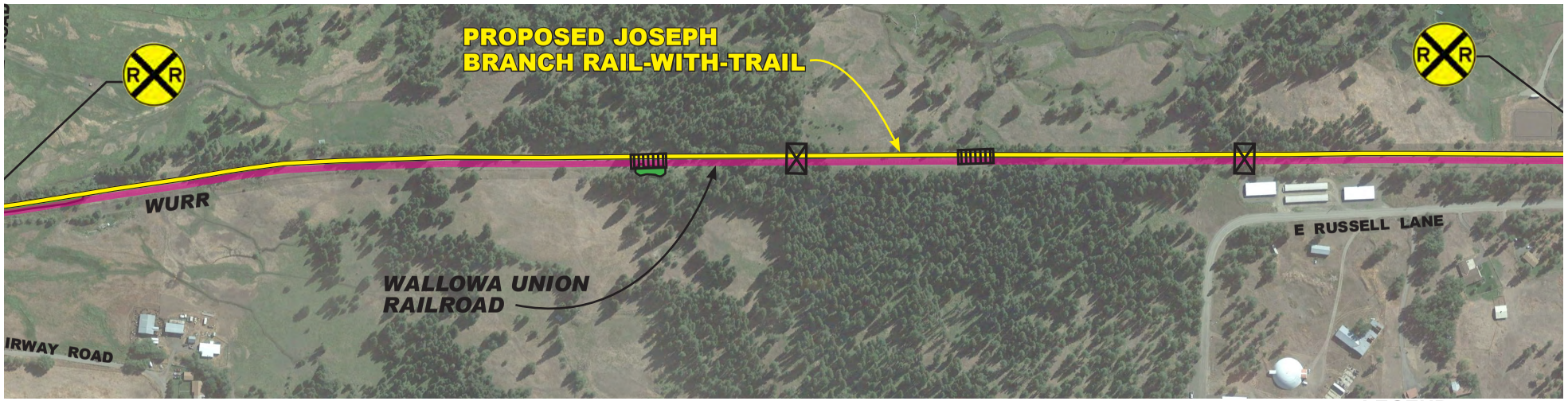

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- CULVERT EXTENSION

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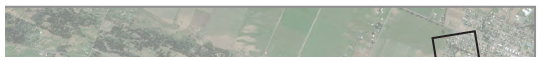

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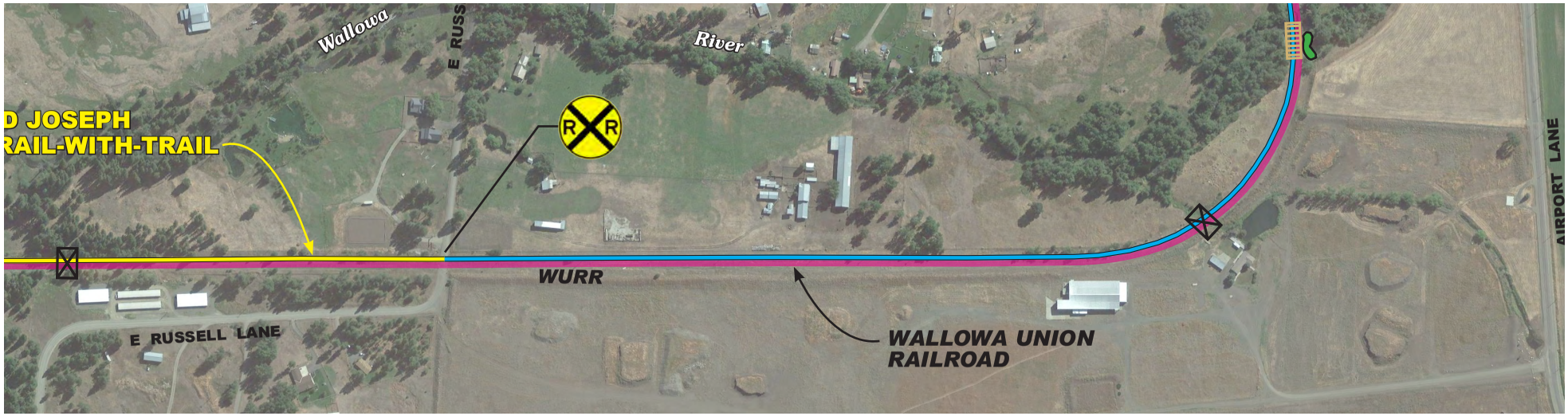

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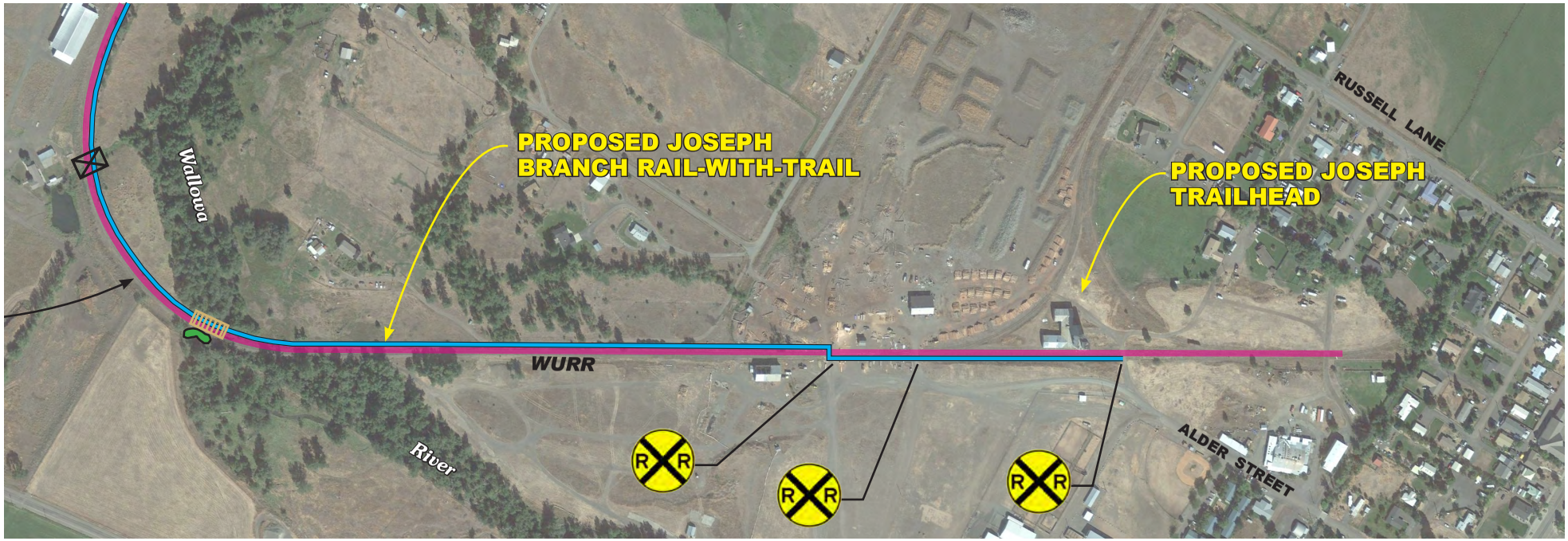

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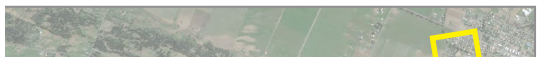

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WALLOWA UNION RAILROAD


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RIVER STREET
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FISH HATCHERY LANE
BILLINGS ROAD
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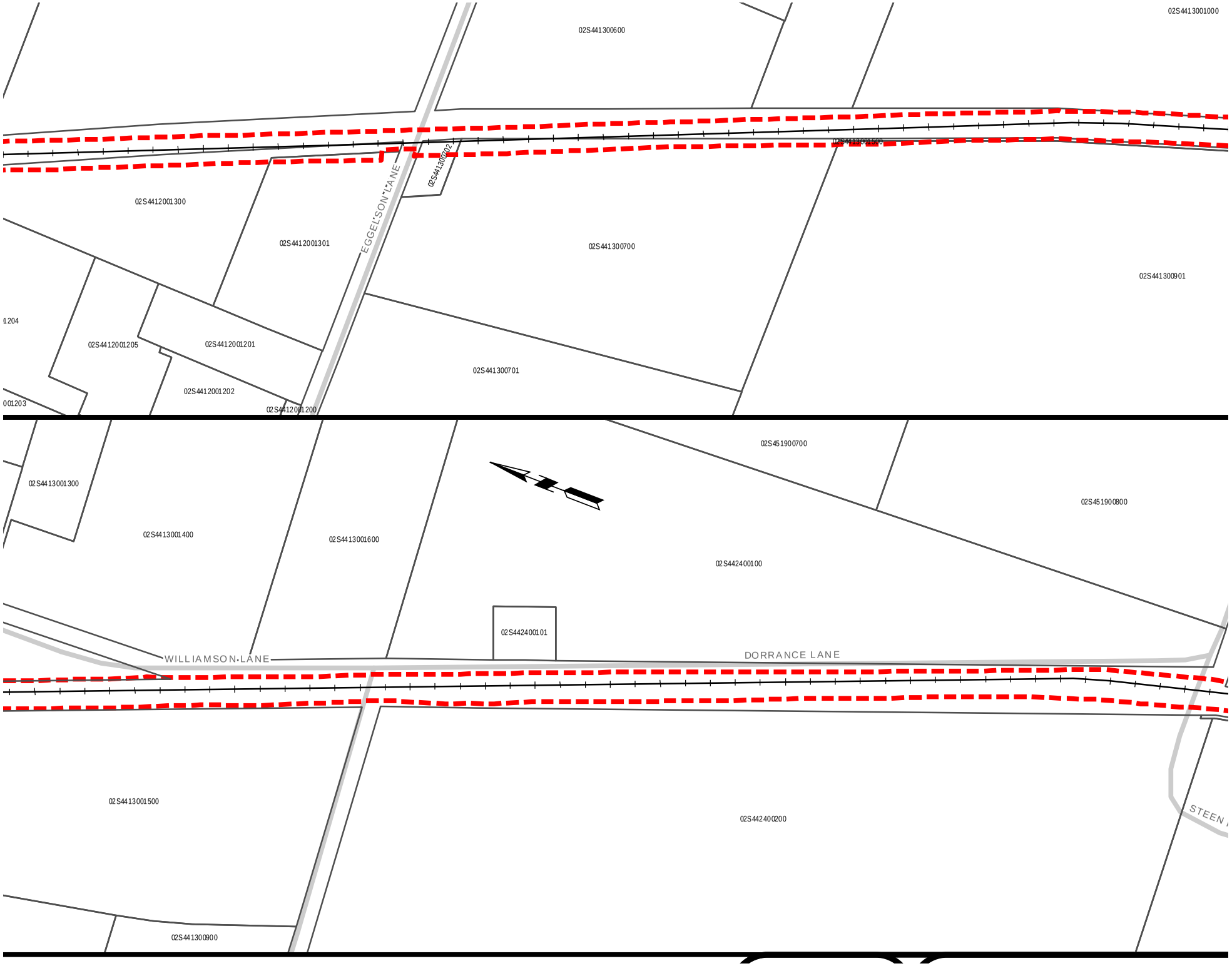
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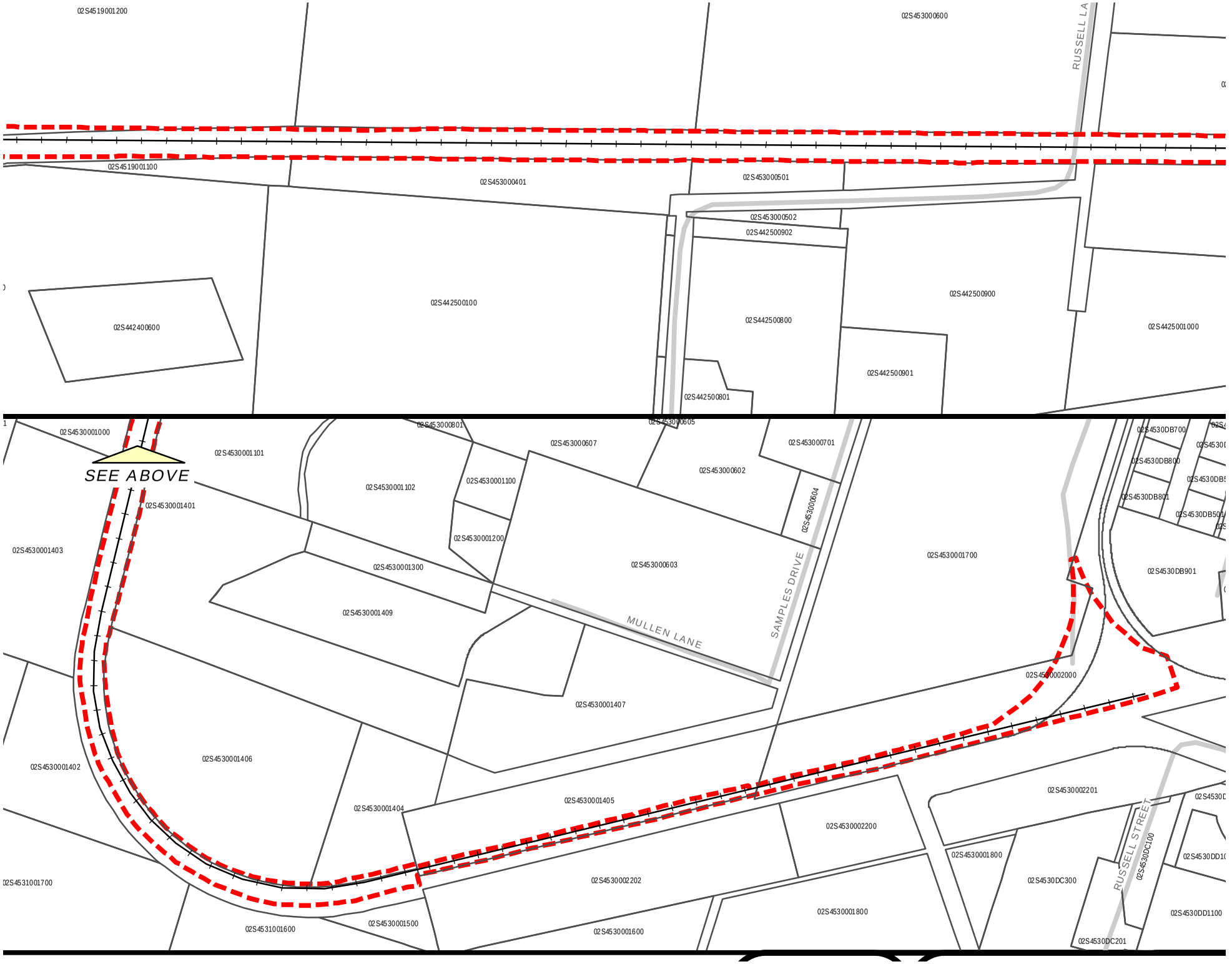
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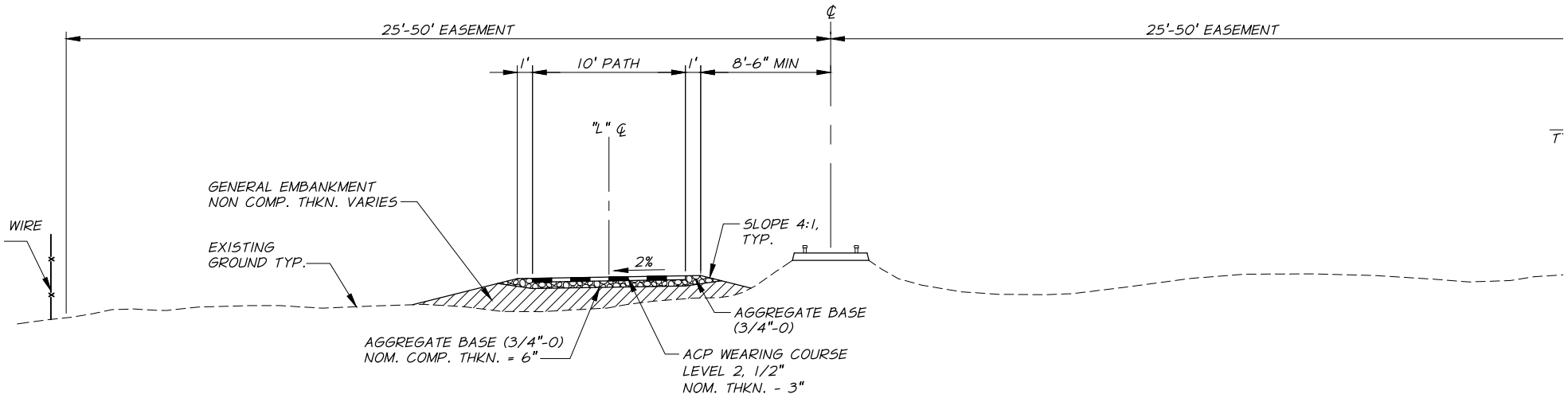

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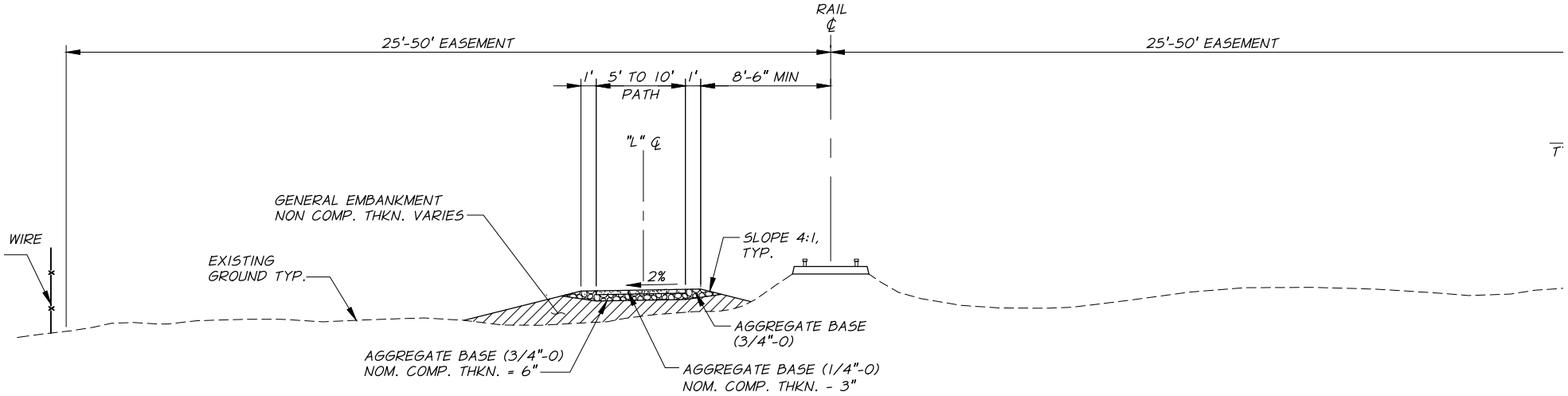
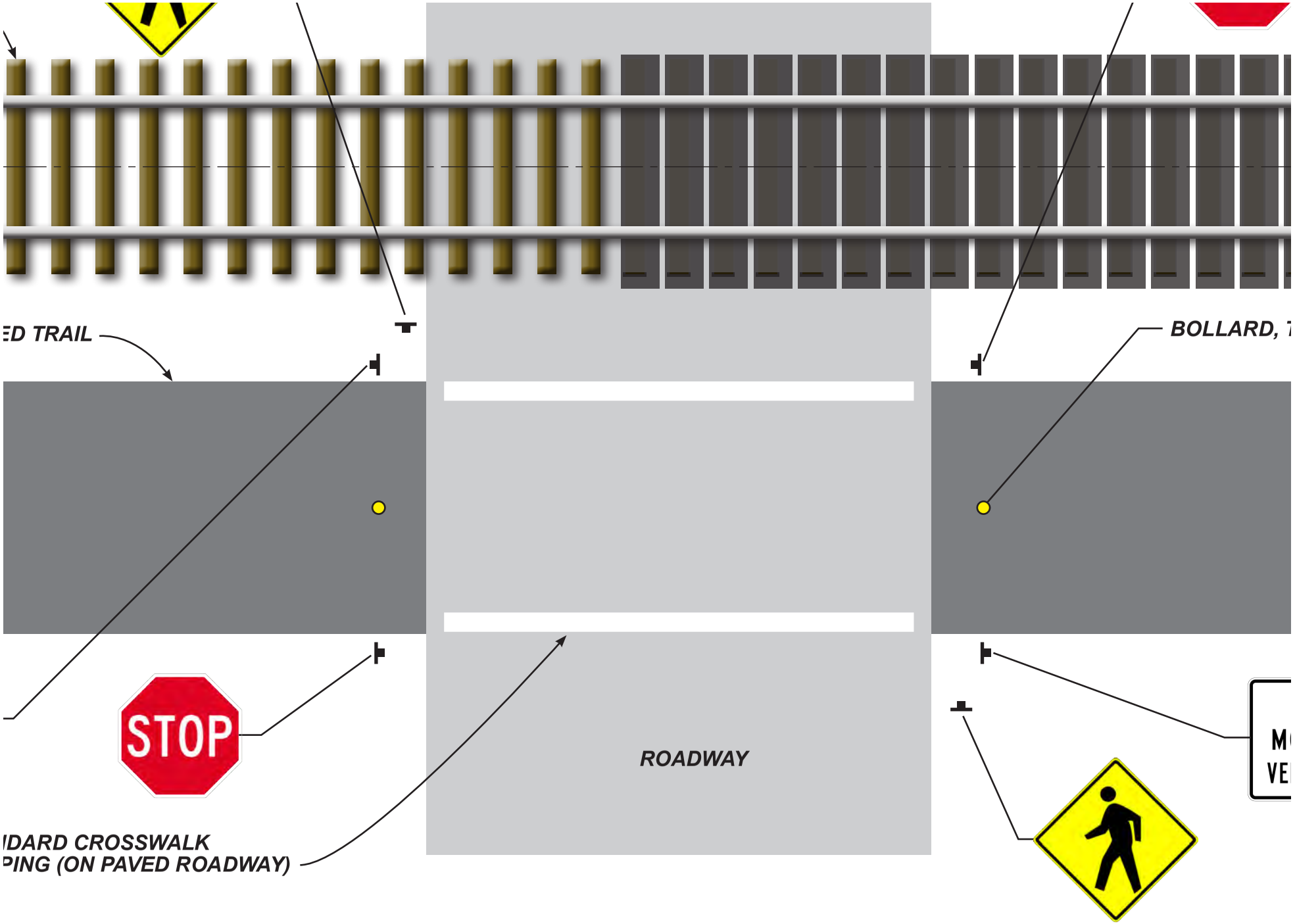


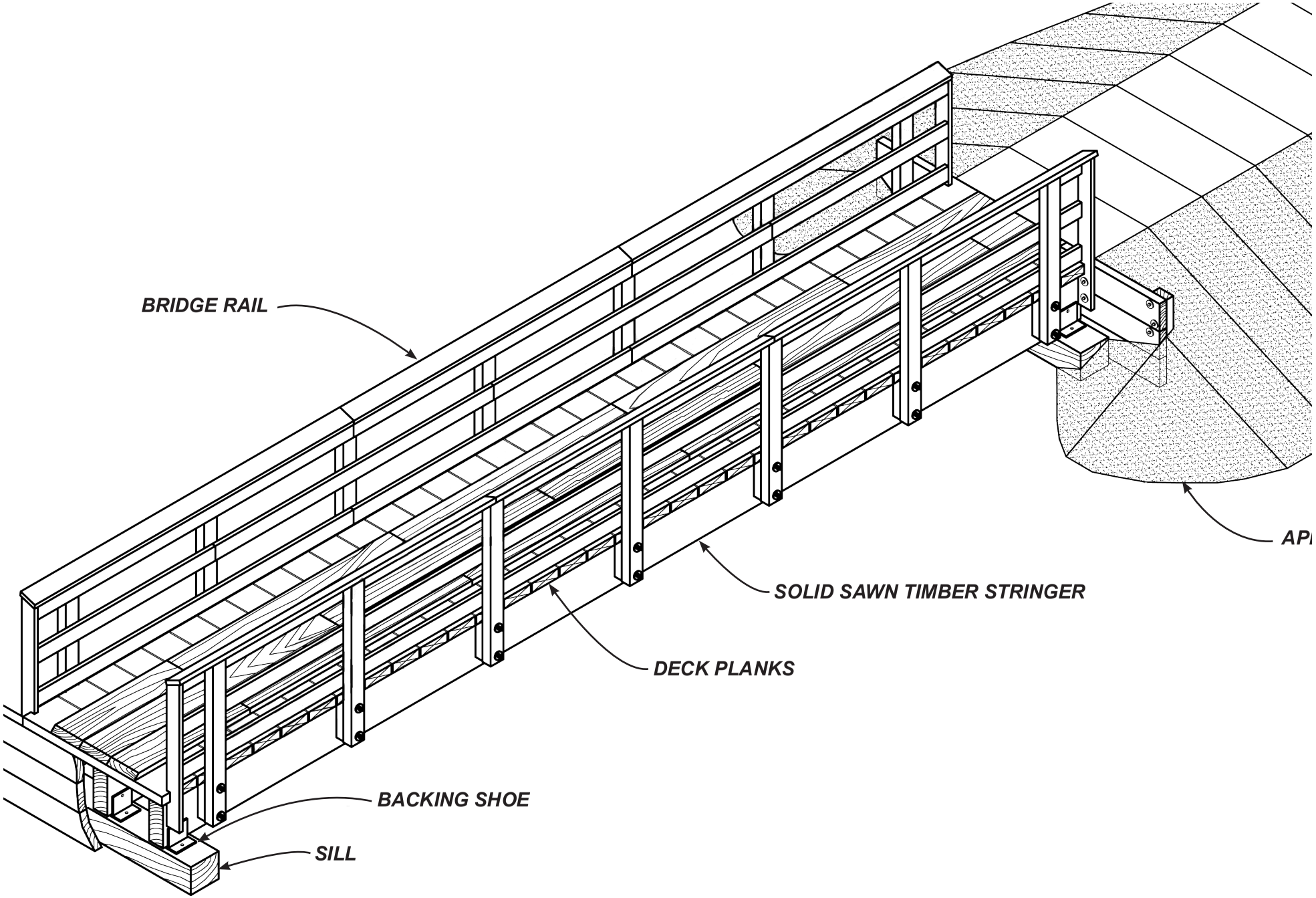
PROPOSED GRAVEL PATHWAY TYPICAL SECTION

N.T.S.



TYPICAL TRAIL/ROADWAY CROSSING DETAIL

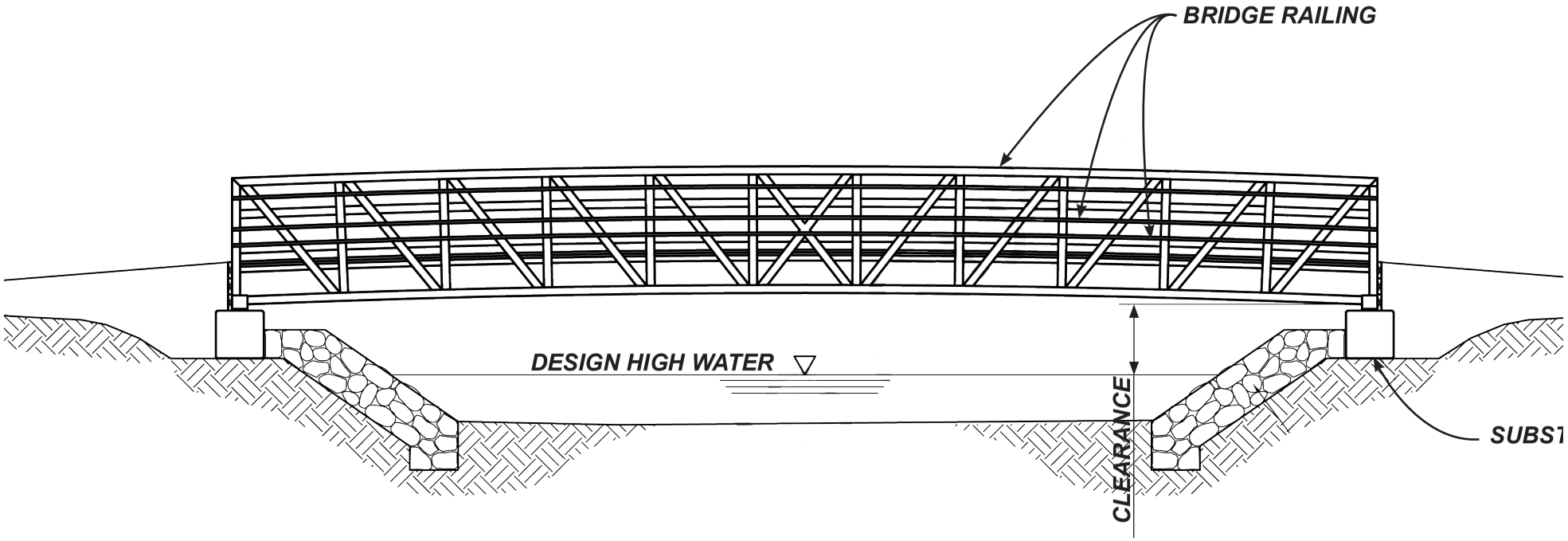
NTS



CONCEPTUAL TIMBER TRAIL BRIDGE

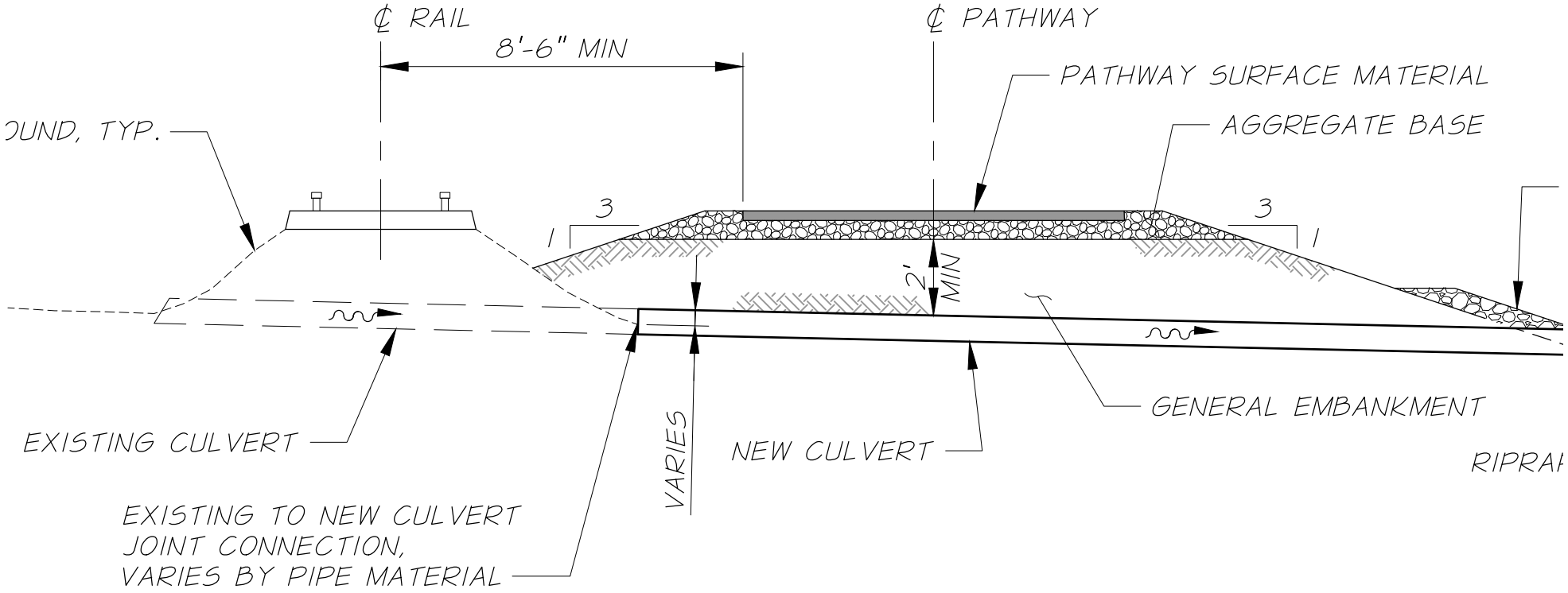
10 - 40 FEET LONG

WALLOWA UNION RAILROAD



CONCEPTUAL PREFABRICATED STEEL TRUSS TRAIL BRIDGE

100 FEET LONG OR LESS


℄ RAIL
8'-6" MIN
℄ PATHWAY
PATHWAY SURFACE MATERIAL
AGGREGATE BASE
3
1
3
1
2' MIN
VARIES
EXISTING CULVERT
EXISTING TO NEW CULVERT
JOINT CONNECTION,
VARIES BY PIPE MATERIAL
NEW CULVERT
GENERAL EMBANKMENT

Appendices Table of Contents

Appendix A Landowner Outreach Material

Appendix B Cost Estimates

Appendix C Oregon Department of Transportation Railroad-Highway Public Safety Application

APPENDIX A
Landowner Outreach Material

Draft Landowner Interview Process

Before Interview

1. Schedule interview, confirm who will be present and how much time to allow for the interview, (estimate an hour, possible an hour and a half) directions to their house, best number to reach them at on day of interview.

2. E-mail confirmation that interview(s) has been scheduled, date, and times to tedvalson@eoni.com for management/calendar purposes.

3. Review purpose of interview: share information about issues and concerns specific to their individual adjacent property.

4. Review guidelines:
   a. Assure the property owner the interview is for the purpose of collecting clarifying information for the public record;
   b. Be prepared for people to become emotional - 'yes and' ,'I've made a note of that ;
   c. Unanswerable or questions we don't have authority to answer yet– 'I'll have to get back to you on that', 'I'll look into that further';
   d. Sidetracking – how to get back on topic– 'There's something I'd like to discuss' 'Before I forget…' 'Regarding the trail…'

5. Review contact information, any written input already received and possible mitigation strategies, (take copy of previous input to the interview meeting).

6. Information to take to landowner interview: (Will be provided interviewer)
   a. Tax lot map showing property (use to locate buildings and areas requiring special attention)
   b. Copy of AP Aerials showing proposed trail siting (3 maps)
   c. Copy of materials in landowner's project file
   d. Concerns/Example Mitigation Strategies
   e. Public safety study results

During interview

1. Confirm they received the August 3 letter outlining the items to be discussed

2. Review location of trail in relation to their property, proposed width, surface, etc.

3. Use forms to take notes and mark site map with location of home and other key features. While the form is set up in a questionnaire format, it is provided as a guide to direct the conversation and for quickly recording information. Become familiar with the topics to be covered and attempt to cover the topics in a conversational mode without resorting to reading the questions. If more space is needed to record answers, use the back page of the interview form, noting the Q number.

4. Review prior concerns, any additions; Q-1 to start the interview

5. What features of their property might amplify their concerns? (Q-5) Walk property and locate and discuss these features if the property owner wishes. Record the features approximate location on the tax lot map.

6. Discuss site specific and generic suggestions for how to mitigate their concerns (Q-19) (interviewers could prep in advance with information on mitigation measures used in other places relative to issues that have already been shared through input forms) and get their feedback as well as their ideas/suggestions for mitigation.

7. Confirm how they would like to be kept involved/informed in the future – email, mail, etc.

After Interview

Type up handwritten notes in form and upload to online to Dana Kurtz at dkurtz@andersonperry.com> and Terry Edvalson at tedvalson@eoni.com.

Property Owner Interview Form
(Interviewer to record responses.)

Q-1 You have sent your concerns and issues statement to be included in the public record. (*Show the property owner what we have in the record.*) Is there any other concerns or issues you would like to address at this time to be included in the public record?

Q-2 What is the approximate distance of buildings and equipment storage areas on your property from the trail? *(Have property owner place the buildings and equipment area locations on the tax map. Accept whatever unit of measure the property owner uses.)*

a. Residence(s) 1. _____ 2. _____
b. Barn _____
c. Equipment Storage Building(s) 1. _____ 2. _____
d. Shop Building(s) 1. _____ 2. _____
e. Other Building(s) (Describe use
_____
f. Equipment Storage Area _____

Q-3 Is or will equipment ever be stored in a field near the trail?

a. _____ Yes
b. _____ No *(If no, go to Q-5)*

Q-4 If yes, when

a. _____ Always
b. _____ Only when working in the field

Q-5 Are there special attractions on your property that might cause people to trespass or seek permission to come on to your property? (An example: People wanting to cross your property to get to the Wallowa River for fishing.)

a. _____ Yes
b. _____ No *(If no, to to Q-7)*

Q-6 If yes, please describe the attraction or attractions. _____
_____
_____
_____
_____

Q-7 Have you had problems with people trespassing on your property in the past?

a. _____Yes
b. _____ No (if no, go to Q-9)

Q-8 If yes, how frequently and for what reasons, if you know?

_____
_____
_____
_____

Q-9 What are the possible easy access points to your property from the proposed trail and county roads that create a potential for trespass?

_____
_____
_____
_____

Q-10 Have you been a victim of crime on your property because of trespass?

a. _____ Yes
b. _____ No (*If no, go to Q-12.)*

Q-11 If yes, what was the crime(s) and when did it/they occur?

_____
_____
_____
_____

Q-12 How are the fields immediately alongside the railroad right of way used generally?
Spring:_____
_____
Summer:_____
_____
Fall:_____
_____
Winter: _____
_____

Q-13 What is the condition of your fences along the railroad right of way at this time?

a. _____ Excellent
b. _____ Good
c. _____ Fair
d. _____ Poor (*If the property owner suggests the condition of fencing is poor*, *Q-13*.)

Q-14. Are there specific problems with your fencing you would like us to call to the attention of the Railroad Authority?

_____
_____
_____
_____

Q-15 Does your property presently receive water runoff from the railroad right of way that causes you problems?

a. _____ Yes
b. _____ No (*If no, go to Q-17.*)

Q-16 If yes, please indicate the location of the water flow problem on the tax map.

Q-17 Your concerns and issues noted on your response form or in other correspondence or in comments at meetings to be included in the public record are: *(Fill out check list prior to the interview session. Don't read the entire list to the property owner. Only deal with those issues he/she has raised.)*

a. ____ Loss of privacy
b. ____ Hours of operation
c. ____ Dogs
d. ____ Trespass
e. _____ Liability
f. ____ Littering
g. _____ Crime
h. _____ Hazing or upsetting livestock
i. _____ Spreading of noxious weeds
j. _____ Misunderstanding of farming practices
k. _____ Potential water intrusion from trail on to property
l. _____ Disruption or negative changes in irrigation ditches/sources
m. _____ Other (*Please specify*) _____
_____

Q-18 Have any of these concerns or issues been adequately addressed in any of the trail meeting you have attended or by other information you have come across?

a. _____ Yes
b. _____ No

Q-19 In looking at the example mitigation strategies on the handout if just handed you, would any of these strategies work to ease your concerns or issues? If not, are there other strategies available that might ameliorate your concerns? *(Examples: 1. Only allow dogs on leashes, require that dog owners be responsible for picking up after their dogs, close the trail entirely to dogs if their presence on the trail is determined to be a problem.)*

Concern	Record Other Mitigation Strategies Suggestions
a. Loss of privacy	
b. Hours of operation	
c. Dogs	
d. Trespass	
e. Liability	
f. Littering	
g. Crime	
h. Hazing or upsetting Livestock	
i. Spreading of weeds	
j. Misunderstanding of farming practices	
k. Potential water intrusion from trail on to property	
l. Disruption or negative changes in irrigation ditches/sources	
m. Other	

Interviewer Instructions

Q-7 What are the possible easy access points to your property from the trail and nearby county roads that create a potential for trespass?

APPENDIX B
Cost Estimates

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION A

June 17, 2016

3.0 mile - 10-foot wide paved D path
3.3 mile - 10-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$249,000	$249,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$24,900	$24,900
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	60,000	$10	$600,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	19,100	$18	$343,800
Aggregate Base (1/4"-0)	Ton	3,600	$20	$72,000
Asphalt Concrete Pavement	Ton	3,400	$100	$340,000
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 449,000
Total Estimated Construction Cost	$ 2,493,860	
Construction Contingencies (20%)	$ 499,000	
Construction Engineering (20%)	$ 499,000	
Total CE and Construction:		$ 3,491,860
Total Estimate (2016 Costs):		**$ 3,941,000**

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION B

June 17, 2016

3.0 mile - 10-foot wide paved D path
3.3 mile - 5-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$221,000	$221,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$22,100	$22,100
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	45,000	$10	$450,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	15,500	$18	$279,000
Aggregate Base (1/4"-0)	Ton	1,800	$20	$36,000
Asphalt Concrete Pavement	Ton	3,400	$100	$340,000
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 399,000
Total Estimated Construction Cost	$ 2,212,260	
Construction Contingencies (20%)	$ 443,000	
Construction Engineering (20%)	$ 443,000	
Total CE and Construction:		$ 3,098,260
Total Estimate (2016 Costs):		**$ 3,497,000**

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION C - With Fence

June 17, 2016

2.0 mile - 10-foot wide paved D path
4.3 mile - 5-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$249,000	$249,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$24,900	$24,900
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	41,000	$10	$410,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	14,500	$18	$261,000
Aggregate Base (1/4"-0)	Ton	2,400	$20	$48,000
Asphalt Concrete Pavement	Ton	2,300	$100	$230,000
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000
Woven Wire Fence	Foot	67,000	$6	$402,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 449,000
Total Estimated Construction Cost	$ 2,489,060	
Construction Contingencies (20%)	$ 498,000	
Construction Engineering (20%)	$ 498,000	
Total CE and Construction:		$ 3,485,060
Total Estimate (2016 Costs):		**$ 3,934,000**

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION C

June 17, 2016

2.0 mile - 10-foot wide paved D path
4.3 mile - 5-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$204,000	$204,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$20,400	$20,400
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	41,000	$10	$410,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	14,500	$18	$261,000
Aggregate Base (1/4"-0)	Ton	2,400	$20	$48,000
Asphalt Concrete Pavement	Ton	2,300	$100	$230,000
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 367,000
Total Estimated Construction Cost	$ 2,037,560	
Construction Contingencies (20%)	$ 408,000	
Construction Engineering (20%)	$ 408,000	
Total CE and Construction:		$ 2,853,560
Total Estimate (2016 Costs):		**$ 3,221,000**

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION D with Fence

June 17, 2016

2.0 mile - 10-foot wide gravel D path
4.3 mile - 5-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$226,000	$226,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$22,600	$22,600
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	41,000	$10	$410,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	14,500	$18	$261,000
Aggregate Base (1/4"-0)	Ton	3,500	$20	$70,000
Asphalt Concrete Pavement	Ton	0	$100	$0
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000
Woven Wire Fence	Foot	67,000	$6	$402,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 407,000
Total Estimated Construction Cost	$ 2,255,760	
Construction Contingencies (20%)	$ 452,000	
Construction Engineering (20%)	$ 452,000	
Total CE and Construction:		$ 3,159,760
Total Estimate (2016 Costs):		**$ 3,567,000**

JOSEPH BRANCH RAIL-WITH-TRAIL
SCOPING LEVEL COST ESTIMATE

OPTION D

June 17, 2016

2.0 mile - 10-foot wide gravel D path
4.3 mile - 5-foot wide gravel B path

Cost Breakdown/Quantities

	UNIT	QUANTITY	UNIT PRICE	ESTIMATED COST (2016)
Mobilization (10%)	LS	1	$180,000	$180,000
Temporary Protection and Direction of Traffic (1%)	LS	1	$18,000	$18,000
Erosion Control	LS	1	$20,000	$20,000
Pollution Control Plan	LS	1	$4,000	$4,000
Clearing and Grubbing	Acre	20	$6,000	$120,000
General Embankment	CuYd	41,000	$10	$410,000
Removal of Structures and Obstructions	LS	1	$10,000	$10,000
Aggregate Base (3/4"-0)	Ton	14,500	$18	$261,000
Aggregate Base (1/4"-0)	Ton	3,500	$20	$70,000
Asphalt Concrete Pavement	Ton	0	$100	$0
Bridges	LS	1	$300,000	$300,000
Major Culvert Extension	Each	9	$5,000	$45,000
Minor Culvert Extension	Each	4	$2,500	$10,000
Retaining Wall	SqFt	2,000	$50	$100,000
Trailhead System	Each	2	$75,000	$150,000
Rail Crossing	Each	3	$2,500	$7,500
Remove and Relocate Existing Fence	LF	2,000	$15	$30,000
Revegetation	Acre	20	$2,000	$40,000
Signing	SqFt	330	$20	$6,600
Pavement Marking	LF	120	$0.50	$60
Benches with Trash Can	Each	7	$3,000	$21,000

Cost Estimate Summary

Preliminary Engineering (15%)		$ 325,000
Total Estimated Construction Cost	$ 1,803,160	
Construction Contingencies (20%)	$ 361,000	
Construction Engineering (20%)	$ 361,000	
Total CE and Construction:		$ 2,525,160
Total Estimate (2016 Costs):		**$ 2,850,000**

APPENDIX C
Oregon Department of Transportation
Railroad-Highway Public Safety Application

Oregon Department of Transportation

RAILROAD-HIGHWAY PUBLIC CROSSING SAFETY APPLICATION

☐ Draft
☐ Final*
** Includes signature*

INSTRUCTIONS

If you need assistance in completing this form, please call the Rail and Public Transit Division in Salem at (503) 986-4321.

Check one of the following items. Complete Section 1, plus the section listed for that item. Only sections for checked items will appear on the following pages.

☐ 1. Closure of an existing railroad-highway public at-grade crossing. ORS 824.206

☐ 2. Alteration or relocation of an existing public highway at an existing railroad-highway at-grade crossing. ORS 824.206

☐ 3. Alteration or relocation of existing railroad track(s) at an existing public highway at-grade crossing. ORS 824.206

☐ 4. Alteration of an existing separated railroad-highway public crossing. ORS 824.210

☐ 5. Alteration of an existing railroad-highway public at-grade crossing by adding warning devices, including installation of automatic signals at a crossing. ORS 824.206

☐ 6. Construction of a new public highway/pathway across an existing railroad track at grade. (Includes converting a private crossing to a public crossing.) ORS 824.204

☐ 7. Construction of a new railroad track or tracks across an existing public highway at grade. ORS 824.204

☐ 8. Construction of a new public highway above or below the grade of an existing railroad track. (Includes converting a private crossing to a public crossing.) ORS 824.210

☐ 9. Construction of a new railroad track or tracks above or below the grade of an existing public highway. ORS 824.210

Definitions:

- “Agency” means any state board, commission, department, or division thereof, or officer authorized by law to make rules or to issue orders, except those in the legislative and judicial branches.
- “APPLICANT” means a Public Authority in Interest or Railroad entitled under ORS 824.204, ORS 824.206 and ORS 824.210 to file an application for a crossing Order, seeking authority to construct, relocate, alter or close a railroad highway crossing. An APPLICANT is a PARTY.
- “Draft application”: A completed, but unsigned, application for a crossing Order submitted by an Applicant seeking advance review of the application by “staff.”
- “Highway” includes all roads, streets, alleys, avenues, boulevards, parkways and other places in this state actually open and in use, or to be opened and used for travel by the public. [ORS 824.200 (2)]
- “Party” means:
  a. Any person or agency entitled as a right to a hearing before the agency.
  b. Any person or agency named by the agency to be a party; or
  c. Any person petitioning to participate before the agency as a party or in a limited party status whom the agency determines either has an interest in the outcome of the agency's proceeding or represents a public interest in such result.
- “Person,” except as provided in ORS 823.037, means any individual, partnership, corporation, association, governmental subdivision or public or private organization of any character other than an agency.
- “Protective device” means a sign, signal, gate or other device to warn or protect the public, installed at or in advance of a railroad-highway crossing [ORS 824.200 (5)].
- “Public authority in interest”, except in proceedings under ORS 824.236, means the state, county, municipal or other governmental body with jurisdiction over the highway crossing the railroad track. In proceedings under ORS 824.236, “public authority in interest” means the county, municipal or other governmental body that has primary zoning authority over the lands served by the crossing. [ORS 824.200 (6)].
- “Railroad” is defined in ORS 824.020, and includes logging and other private railroads.
- “Railroad Company” is defined in ORS 824.200 (8).
- “Staff” means any employee of the Department of Transportation's Rail and Public Transit Division.
- "Interested agency/person" is an individual, agency, or organization that is copied on docket information but does not have party status.

Oregon Department of Transportation

RAILROAD-HIGHWAY PUBLIC CROSSING SAFETY APPLICATION

ODOT CROSSING NO.
US DOT NO.

Rail and Public Transit Division
555 13th St. NE, Ste. 3
Salem, OR 97301

SECTION 1: APPLICATION INFORMATION

This section must be filled out completely by applicant.

1.1 Applicant contact information

APPLICANT NAME			PHONE
ADDRESS			FAX
CITY	STATE	ZIP	E-MAIL
CONTACT PERSON			PHONE

1.2 Construction contract status

☐ This project is to be constructed under a contract let by ODOT Highway Division.

1.3 Crossing information

This information can be found at http://wpdotappl21.odot.state.or.us/transgis

STREET OR HIGHWAY NAME	RAILROAD NAME
CITY	NAME OF TRACK
COUNTY	RAILROAD MILEPOST
ROAD AUTHORITY	PHONE

1.4 Railroad and public authority information

List contact information for the railroad and road authority directly affected by the project. (See definitions of "party," "public authority," "railroad" and "interested agency/person.") *Note: Pursuant to ORS Chapter 824, only a railroad or a public authority may file an application seeking authority to construct, relocate, alter, or close a railroad-highway crossing.*
To add another public authority, interested agency, or interested agency/person, click the "Add Another" button.

Railroad

NAME			CONTACT PERSON NAME	TITLE
ADDRESS			E-MAIL	
CITY	STATE	ZIP	PHONE	

Public Authority

NAME			CONTACT PERSON NAME	TITLE
ADDRESS			E-MAIL	
CITY	STATE	ZIP	PHONE	

1.5 Describe or attach the scope of the proposed project in detail:

1.6 Provide plans, profiles, and cross-section drawings of the proposed construction.

Engineered plans must be signed and sealed by a professional engineer (P.E.).

Number of plans attached .....

1.7 Will a separated crossing be constructed? ..... ☐ Yes ☐ No

1.8 Is there an alternate access route to the area to be served by the crossing? ..... ☐ Yes ☐ No

1.9 What is the purpose and need for the project?

1.10 Upon completion of the project, will it be possible to close any existing grade crossings in the area? ☐ Yes ☐ No

EXPLAIN

If yes, check Question 1 on Page 1 and complete Section 4.

SECTION 2: AT-GRADE PUBLIC CROSSING

2.1 Physical description of crossing

2.1.1 The Highway

Alignment: Describe the highway alignment for 500 feet on each approach

☐ North *or* ☐ East of the track	DESCRIPTION
☐ South *or* ☐ West of the track	DESCRIPTION

Width: Describe the roadway cross-section configuration (must agree with plans):

From: ☐ North *or* ☐ East **To:** ☐ South *or* ☐ West		**Present configuration** (width in feet)	**After construction** (width in feet)	**Surface type** (after construction)
Sidewalk.....				
Buffer (grass) strip.....				
Curb (include gutter).....				
Shoulder.....				
Bikeway.....				
Lanes.....	NUMBER			
Lanes.....	NUMBER			
Median				
Lanes.....	NUMBER			
Lanes.....	NUMBER			
Bikeway.....				
Shoulder.....				
Curb.....				
Buffer (grass) strip.....				
Sidewalk.....				

Profile

OAR 741-120-0020 states that the roadway approach at a distance of 30 feet minimum from the outside rail cannot be more than 3 inches lower or 3 inches higher than the top of the rail.

Will the roadway approaches comply with OAR-741-120-0020? ..... ☐ Yes ☐ No

Sidewalks

Sidewalks must comply with the Americans with Disabilities Act (ADA) by providing safe, fully accessible facilities

Will the sidewalks comply with the ADA? ..... ☐ Yes ☐ No

Adjacent Roadways Within 500 feet (List public authority(ies) in interest in Section 1.4)

– Public roadway intersecting ☐ South *or* ☐ West of the track

NAME OF ROADWAY	DISTANCE FROM TRACKS
PUBLIC AUTHORITY IN INTEREST	TRAFFIC VOLUME AADT

– Public roadway intersecting ☐ North *or* ☐ East of the track

NAME OF ROADWAY	DISTANCE FROM TRACKS
PUBLIC AUTHORITY IN INTEREST	TRAFFIC VOLUME AADT

Describe private driveways within 100 feet of the nearest rails and show on plans:

DESCRIPTION

Are traffic signals (to be) installed at either of the the above intersections? ..... ☐ Yes ☐ No

Vehicular Use of the Crossing

Average daily vehicle traffic count		PRESENT	ANTICIPATED	
Vehicle speed for each approach.		☐ One-way	☐ Two-way	
☐ North *or* ☐ East of the track:	MILES PER HOUR	☐ South *or* ☐ West of the track:	MILES PER HOUR	

2.1.2 The Railroad

List track from North or East to South or West:

	NAME OF TRACK	ANGLE OF INTERSECTION	ELEVATION RELATIVE TO ADJACENT TRACK (MULTIPLE TRACK CROSSING)	DISTANCE FROM ADJACENT TRACK (MULTIPLE TRACK CROSSING)	ALIGNMENT TO CROSSING	NEAREST SWITCH CLOSER THAN 3000 FEET
1						

Train use of crossing

Daily train movements over the crossing, average per day:

NAME OF TRACK	NUMBER OF MOVEMENTS	MAXIMUM SPEED AUTHORIZED	TYPICAL TRAIN SPEED OBSERVED	AVERAGE MAKEUP OF TRAIN (NO. OF CARS)
Freight train				
Passenger train				
Switching movement				

Devices to be installed at crossing

	MUTCD/ODOT REFERENCE	WHO WILL FURNISH THE DEVICE? (LIST QUANTITY		WHO WILL INSTALL THE DEVICE? (LIST QUANTITY)		WHO WILL MAINTAIN THE DEVICE AND PAY FOR MAINTENANCE? (LIST QUANTITY)		RESPONSIBILITY FOR COST OF FURNISHING AND INSTALLING THE DEVICE (INDICATE SOURCE OF FUNDS AND PERCENTAGE OF RESPONSIBILITY; MUST EQUAL 100%)			
	DEVICE CODE | DEVICE DESCRIPTION	RR	PA	RR	PA	RR	PA	RR	PA	OTHER	DESCRIBE OTHER
1											

SECTION 3: SEPARATED CROSSINGS

3.1 At the crossing, will the highway be above or below the railroad tracks? ..... ☐ Above ☐ Below

If the highway is to be below the railroad, describe the protection for vehicles at the bridge abutments:

DESCRIBE

3.2 The structure will be constructed by:..... ☐ Railroad ☐ Public Authority in Interest

The cost of construction will be borne by:

	NAME	% OF COST
1		

Include detailed drawings indicating division of responsibility and describe here (Note: Drawing should include vertical and horizontal clearances.):

3.3 Maintenance of separated crossing

PORTION OF IMPROVEMENTS	MAINTENANCE WILL BE PERFORMED BY	MAINTENANCE WILL BE PAID BY
Structure support		
Main structure		
At highway appurtences		
Railroad tracks, railroad drainage, all railroad facilities		
Damage to structure caused by motor vehicle traffic on highway		

3.4 Temporary impairment

Describe temporary impairment (if any) of the railroad's standard clearances during construction (attach detailed drawing):

DESCRIBE

3.5 Temporary public crossing at grade

If a temporary public crossing at grade is necessary during construction, complete Section 2 and include plan, profile, and cross-section drawings.

The temporary grade crossing will be located at which railroad milepost?		RAILROAD MILEPOST
The temporary grade crossing will be in place on what dates?	BEGINNING DATE	ENDING DATE

SECTION 4: PERMANENT PUBLIC GRADE CROSSING CLOSURE

4.1 Name and location of grade crossing to be closed (if different from crossing described in 1.3):

Street or highway name	
City	
County	
Jurisdiction (public road authority)	
Railroad name	
Railroad milepost	

4.2 Alternate routes

Describe in detail alternate routes available in place of the closed crossing. Include out-of-direction travel distance involved in the use of each route from the midpoint of the area served by the existing crossing to the major destination points.

Alternate route 1:

DESCRIPTION OF ROUTE	CIRCUITY DISTANCE

This route will use an existing railroad grade crossing:.....	CROSSING NUMBER
Vehicle traffic on this alternate route will be increased by:.....	AADT

4.3 Emergency services

Will the crossing closure adversely affect emergency services currently using the crossing? ..... ☐ Yes ☐ No

If yes, list each affected emergency service in Section 1.4 as a "party" in this matter.

Explain the extent of the effect and the steps to be taken to overcome the adverse effect:

4.4 Pedestrian/pathway public grade crossing

Will a pedestrian/pathway public grade crossing be needed at the site of the crossing being closed to vehicles? ☐ Yes ☐ No

If yes, provide justification for retention of a pedestrian or multi-use path grade crossing:

JUSTIFICATION

4.5 Describe how the crossing will be closed (barricades, fences, roadway surface material, etc.)

DESCRIBE
ATTACH ENGINEERED DEPICTION OF CLOSED CROSSING AND LOCATION OF CLOSURE DEVICES

4.6 The crossing will be closed by:..... ☐ Removing tracks ☐ Closing roadway

DESCRIPTION OF WORK TO CLOSE CROSSING (SELECT FROM DROPDOWN LIST OR TYPE IN DESCRIPTION)	WORK WILL BE PERFORMED BY	COST OF WORK TO BE BORNE BY
Maintenance of existing closure devices		

Applicant hereby requests an Order authorizing construction according to this application.

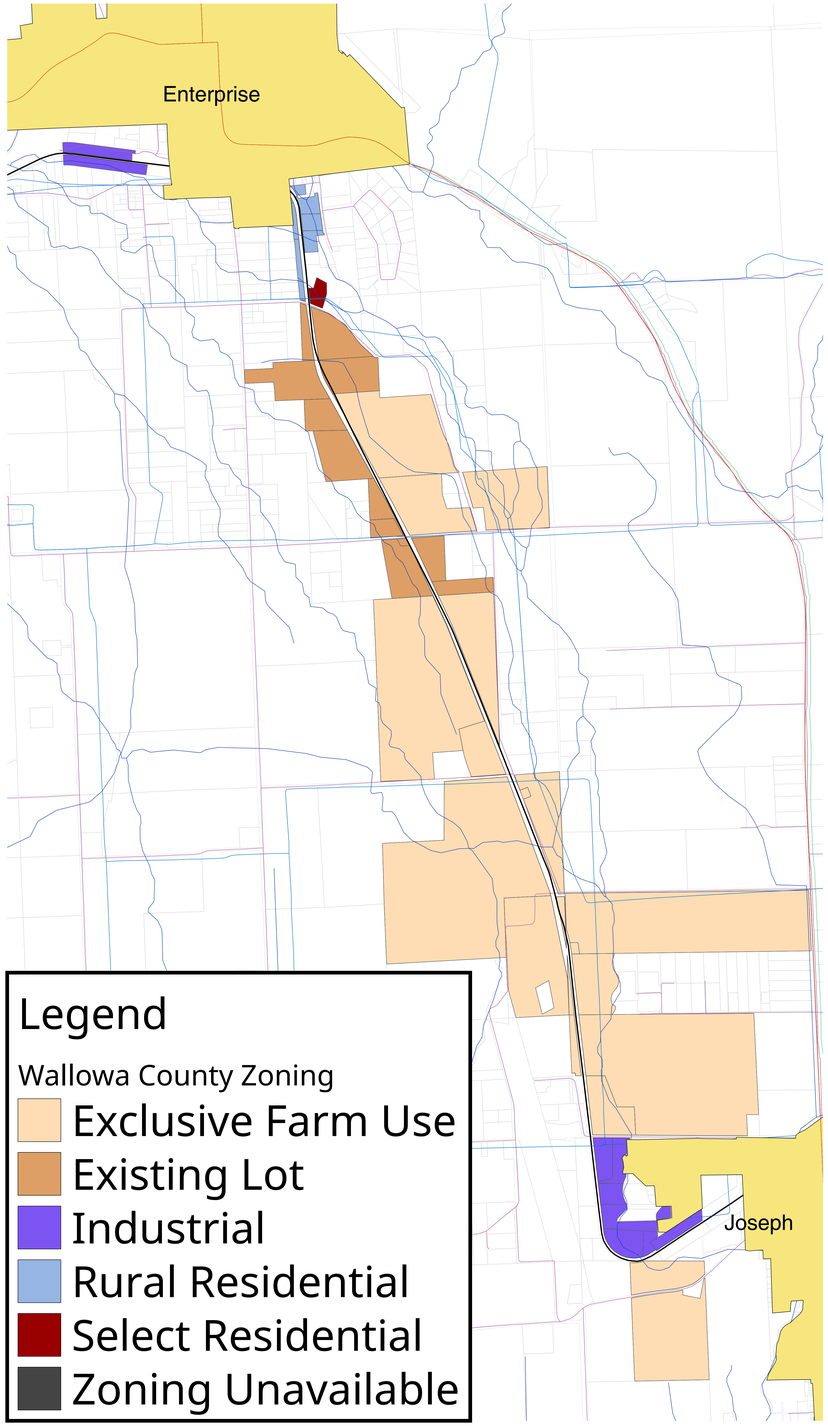
This application must be signed by an official of the public authority or railroad making application for an order. The signer must have contract signing authority for expenditure of funds to construct and maintain the proposed project.

PRINT NAME	TITLE	
SIGNATURE	SIGNED AT (CITY AND STATE)	SIGNATURE DATE

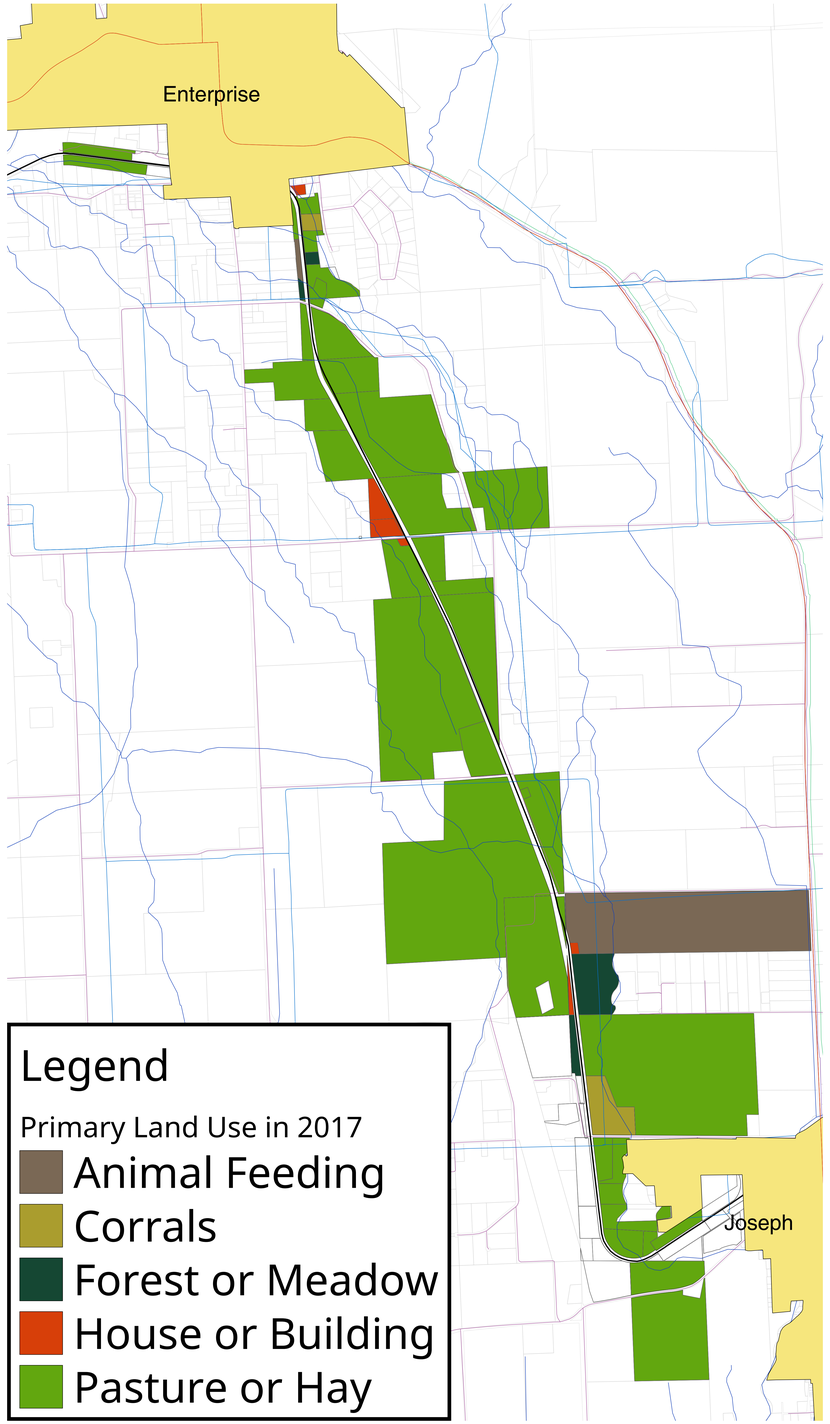
If you choose to submit this application electronically by clicking the Submit button, you agree that typing your name in the signature field and submitting from a password-protected e-mail account is the equivalent of a manual signature for the purposes of this application.

Print Form | Save | Submit by Email

Wallowa County Zoning



Primary Land Use in 2017



Livestock Observed in 2017

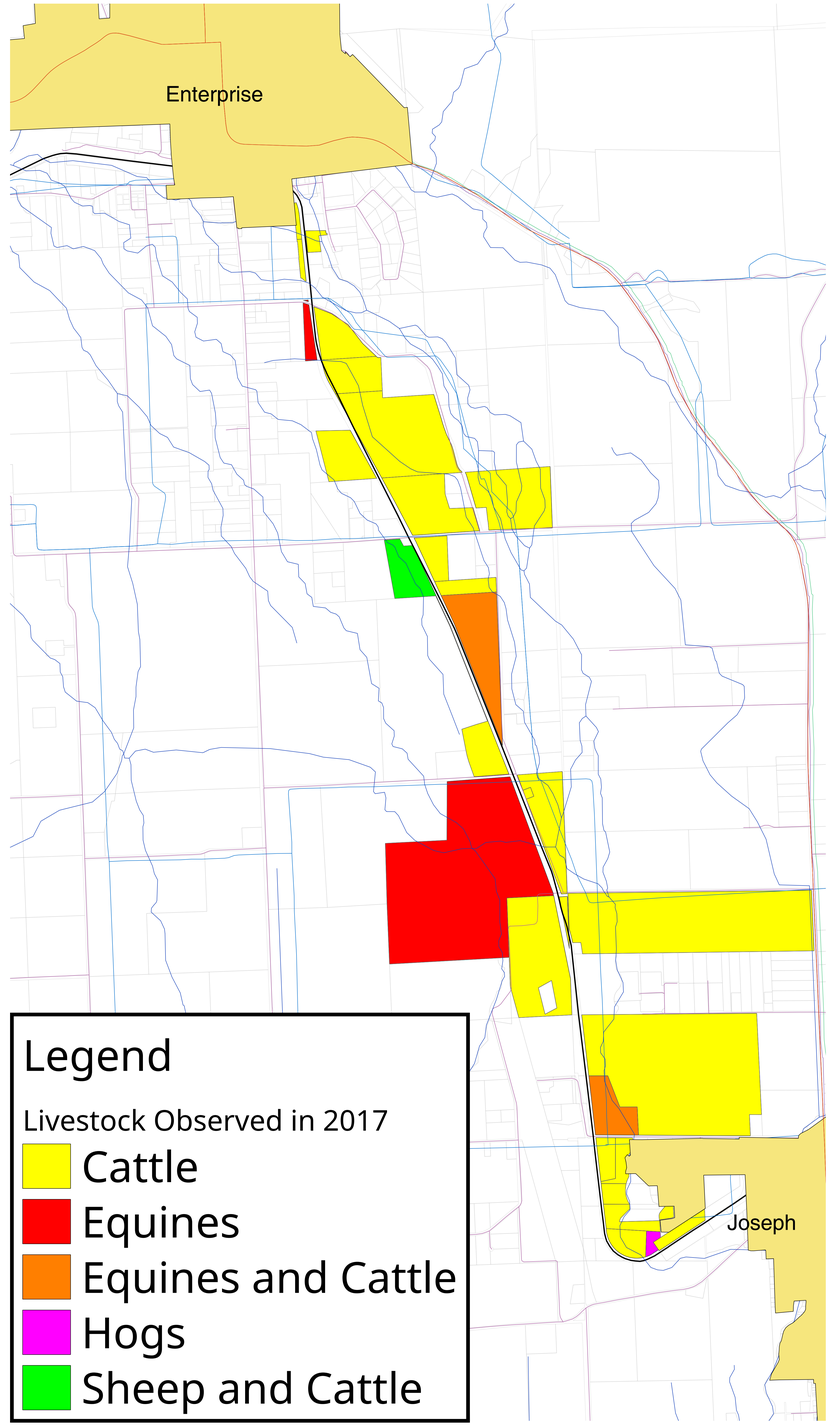


Photo credit: JosephDigital.com

Assessment of Impacts of the Proposed Joseph Branch Rail-with-Trail on Surrounding Lands Dedicated to Farm or Forest Use

Byron M. Shock, Clinton C. Shock, and Candace B. Shock

Scientific Ecological Services, Inc.

for the

Joseph Branch Trail Consortium

17 April 2018

About the authors

Byron Shock is a data scientist with specialized knowledge of geographic information systems (GIS), advanced statistical methods, and machine learning. He has worked on a wide range of projects including mapping and research for the Upper Owyhee Watershed Assessment; responding to the FDA's proposed rules for the production and handling of fresh produce, which would have all but eliminated the onion industry in southeastern Oregon and western Idaho; characterizing the diets of the threatened, endemic northern Idaho ground squirrel population; analyzing the historical and current water usage of an irrigation district in southeastern Oregon; and analyzing revegetation patterns in the Amazon River basin. Byron also enjoys teaching in both formal and informal settings (Appendix III).

Clint Shock has enthusiasm for plants and working with people. His international experience is from Brazil, China, Paraguay, Peru, Senegal, Nigeria, and Venezuela. He seeks to use creativity, science, and education to solve horticultural, environmental, and social problems. His research conceives, tests, and shares economically viable options for voluntarily implementation by growers. Clint envisioned and generated win-win solutions to problems including credit and market access for poor growers in Brazil; revegetation in the Amazon; potato physiological defects in the Pacific Northwest of the US; and solutions to groundwater contamination, irrigation induced erosion, and production methods for specialty crops in Oregon.

As Director of the Oregon State University Malheur Experiment Station, he has led cooperative efforts to improve growers' yields and profitability while simultaneously correcting environmental or social problems. Precision irrigation and nutrient management are key elements to programs aiding growers and the environment in the USA and China (Appendix IV).

Candace Shock is interested in the economic development of under-served areas both in the US and abroad. She completed assessments for the Owyhee Watershed Council of the Owyhee River watershed. Recreation, rangeland, irrigated agriculture, vegetation, and history were among the 18 factors that she analyzed. The primary concern of the council was that the assessment be scientifically based, objective, historically correct, and focused on real issues. As a technical writer she has contributed to some and has reviewed over 1000 technical articles, mostly reports and articles for growers.

A. Summary

The Joseph Branch Trail Consortium and Wallowa Union Railroad Authority seek to develop a six-mile pilot segment of gravel-composite trail paralleling the rail line within the Wallowa Union Railroad right-of-way between Joseph and Enterprise.

To ensure that the Joseph Branch Trail would comply with Oregon's Standards for approval of certain uses in exclusive farm use zones, an assessment of potential impacts was conducted. This assessment was informed by a review of pertinent literature on the impacts of trails. County property records were examined to identify all tax lots adjoining the railroad right-of-way, and the agricultural and forestry activities on each lot were noted during on-site visits to the corridor in 2017. Maps of both county zoning and land uses of properties adjacent to the proposed trail were prepared. Consideration was given to what significant changes or significant increases in costs, if any, would be incurred in accepted farming and forestry practices on these properties.

Agricultural and forestry practices should not be affected by the establishment of a Joseph Branch Trail. Permitted agricultural and forestry practices will remain unchanged. The costs of accepted farm and forestry practices also should not increase significantly with the establishment of the trail.

B. History

In 1908 the Oregon-Washington Railroad & Navigation Company, by then a subsidiary of the Union Pacific Railroad, extended its existing branch line from La Grande to Elgin further into Union County and Wallowa County, serving the communities of Minam, Wallowa, Enterprise, and Joseph (The Pacific Northwest Chapter, National Railway Historical Society, n.d.).

The Idaho Northern & Pacific Railroad (INPR) purchased the extended portion of the branch line from Union Pacific in 1993.

The Wallowa Union Railroad Authority (WURA) purchased 63 miles of the short-line Joseph Branch railroad between Joseph and Elgin, Oregon from INPR in May 2002 (Surface Transportation Board, US Department of Transportation, 2002; "Wallowa Union Railroad," n.d.; "Wallowa Union Railroad Authority," 2015). Trackage between Minam and Elgin (the present Idaho Northern & Pacific terminus) is actively used for rail operations. Trackage between Joseph and Enterprise, and between Wallowa and Minam, is actively used for tandem pedal-powered rail vehicle excursions by the Joseph Branch Railriders.

The Wallowa Union Railroad (WURR) corridor runs through working landscapes that have been cared for by generations of foresters and ranching families (Joseph Branch Trail Consortium, n.d.).

C. Location

The Joseph Branch trail would accompany the Wallowa Union Railroad right-of-way between Enterprise and Joseph, Oregon.

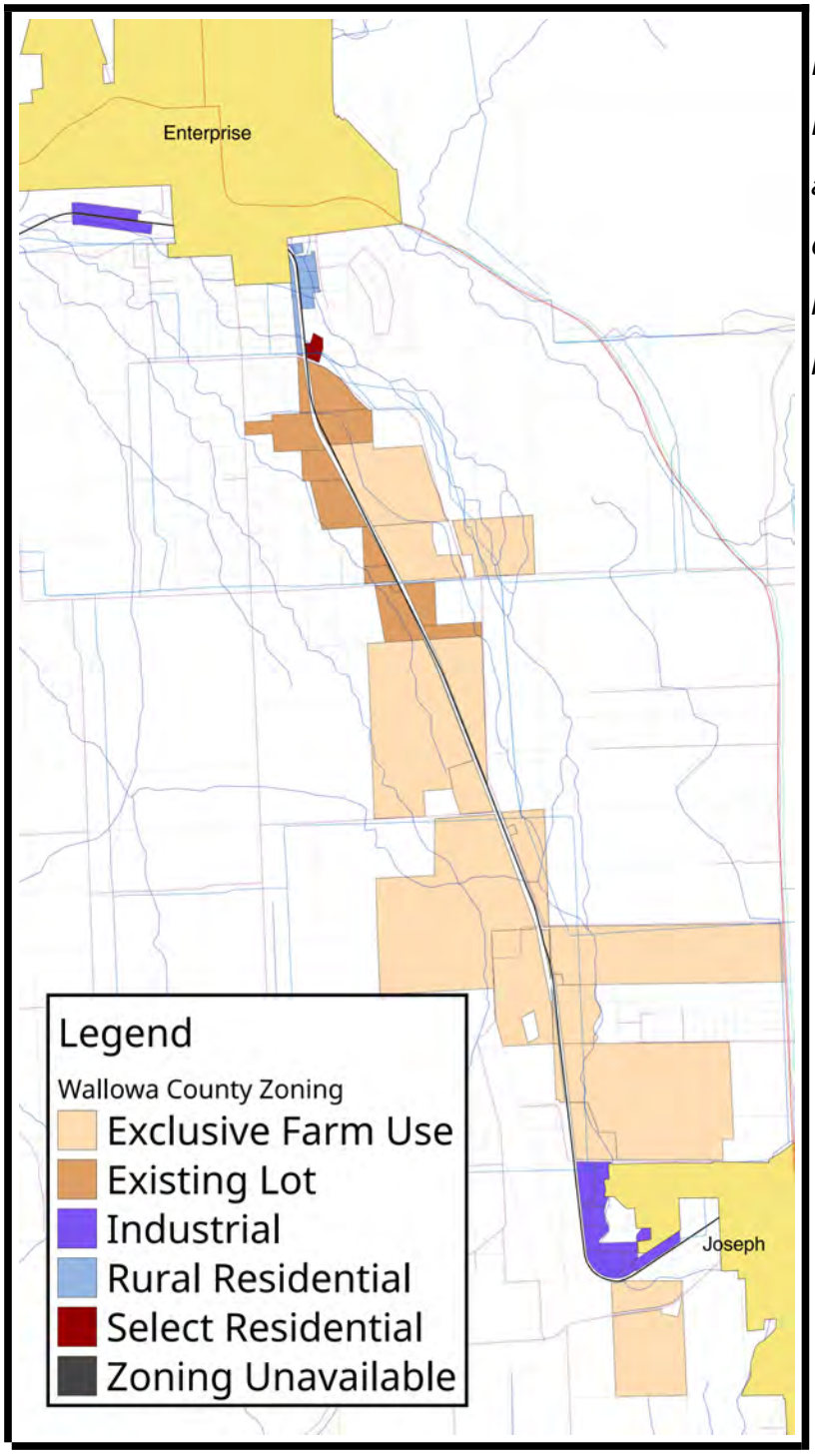


Figure 1: Map of the Wallowa Union Railroad corridor between Enterprise and Joseph, Oregon. The railroad corridor is illustrated in black, with highways in red and streams in dark blue.

D. Methods

1. Standards for approval of certain uses in exclusive farm use zones

Methodology was developed with a particular view to assessing whether the proposed six-mile pilot segment trail would (a) force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use, or (b) significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use, as set forward in 2017 ORS § 215.296 (Standards for approval of certain uses in exclusive farm use zones, 2011). The full text of 2017 ORS § 215.296(1) states:

> A use allowed under ORS § 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) or ORS § 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) may be approved only where the local governing body or its designee finds that the use will not:
> (a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or
> (b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

2. Literature review

Literature on rail trail assessments was reviewed. The review placed emphasis on assessments that studied the benefits, inconveniences, and economic losses created by the establishment of rail trails. Several assessments surveyed neighboring property owners' perceptions of the trails, including how these perceptions were formed and how the perceptions changed over time.

3. Tabulation of tax lot data

County property records were examined to identify all tax lots adjoining the railroad right-of-way. The agricultural and forestry activities on each lot were tabulated by observation, including on-site visits to the corridor in 2017 by the first and second authors of this assessment. Established agricultural and forestry practices were recorded.

4. Mapping

Mapping efforts combined high-resolution digital vector GIS data available from the Oregon Geospatial Data Clearinghouse ("Emergency Preparedness Data Collection," 2015; "Oregon City Limits," 2017; "Oregon Railroads," 2016) and a low-resolution digital raster image available from Wallowa County. The digital raster image was georeferenced to approximately 150 feet of accuracy (¼ pixel) north to south and approximately 150 feet of accuracy (¼ pixel) east to west ("Wallowa County Zoning (digital raster image)," n.d.).

E. Positive impacts of the Joseph Branch Trail

1. Positive impacts of rural rail trails (literature review)

Rail trails typically bring a number of positive changes. Chief among these are improved transportation infrastructure, increased public safety, and increased recreational opportunities.

2. Positive impacts of the Joseph Branch Trail

We foresee that each of the following positive benefits would be realized on the Joseph Branch Rail-with-Trail:

a. Improved transportation infrastructure

Adding a trail between Enterprise and Joseph would provide a new corridor for pedestrians, equestrians, and cyclists to commute among the two communities and the rural areas near the trail itself. At present two separate routes between Enterprise and Joseph are highways, either of which presents dangers to non-motor-vehicle users. State Route 82 (SR 82) is a direct route along a busy highway that presents dangers to non-motor-vehicle users. It covers 6.2 miles from the Wallowa County Courthouse in Enterprise to the intersection of

Main Street and Wallowa Avenue in Joseph. Hurricane Creek Road is a direct highway route with less traffic than SR 82, with reduced highway speeds, and suitable for experienced cyclists. This route is 7.6 miles between the given landmarks. Highway-free routes to the west of SR 82 are less direct, involve a number of secondary and tertiary roads, and are more suitable for cyclists, equestrians, and pedestrians. However, they are longer than the proposed rail-with-trail. Google Maps suggests that cyclists balance distance and safety by utilizing 2.1 miles of the two highways and 4.5 miles of secondary and tertiary roads (6.6 miles) (Google, 2018).

In contrast the trail corridor would provide a safe, direct connection, especially benefiting youth and other individuals with limited access to motor transportation. The proposed trail length between River Street in Enterprise and the Joseph rail terminus is 5.75 miles; the total route length (with connecting roads) between the Wallowa County Courthouse in Enterprise and the intersection of Main Street and Wallowa Avenue in Joseph is 6.6 miles (Google, 2018; Wallowa Union Railroad Authority, Eastern Oregon University, and Joseph Branch Trail Consortium, 2015).

b. Increased public safety

A consistent finding in the literature on rail trails is that public safety benefits from the conversion of a rail corridor into a trail. The increased public access to the corridor also increases public visibility, making it a less desirable space for the commission of crimes.

c. Increased recreational opportunities

The rail line between Joseph and Enterprise already supports pedal-powered rail vehicle excursions by the Joseph Branch Railriders. Since 2014, the Joseph Branch Railriders have had approximately 20,000 customers ride the tracks between Joseph and Enterprise (personal communication, April 9, 2018). Opening a trail paralleling this line would enhance the recreational infrastructure of the communities the trail serves.

d. Opportunities for education

Benches and signage along the trail could provide educational opportunities. The right-of-way crosses several ecological zones that support wildlife (Anderson Perry & Associates, Inc., 2016). Signage could also strengthen attitudes toward stewardship and consideration for the interests of trail neighbors ("Management, signage, and maintenance plan for the Joseph Branch Trail," 2016).

Photo Credit: Joseph Branch Trail Consortium

Photo Credit: Joseph Branch Trail Consortium

The proposed trail will provide students of all ages with community-based learning experiences in trail development and management efforts ("Management, signage, and maintenance plan for the Joseph Branch Trail," 2016).

F. Problems that may occur on the Joseph Branch Trail

1. Nuisance problems that typically occur on rail trails (literature review)

A common problem that trails must address is dog owners allowing their pets to run unleashed (*A Guide to Using and Developing Trails in Farm and Ranch Areas*, 2005; Corning, Mowatt, & Charles Chancellor, 2012; Wolter, Lindsey, Drew, Hurst, & Galloway, 2001). Unleashed dogs can cause problems by chasing livestock, scattering the animals, and even chasing individuals until they are exhausted or injured. Sheep in particular can be stressed just by seeing dog that is not under the control of its owner (*A Guide to Using and Developing Trails in Farm and Ranch Areas*, 2005). Dogs also need to be controlled so they do not spook horses on a trail.

Dog waste on private property is another concern raised by residents and property owners adjacent to trails (Corning et al., 2012). If dogs are prevented from crossing onto private property, the problem of dog waste exists only on the trail and adjacent public right-of-ways.

Although residents and property owners adjacent to trails may foresee an increased problem with litter other than dog waste, this is not borne out in published studies (Corning et al., 2012; Kaylen, Bhullar, Vaught, & Braschler, 1993; Moore, Graefe, & Gitelson, 1994;

Schweigerdt & Bobilev, 2012). Kaylen et al (1993) determined that residents' perceptions were substantially improved over time concerning privacy, theft, vandalism, trespass, litter, liability, maintenance, and fire along the Missouri River State Trail. Moore et al. (1994) surveyed a total of 663 property owners along three rail trails and determined that occurrence of diverse problems associated with rail trails were both low and less than property owners had expected. Considering also the record of rail use along the Joseph Branch Rail-with-Trail pilot segment since 2014 by 20,000 customers of the Joseph Branch Railriders without complaint from adjacent landowners or those riding the rails, we anticipate that the nuisance impacts of adjoining trail use will fit this pattern (personal correspondence, April 9, 2018).

2. Design considerations to minimize nuisance impacts on adjacent landowners

The buffer distance between the Joseph Branch Rail-with-Trail and the fence separating adjacent landowners from the trail will be between 30 and 35 feet. This contrasts with the 10- to 20-foot buffer distance along county roads where recreational uses including walking, dog walking, cycling, and equestrian activities are already permitted (personal correspondence, July 7, 2018).

3. Tabulation and mitigation of nuisance impacts that may occur

Joseph Branch Trail Consortium and Wallowa Union Railroad Authority have identified and written a Management Plan to mitigate potential nuisance impacts on the proposed Joseph Branch Rail-with-Trail ("Draft concerns and example mitigation strategies," 2016; "Joseph Branch Rails-with-Trails adjacent property owners relations plan," 2016). This plan reflects concerns aired in a census of residents and property owners adjacent to the proposed trail. Adjacent property owners reviewed the Management Plan in 2016 and provided feedback. This feedback was incorporated into the newest version of the Management Plan, now in its third draft form. One example of a proposed mitigation strategy, in regard to dogs, is that a woven wire fence through which dogs cannot pass will be placed by the Joseph Branch Trail Consortium in partnership with the Wallowa Union Railroad Authority along the corridor in

sensitive areas, such as cow-calf operations. A leash law will be enacted on the trail in the corridor. Litter bags for dog waste will be available at all trailheads and at various points along the trail corridor. Trash cans will be available at intervals along the trail as well. For a complete list of proposed mitigation strategies, see the Joseph Branch Rail with Trail Management Plan.

G. Summary of farming activities along the WURR right-of-way

Agricultural activities are typically pasture and hay production in support of livestock (Appendix I). Key agricultural operations include soil tillage, forage establishment, irrigation, soil correction and fertilization, maintaining soil tilth, control of weeds (especially noxious weeds), control of insect pests, management of grazing pressure, and management of hay harvests, drying and storage.

1. Accepted farming practices

a. Standards for farming practices

Accepted farming practices for pasture and hay production are well established, recommended practices are well known, and the rights to farm are established (Jahns, Hirnyck, & Downey, 2007; Oregon Department of Agriculture, n.d.; Thomson, Parrott, & Jenkins, 2000; Undersander et al., 2011). Farming operations will remain unchanged with the addition of a trail along the railroad right-of-way because permitted operations will be unchanged.

Weed problems may be controlled through the use of labeled herbicides at maximum specified rates (Peachey, E., ed., 2018). Labeled herbicide use varies with the targeted weed, the soil type, and the nature of the hay or pasture forage species being treated, and the geographic specificity of the label (Jahns et al., 2007; Peachey, E., ed., 2018). Herbicide

applications are restricted as the operator approaches the perimeter of the property. Herbicide drift is not permitted over the property line (Peachey, E., ed., 2018). It is unlawful to use any registered herbicide "in a manner inconsistent with its labeling" (Environmental Pesticide Control, 1991). Weed control operations should be unchanged with the addition of a trail along the railroad right-of-way since no regulations will impose any additional burden on producers.

Insect problems may be controlled through the use of labeled insecticides at maximum specified rates (Hollingsworth, C.S., ed., 2018). Labeled insecticide use varies with the targeted insect and the nature of the hay or pasture forage species being treated, and the geographic specificity of the label (Hollingsworth, C.S., ed., 2018; Jahns et al., 2007). Insecticide applications are restricted as the operator approaches the perimeter of the property. Insecticide drift is not permitted over the property line (Hollingsworth, C.S., ed., 2018). It is unlawful to use "any registered pesticide in a manner inconsistent with its labeling" (Environmental Pesticide Control, 1991). Insect control operations should be unchanged with the addition of a trail along the railroad right-of-way since no regulations will impose any burden on producers.

b. Animal feeding operations

Regulations related to animal feeding operations are determined by the Oregon legislature and administered by the Oregon Department of Agriculture in cooperation with the Oregon Department of Environmental quality (Oregon Department of Agriculture, 2018). Permits are required if animal waste from animal feeding is discharged to a stream or river (Matthews, Nomura, & Moore, 2016a). If animal waste is not discharged to a stream or river, many other factors enter into the permitting process including the number of livestock, their duration in confinement in any 12-month period, the existence of wet or dry waste treatment and storage facilities, and whether nutrients are discharged to groundwater (Matthews, Nomura, & Moore, 2016b). Permitting is not dependent on the proximity of an animal feeding site to a railroad

right-of-way or foot path (Oregon Department of Agriculture, 2018). The establishment of a trail is not pertinent to the permitting of animal feeding operations.

c. Farming practices that would change with the addition of a trail along the WURR right-of-way

Neither the rights nor practices of producers will change with the addition of a foot path along the existing railroad right-of-way.

H. Summary of forestry activities along the WURR right-of-way

1. Accepted forestry practices

A small amount of forestry exists adjacent to the railroad right-of-way, principally within the protected watershed owned by the City of Enterprise (tax lots 02S453000 401, 02S451900 1100, and 02S451900 1200). Forest elements exist throughout the adjacent land and, in places, extend into the WURR right-of-way.

a. Standards for forestry practices

The legal use of herbicides and pesticides, covered above in "Accepted farming practices", applies to landowners and their tenants in general. It is unlawful to use registered herbicides and pesticides in a manner inconsistent with their labeling (Environmental Pesticide Control, 1991; "Forest Practices Act Rulebook," 2018). Applications are restricted as the operator approaches the perimeter of the property, and product drift is not permitted over the property line (Hollingsworth, C.S., ed., 2018; Peachey, E., ed., 2018).

b. Forestry practices that would change with the addition of a trail along the WURR right-of-way

There is nothing that foresters currently can do that they would not be able to do with the addition of a trail along the WURR right-of-way.

I. Conclusions

Agricultural and forestry practices should not be affected by the establishment of a Joseph Branch Trail. Permitted agricultural and forestry practices will remain unchanged. Currently permitted practices for weed control will be unaffected by the addition of a foot trail along the railroad right-of-way. Likewise, currently permitted practices for insect control will continue to be permitted.

The costs of accepted farm and forestry practices should not increase significantly with the establishment of the trail. In particular, the establishment of the trail would cause no economic impact on animal feeding operations because rules and permitting are based on the risks of operations contaminating water and not based on proximities to roads, right-of-ways, or trails.

The Wallowa Union Railroad Authority (WURA) and Joseph Branch Trail Consortium (JBTC) have carefully considered the potential nuisance problems and have proposed mitigation

plans consistent with effective measures used on other rural rail trails. In particular, mitigation is planned to prevent dogs from chasing livestock on private property. The WURA and JBTC intend to use the Joseph Branch trail as an opportunity for public education ("Draft concerns and example mitigation strategies," 2016; "Management, signage, and maintenance plan for the Joseph Branch Trail," 2016).

J. References

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Appendix I: Farm use of properties adjacent to the Wallowa Union Railroad right-of-way

A. Farm use of properties zoned EFU (Exclusive Farm Use)

Abutting the Wallowa Union Railroad (WURR) right-of-way there are seventeen tax lots zoned EFU. These 1,226 acres are owned by thirteen landowners. Twelve of the tax lots appeared to have agricultural operations in 2017. One has the City of Enterprise's protected water source. The principal farm uses observed were pasture for cattle and sheep, grass hay, an animal feeding operation, and a farm with horses.

Acres	2017 primary use	Secondary use	Dwelling within 500 ft of WURR	Tax lots
78.29	Pasture (cattle)	Grass hay		02S441200 901
33.57	Forest (watershed protection)	Chlorination plant		02S453000 401, 02S451900 1100 & 1200
34.59	Pasture (cattle)			02S442400 100 & 101
17.63	Pasture (cattle)			02S441300 1500
234.19	Grass hay	Pasture (cattle)	Yes	02S442400 200
95.39	Pasture or grass hay			02S453100 1600
91.41	Pasture (cattle)	Grass hay		02S441200 1400
192.97	Pasture (cattle)			02S453000 400
156.66	Animal feeding operation (cattle)	Pasture (cattle and horses)		02S451900 1000, 02S442400 400
42.00	Pasture (horses)			02S441300 1000
67.43	Pasture (cattle)		Yes	02S442400 500
159.19	Grass hay	Pasture (cattle)		02S441300 901
22.90	Horses	Pasture	Yes	02S453000 600

B. Farm use of properties zoned EL-1 (Existing Lot)

Abutting the WURR right-of-way there are twelve tax lots zoned EL-1, owned by eleven landowners. These 160 acres represent eight farm operations and three other houses. The principal farm uses in 2017 were pasture, grass hay, and honeybees.

Acres	2017 primary use	Secondary use	Dwelling within 500 ft of WURR	Tax lots
19.59	Pasture (sheep and cattle)	Grass hay	Yes	02S441300 700
11.70	Grass hay	Honeybees		02S441300 600
9.64	Pasture (cattle)			02S441300 400
0.74	House			02S441300 702
5.10	House			02S441200 1301
6.70	House and yard	Cycle track	Yes	02S441200 1300
22.30	Pasture (cattle)	Grass hay		02S441200 1003
12.96	Pasture	Grass hay		02S441200 1002
41.36	Pasture (cattle)	Grass hay		02S441200 400 & 500
5.32	Pasture (horses and mules)	Stables	Yes	02S441100 100
24.55	Pasture			02S441100 1500

C. Farm use of properties zoned R-1 (Rural Residential)

Abutting the WURR right-of-way there are five tax lots zoned R-1, owned by four landowners. These 13 acres represent three farm operations and a yard ajoining a house on a separate lot. The principal farm uses in 2017 were pasture, an animal feeding operation, and a former feedlot.

Acres	2017 primary use	Secondary uses	Dwelling within 500 ft of WURR	Tax lots
1.24	Yard			02S4401CC 700
3.82	Animal feeding operation (cattle)	Pasture (cattle)	Yes	02S4401CC 500, 02S4401CB 1800
3.66	Pasture (cattle)			02S4401CC 400
4.66	Old sale yard	Pasture		02S4401CB 1900

D. Farm use of properties zoned R-4 (Select Residential)

Abutting the WURR right-of-way there is one tax lot zoned R-4. The principal farm use in 2017 was pasture.

Acres	2017 primary use	Secondary uses	Dwelling within 500 ft of WURR	Tax lots
3.11	Pasture (unused)			02S4401CC 600

E. Farm use of properties zoned M-1 (Industrial)

Abutting the WURR right-of-way there are eight tax lots zoned M-1. These 63 acres represent four farm operations. The principal farm uses in 2017 were pasture, corrals, and raising hogs.

Acres	2017 primary use	Secondary uses	Dwelling within 500 ft of WURR	Tax lots
11.77	Pasture (cattle and horses)	Corrals	Yes	02S453000 802 & 1101
11.98	Pasture (cattle)		Yes	02S453000 1401
21.42	Pasture (cattle)	Hogs, corrals	Yes	02S453000 1404, 1405 & 1406
17.36	Pasture			02S440200 4801 & 4802

F. Farm use of properties with unavailable zoning

Abutting the WURR right-of-way there are two tax lots for which zoning is unavailable, both arising from subdivision of the old sale yard near Enterprise. One has no tax records at the county assessor's office. The principal uses in 2017 are pasture and a meadow used by wildlife.

Acres	2017 primary use	Secondary uses	Dwelling within 500 ft of WURR	Tax lots
10.47	Pasture	Old sale yard		02S4401CC 602
1.88	Meadow	Old sale yard		02S4401CC 603

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Appendix III: Curriculum Vitae

Byron Mitchell Shock

Data Scientist

Scientific Ecological Services

1059 SW 2nd Ave. Ontario, OR 97914

Mobile (541)212-5245, Email byron.shock@gmail.com

Summary

Byron M. Shock is a data scientist with specialized knowledge of geographic information systems (GIS), advanced statistical methods, and machine learning. He has worked on a wide range of projects including responding to the FDA's proposed rules for the production and handling of fresh produce, which would have all but eliminated the onion industry in southeastern Oregon and western Idaho; characterizing the diets of the threatened, endemic northern Idaho ground squirrel population; analyzing the historical and current water usage of an irrigation district in southeastern Oregon; mapping and research for the Upper Owyhee Watershed Assessment; and analyzing revegetation patterns in the Amazon River basin. Byron also enjoys teaching in both formal and informal settings.

Education

Ph.D., Cognitive and Neural Systems, Boston University, Boston, MA

B.S., *summa cum laude*, Computer Science/Mathematics, The College of Idaho, Caldwell, ID

Awards and honors

- National Science Foundation Graduate Research Fellow
- Presidential University Graduate Fellow, Boston University
- Barry M. Goldwater Scholar
- Whittenberger Scholar, The College of Idaho, Caldwell, Idaho
- Professor of the Month, Kappa Alpha Theta, The College of Idaho, Caldwell, Idaho
- Friend of Education, Canyon Springs High School, Caldwell, Idaho
- William Lowell Putnam Mathematical Competition – nationally ranked

Languages

Spanish: College minor, past fluency
Portuguese: Intermediate

Professional experience: research and related activities

Scientific Ecological Services, Inc., Ontario, OR

Data scientist; researcher/analyst/GIS specialist

- Characterized the diets of threatened, endemic northern Idaho ground squirrels in relatively undisturbed habitats. Applied advanced statistical techniques such as kernel regression and principal components analysis to gain a detailed understanding of how the diets vary by season, site, and age of squirrel. Created colorful visualizations that tell the story of what northern Idaho ground squirrels eat in their natural habitat; how this differs with site, season, and age; and how the pattern of consumption changes with days of the year at two well-sampled sites. (Yensen, Shock, Tarifa, & Mack, 2018).
- Co-designed a field experiment to test the hypothesis that silt loam soils function as antimicrobial filters during drip irrigation and/or furrow irrigation events. Co-authored “Drip vs. furrow irrigation in the delivery of *Escherichia coli* to onions” (Shock et al., 2016).
- Characterized the differences between the diets of threatened, endemic northern Idaho ground squirrels (*Urocitellus brunneus*) and the diets of cattle grazing on the same range with principal components analysis, demonstrating that the diets of the two species are linearly separable (Yensen, Tarifa, Mack, Wagner, & Shock, 2014).

- Delivered distance-based trapping web estimates of the population density of Piute ground squirrels. Implemented maximum-likelihood estimation with Aikake's information criterion (AIC) in the R statistical programming language (Yensen, Tarifa, Shock, Warner, & Baun, 2014; Shock, 2014).
- Delivered research findings based on analysis of the published literature on the food safety of fresh dry bulb onion (*Allium cepa* L.). with respect to the U.S. Food and Drug Administration's *Standards for the Growing, Harvesting, Packaging, and Holding of Produce for Human Consumption: Proposed Rule* with respect to the published literature on the food safety of fresh dry bulb onion (*Allium cepa* L.). Created and curated an extensive database of relevant scientific and governmental publications. Research findings were submitted to the U.S. Food and Drug Administration's proposed rule-making docket.
- Delivered research findings that document the historical quality of surface irrigation water in Idaho and Malheur County, Oregon, with respect to the U.S. Food and Drug Administration's *Standards for the Growing, Harvesting, Packaging, and Holding of Produce for Human Consumption: Proposed Rule.* Created and curated an extensive geographic information system consisting of historical *Escherichia coli* data sampled by numerous organizations in Idaho and Eastern Oregon. Research showed that the surface irrigation water delivery systems in this region are not compliant with the proposed rule and that surface irrigation water delivery systems in this region cannot comply with the proposed rule without complete redesign to eliminate the historical conservation practice of reusing runoff water from agricultural fields. Research findings were submitted to the U.S. Food and Drug Administration's proposed rule-making docket.
- Analyzed historical and current water usage from multiple sources by an irrigation district in eastern Oregon. Analysis took into account statutory water rights owned by the irrigation district, subsequent legally binding agreements pertaining to the water rights, and judicial rulings. Created multiple hypothetical scenarios for further agreements pertaining to the district's water rights agreements. Created and curated a database of historical and current water usage quantities. Using successive platforms of Microsoft Excel, Microsoft Access, and Django + Python, provided timely technical computations of water usage to inform the irrigation district's ongoing legal discussions of further water rights agreements.
- Utilizing open-source software, created and managed custom geographic information systems for watershed assessment. Obtained and integrated data from a variety of sources; created maps necessary for the Upper Owyhee Watershed Assessment. Created statistical visualizations of stream flow vs. day of year for stream gages within the upper Owyhee watershed. Conducted online and library research pertaining to the history and ecology of the Upper Owyhee River watershed, writing report sections.

The College of Idaho, Caldwell, ID

Visiting Assistant Professor of Mathematics and Computer Science

Boston University Department of Cognitive and Neural Systems

Graduate research fellow; graduate student

- Full-time Ph.D. candidate student and graduate research fellow. In conjunction with advisors, developed machine learning algorithms based on neural networks and statistical pattern recognition. Responsible for research, technical implementation, analysis, and presentation of results.

Shock Consulting, Ontario Oregon

Owner; instructor

Publications and presentations

Books

Shock, C. B., Shock, M. P., Shock, B. M., & Shock, C. C. (2011). *Upper Owyhee Watershed Assessment*. Adrian, OR: Owyhee Watershed Council.

Shock, B. M. (2005). *ARTMAP and orthonormal basis function neural networks for pattern classification* (Doctoral dissertation). Boston, MA: Boston University.

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Shock, C. C., Stieber, T. D., Shock, B. M., & Saunders, M. (1990). Nitrogen management... Balancing levels is necessary. *Sugar,* April, pp. 20-21.

Invited presentations

Shock, C. C., Feibert, E. B. G., Reitz, S. R., Riveira, A., Roncarati, R. A., Kreeft, H., Pinto, J. M., Shock, B. M., & Saunders, L. D. (2015). Avoiding irrigation-induced bacterial contamination of vegetable crops. Universidade Federal de Lavras, Lavras, Minas Gerais, Brazil. March 24.

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Shock, C. C., Shock, B. M., & Welch, T. (2013). Strategies for efficient irrigation water use. Sustainable Agriculture Techniques, Oregon State University Extension Service, EM 8783.

Software package

Shock, B. M. (2014). An implementation in R of trapping web animal population and population density estimation. Copyright 2015. Available upon request from the author.

Scientific and technical computing

- Geographical information system database development and applications. Proficiency in QGIS and GRASS.
- Advanced statistics. Proficiency in R and MATLAB.

- Scientific and technical programming. Proficiency in R, MATLAB, C++, Python, Erlang, Prolog, Perl, Visual Basic, and MIPS32 Assembler. Knowledge of Fortran, PHP, JavaScript, and x86 Assembler.
- Database design and programming. Proficiency in SQL, Django + Python, and Microsoft Access.
- Digital signal processing (1-D and 2-D). Theory, filter design, and software implementation. Stochastic process estimation. Proficiency in MATLAB.

Appendix IV: Curriculum Vitae

Clinton Cleon Shock

Certified Professional Horticulturalist

Scientific Ecological Services

1059 SW 2nd Ave. Ontario, OR 97914

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Summary

Clint Shock has enthusiasm for plants and working with people. His international experience is from Brazil, China, Paraguay, Peru, Senegal, Nigeria, and Venezuela. He seeks to use creativity, science, and education to solve horticultural, environmental, and social problems. His research conceives, tests, and shares economically viable options for voluntarily implementation by growers. Clint envisioned and generated win-win solutions to problems including credit and market access for poor growers in Brazil; revegetation in the Amazon; potato physiological defects in the Pacific Northwest of the US; and solutions to groundwater contamination, irrigation induced erosion, and production methods for specialty crops in Oregon.

As Director of the Oregon State University Malheur Experiment Station, he has led cooperative efforts to improve growers' yields and profitability while simultaneously correcting environmental or social problems. Precision irrigation and nutrient management are key elements to programs aiding growers and the environment in the USA and China.

Employment

Dates	Rank or Position, Institution	Duties	Emphases
1984 - present	Director and Prof. Emeritus (Assoc Prof '84-'91 then Prof.) Malheur Experiment Station Oregon State Univ., Ontario	Research and administration	Watershed stewardship, drip irrigation, plant nutrition, water quality, erosion control; Soil water sensors. Agronomy of potatoes, onions, poplars, sugar beets, alfalfa, new crops.

1982 - 1984	Assistant Professor Louisiana State Exp. Station Jeanerette, Louisiana	Research	Forage legume introduction, cultural practices, and pasture productivity and management.
1978 - 1982	Research Assistant & Graduate Student University of California, Davis	Research	Pasture and rangeland fertility; sulfur nutrition of forage plants; plant competition for scarce resources.
1978	Acting General Manager IRI Research Institute Brazil	Research and administration	Revegetation of infertile acid Amazon subsoil: specie adaptation for revegetation, soil fertility, practical operations manuals.
1975 - 1978	Manager and Superintendent IRI Experiment Station Matão, São Paulo, Brazil	Research and administration	Collection, identification of 700+ new accessions of grass & legumes. Amazon revegetation research.
1974 - 1975	Manager Coffee farms, Pedro Juan Caballero, Paraguay	Administration	450 hectares coffee & soybeans. Historic July 1975 frost killed coffee trees.
1973 - 1975	Project Leader IRI Research Institute São Paulo Mountains, Brazil	Research	Revegetation of infertile cut & fill subsoil: Plant species adaptation, fertilization, application of mechanical methods.
1972 -1973	Laboratory Technician & Graduate Student University of California, Davis	Research	Development of laboratory procedures for better estimate of K availability from soils.
1968 - 1972	Extension/Social Missionary United Methodist Church Mato Grosso, Brazil	Extension, Farm Credit, & Coop. Admin.	Access to credit and free markets for homesteaders. Cultural practices of homesteaders' crops.

Education

Dates	Degree Earned	Name of Institution	Major Field
1978 -1982	Ph.D.	University of California, Davis	Plant Physiology
1972 -1973	M.S.	University of California, Davis	Horticulture
1962 -1966	B.A.	University of California, Berkeley	Mathematics

Languages

Portuguese: reasonably fluent

Spanish: basic conversational

Total of 1,518 publications And Reports through 4 Dec. 2017

Refereed, 112: *journal articles 103, and book chapters 9*

Non-refereed journal articles, 21

Book format, 4: *research reports 1, and guides 3*

Patents, 3

Thesis, 1

Invited presentations since 1994, 137 *(39 overseas)*

Abstracts and proceedings, 379: *invited (14 tallied separately above) plus volunteered international 45, national 194, and regional 140.*

For growers and other users, 768: *as annual reports 572, growers' proceedings 56 (not duplicated above), written reports not printed in proceedings 21, extension bulletins 40, adult education reports 2, exclusively on the web 20, and field day presentations since 2009, 57.*

Consultant reports, 57

Watershed assessments, 4

National, regional, and tri-state reports on potato development, 32

Highlights

Led local research on environmental issues including erosion control, excessive sediment and nutrient losses in surface water runoff, and groundwater contamination with nitrate and Dacthal breakdown products. Effectively participated in several cooperative team efforts to correct environmental problems. Promoted sustainable agricultural projects and ethics through the Malheur Watershed Council, Owyhee Watershed Council, Northern Malheur County Citizens Groundwater Committee, the Malheur Basin Local Advisory Group (SB1010), Water Quality Interagency Team, and the Snake River TMDL Public Advisory Committee, and others.

Fostered the work of the Malheur Watershed Council and the Owyhee Watershed Council. Participated in watershed assessments in the US and Brazil. Conceived of the Owyhee Field Day to educate 5th graders about watersheds. The field day is led and implemented by the Owyhee Watershed Council with many cooperators.

Fostered cooperation of extension agents in SE Oregon and Idaho through the conception and creation of the Pacific Northwest Pest Alert Network. The network is being led by Jerry Neufeld of UI and others.

Conducted research that led to reductions in the potato sugar end problem experienced by Oregon growers. Proved in the 1980s that sugar ends could be reduced by proper irrigation management, adoption of sprinkler irrigation, and the use of tolerant varieties. Cooperated in the potato variety development program and released 22 varieties, many of which have resistance to sugar ends.

Led local research on environmental problems and opportunities on onion including tailoring soil moisture monitoring, precision irrigation, drip irrigation, and nutrient management to address erosion control, excessive sediment and nutrient losses in surface water runoff, and groundwater contamination with nitrate and Dacthal breakdown products.

Promoted sustainable agricultural projects and ethics through the Malheur Watershed Council, Owyhee Watershed Council, Northern Malheur County Citizens Groundwater Committee, the Water Quality Interagency Team, and others.

Effectively participated in cooperative team efforts to increase onion productivity and quality while correcting environmental problems. Addressed *E. coli* and other disease issues in onion production.

Investigated new crops including native wildflower seed production for revegetation of rangeland, asparagus, soybeans, poplars, Hicksii yew for the anti-cancer drug taxol, corn lily for the anti-cancer compound IPI-926 and other pharmaceuticals. Tested lines of pumpkins for hull-less seed production and quinoa as alternative crops. Developed soybean germplasm adapted to the Pacific North West (PNW). Successfully produced organic soy in the PNW. Examined other plants for phytochemistry products.

Led native wildflower seed production research to provide seed production technology for areas damaged by fire and infested with invasive weeds. This work could contribute greatly to excellence in rangeland restoration.

Planned, installed, and evaluated 1st erosion and revegetation research trials in the Amazon basin. Discovered revegetation methods, species adaptation, soil fertility, and critical minimum levels of soil fertility for infertile acid Amazon subsoils. Revegetated areas maintain adequate cover through the present.

Professionally active on editorial boards and as consulting editor, reviewer, and member of regional working groups. Current or past international consulting experience or involvement in Brazil, China, Paraguay, Peru, Senegal, Nigeria, and Venezuela. Demonstrated effective rural credit for small family farms in Brazil that led to credit becoming widely available.

Professional awards

2016 Distinguished Service Award, National Onion Association.

Recognition of Service, 2016, Nyssa-Nampa Sugarbeet Growers Association

Treasure Valley Community College Foundation, 2016 Volunteer of the Year, presented to Clint and Candace Shock.

Onion Hall of Fame, 2012, Idaho-Eastern Oregon Onion Industry.

William T. Hornaday Gold Medal, 2011, for Distinguished Service to National Conservation, National BSA

Agriculturalist of the Year, 2010, Ontario Chamber of Commerce

Distinguished Service Award for Individual Contribution to the Agricultural Industry, 2008, Oregon Department of Agriculture

American Society of Agronomy, Division A-7 Innovator Award 2007

Briskey Award for Faculty Excellence, College of Agriculture Sciences, Oregon State University, 2003

Distinguished Service Award, Oregon Potato Commission, January 2003

Distinguished Services Rendered to the ASHS as Associate Editor, HortScience. American Society of Horticultural Science. 2003.

American Society of Agronomy Excellence in Educational Materials, Malheur Exp. Station Web Site, 2002

Certified Professional Horticulturalist, 2002 to present, American Society of Horticultural Science.

Governor's 2001 Spirit of the Oregon Plan Leadership Award (environmental leadership).

American Society of Agronomy Excellence in Educational Materials, Publications over 16 pages, 2001

Hall of Fame 1999, Mentor to Apprenticeships in Science and Engineering by the Saturday Academy.

ESCOP/ACOP Leadership Development Program, Cert. of Completion, 1999

Outstanding and Dedicated Service, Malheur County Farm Bureau, 1998.

Team awards

National Water and Energy Conservation Award in 2017 to the Micro Irrigation working group W3128 from the Irrigation Association.

Award of Excellence, (top national working group). Microirrigation for Sustainable Water Use (working group), Association of Public and Land Grant Universities, 2014.

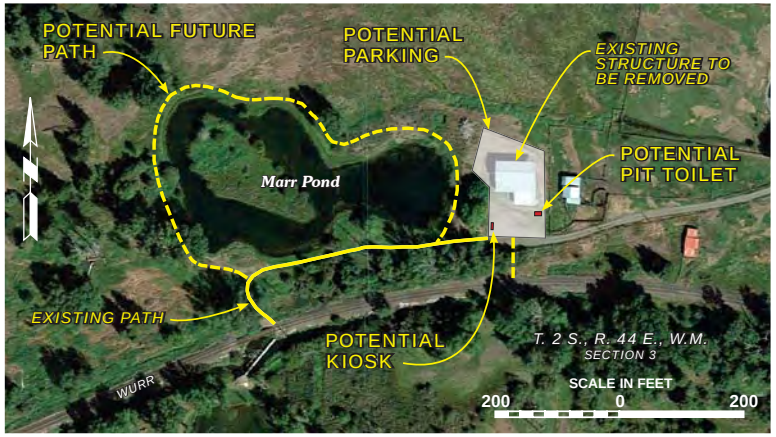
Award of Excellence, Microirrigation for Sustainable Water Use (working group), Western Association of Agricultural Experiment Station Directors, 2014.

Joint Conservation Project of the Year, March, 2012, awarded by the Forest Service and the Bureau of Land Management to the “Great Basin Native Plant Selection and Increase Project”.

Outstanding Regional Partnership 2010 by the Far West Region of the Federal Laboratory Consortium for Technology Transfer to the Tri-State Potato Variety Development Program in recognition for the program’s success in variety development and subsequent utilization by the U.S. potato industry.

Environmental Achievement Award to the Malheur Water Quality Initiative from Renew America. 1996 and 1997

Environmental Progress Award to the Malheur Water Quality Initiative from Renew America. 1992.



PROPOSED MARR POND TRAILHEAD

PROPOSED JOSEPH TRAILHEAD

PROPOSED PILOT PROJECT LOCATION

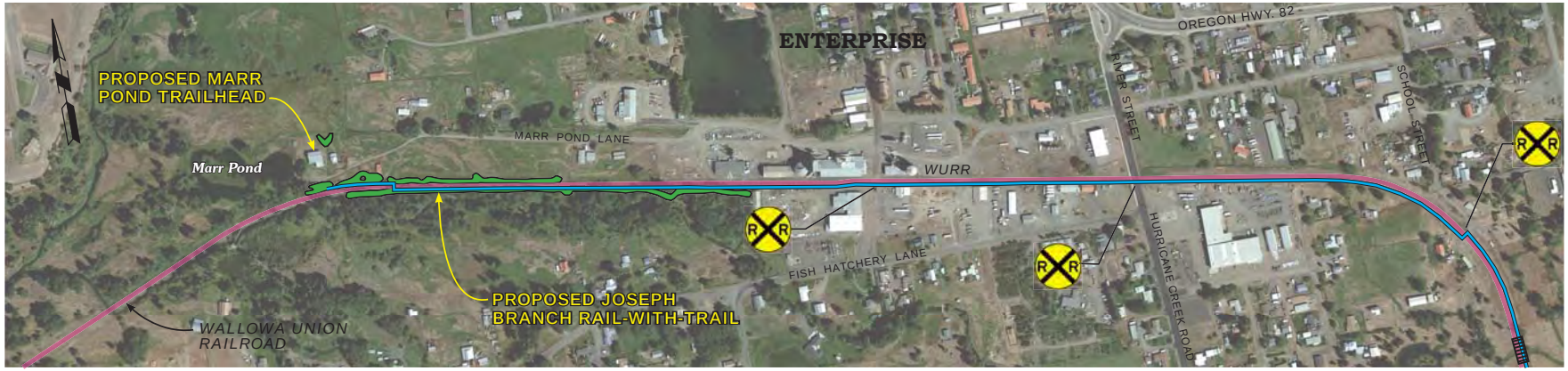
anderson perry & associates, inc.

WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
PRE-DESIGN ENGINEERING AND
PRELIMINARY ENVIRONMENTAL REVIEW REPORT

PROPOSED PILOT PROJECT AND TRAILHEAD LOCATIONS

FIGURE
1

Job# 1199-581-022 Sep. 30, 2016 lbauer



LEGEND

- ROADWAY CROSSING - INCLUDES BENCH WITH TRASH CAN
- TIMBER BRIDGE
- STEEL BRIDGE
- CULVERT EXTENSION
- 5-FOOT WIDE PATH
- 10-FOOT WIDE PATH
- WALLOWA UNION RAILROAD
- EDGE OF WETLAND

MAP KEY

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

anderson perry & associates, inc.

WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
PRE-DESIGN ENGINEERING AND
PRELIMINARY ENVIRONMENTAL REVIEW REPORT

AERIAL 1

FIGURE 2

Job# 1199-581-022 Sep. 30, 2016 lbauer

LEGEND

- ROADWAY CROSSING - INCLUDES BENCH WITH TRASH CAN
- TIMBER BRIDGE
- STEEL BRIDGE
- CULVERT EXTENSION
- 5-FOOT WIDE PATH
- 10-FOOT WIDE PATH
- WALLOWA UNION RAILROAD
- EDGE OF WETLAND

MAP KEY

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

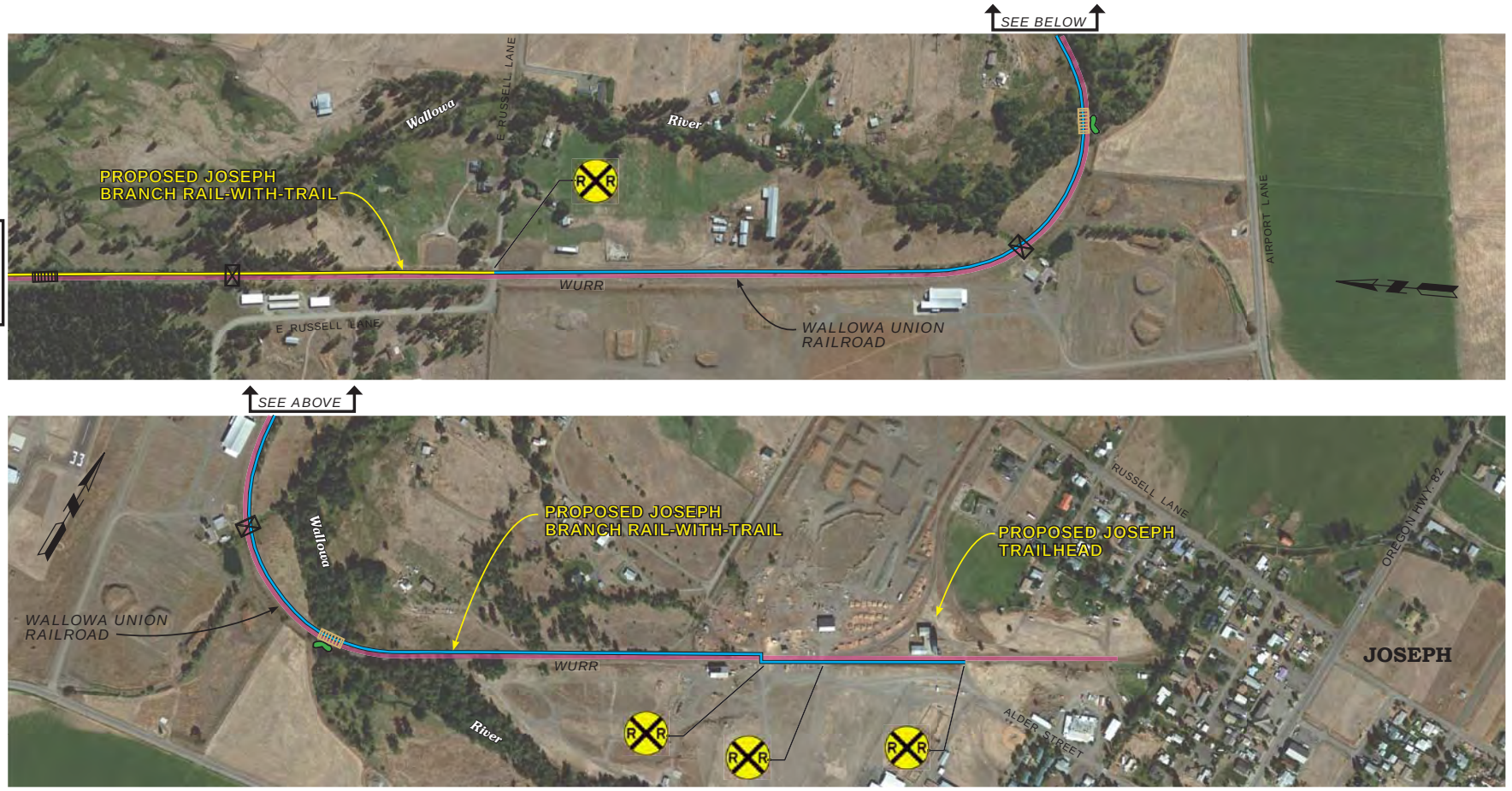
anderson perry & associates, inc.

WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
PRE-DESIGN ENGINEERING AND
PRELIMINARY ENVIRONMENTAL REVIEW REPORT

AERIAL 2

FIGURE 3

Job# 1199-581-022 Sep. 30, 2016 lbauer



LEGEND

- ROADWAY CROSSING - INCLUDES BENCH WITH TRASH CAN
- TIMBER BRIDGE
- STEEL BRIDGE
- CULVERT EXTENSION
- 5-FOOT WIDE PATH
- 10-FOOT WIDE PATH
- WALLOWA UNION RAILROAD
- EDGE OF WETLAND

MAP KEY

T. 2 S., R. 44-45 E., W.M.

SCALE IN FEET

500 0 500

anderson perry & associates, inc.

WALLOWA UNION RAILROAD AUTHORITY
JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
PRE-DESIGN ENGINEERING AND
PRELIMINARY ENVIRONMENTAL REVIEW REPORT

AERIAL 3

FIGURE 4

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Wetland Delineation

Wallowa Union Railroad Authority

Joseph To Enterprise Rail-With-Trail Pilot Project

2016

anderson perry & associates, inc.

engineering · surveying · natural resources

1901 North Fir Street
P.O. Box 1107
La Grande, Oregon 97850
(541) 963-8309
www.andersonperry.com

WETLAND DELINEATION REPORT

FOR

JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT

PREPARED FOR:

WALLOWA UNION RAILROAD AUTHORITY AND
JOSEPH BRANCH TRAIL CONSORTIUM

FUNDED BY:

U.S. ENVIRONMENTAL PROTECTION AGENCY COMMUNITY PLANNING GRANT

ADMINISTERED BY:

NORTHEAST OREGON ECONOMIC DEVELOPMENT DISTRICT

SEPTEMBER 2016

By
Sue Brady, Biologist

ANDERSON PERRY & ASSOCIATES, INC.

La Grande, Oregon
Prineville, Oregon
Walla Walla, Washington

 Job No. 1199-581

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A. Site Description, Landscape Setting

The Wallowa Union Railroad Authority proposes to construct a multi-modal trail between Joseph and Enterprise along the existing Joseph Branch Rail Line. This project is funded by a U.S. Environmental Protection Agency community planning grant administered by the Northeast Oregon Economic Development District. This Wetland Delineation Report was prepared to aid in the design process.

The trail will traverse a working landscape with open farmland and the Wallowa Mountains rising to the south. The total project length is approximately 5.75 miles. The railroad right-of-way (ROW) provides sufficient space to allow an improved trail to be developed. Approximately 1.5 miles of 10-foot wide trail, with a compacted gravel surface, is proposed to be developed in both Enterprise and Joseph. An improved trail, defined as being 5 feet wide with a compacted gravel surface, is suggested in the Concept Plan to connect the 10-foot wide trail segments.

The majority of the study area is within the Wallowa Lake - Wallowa River subwatershed (HUC 12 - 170601050109), with a small portion of the northern end of the study area in the Lower Prairie Creek subwatershed (HUC 12 - 170601050105). The legal description is Township 2 South, Range 44 East, Sections 1, 2, 12, 13, and 24; and Township 2 South, Range 45 East, Sections 19 and 30, Willamette Meridian (see Figures 1A and 1B). The study area includes portions of Tax Lots 16400 (railroad alignment) and 1500 (Marr Pond trailhead area) on Tax Map 02S44E, and land marked "Rails" on Tax Map 02S45E.

Figures 1 through 6E in Appendix A provide location and vicinity maps, tax lot maps, National Wetlands Inventory (NWI) maps, soils maps, aerial photographs, and wetland delineation maps to aid in review of this project. It should be noted that the tax lot boundaries shown on Figures 6 through 6E are provided by the Wallowa County GIS Services, and may not align with the actual property lines. For example, the railroad alignment shown on the tax maps deviated from the actual alignment of the railroad as seen in the field and verified with Global Positioning System (GPS). Therefore, although the study area boundary shown on Figures 6 through 6E appears to fall outside the railroad property in places, it was verified in the field to be contained within the railroad property and Tax Lot 1500, which is owned by the Oregon Department of Fish and Wildlife.

The proposed project is located in the Wallowa River watershed of northeastern Oregon, in the Blue Mountain ecoregion. This region is characterized by a moderate climate, with cold, moist winters and hot, dry summers. The topography in the immediate study area is flat floodplain and has an elevation of approximately 4,150 feet above sea level at the southern end in Joseph, and approximately 3,730 feet above sea level at the northern end in Enterprise.

The wetlands and waterways discussed in this Report are located along the railroad alignment between the Cities of Enterprise and Joseph, totaling 2.07 acres within the 67-acre study area. This wetland investigation was conducted by Sue Brady, Anderson Perry & Associates, Inc. (AP) biologist, on June 20, 21, and 22, 2016. Wetland Determination Data Forms from the Arid West Regional Supplement (U.S. Army Corps of Engineers [USACE], 2008) were used to record information gathered from the sample plots and are included in Appendix B. Site photographs are included in Appendix C.

B. Site Alterations, Current and Past Land Use

The study area is designated as railroad ROW, with one area zoned M-1 (Industrial) at the northern end adjacent to Marr Pond. Currently, the majority of the land adjoining the study area is privately owned and used for agricultural purposes, with scattered residences. Commercial and industrial properties are located adjacent to the railroad property in the Cities of Enterprise and Joseph.

B.1 Soils

Soils within and adjacent to the study area have been impacted by agriculture, construction and maintenance of the railroad and roads, and residential and commercial development.

B.2 Hydrology

The land in the study area is flat and is located in the Wallowa River floodplain. Various parts of the study area receive water from precipitation, overbank flow during seasonal high water events, hyporheic flow from the river, and/or irrigation. Surface and subsurface hydrology in the study area has been extensively altered by agricultural practices, including irrigation and ditching, as well as the construction of the railroad grade and embankments.

B.3 Vegetation

The majority of the study area is covered by herbaceous vegetation, primarily grasses. Shrub thickets and trees are found in the riparian corridor at the river crossings and, to a lesser degree, in the swales between the railroad embankments and adjacent fields. In the portions of the study area passing through more developed areas in the Cities of Enterprise and Joseph, there are large areas with no vegetation, and what vegetation is present consists primarily of weedy grasses and other herbaceous species.

Disturbance within the study area is primarily a result of agricultural activities, industrial and commercial activities, and the construction and maintenance of the railroad grade. Lands outside the study area have been altered by past and current activities associated with agriculture, commercial and residential development, and the construction and maintenance of roads.

C. Precipitation Data and Analysis

C.1 Climate and Growing Season

The following information on the study area climate is summarized from the Soil Survey of Wallowa County Area, Oregon (Natural Resources Conservation Service [NRCS], 2007), and the NRCS National Water and Climate Center WETS tables for the Enterprise weather station (NRCS, 2016a).

The climate in Wallowa County is moderate, with warm, dry summers and cold, moist winters. Temperature, rainfall, and snowfall are dependent on elevation. The average daily high temperature in Enterprise ranges from approximately 81° Fahrenheit (F) in the summer to approximately 40°F in the winter. Average precipitation for Enterprise is 19.8 inches, and average snowfall is 26.5 inches.

The growing season (28°F day, 70 percent interval) for this area is May 23 through September 18. Of the total annual precipitation, 5.54 inches, or approximately 20 percent, usually falls during June through September, which includes the growing season for most crops.

C.2 Precipitation and Natural Resources Conservation Service WETS Table Summary

Current precipitation data are not available for the Joseph or Enterprise weather stations; therefore, data from the La Grande weather station, approximately 40 miles west of the study area, were used and compared to the WETS table for La Grande. It is likely that the precipitation in the study area was slightly different than that recorded in La Grande, but this provides an approximation of regional conditions at the time of the field work.

Precipitation data during the three months preceding the field investigation are presented on Table C-1 (National Oceanic and Atmospheric Association [NOAA], 2016; NRCS, 2016a). Refer to Appendix D for current and historic precipitation data.

Rainfall amounts in March were above both the average and normal levels, while April and May received rainfall amounts below both the average and normal levels. Rainfall in June (to date) was below the average levels but within the normal range. At the time of the field investigation, this station was reporting 11.22 inches of precipitation for the water year to date; this is below average but within the normal range. The water year is defined as October 1 through September 30 of the following year.

TABLE C-1
SUMMARY OF MONTHLY NORMAL AND RECORDED PRECIPITATION BETWEEN MARCH 1, 2016, AND JUNE 22, 2016, FOR LA GRANDE, OREGON

	March	April	May	June	Total Water Year to Date
Recorded Precipitation (inches)	2.16	0.73	0.55	1.09 (to date)	11.22
Precipitation Average (inches)	1.50	1.58	1.90	1.53 (month)	15.08
Percent of Average	144	46	29	71	74
Monthly Normal (inches)					
30% Chance Less Than	1.06	0.98	1.29	1.04	9.49
30% Chance More Than	1.78	1.91	2.27	1.82	18.18

Daily precipitation data at the La Grande weather station for the two weeks immediately preceding the field investigation are presented on Table C-2 (NOAA, 2016; NRCS, 2016a). The highlighted dates represent the days the field investigations were performed. Precipitation occurred on six days during the period preceding the field investigation. The total precipitation during this period was slightly above average but within the normal range. Refer to Appendix D for daily precipitation data.

TABLE C-2
SUMMARY OF DAILY NORMAL AND RECORDED PRECIPITATION BETWEEN JUNE 7, 2016, AND JUNE 22, 2016, FOR LA GRANDE, OREGON

	June 2016																**Total**
Date	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Actual Precipitation (inches)	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.08	0.08	0.25	0.27	0.00	0.00	0.26	0.00	0.00	**0.86**
Average Precipitation (inches)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	**0.80**
Daily Normal (inches)																	
30% Chance Less Than	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	**0.48**
30% Chance More Than	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	**0.96**

Shaded dates indicate days that field investigations were performed.

D. Investigation Methods

Two methods of investigation were used to analyze the wetlands within the study area: a pre-field review of existing information and an on-site wetland investigation.

D.1 Pre-Field Review

A review of existing literature, maps, and other materials was conducted to identify wetlands or site characteristics indicative of wetlands within the study area. Known wetland and waterway locations were identified from the U.S. Fish and Wildlife Service (USFWS) NWI map (USFWS, 2016) (see Figure 3 in Appendix A). It should be noted that these sources can only indicate the likelihood of the presence of wetlands. Actual wetland determinations must be based on data obtained from the field investigation. Soil descriptions were taken from the NRCS website (NRCS, 2016b).

D.1.1 Soils

Three soils are mapped in the study area, as described below and shown on Figure 4 in Appendix A.

- Cheval silt loam, 0 to 2 percent slopes (map unit 47) is a somewhat poorly drained soil formed in mixed alluvium and is found on floodplains. Native vegetation typically consists of grasses, sedges, and rushes. This soil has a hydric rating of 7 (predominantly non-hydric).
- Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71) is a moderately well-drained soil formed in mixed alluvium and is found on floodplains. Native vegetation typically consists of cottonwood, Englemann spruce, and woody and herbaceous understory species. This soil has a hydric rating of 0 (non-hydric).
- Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes (map unit 204) is a somewhat excessively drained soil formed in alluvium or glacial outwash, and is found on stream terraces. Native vegetation typically consists of Douglas fir, ninebark, ponderosa pine, and woody and herbaceous understory species. This soil has a hydric rating of 0 (non-hydric).

D.1.2 Hydrology

The NWI map identifies four wetlands within the study area (see Figure 3 in Appendix A). These include an area of Palustrine Forested wetland immediately adjacent to the Wallowa River at the northern end of the study area, two areas of Palustrine Emergent wetland in the central part of the study area south of Eggleson Lane, and three Palustrine Unconsolidated Bottom ponds. In addition, the NWI map shows the Wallowa River and several agricultural ditches.

D.1.3 Vegetation

The project is within the Blue Mountain ecoregion, specifically the regional vegetation zone of meadow steppe (*Festuca-Symphoricarpos* association). Native vegetation of this zone typically consists of a patchy mosaic of grasses (*Festuca idahoensis, Agropyron spicatum, Koeleria cristata, Poa ampla*), a variety of perennial forbs (*Achillea millefolium, Balsamorhiza sagittata, Geum triflorum var. ciliatum, Lupinus sericeus, Potentilla gracilis*), and shrubs (S*ymphoricarpos albus, Rosa nutkana, Rosa woodsii*) (Franklin and Dyrness, 1988).

D.2 On-Site Wetland Investigation

An on-site wetland investigation was conducted by an AP biologist on June 20 through 22, 2016. Procedures outlined in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0) (USACE, 2008) were used to determine the presence and extent of wetlands within the study area. The methodology outlined in the manuals is based on three essential characteristics of wetlands: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Generally, field indicators of all three characteristics must be present to make a positive wetland determination, except in specific situations as outlined in Chapter 5: Difficult Situations in the Regional Supplement.

Seventeen paired (upland/wetland) sample plots were established to determine plant species composition, analyze soil pits, and evaluate hydrology in the wetland areas. One unpaired plot (Plot U-1) was taken in an area marked as wetland on the NWI map, south of Eggleson Lane. However, it was determined that this area was upland. Sample plot locations were chosen based on NWI mapping, aerial photography, a visual survey of the entire study area, and local variations in topography and vegetation along the apparent wetland boundaries.

Wetland determination data forms from the Arid West Regional Supplement were used to record information gathered from the sample plots and are included in Appendix B. Site photographs are included in Appendix C.

D.2.1 Soils

To determine the presence or absence of hydric soils, soil samples were collected at each representative sample plot. Soils were inspected to a minimum depth of 24 inches, or the depth needed to confirm the presence of hydric soil and hydrology indicators. Soils were analyzed for soil matrix color, soil texture, redoximorphic features, and the presence of mottles or gleying. Soil hue value and chroma were determined using the Munsell Soil Color Charts (Munsell Color, 2009). Observations about hydric soil indicators from the Arid West Regional Supplement were noted for each of the sample plots. The indicators found at the sample plots were Redox Dark Surface. No problematic soils were encountered at the sample plots.

D.2.2 Hydrology

Observations of wetland hydrology indicators from the Arid West Regional Supplement were noted for each of the sample plots. The primary indicators found at the sample plots were surface water, high water table, and saturation. No secondary indicators were necessary for any of the sample plots, and no difficult hydrologic situations were encountered.

D.2.3 Vegetation

Dominant plant species at each sample plot were identified, when possible, and percent cover was visually estimated. Sample plots had an approximately 4 square meter area for the herb and vine strata, and an approximately 25 square meter area for the sapling/shrub and tree strata. If a plant was not immediately identifiable in the field, a representative sample was collected and identified in the lab using a dissecting microscope when necessary. Plants were keyed to species using Hitchcock and Cronquist (1973), Barkworth et al. (2007), and Wilson et al. (2008). Scientific and common names used in this Report are from the U.S. Department of Agriculture PLANTS Database (U.S.

Department of Agriculture, 2016). Wetland plant indicator status was taken from the USACE National Wetland Plant List approved in 2016 (Lichvar et al., 2016). No problematic situations that precluded evaluating the area were encountered in regard to hydrophytic vegetation.

E. Description of All Wetlands and Other Non-Wetland Waters

Seventeen wetland areas, totaling 2.07 acres within the study area, were identified based on field observations, as well as seven non-wetland waterbodies (see Figures 6A through 6E in Appendix A).

E.1 Wetlands

The identified wetland areas appear to have been naturally formed in low areas of the landscape, and are supported by runoff, groundwater, and/or adjacent waterways. Most of the wetlands have been modified by human activities to some extent since they occur in an agricultural area and are subject to disturbance during routine farm activities. The wetlands are subject to disturbance from riverbank erosion and maintenance of the railroad embankment.

The delineated wetlands are summarized on Table E-1, including the Hydrogeomorphic and Cowardin classifications, the USACE jurisdictional category, sample plots associated with each wetland, and acreage within the study area. Descriptions of the vegetation, soils, and hydrology for each wetland are presented below. The wetlands documented by this Report are graphically depicted on the wetland delineation map for the study area as shown on Figures 6A through 6E in Appendix A. Wetland determination data forms documenting the delineation are included in Appendix B, while representative photographs documenting site conditions at the time of the investigation are presented in Appendix C.

TABLE E-1
WETLANDS DELINEATED WITHIN THE STUDY AREA

Wetland Number	Hydrogeomorphic Wetland Class[1]	Cowardin Class[2]	USACE Category and Basis	Sample Plots	Acres in Study Area
1	Riverine Flow-through	PFO	Cat. 7 - Adjacent to Wallowa River	1	0.10
2	Depressional	PFO	Cat. 7 - Adjacent to Wallowa River	2	0.03
3	Flats	PEM	Cat. 7 - Adjacent to Marr Pond	3	0.02
4	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	4	0.01
5	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	5	0.04
6	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	6	0.06
7	Riverine Flow-through	PEM	Cat. 7 - Adjacent to Wallowa River	7	0.09
8	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	8	0.53
9	Depressional	PEM	Cat. 7 - Adjacent to Wallowa River	9	0.20
10	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	10	0.16
11	Flats	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	11	0.26
12	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	12	0.08
13	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	13	0.19
14	Depressional	PEM/PSS	Cat. 7 - Adjacent to Wallowa River	14	0.08
15	Riverine Flow-through	PSS	Cat. 7 - Adjacent to Wallowa River	15	0.14
16	Riverine Flow-through	PFO	Cat. 7 - Adjacent to Wallowa River	16	0.05

Wetland Number	Hydrogeomorphic Wetland Class[1]	Cowardin Class[2]	USACE Category and Basis	Sample Plots	Acres in Study Area
17	Riverine Flow-through	PEM/PFO	Cat. 7 - Adjacent to Wallowa River	17	0.03
				Total	**2.07**

[1]*Adamus, 2001*

[2]*Cowardin et al., 1979*

E.1.1 Wetland 1

Wetland 1 is located at the northern end of the study area, south of the railroad and immediately adjacent to the Wallowa River. The wetland appears to be supported by overbank flow from the river, groundwater, and precipitation. This area is depicted as Palustrine Forested (PFOA) wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Forested. The wetland is not entirely contained within the study area, as it extends to the south.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland was Saturation (A3). Surface Water (A1) and High Water Table (A2) were also seen in the wetland but not at the sample plot location. No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included reed canarygrass, arctic rush, Kentucky bluegrass, and orchardgrass, with smaller amounts of other grasses and forbs. Woody vegetation included willow, cottonwood, alder, and rose. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits. Along most of the length of the wetland, the boundary was the toe of the slope of the railroad embankment.

E.1.2 Wetland 2

Wetland 2 is located at the northern end of the study area in a small depression between the railroad embankment and the access road for Marr Pond. The wetland appears to be supported by precipitation and groundwater and may also be connected to Wetland 1 via a culvert at the eastern end of the wetland. This area approximately corresponds to an area of Riverine (R3UBH) wetland depicted on the NWI map. Based on site observations, this wetland is classified as Palustrine Scrub-Shrub. The wetland is not entirely contained within the study area, as it extends to the west.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as panicled bulrush, forget-me-not, and climbing nightshade, as well as willow and alder. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.3 Wetland 3

Wetland 3 is located at the north end of the study area in the picnic area east of Marr Pond. The wetland appears to be supported by precipitation, groundwater, and seepage from the adjacent ditch. This area is not depicted wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is not entirely contained within the study area, as it extends to the north.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included Nebraska sedge and meadow foxtail, with smaller amounts of other unidentifiable grasses and Canada thistle. The hydrophytic vegetation indicator used was the Dominance Test. The vegetation in this area had been mowed, but enough plant material was present to identify the dominant species. No other problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.4 Wetland 4

Wetland 4 is located in a depression at the toe of the slope in the pasture north of the rail line, east of Wetland 2. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is not entirely contained within the study area, as it extends to the north.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were Surface Water (A1), High Water Table (A2), and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as Nebraska sedge, arctic rush, buttercup, curly dock, Kentucky bluegrass, orchardgrass, and smaller amounts of other grasses and forbs. The hydrophytic vegetation indicator used was the Dominance Test. The vegetation had been moderately grazed, but the plants were identifiable and no other problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.5 Wetland 5

Wetland 5 is located in a depression at the toe of the slope in the pasture north of the rail line, east of Wetland 4. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is not entirely contained within the study area, as it extends to the north.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were Surface Water (A1), High Water Table (A2), and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as Nebraska sedge, arctic rush, buttercup, Kentucky bluegrass, orchardgrass, and smaller amounts of other grasses and forbs. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.6 Wetland 6

Wetland 6 is located in a depression at the toe of the slope in the pasture north of the rail line, east of Wetland 5 and separated from it by a farm access road. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is not entirely contained within the study area, as it extends to the north.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were Surface Water (A1), High Water Table (A2), and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included primarily Nebraska sedge and arctic rush, with smaller amounts of other grasses and forbs. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.7 Wetland 7

Wetland 7 is located north of Green Valley Road, on both sides of the river at Wallowa River Crossing No. 1. The wetland appears to be supported by precipitation, groundwater, and periodic

surface water input from the Wallowa River. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is not entirely contained within the study area, as it extends to the west.

Hydric Soil

Soils in this wetland are mapped as Eggleson gravelly loam, 0 to 2 percent slopes (map unit 71). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicator recorded in this wetland was High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland was reed canarygrass. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.8 Wetland 8

Wetland 8 is located south of Green Valley Road, in the depression between the railroad embankment and the agricultural field to the west. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent. The wetland is entirely contained within the study area.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicator recorded in this wetland was Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as Nebraska sedge, arctic rush, meadow foxtail, Kentucky bluegrass, and small amounts of other grasses and forbs. A small patch of willow and cottonwood is located in the center of the wetland. The hydrophytic vegetation

indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.9 Wetland 9

Wetland 9 is located north of Dorrance Road, in the depression between the railroad embankment and the agricultural field to the west. The wetland appears to be supported by precipitation and groundwater. This area corresponds to a portion of a larger, linear wetland depicted as Palustrine Emergent (PEM1Cx) wetland on the NWI map, which was supported by site observations. The wetland is entirely contained within the study area.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as sedges, arctic rush, Kentucky bluegrass, and small amounts of other grasses and forbs. A small patch of willow and rose bushes is located near the northern end of the wetland. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.10 Wetland 10

Wetland 10 is located north of Dorrance Road, in the depression between the railroad embankment and Williamson Lane to the east. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Scrub-Shrub. The wetland is not entirely contained within the study area, as it extends to the east.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were Surface Water (A1), High Water Table (A2), and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as sedges, arctic rush, fowl bluegrass, water mint, and other grasses and forbs, as well as willow, rose, and a few cottonwood trees. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.11 Wetland 11

Wetland 11 is located southeast of the intersection of Dorrance Road and Williamson Lane, in the depression between the railroad embankment and the agricultural field to the west. The wetland appears to be supported by precipitation, groundwater, and seepage from Ditch 1 at the north end of the wetland. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Scrub-Shrub. The wetland is entirely contained within the study area.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as water sedge, arctic rush, fowl bluegrass, water mint, and other grasses and forbs, as well as willow, rose, and a few cottonwood trees. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.12 Wetland 12

Wetland 12 is located south of Wetland 11, in the depression between the railroad embankment and Dorrance Road to the east. The wetland appears to be supported by precipitation, groundwater, and seepage from the adjacent Ditch 1. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Scrub-Shrub. The wetland is not entirely contained within the study area, as it extends to the east.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicator recorded in this wetland was High Water Table (A2) and Saturation (A3). Surface Water (A1) was also observed in the wetland, although not at the sample plots. No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as reed canarygrass, sedges, rushes, fowl bluegrass, and other grasses and forbs, as well as willow and rose. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.13 Wetland 13

Wetland 13 is located just north of the intersection of Airway Road and Dorrance Road, in the depression between the railroad embankment and Dorrance Road to the east. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Scrub-Shrub. The wetland is not entirely contained within the study area, as it extends to the east.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as water sedge, arctic rush, reed canarygrass, teasel, and other grasses and forbs. A stand of willow, cottonwood, rose, and alder covers approximately half of the wetland. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.14 Wetland 14

Wetland 14 is located just north of the intersection of Airway Road and Dorrance Road, in the depression between the railroad embankment and the agricultural field to the west. The wetland appears to be supported by precipitation and groundwater. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Scrub-Shrub. The wetland is entirely contained within the study area.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicator recorded in this wetland was High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland included herbaceous species such as reed canarygrass, water sedge, arctic rush, teasel, and other grasses and forbs, with a patch of willows and rose at the southern end of the wetland. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.15 Wetland 15

Wetland 15 is located south of the intersection of Airway Road and Dorrance Road, in the depression between the railroad embankment and the agricultural field to the east. The wetland appears to be supported by precipitation, groundwater, and leakage from irrigation ditches in the field to the east. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Scrub-Shrub. The wetland is not entirely contained within the study area, as it extends to the east.

Hydric Soil

Soils in this wetland are mapped as Cheval silt loam, 0 to 2 percent slopes (map unit 47). This soil complex is listed as 7 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). Surface Water (A1) was also observed in the wetland, although not at the sample plots. No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland was primarily a dense thicket of willow, alder, and rose, with reed canarygrass, sedges, rushes, teasel, and thistle along the edge. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.16 Wetland 16

Wetland 16 is located approximately 0.4 mile south of Wetland 15, in a shallow depression west of the railroad embankment and adjacent to Ditch 2. The wetland appears to be supported by precipitation, groundwater, and water from the ditch. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Forested. The wetland is not entirely contained within the study area, as it extends to the west.

Hydric Soil

Soils in this wetland are mapped as Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes (map unit 47). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicators recorded in this wetland were High Water Table (A2) and Saturation (A3). Surface Water (A1) was also observed in the wetland, although not at the sample plots. No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland was primarily willow, alder, rose, and Douglas fir, with an understory of fowl bluegrass, buttercup, arctic rush, water sedge, and teasel. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.1.17 Wetland 17

Wetland 17 is located near the southern end of the study area, south of the railroad embankment and adjacent to Wallowa River Crossing No. 2. The wetland appears to be supported by precipitation, groundwater, and overbank flow from the river. This area is not depicted as wetland on the NWI map. Based on site observations, this wetland is classified as Palustrine Emergent and Palustrine Forested. The wetland is not entirely contained within the study area, as it extends to the south.

Hydric Soil

Soils in this wetland are mapped as Matterhorn gravelly fine sandy loam, 0 to 3 percent slopes (map unit 47). This soil complex is listed as 0 percent hydric (NRCS, 2016b). The hydric soil indicator recorded was Redox Dark Surface (F6). No problematic soils were observed.

Hydrology

The primary hydrology indicator recorded in this wetland was High Water Table (A2) and Saturation (A3). No problematic hydrologic situations were encountered, and no secondary hydrology indicators were required.

Hydrophytic Vegetation

Vegetation observed in this wetland was primarily willow, alder, rose, and cottonwood, with an understory of reed canarygrass, Johnsongrass, arctic rush, and teasel. The hydrophytic vegetation indicator used was the Dominance Test. No problematic hydrophytic vegetation situations were encountered.

The wetland boundary was determined using local topographical features and vegetation patterns, coupled with observations of hydric soils and hydrology from the sample soil pits.

E.2 Other Waters of the State/U.S.

Several non-wetland Waters of the State/U.S. are present within the study area, as follows:

- The Wallowa River is a perennial stream that has been modified by irrigation diversions, channelization, levee construction, and other activities associated with agricultural practices. The river flows roughly south to north, ultimately draining into the Grande Ronde River approximately 40 river miles downstream of Enterprise. The Wallowa River is impacted by the study area four times:
    - At the northern end of the project area, the Wallowa River runs along the south side of the study area boundary, at the toe of the slope of the railroad embankment. The channel is approximately 15 feet wide at this location; however, less than 3 feet of this width is contained within the study area. Approximately 65 linear feet (0.003 acre) of channel is within the study area boundary.
    - The Wallowa River side channel crossing is located approximately 0.28 mile north of Green Valley Road. Within the study area, the channel is approximately 15 feet wide, with moderately stable vegetated banks. Approximately 101 linear feet (0.03 acre) of channel is within the study area.
    - Wallowa River Crossing No. 1 is located approximately 400 feet north of Green Valley Road. Within the study area, the channel is approximately 8 feet wide, with moderately stable vegetated banks. Approximately 80 linear feet (0.01 acre) of channel is within the study area.
    - Wallowa River Crossing No. 2 is located near the southern end of the study area, at the toe of the slope of the railroad embankment. The river flows parallel to the railroad for approximately 500 feet, then makes a right-angle bend to the north to flow under the railroad bridge. Within the study area, the channel is approximately 45 feet wide, with moderately stable vegetated banks. Approximately 554 linear feet (0.32 acre) of channel are contained within the study area.
- Newby Creek is an intermittent stream located near the southern end of the project, just west of Wallowa River Crossing No. 2. This stream drains from the farmland to the south, and joins the Wallowa River approximately 300 feet northeast of the study area. The channel is approximately 3 feet wide, with incised banks. The channel was dry at the time of site visit, and it appears that this water is captured in a farm pond immediately south of the railroad. Approximately 42 linear feet (0.003 acre) of channel are contained in the study area.
- Several irrigation ditches cross the study area, all associated with the Wallowa River and its tributaries:
    - Island Ditch crosses the study area just south of Green Valley Road. Within the study area, the channel is approximately 10 feet wide, with moderately stable vegetated banks. Approximately 101 linear feet (0.02 acre) of channel is contained within the study area.

- Lower Alder Slope Ditch crosses the study area just north of Airway Road. Within the study area, the channel is approximately 10 feet wide, with moderately stable vegetated banks. Approximately 98 linear feet (0.01 acre) of channel is contained within the study area.

- Ditch 1 crosses the study area just south of the intersection of Dorrance Road and Williamson Lane and is associated with Wetland 11. This ditch is 5 to 10 feet wide within the study area and is sinuous with somewhat unstable vegetated banks. Approximately 174 linear feet (0.02 acre) of channel is contained within the study area.

- Ditch 2 crosses the study area approximately 0.4 mile south of the intersection of Airway Road and Dorrance Road and is associated with Wetland 16. This ditch is 1 to 5 feet wide within the study area and drains east from Wetland 16. Approximately 60 linear feet (0.003 acre) of channel is contained within the study area.

F. Deviation from Local Wetland Inventory or National Wetland Inventory

A local wetland inventory has not been prepared for the Enterprise or Joseph areas. Within the study area, the NWI map shows one Palustrine Forested wetland, two Palustrine Emergent wetlands, and three areas of Palustrine Unconsolidated Bottom wetland (see Figure 3 in Appendix A).

During the field investigation, two wetlands were found to correspond approximately to wetlands shown on the NWI map:

- Wetland 1 was found to approximately correspond to the large Palustrine Forested wetland shown on the NWI map at the northern end of the study area.

- Wetland 9 was located in approximately the area of a long linear Palustrine Emergent wetland that extends from just south of Eggleson Lane to Lower Alder Slope Ditch. It appears that this linear wetland is a former ditch that has been moved to the edge of the adjacent field and is no longer on railroad property.

The remaining wetlands (Wetlands 2 through 8 and 10 through 17) were located in areas not shown as wetland on the NWI map.

The Palustrine Emergent wetland shown south of Eggleson Lane on the NWI map was determined to be upland. It appears that the hydrology for this area has been cut off by modifications to the ditch system in the adjacent field. The wetland determination data form for sample plot U-1 is provided in Appendix B.

The three Palustrine Unconsolidated Bottom pond areas shown within the study area on the NWI map were not observed within the study area during the site visit. This may be partially due to mapping inaccuracies in the NWI map, as all three ponds are shown overlapping the rail lines or embankment. The first pond area is shown approximately 250 feet south of the intersection of Airway Road and Dorrance Road, but no evidence of this pond was observed during the site visit. The second area is a farm pond associated with Newby Creek and is located outside of the railroad property. No evidence of the third pond, shown approximately 800 feet east of Wallowa River Crossing No. 2, was observed during the site visit.

G. Mapping Method

The study area boundaries were created using ArcGIS and field-verified during the site visit. The best professional judgment of the investigator was used to determine the wetland boundaries based on vegetation, soil, hydrologic, and topographic indicators observed in the field. The ordinary high water elevations (OHWE) of the waterways were determined using field indicators such as the slope break of the bank, change in vegetation and sediment characteristics, and the presence of washed out roots in the bank. Pin flags were used to mark the wetland boundaries, sample plot locations, and OHWE, which were surveyed at the time of the site visit using a Trimble GeoXT 6000 handheld GPS unit. This survey was accurate to submeter standards.

H. Additional Information

According to StreamNet (2016), Chinook salmon use the Wallowa River up to approximately East Dorrance Road for spawning, rearing, and migration, while steelhead use the entire reach between Enterprise and Joseph for spawning and rearing. Bull trout are unlikely to be present in this reach of the Wallowa River (see the distribution maps in Appendix D). The entire length of the Wallowa River is included in the designated critical habitats for bull trout, steelhead, and Chinook salmon, and is considered Pacific Salmon Essential Fish Habitat and Essential Salmonid Habitat.

The wetlands adjacent to the Wallowa River and major ditches (Wetlands 1, 7, 11, and 17) may be accessible to fish periodically, approximately every 2 years. The remaining wetlands (Wetlands 2 through 6, 8 through 10, and 12 through 16) are unlikely to be accessible to fish except during extremely high water events.

I. Results and Conclusions

Based on the results of site investigations conducted on June 20 to 22, 2016, AP confirmed the presence of 17 wetland areas totaling approximately 2.07 acres within the study area. These results are based on the presence of the three required indicators for wetlands as described in the 1987 USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). Nine non-wetland waterbodies were mapped in the study area.

These areas may be considered Waters of the State/U.S., and any fill or removal activities could require permits from the USACE and/or the Oregon Department of State Lands (DSL).

J. Disclaimer Statement

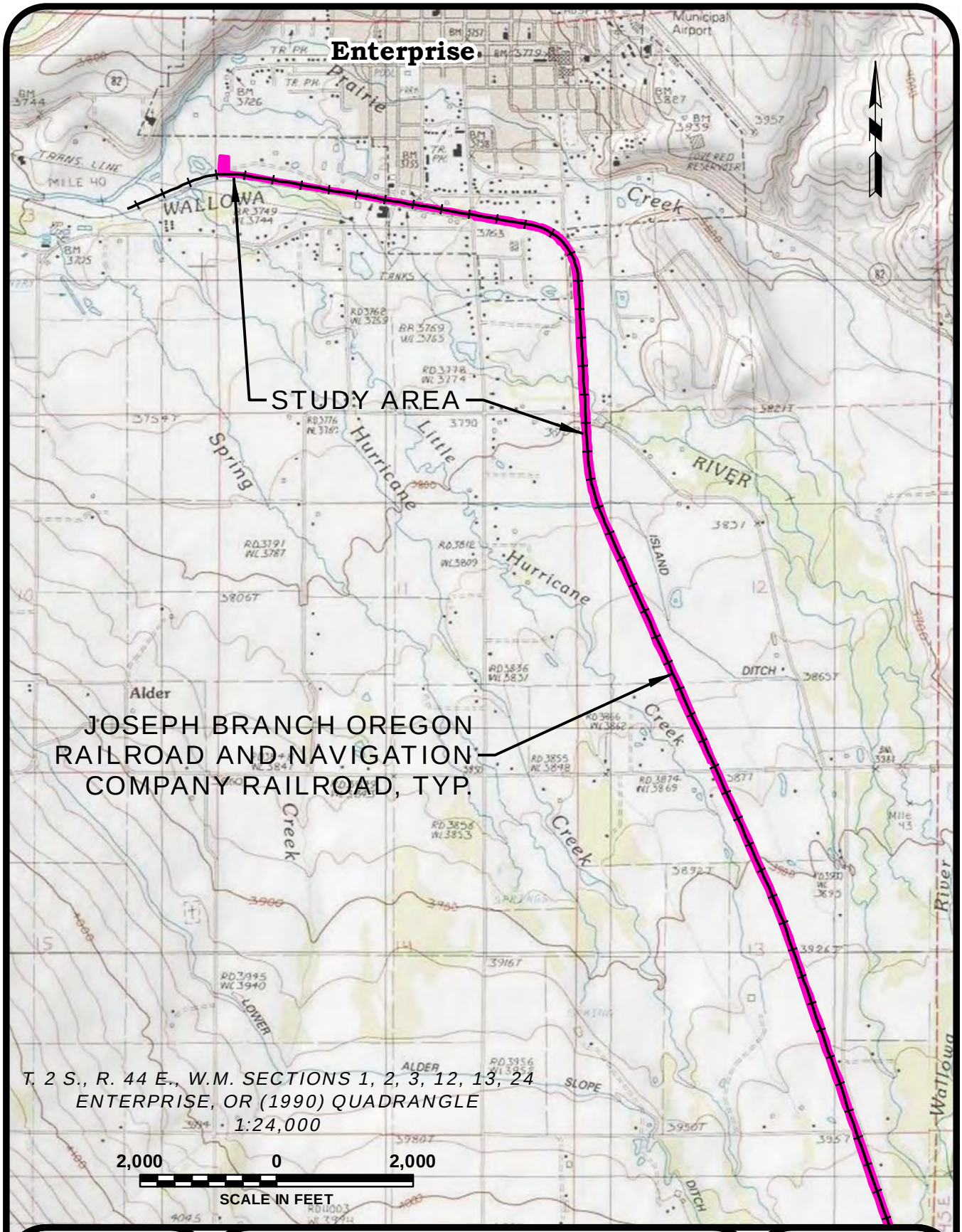
The wetland delineation was conducted in accordance with the routine methodology provided in the 1987 USACE Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0).

This Report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the DSL in accordance with Oregon Administrative Rules 141-090-0005 through 141-090-0055.

Appendices

Appendix A	Figures
Appendix B	Wetland Determination Data Forms
Appendix C	Ground-level Color Photographs
Appendix D	Additional Tables and Information
Appendix E	Literature Citations and References

APPENDIX A
Figures



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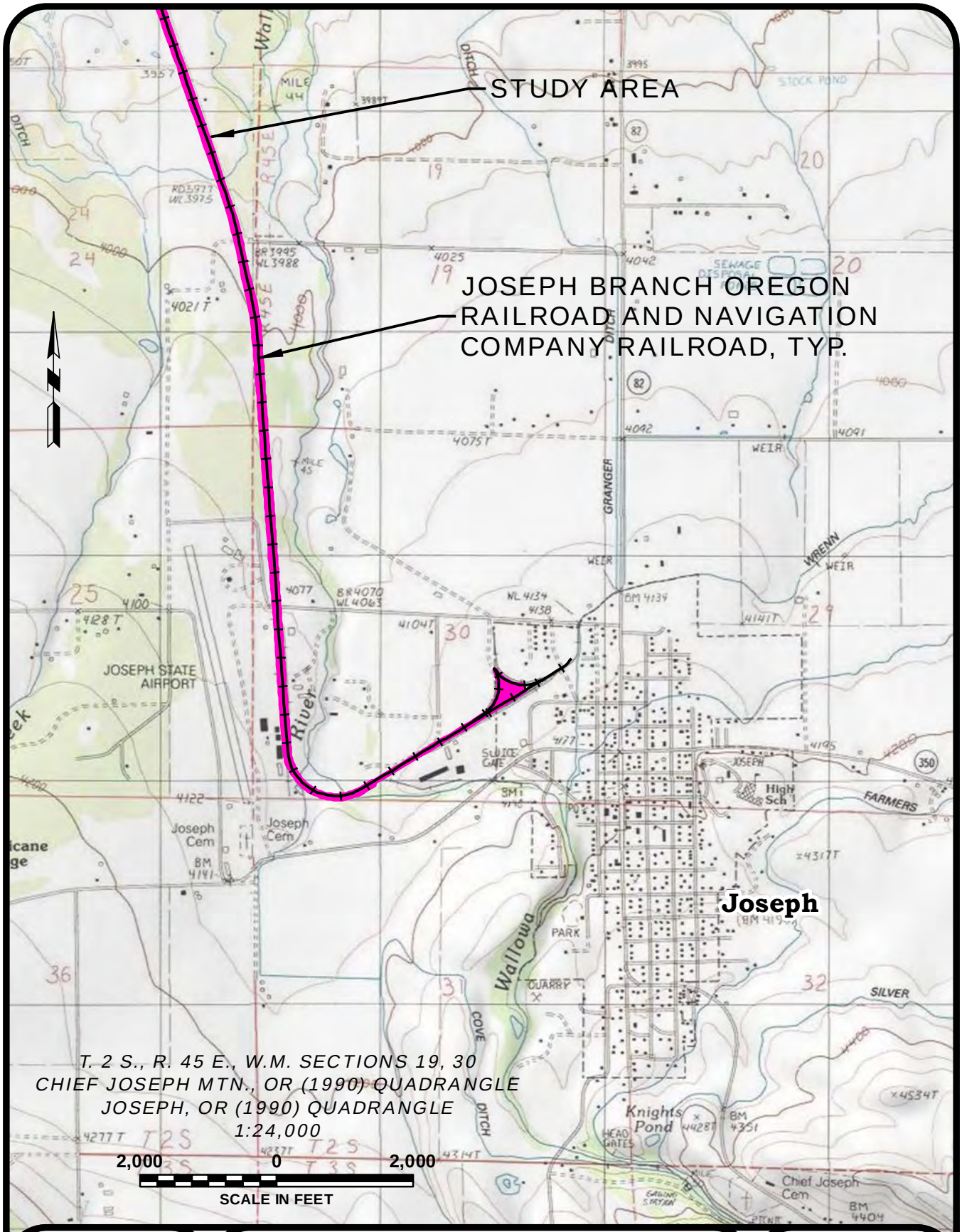
NORTHEAST OREGON ECONOMIC DEVELOPMENT DISTRICT

JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

LOCATION AND VICINITY MAP

FIGURE

1A



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JOSEPH TO ENTERPRISE RAIL-WITH-TRAIL PILOT PROJECT
WETLAND DELINEATION REPORT

LOCATION AND VICINITY MAP

FIGURE

1B