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FEASIBILITY ANALYSIS
SR 207 Realignment
Nason Creek Floodplain

Submitted to
Yakama Nation Fisheries

August 2021

perteet.com

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1.0 INTRODUCTION

1.1 Project Background and Need

The Yakama Nation Upper Columbia Habitat Restoration Project (UCHRP) has partnered with the Washington State Department of Transportation (WSDOT) for a project along Nason Creek between river mile 3.2 and 4.6, along State Route 207 in the vicinity of MP 0.15 to MP 1.00.

In 2018, the UCHRP and WSDOT Determined that Lower Nason Creek was a high priority area for restoration actions. Developing salmon and steelhead habitat restoration projects could benefit both endangered salmon species and the SR 207 roadway.

UCHRP worked with their engineer to develop restoration concepts in 2019 that showed a potential beneficial project for Nason Creek that could retain the existing alignment of SR 207. However, they recently developed a new concept idea that would reroute approximately one mile of SR 207 around the historical Nason Creek floodplain to both improve aquatic habitat conditions and protect roadway infrastructure.

The UCHRP hired Perteet Inc. to perform and preliminary design and feasibility analysis for rerouting the highway away from the Nason Creek as shown in the vicinity map below, staying within United States Forest Service (USFS) parcel boundaries.

This analysis presents three alignment alternatives, meeting WSDOT design standards that could be refined into a roadway construction project.

1.2 Project Goals

The main goals for this analysis were to develop three alternatives:

1. Minimize impacts to the Nason Creek floodplain and associated critical areas as identified by the Yakama Nation,
2. Identify the design requirements and constraints needed to advance the realignment of SR 207,
3. Optimize federal funding for the design and construction of a selected alternative by minimizing earthwork and impacts to US Forest Service land.

An additional goal of this analysis was to deliver the final feasibility memo by September 1, to allow Yakama Nation Fisheries staff to determine whether to proceed with the project using available grant funding.

This is a planning-level study that did not generate construction-ready documents for the corridor. Future design efforts will be necessary to produce those materials. However, this study has included planning level opinions of cost to include key project items that most

significantly affect the anticipated project cost. Where applicable, this report documents assumptions that should be considered when developing final design materials.

1.3 Study Area

Figure 1-1 shows the location of the project and adjacent land. SR 207 runs from southwest to northeast in the project area, but as WSDOT considers SR 207 roadway a north-south corridor, the roadway will be referred to in north-south terms in this analysis. Mileposts are increasing in the northbound direction. An existing culvert bounds the study under SR 207 to the north, private property boundaries to the south, Nason Creek to the west, and hillside topography to the east. The study length along the highway spans approximately 0.85 miles.



Figure 1-1. Study Area.

1.4 Existing Conditions

The posted speed limit on SR 207 is 55 miles per hour (mph) through the length of the study area. In the southbound direction, SR 207 approaches a stop condition at the intersection with US 2 at Coles Corner. In the northbound direction, SR 207 continues on a tangent alignment as it continues towards Lake Wenatchee. The highway realignment area is bounded by private

property to the south and an existing culvert under SR 207 to the north. SR 207 is not a National Highway System (NHS) Route in Washington State.

Nason Creek borders SR 207 to the west and abuts the roadway fill slope in two locations. The highway acts as a levee that restricts Nason Creek from flowing into its historic floodplain. United States Forest Service (USFS) land borders SR 207 to the south. The hillside slopes toward the roadway at 8% to 12% and is vegetated in timber and brush.

Other existing design data for SR 207 includes the following:

Table 1-1. Existing Design Data for SR 207.

Design Criteria	Existing
Functional Class	Rural Minor Arterial
Speed Limit	55 mph
Right-of-Way Width	70.0'
Lane Width	12.5'
Shoulder Width	6.0'
Guardrail	No
Ditch	Yes, unknown type
Cut Slope	None in study area
Fill Slope	4:1
Superelevation	N/A - tangent
Horizontal Curve Radius	N/A - tangent
Vertical Curve Radius	N/A - tangent

1.4.1 Typical Cross Section

The typical cross section for the existing roadway alignment includes 12.5' lanes and 6.0' shoulders with a typical centerline crown. The roadway is on a fill slope that varies from 4'-10' in height.

1.4.2 Roadway Profile

SR 207 in the study area has no known vertical curves. The roadway alignment generally slopes downhill to the northeast at a grade of less than 1%, as measured from LiDAR data and verified in the field using a slope board.

1.4.3 Critical Areas and Geotechnical

The existing highway is adjacent to Nason Creek. There are several nearby wetlands, riparian and upland habitat, floodplain, and an aquifer recharge area. These areas are mapped in detail in Appendix A. There are no existing geotechnical hazards along the alignment mapped in the

DNR Geologic Information Portal, The Natural Resources Conservation Service (NRCS) Web Soil Survey map, or Chelan County's GIS mapping for geological hazards.

1.4.4 Stormwater

Stormwater runoff flows from the existing pavement into roadside ditches on the south, and to the river and other wetland areas to the north. There are no water treatment facilities or infiltration basins present. The water is assumed to infiltrate into the ground or join existing water bodies.

1.4.5 Utilities

Chelan County PUD owns a 115kV line (Lake Wenatchee) that runs parallel to SR 207 which also hosts a distribution line underbuilt. A second 115kV line to Plain starts double-circuit with Lake Wenatchee at Coles Corner and then splits on its own pole lead and heads north on Richie Road.

Bonneville Power Association (BPA) owns a transmission line corridor with three extra high voltage transmission lines crossing the SR 207 right-of-way on two sets of lattice towers at the north end of the study area.

There are no known water, sewer, stormwater, or other underground utilities within the SR 207 corridor or the area of the potential roadway realignment. To the south and east, private property has several buried utilities, including a community well, septic systems, and underground power service connections.

2.0 CONCEPT DEVELOPMENT

This study included a multi-step design process to arrive at three "best fit" corridor concepts. The study team identified roadway design criteria per current WSDOT Design Manual requirements. Each alternative alignment corresponds to a potential speed limit, which controls roadway design including horizontal curve radius, superelevation, vertical curves, and sight distance. Per the request of Yakama Nation Fisheries, the development process did not include any public involvement or utility coordination.

2.1 Initial Concept Development

The planning-level concept development for this study included the design team evaluating preliminary roadway cross-section design elements and vertical design elements (e.g. grades, vertical curvature). All concept development work was based off existing GIS data, including LiDAR elevation data to provide contours for the study area, and two site visit evaluations to confirm approximate profile grades and surface feature locations. The GIS data used for design

was obtained in 2015 for the Oregon LiDAR Consortium (OLC) Chelan FEMA study area in Chelan County. The vertical accuracy for the data reported at 0.123 ft and relative accuracy is reported at 0.185 ft.

The roadway design process included multiple iterations to achieve “best fit” alignments that meet the objectives of Yakama Nation Fisheries while also meeting all WSDOT design standards.

The study team used the WSDOT Design Manual M 22-01.12 to determine appropriate design criteria for the roadway cross section as shown below.

Table 2-1. Existing and Proposed Design Criteria for SR 207.

Design Criteria	Proposed
Functional Class	Rural Minor Arterial
Speed Limit	35, 45, or 55 mph
Right-of-Way Width (widened as needed for roadway embankment maintenance or drainage features)	Min 65.0'
Lane Width	12.0', widened on corners per DM 1240.02(5)
Shoulder Width	6.0'
Guardrail	TBD
Ditch	Yes, trapezoidal per DM 1239-5
Cut Slope	2:1
Fill Slope	4:1
Superelevation	Max 6%
Horizontal Curve Radius	Varies, see DM 1250-4c
Vertical Curve Radius	Varies, see DM 1260-1
Roadway Grade	Max 5%

Key assumptions for designs include:

1. Future ROW width minimum of 65'. This is narrower than the existing 70'; however, it allows the roadway to maintain further distance from the historical floodplain by shifting curves south, closer to private property corners by a minimal amount. The amount of ROW needed may be increased or decreased to ensure WSDOT has enough space to maintain the roadway features.
2. Vertical curves were “best-fit” to existing contours of the hillside to minimize the overall earthwork (cut/fill) volumes, but volumes were not specifically balanced for each

alignment. Further iterations during final design can balance earthwork to meet WSDOT and Yakama Nation goals.

3. The slope of the new highway alignments stays under 5%.
4. The design team attempted to avoid the BPA power crossing on the north end due to size of facilities, but assumed that any Chelan County PUD transmission and distribution lines will be relocated away from the river and along the new alignments.

2.1.1 Roadway Cross-Section and Horizontal Design

The depths of pavement and crushed rock were assumed, as no geotechnical recommendations are yet available.

Using the cross-section shown, the study team laid out horizontal alignments and curves to avoid private property impacts and the historic Nason Creek floodplain while reducing the need for structures such as retaining walls. The team widened the lanes around curves as appropriate, and super-elevated the roadway of each alignment to a maximum of 6%. The horizontal designs were further refined to increase curve radii from the minimums in the 35mph and 45mph concepts. The 55mph curves are already at the maximum allowed to fit within site constraints. Several iterations of design changes resulted in smoother curves and increased stopping sight distance.

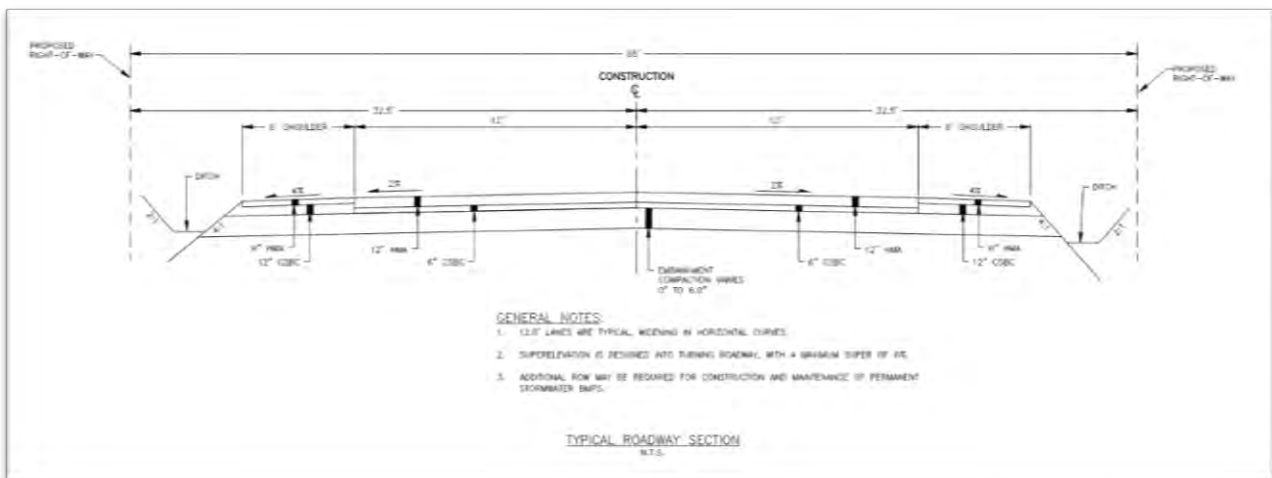


Figure 2-1. Proposed SR 207 Alignment Cross-Section.

2.1.2 Roadway Vertical Design

Once preliminary horizontal alignments were laid out, the design team created corresponding vertical alignments, attempting to follow the existing hillside profile to the extent feasible to minimize earthwork. As noted in the design criteria table, the design team did not exceed 5% roadway grade. The vertical curves were designed to meet or exceed stopping sight distance requirements and coordinate with the horizontal curves per recommendations in WSDOT DM Chapter 1220 for Geometric Profile Elements.

Along the entire length of each alignment, the preliminary concepts show that by using 2:1 cut slopes and 4:1 fill slopes, no retaining walls are needed. This will be confirmed with a full geotechnical analysis in further phases of this project.

Appendix A includes the three alternative alignment drawings.

2.2 Alternative Comparisons

The study team determined that all three alternative alignments and concepts are feasible geometric alignments for re-routing SR 207 away from Nason Creek. The study team does not identify a preferred alternative alignment; however, concept comparisons are provided below.

Table 2-2. Concept Comparisons.

Design Criteria	35 mph	45 mph	55 mph
Roadway Alignment Length	3,514 LF	3,744 LF	4,111 LF
Overall Cut Volume	20,190 CY	32,760 CY	48,710 CY
Overall Fill Volume	21,851 CY	27,954 CY	62,448 CY
Clearing and Grubbing Area (includes timber removal)	6.0 Acres	7.0 Acres	9.0 Acres
Utilities to be Relocated	Chelan County PUD transmission lines	Chelan County PUD transmission lines	Chelan County PUD transmission lines
Design Analysis (deviations) Anticipated	None	None	None
Private Property Right-of-Way Impacts	None	None	None

Alignment alternatives and proposed cross section are shown in Appendix A.

3.0 IMPACTS AND PERMITTING

Overall, there are few environmental constraints for this project, and the mitigation opportunities from removing and restoring the current road bed area are likely more than enough to mitigate any impacts from constructing the new road.

3.1 Right-of-Way

The currently alignment SR 207 is assumed to be built upon Federal lands under a State Highway Easement. This will also be true for proposed alternative alignments, and all will require WSDOT coordination with USFS to determine final right-of-way requirements for roadway maintenance. Re-aligning the roadway is a significant change in right-of-way area, and will required an amendment to the recorded Easement Deed between WSDOT and the US Forest Service.

The USFS will need to provide early guidance and advice to WSDOT regarding project consistency with the applicable forest plan. Additionally, WSDOT and USFS will coordination on needed environmental documents and approvals. See Section V, Planning, in the existing memorandum of understanding between USFS and WSDOT as shown in Appendix D.

The study team advises that Yakama Nation Fisheries should request that WSDOT add this realignment project to their Statewide Transportation Improvement Program as soon as possible.

3.2 Environmental Review

3.2.1 Regulatory Context and Permitting

Overall, there are few environmental constraints for this project, and the mitigation opportunities from removing and restoring the current road bed area are likely more than sufficient to mitigate any impacts from constructing the new road. The most important actions are to investigate the presence of additional wetlands and a stream and determine actual locations and buffers. See Appendix C for a full discussion of permitting related to critical areas.

3.2.2 Geotechnical

Existing hillside slopes in the vicinity of the alternative alignments range from 8% to 12%. Perteet did not perform a geotechnical analysis as a part of this study; however, the study team reviewed Chelan County's records to confirm any areas of historical instability in the study area. There are no known geo-hazard areas indicated in the study area, nor are there any landslide areas identified. There is one area of erosion hazard within all three alignments, as well as 800' uphill. The Natural Resources Conservation Service (NRCS) Web Soil Survey map confirms that the erosion hazard is slight. Additionally, the DNR Geologic Information Portal indicates that no faults are on or near the study site and the liquefaction is identified as moderate to high liquefaction risk.

Geotechnical assumptions used for alignment alternatives include:

- New culverts will be round, closed arch, and/or closed box culverts and will be hydraulically designed in the future phases of work.

- Common borrow excavated from the site will be used for backfill or embedment material zones during dry-weather months (June to September), which is a typical construction timeframe in WSDOT's North Central Region. For the study opinion of cost, 75% of the common borrow will be useable as fill material. The rest of the fill material is assumed to be gravel borrow.
- Stormwater infiltration may be feasible in certain locations within the study area but has not been assumed in the study opinion of cost. Further study is required to determine if infiltration is possible and the design infiltration rates that be used to confirm the feasibility and sizing of infiltration systems.

3.2.3 Storm Drainage

This study did not include a stormwater technical information report; however, our team reviewed the site for potential requirements. The largest stormwater cost to the roadway project is likely flow control and water quality treatments. If WSDOT obtains enough right-of-way space, the dispersion method may be a viable option for both, which is a low-cost treatment with large space requirements. Other opportunities could include media filter drains, bio swales, or bioretention facilities. These are more expensive alternatives but require a smaller footprint. For this study, the planning level opinions of cost include conservative values for the more complicated bioretention facilities.

3.3 Opinion of Cost

Perteet prepared planning-level opinions of cost for the three alternative alignments:

1. Alignment 1 – 35 mph
2. Alignment 2 – 45 mph
3. Alignment 3 – 55 mph

The opinions of cost include roadway construction, right-of-way acquisition, environmental, engineering, and construction management costs. The following notes and assumptions apply to these cost estimates:

- No costs were included for removal of the existing alignment of SR 207 between the new connection points. Those costs are assumed to be included in future work related to re-establishing Nason Creek in the historical floodplain.
- No costs are included for relocation of power utilities.
- Development files, aerial imagery, GIS right-of-way, and critical areas were used for the basemap.
- Earthwork quantities were generated using AutoCAD Civil 3D 2018 corridor tools. These relied on LiDAR data and therefore accuracy is limited to the accuracy of the LiDAR.

- Proposed 12-inch hot mix asphalt (HMA) pavement over six inches of crushed surfacing base course (CSBC) for new pavement zones. Shoulders will receive six-inch HMA depth over 12 inches of CSBC.
- Environmental costs include permitting in final design, construction compliance, wetland (buffer) mitigation, and temporary water pollution and erosion control.
- 30% of construction costs for construction contingency to cover additional project costs to be identified during final design.
- 10% of construction subtotal for mobilization.
- 15% of construction subtotal, including mobilization, for construction engineering.
- 5% of construction subtotal, including mobilization, for Yakama Nation Fisheries coordination and construction administration.
- 20% of construction total for final design.
- 5% of construction total for Yakama Nation coordination and design administration.
- No right-of-way acquisition costs from USFS are included; however, \$80K is included for WSDOT agency coordination and administration of road easement or ROW needs per the Memorandum of Understanding between WSDOT and USFS (WSDOT Agreement No. GCB 1336).
- All costs presented in 2021 dollars, to be escalated by the Yakama Nation during budgeting.

The full opinions of cost are included in Appendix B for all three Alternatives. Table 3-1 summarizes the total costs. One other item that can reduce future costs is accelerating one or more stages of the project (ROW, design, and/or construction), as the design team anticipates that inflation will cause time, labor, and materials costs to increase year over year.

Table 3-1. Alternative Alignments Ranges of Cost (2021 \$).

Roadway(s)	Eng. and Admin.	New Roadway Construction	Remove Existing Roadway	Total
Alignment – 35 mph	\$1.1M to \$1.2M	\$5.8M to \$6.3M	TBD	\$6.9M to \$7.5M
Alignment – 45 mph	\$1.1M to 1.2M	\$6.5M to \$6.9M	TBD	\$6.6M to \$8.1M
Alignment – 55 mph	\$1.1M to 1.2M	\$8.6M to \$9.3M	TBD	\$9.7M to \$10.5M

3.4 Considerations for Final Design

There are several project elements that should be explored further in final design. The current opinion of cost is conservative because of the limited basemaps on which study work was conducted.

Horizontal and Vertical Alignments

The chosen roadway alignment alternative can be further evaluated to better balance cut and fill quantities and reduced offsite haul needs required. Additionally, with WSDOT concurrence, roadway grade could be increased up to 9% for a design speed of 35mph. This may further reduce earthwork quantities.

During the final design phase, the roadway design team should coordinate with USFS to determine an appropriate connection location to existing Forest Service Road 6603.

Environmental Impacts and Permitting

All three alignment alternatives are likely to have impacts on one or more wetland or stream in the study area. After a final alternative is chosen, the impacts will be confirmed so that mitigation can be designed into the project. The environmental review memo from this planning study should be updated during final design as the project footprint changes and, potentially, the governing requirements adjust over time.

A list of potential federal, State, and local determination and permit requirements are listed in the Appendix C Environmental Review Memo prepared as part of this study. Permitting timelines are a risk to project delivery depending on each agency's review and processing timeline.

Utility Coordination

As part of the design and permitting process, a relocation of SR 207 will require coordination and potential relocation of significant utilities owned by Chelan County PUD, Bonneville Power Administration (BPA), and others, if more are made apparent through full project survey. A vacation of current right-of-way and reclamation of native habitat will drive relocation of utilities located in or parallel to the highway. Main tasks for coordination are:

1. Identify utility conflicts – vertical and horizontal clearances, control zone, construction, and maintenance access. Identify any customers served in this segment and develop conceptual plan to keep in service.
2. Conduct property rights review.
3. Notify impacted utilities. Host coordination meetings (from concept through final design and construction).
4. Develop concept for replacement easement and right-of-way in relation to new SR 207 alignment.
5. Acquire cost estimates from utilities for their relocations – establish funding and agreements.
6. Work with utility on their relocation design. Perform design reviews. Identify conflicts with proposed construction or other utilities.
7. Develop construction sequencing and schedule.

8. Permitting – easement and crossing permits. Acquisition of easement will require survey, legal descriptions, appraisals, landowner negotiations, etc. Develop exhibits for crossings (highway and BPA).
9. Environmental permitting – depending on who is leading the effort, utilities may request assistance to acquire or want their activities permitted under the highway construction. The project will require public outreach and solicitations. SEPA/NEPA, EIS, etc.
10. Construction agreements. Utilities will want to create firm scopes to bid to contractors and might question who is doing what or who is liable for what. This could get complicated if there are multiple contractors running through the site at the same time under different permitting requirements and contracts, particularly with sensitive environmental and cultural resources.

Electric Transmission Lines

BPA owns a corridor with three extra high voltage transmission lines crossing the SR 207 right-of-way on two sets of lattice towers. BPA will need to evaluate clearances to the proposed relocated highway, including proximity to grading and construction activities, equipment operating under the lines, and access roads to maintain the lines during normal or abnormal operating conditions. It is hopeful that these lines can remain without modification to the lines or lattice towers. A relocation of these facilities would likely require \$1-2M and two to three years to accomplish this agency. At this time, all three alternative alignments were designed to maintain minimum horizontal and vertical clearances from the towers and lines; however, this should be confirmed with survey and coordination with BPA as soon as possible.

Chelan County PUD owns a 115kV line (Lake Wenatchee) that runs parallel to SR 207 that also hosts a distribution line underbuilt. A second 115kV line to Plain starts double-circuit with Lake Wenatchee at Coles Corner and then splits on its own pole lead and heads down Richie Road.

Since the highway corridor will no longer be accessible, these lines will need to be relocated. A property rights review is needed, but the utility may have private easement or franchise agreement that would need to be replaced with like-kind in another area suitable for relocated lines. The costs for the easement and relocation would likely be billed to the organization requiring the relocation. Due to fire danger, the utility may have need to replace wood structures with metal (steel or ductile iron). These materials are more costly and perhaps can be negotiated to some degree. If electrical customers are served along this line segment, then those services will need to be maintained by rerouting where needed. It does not appear there are many customers served in this area. This relocation could be a significant project in its own right requiring easement, environmental permits, roads, tree clearing, etc. This might take \$600k to \$1M and one to two years to accomplish with overhead wood pole construction. For steel construction, add \$500k and six months. This is a significant project risk that should be investigated with Chelan County PUD as soon as possible.

Geotechnical

The final design should include a geotechnical analysis to provide detailed recommendations for elements such as fill embankment and pavement section subgrade preparation, wet weather considerations, re-use of on-site materials as structural fill, potential retaining walls, and temporary excavations/shoring. Additionally, it should provide recommendations as needed for potential “erosion” areas, including a summary of seismic hazards (if present) and design parameters.

Stormwater

Future phases of work should include hydraulic design and engineering documented in a WSDOT Type A Hydraulic Report, including:

- Threshold Discharge Area (TDA) confirmation using available basemap, as-built, GIS, and contour information in accordance with the WSDOT Highway Runoff Manual.
- Necessary mapping to include in the Hydraulic Report, including basin maps, TDA maps, existing condition maps, existing and proposed impervious area maps.
- Coordination with the project geotechnical engineer to evaluate infiltration feasibility.
- Perform threshold analysis and confirm existing, new, and replaced impervious (both PGIS and NPGIS) surfaces for the project and confirm the minimum requirements that will apply to each TDA.
- Establish equivalent area capture for each flow control and water quality facility.
- Perform runoff treatment and flow control facility sizing calculations based on the project footprint.

Schedule Risks

The roadway design and construction drawings are straightforward and can likely be completed within 12-months. However, there are several schedule risks that should be considered during the design phase of work, as listed below:

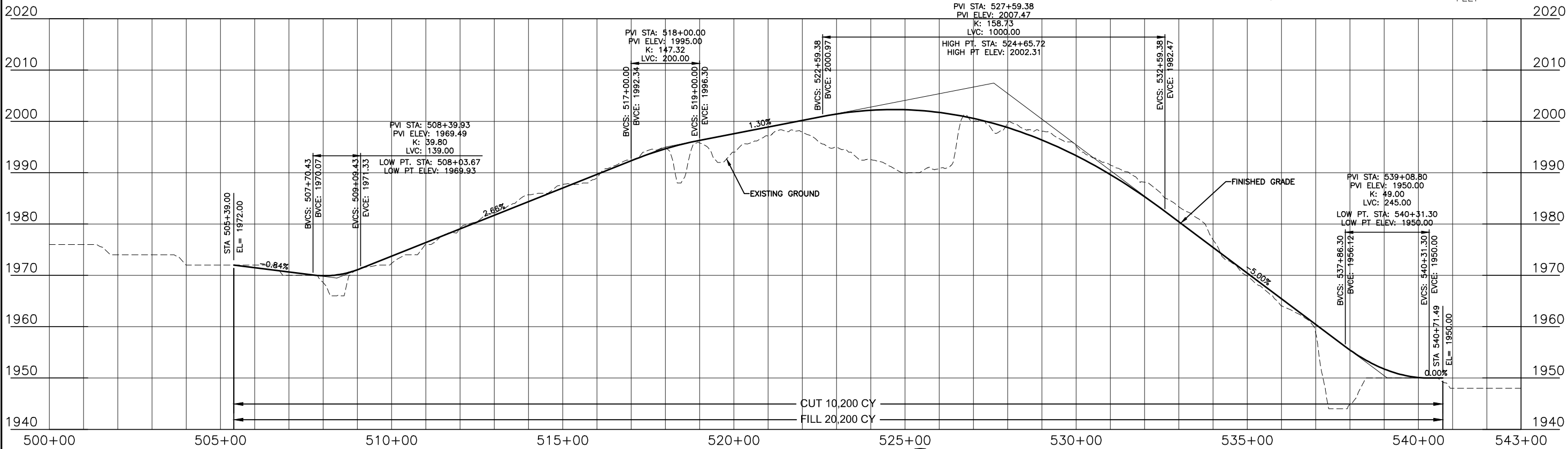
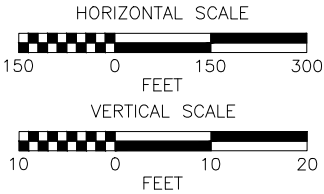
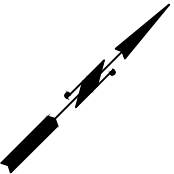
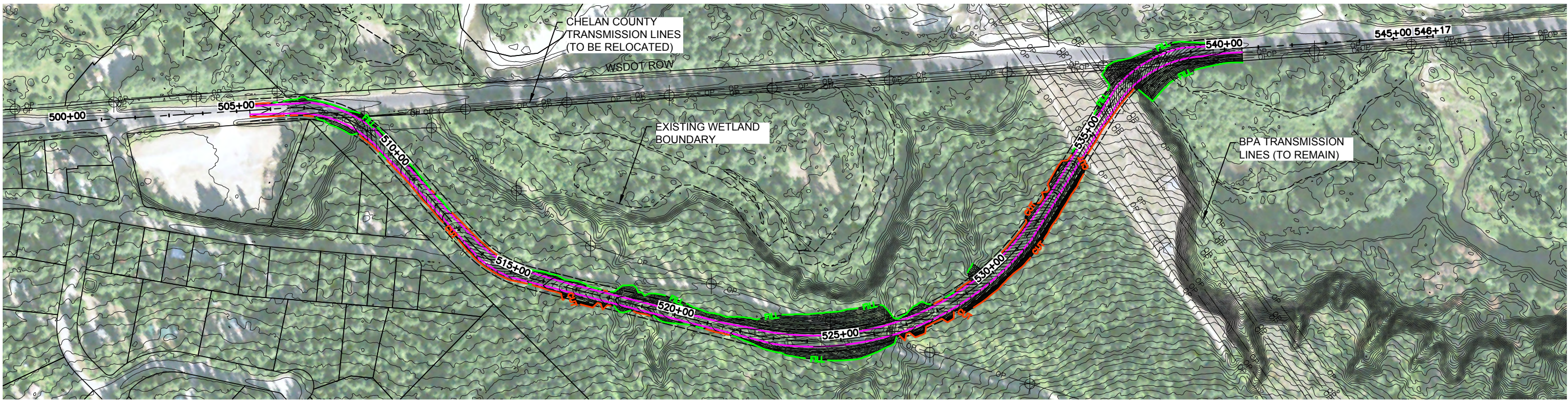
- Coordination with Chelan County PUD for line relocation of two sets of power lines,
- Coordination with Bonneville Power Association to confirm clearances to towers and coordinate permits, if required,
- ROW coordination between USFS and WSDOT, and,
- Environmental processes and permits as described in the Environmental Review Memo in Appendix C.

Coordination with all parties should begin as soon as the Yakama Nation decides whether to proceed with this roadway realignment project to minimize risk of project delays.

APPENDIX A

SR 207 Realignment Concepts

Aug 23, 2021 - 5:22pm mickycales X:\Yakama Nation Fisheries\Projects\20210139 - Nason Creek Floodplain\CADD\02 - Plan Sheets\20210139-PP-35MPH-Long Layout Name: 35MPH Concept



No.	Date	Revision	By	Appr.



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Know what's below.
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PRELIMINARY

Drawn By	Date
8/2021	8/2021
Designed By	8/2021
8/2021	8/2021
Checked By	8/2021
8/2021	8/2021
Approved By	8/2021
-----	8/2021

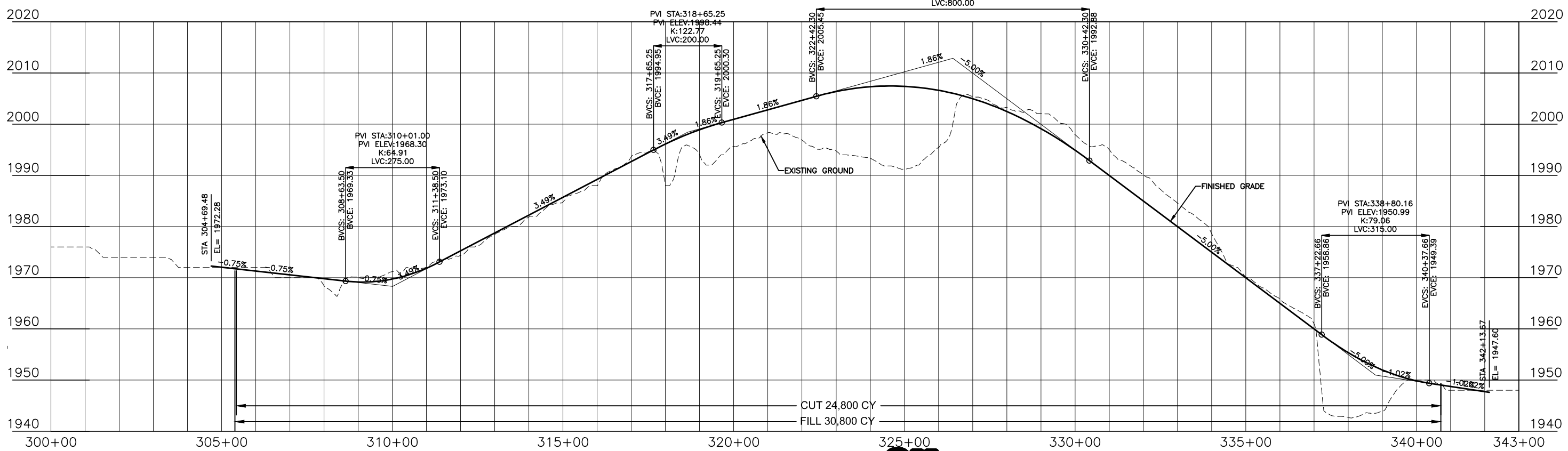
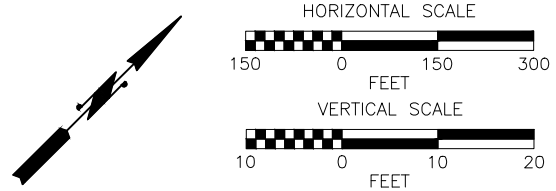
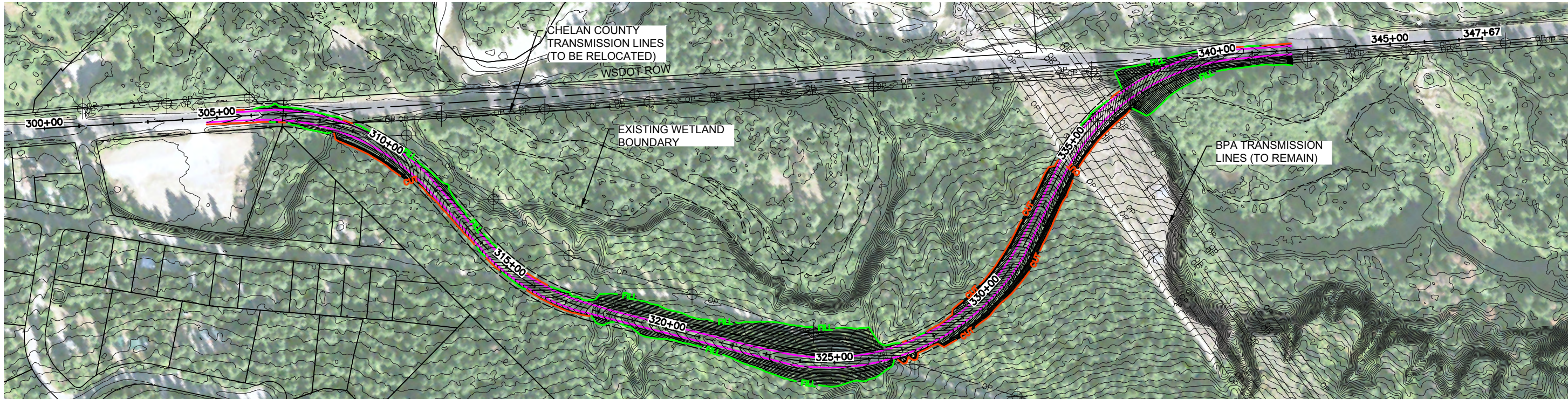
Project Number
20210139

YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN

35 MPH CONCEPT

Drawing No.
AL1

Sheet No.
1
of Total
4



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PRELIMINARY

Drawn By: MC
Designed By: JL
Checked By: JS
Approved By: _____
Date: 8/2021

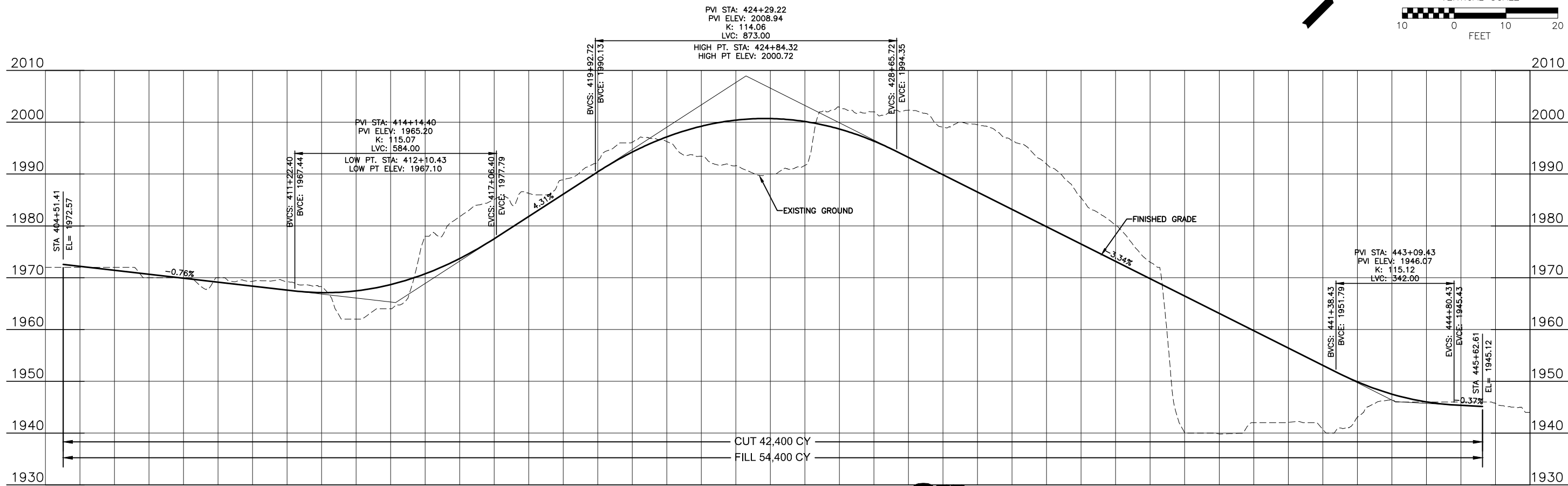
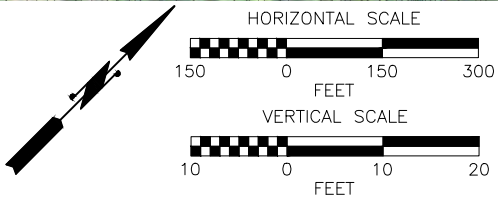
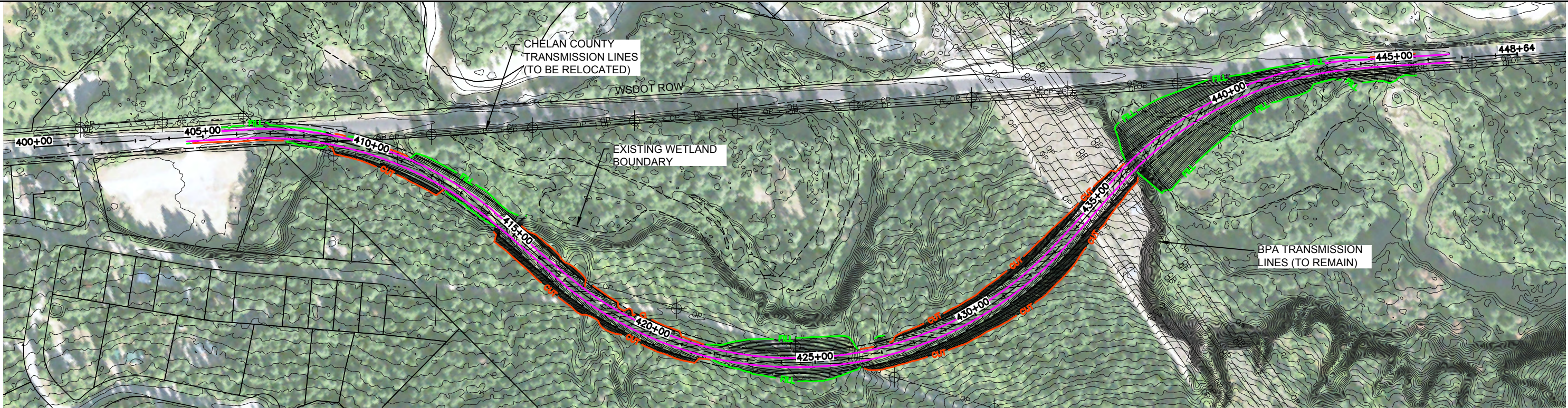
Project Number: 20210139

**YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN
45 MPH CONCEPT**

Drawing No.: **AL2**
Sheet No.: 2 of 4

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No.	Date	Revision	By	Appr.



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PRELIMINARY

Drawn By	Date
8/2021	8/2021
Designed By	8/2021
8/2021	8/2021
Checked By	8/2021
8/2021	8/2021
Approved By	8/2021

Project Number
20210139

YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN

55 MPH CONCEPT

Drawing No.

AL3

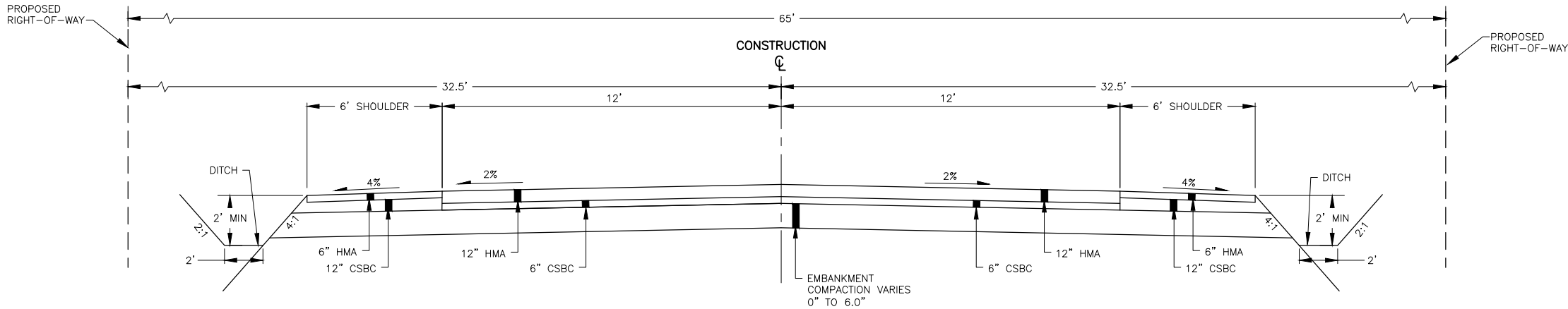
Sheet No.

3

4

of Total

Aug 23, 2021 - 3:39pm mickey.zalles X:\Yakama Nation Fisheries\Projects\20210139 - Nason Creek Floodplain\CADD\02 - Plan Sheets\20210139-DD.dwg Layout Name: Design Details



GENERAL NOTES:

1. 12.0' LANES ARE TYPICAL, WIDENING IN HORIZONTAL CURVES.
2. SUPERELEVATION IS DESIGNED INTO TURNING ROADWAY, WITH A MAXIMUM SUPER OF 6%.
3. ADDITIONAL ROW MAY BE REQUIRED FOR CONSTRUCTION AND MAINTENANCE OF PERMANENT STORMWATER BMPS.

TYPICAL ROADWAY SECTION
N.T.S.

DESIGN DATA	
DESIGN DATA	SR 207
FUNCTIONAL CLASS	RURAL MINOR COLLECTOR
NHS STATUS	NO
DESIGN VEHICLE	WB-67
POSTED/DESIGN SPEED	EXISTING: 55MPH, PROPOSED: VARIES
TERRAIN	ROLLING
TRUCK PERCENTATGE	10.30%

No.	Date	Revision	By	Appr.



PERTEET
2707 COLBY AVENUE, SUITE 900
EVERETT, WA 98201
425.252.7700 | 800.615.9900



Know what's below.
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PRELIMINARY

Drawn By	Date
8/2021	8/2021
Designed By	8/2021
8/2021	8/2021
Checked By	8/2021
8/2021	8/2021
Approved By	8/2021
-----	8/2021

Project Number
20210139

YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN

DESIGN DETAILS

Drawing No.

DD1

Sheet No.

4

4
of Total

APPENDIX B

Opinions of Cost

Preliminary Opinion of Cost
Yakima Nation Fisheries
SR 207 Realignment
8/23/2021
20210139



Spec. Section	ITEM	UNITS	QUANTITY	UNIT PRICE	AMOUNT
RIGHT OF WAY					
	WSDOT / USFS ROW Coordination (considered admin cost)	LS	1	\$ 80,000	\$ 80,000
RIGHT OF WAY TOTAL					\$ 80,000
CONSTRUCTION					
PREPARATION/GRADING/DRAINAGE					
2-01	Clearing and Grubbing	AC	6.5	\$ 12,000	\$ 78,000
2-01	Roadside Cleanup	LS	1	\$ 50,000	\$ 50,000
2-02 SP	Saw Cutting Existing Pavement	LF	80	\$ 5	\$ 400
2-03	Roadway Excavation Incl. Haul	CY	18,940	\$ 15	\$ 284,100
2-03	Common Borrow Incl. Haul	TON	12,420	\$ 15	\$ 186,300
2-03	Embankment Compaction	CY	24,140	\$ 5	\$ 120,700
Special	Stormwater Treatment Place Holder	LS	1	\$ 1,196,000	\$ 1,196,000
SURFACING					
4-04	Crushed Surfacing Base Course	TON	5,890	\$ 30	\$ 176,700
5-04 SP	HMA CL. 1/2" PG 58H-22	TON	10,210	\$ 100	\$ 1,021,000
ROADSIDE DEVELOPMENT					
8-01	Erosion/Water Pollution Control (3%)	EST	1	\$ 96,000	\$ 96,000
8-01	Silt Fence	LF	7,030	\$ 5	\$ 35,150
8-01 SP	Landscaping	LS	1	\$ 24,000	\$ 24,000
TRAFFIC					
8-09	Roadway Recessed Pavement Marker Type 2	HUND	1	\$ 500	\$ 500
8-10	Guidance Post	EA	90	\$ 5	\$ 450
8-21	Permanent Signing	LS	1	\$ 5,000	\$ 5,000
8-22	Paint Line	LF	10,550	\$ 1	\$ 10,550
OTHER ITEMS					
1-04.4	Unexpected Site Changes	LS	1	\$ 25,000	\$ 25,000
1-05.4 SP	Roadway Surveying (2%)	LS	1	\$ 64,000	\$ 64,000
1-05.4 SP	Structure Surveying (1.5%)	LS	1	\$ 48,000	\$ 48,000
1-09.7	Mobilization (12%)	LS	1	\$ 383,000	\$ 383,000
1-10 SP	Project Temporary Traffic Control (15%)	LS	1	\$ 479,000	\$ 479,000
	Archaeological and Historical Salvage	LS	1	\$ 20,000	\$ 20,000
Construction Subtotal					\$ 4,303,850
	Construction Contingency (30%)	LS	1	\$ 1,291,155	\$ 973,950
	Construction Engineering - Consultant (15%)	LS	1	\$ 645,578	\$ 486,975
	Construction Coordination - Yakima Nation (5%)	LS	1	\$ 162,325	\$ 162,325
Construction Total					\$ 5,927,100
PRELIMINARY ENGINEERING AND ADMINISTRATION					
	Final Design - Consultant (20%)	LS	1	\$ 860,770	\$ 860,770
	Final Design - Yakima Nation (5%)	LS	1	\$ 215,193	\$ 215,193
Engineering + Admin Total					\$ 1,155,963
Planning Level Opinion of Cost					\$ 7,163,100

Preliminary Opinion of Cost
Yakima Nation Fisheries
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8/23/2021
20210139



Spec. Section	ITEM	UNITS	QUANTITY	UNIT PRICE	AMOUNT
RIGHT OF WAY					
	WSDOT / USFS ROW Coordination (considered admin cost)	LS	1	\$ 80,000	\$ 80,000
RIGHT OF WAY TOTAL					\$ 80,000
CONSTRUCTION					
PREPARATION/GRADING/DRAINAGE					
2-01	Clearing and Grubbing	AC	7.5	\$ 12,000	\$ 90,000
2-01	Roadside Cleanup	LS	1	\$ 50,000	\$ 50,000
2-02 SP	Saw Cutting Existing Pavement	LF	80	\$ 5	\$ 400
2-03	Roadway Excavation Incl. Haul	CY	32,760	\$ 15	\$ 491,400
2-03	Common Borrow Incl. Haul	TON	6,280	\$ 15	\$ 94,200
2-03	Embankment Compaction	CY	31,650	\$ 8	\$ 253,200
Special	Stormwater Treatment Place Holder	LS	1	\$ 1,230,000	\$ 1,230,000
SURFACING					
4-04	Crushed Surfacing Base Course	TON	7,910	\$ 30	\$ 237,300
5-04 SP	HMA CL. 1/2" PG 58H-22	TON	10,440	\$ 100	\$ 1,044,000
ROADSIDE DEVELOPMENT					
8-01	Erosion/Water Pollution Control (3%)	EST	1	\$ 108,000	\$ 108,000
8-01	Silt Fence	LF	7,490	\$ 5	\$ 37,450
8-01 SP	Landscaping	LS	1	\$ 34,000	\$ 34,000
TRAFFIC					
8-09	Roadway Recessed Pavement Marker Type 2	HUND	1	\$ 500	\$ 500
8-10	Guidance Post	EA	90	\$ 5	\$ 450
8-21	Permanent Signing	LS	1	\$ 5,000	\$ 5,000
8-22	Paint Line	LF	11,240	\$ 1	\$ 11,240
OTHER ITEMS					
1-04.4	Unexpected Site Changes	LS	1	\$ 30,000	\$ 30,000
1-05.4 SP	Roadway Surveying (2%)	LS	1	\$ 72,000	\$ 72,000
1-05.4 SP	Structure Surveying (1.5%)	LS	1	\$ 54,000	\$ 54,000
1-09.7	Mobilization (12%)	LS	1	\$ 430,000	\$ 430,000
1-10 SP	Project Temporary Traffic Control (15%)	LS	1	\$ 537,000	\$ 537,000
1-10 SP	Archaeological and Historical Salvage	LS	1	\$ 20,000	\$ 20,000
Construction Subtotal					\$ 4,830,140
	Construction Contingency (30%)	LS	1	\$ 1,449,042	\$ 1,079,733
	Construction Engineering Consultant (15%)	LS	1	\$ 539,867	\$ 539,867
	Construction Coordination Yakima Nation (5%)	LS	1	\$ 179,956	\$ 179,956
Construction total					\$ 6,629,695
PRELIMINARY ENGINEERING AND ADMINISTRATION					
	Final Design Consultant (20%)	LS	1	\$ 966,028	\$ 966,028
	Final Design Yakima Nation (5%)	LS	1	\$ 241,507	\$ 241,507
Engineering Total Incl. ROW					\$ 1,287,535
Planning Level Opinion of Cost					\$ 7,997,300

Preliminary Opinion of Cost
Yakima Nation Fisheries
SR 207 Realignment
8/23/2021
20210139



Spec. Section	ITEM	UNITS	QUANTITY	UNIT PRICE	AMOUNT
RIGHT OF WAY					
	WSDOT / USFS ROW Coordination (considered admin cost)	LS	1	\$ 80,000	\$ 80,000
RIGHT OF WAY TOTAL					\$ 80,000
CONSTRUCTION					
PREPARATION/GRADING/DRAINAGE					
2-01	Clearing and Grubbing	AC	10	\$ 12,000	\$ 120,000
2-01	Roadside Cleanup	LS	1	\$ 50,000	\$ 50,000
2-02 SP	Saw Cutting Existing Pavement	LF	80	\$ 5	\$ 400
2-03	Roadway Excavation Incl. Haul	CY	48,710	\$ 15	\$ 730,650
2-03	Common Borrow Incl. Haul	TON	47,960	\$ 15	\$ 719,400
2-03	Embankment Compaction	CY	62,450	\$ 5	\$ 312,250
Special	Stormwater Treatment Place Holder	LS	1	\$ 1,314,000	\$ 1,314,000
SURFACING					
4-04	Crushed Surfacing Base Course	TON	8,520	\$ 30	\$ 255,600
5-04 SP	HMA CL. 1/2" PG 58H-22	TON	11,130	\$ 100	\$ 1,113,000
ROADSIDE DEVELOPMENT					
8-01	Erosion/Water Pollution Control (3%)	EST	1	\$ 142,000	\$ 142,000
8-01	Silt Fence	LF	8,230	\$ 5	\$ 41,150
8-01 SP	Landscaping	LS	1	\$ 56,000	\$ 56,000
TRAFFIC					
8-09	Roadway Recessed Pavement Marker Type 2	HUND	1	\$ 500	\$ 500
8-10	Guide Posts	EA	90	\$ 5	\$ 450
8-21	Permanent Signing	LS	1	\$ 5,000	\$ 5,000
8-22	Paint Line	LF	12,340	\$ 1	\$ 12,340
OTHER ITEMS					
1-04.4	Unexpected Site Changes	LS	1	\$ 40,000	\$ 40,000
1-05.4 SP	Roadway Surveying (2%)	LS	1	\$ 95,000	\$ 95,000
1-05.4 SP	Structure Surveying (1.5%)	LS	1	\$ 71,000	\$ 71,000
1-09.7	Mobilization (10%)	LS	1	\$ 474,000	\$ 474,000
1-10 SP	Project Temporary Traffic Control (15%)	LS	1	\$ 710,000	\$ 710,000
	Archaeological and Historical Salvage	LS	1	\$ 20,000	\$ 20,000
Construction Subtotal					\$ 6,282,740
	Construction Contingency (30%)	LS	1	\$ 1,884,822	\$ 1,884,822
	Construction Engineering Consultant (14%)	LS	1	\$ 879,584	\$ 879,584
	Construction Coordination Yakima Nation (5%)	LS	1	\$ 314,137	\$ 314,137
Construction Total					\$ 9,361,283
PRELIMINARY ENGINEERING AND ADMINISTRATION					
	Final Design Consultant (18%)	LS	1	\$ 1,099,480	\$ 1,099,479.50
	Final Design Yakima Nation (3%)	LS	1	\$ 188,482	\$ 188,482.20
Engineering Total					\$ 1,367,962
Planning Level Opinion of Cost					\$ 10,809,300

APPENDIX C

Environmental Review Memo

DRAFT MEMORANDUM

2302 W Dolarway Road, Suite 1, Ellensburg, WA 98926 | P 800.615.9900

To: Jennifer Saugen

From: Christina Wollman, AICP CFM

Date: August 24, 2021

Re: Environmental Review Memo – DRAFT SR 207 Realignment Feasibility Study

PURPOSE

This memo was prepared as part of a larger report to inform the feasibility of relocating a portion of State Route 207, near Leavenworth, Washington in Chelan County. The existing highway is adjacent to Nason Creek. The project proposes to move the highway away from the creek to provide additional floodplain and riparian habitat. The existing road grade will be removed.

REGULATORY CONTEXT

Federal Determinations/Permits

- **US Forest Service NEPA Program** – The proposed road relocation will occur on federal land owned by the US Forest Service (USFS). Evaluation under the National Environmental Policy Act (NEPA) is assumed due to federal land nexus. Assumed NEPA evaluation level is EA or EIS. This memo does not identify the specific policies and regulations that are required by the USFS NEPA program. Project level evaluation for NEPA documentation scoping would occur with the USFS under NEPA early coordination. Early coordination with the USFS is advised to identify specific NEPA documentation requirements.
- **Section 7 ESA Consultation** – Assumed due to federal project nexus, Endangered Species Act review would occur under NEPA evaluation and could be applied to other federal permits as needed (e.g. Corps 404).
- **Section 106 NHPA Consultation** – Assumed due to federal project nexus, 106 National Historic Preservation Act (NHPA) review would occur under NEPA evaluation and could be applied to other federal permits as needed (e.g. Corps 404).
- **404 Permit** - If any project activities occur within the Waters of the US, project applicant agency may be required to obtain a Clean Water Act Section 404 permit from the US Army Corps of Engineers (Corps) along with impact and mitigation identification for any work in Waters of the US (wetlands or streams). Requires Joint Aquatic Resources Permit Application (JARPA) to be submitted to Corps.

State Permits

- **Hydrologic Project Approval** - Work within, above, or below the waterbody or near the ordinary high water mark of a State Water must be permitted by the Washington Department of Fish and Wildlife

MEMORANDUM

(WDFW) through the Hydraulic Project Approval (HPA) process. WDFW HPA occurs after local SEPA determination.

- **NPDES** – Construction Stormwater General Permit Notice of Intent is assumed to be required for construction activities.
- **401 Certification** – If triggered under Section 404 Permit, Corps can require Ecology to certify under 404. Requires separate JARPA submittal to ecology similar to 404 permit and coordinated with both the Corps and Ecology under 404 permit evaluation.

Local Determinations/Permits

- **SEPA** – Project action is assumed to require evaluation under the WA State Environmental Policy Act (SEPA) under Chelan County jurisdiction.
- **Shoreline Management Program** - A portion of the site falls within the jurisdiction of the Chelan County Shoreline Management Program (SMP). The shoreline jurisdiction extends approximately 200-feet inland from the ordinary high water mark of Nason Creek including associated wetlands and floodplains. Pursuant to the SMP, Section 1.3, “This SMP shall apply to all nonfederal developments and uses undertaken on federal lands and on lands subject to nonfederal ownership, lease, or easement, even though such lands may fall within the external boundaries of a federal ownership.” All uses within this jurisdiction must comply with the County’s SMP and receive the applicable shoreline permit from the County. This memo does not evaluate the policies and regulations that are required by the SMP for specific uses. The applicable shoreline designation is Conservancy.
- **Critical Areas** - Critical areas regulations differ in Chelan County depending on whether the critical area is located within the shoreline jurisdiction. Within the shoreline, the critical areas are regulated by Appendix B of the Chelan County SMP. Outside of the shoreline jurisdiction the critical areas are regulated by the overlay district regulations within Title 11 of the Chelan County Code.
- **Floodplain** - All development activities within the 100-year floodplain must receive a floodplain development permit from Chelan County pursuant to Chelan County Code Chapter 3.20 Flood Hazard Development.

MAPS

Perteet prepared maps with the following environmental information to support this review memo:

- Wetlands, Floodplains, and Riparian Areas
- Wellhead Protection Area

ENVIRONMENTAL REVIEW

Wetlands

The Yakama Nation provided a wetland report for the project area prepared by the Chelan County Natural Resource Department in 2016 for a proposed culvert project in the project area. The wetland was classified as a Type III with a habitat score of 6 using the 2014 rating method. Chelan County Code requires a buffer of 110-150 feet. The Yakama Nation also provided a GIS layer with wetland boundaries adjacent to the project area. This data does not appear to encompass the entire project area, and the National Wetland Inventory (NWI) indicates a forested wetland on the east side of the current roadway that may be within the new road alignment. The actual

MEMORANDUM

presence or absence of this or any other wetlands must be determined by a field investigation performed by a qualified professional. This information would be included in permit documentation for HPA and Corps Permit as well as mitigation design for any direct wetland impacts as may be necessary and unavoidable, should the wetlands be confirmed and be impacted by this project.

Habitat

The study area contains several species that are considered endangered or priority. Due to the presence of these species, federal and local permitting as discussed above will be required.

Riparian Habitat

The DNR Forest Practices Application Mapping Tool identifies a potential non-fish bearing stream through the project area. The 2016 wetlands report noted that this stream was not present as a surface feature. However, this stream did not affect the previously proposed project and it does not appear there was any consultation with other agencies to confirm the determination. The actual presence or absence of this stream must be confirmed.

According to the WDFW SalmonScape map, Nason Creek is home to the following ESA listed fish species:

- Upper Columbia River Spring-run Chinook Salmon
- Upper Columbia River Summer and Winter Steelhead

The WDFW PHS on the Web map identifies the Nason Creek as supporting the following PHS fish species:

- Rainbow Trout
- Steelhead (Federal ESA)
- Westslope Cutthroat
- Spring and Summer Chinook
- Dolly Varden/Bull Trout (Federal EFH)

Upland Habitat

The PHS map also identifies the area as masked for Spotted Owl which is an ESA listed species. The area is also shown as mule deer fawning and elk calving grounds.

Aquifer Recharge Area

The Department of Health Source Water Assessment Program (SWAP) mapping application identifies one wellhead protection area at the southern end of the site. Because a road with stormwater control would likely be considered a low intensity land use and because the site has low soil permeability according to the US Department of Agriculture Web Soil Survey, the potential designation of aquifer recharge area should not be a limiting factor.

Because the proposed roadway may be located near the wellhead, precautions should be taken to avoid well impacts.

Floodplain

FEMA Flood Insurance Rate Maps designate Nason Creek as the 100-year floodplain. The floodplain is located to the west of the current highway location and on the east side of the highway to the north of the power lines. The floodplain designation will not create any limiting factors. However, as the current roadway acts as a floodplain barrier, an updated flood study may be required to map the changed conditions.

MEMORANDUM

Geohazards

The DNR Geologic Information Portal indicates that no faults are on or near the study site and the liquefaction is identified as moderate to high liquefaction risk. The Web Soil Survey map indicates the erosion hazard is slight. There are no landslides identified and no steep slopes.

SUMMARY

Overall there are few environmental constraints for this project, and the mitigation opportunities from removing and restoring the current road bed area are likely more than sufficient to mitigate any impacts from constructing the new road. The most important actions are to investigate the presence of additional wetlands and a stream, and determine actual locations and buffers.

DATA SOURCES

Chelan County Assessor Data. Accessed through the Chelan County GIS Parcel Search Map <https://maps.co.chelan.wa.us/GIS/>.

FEMA Flood Insurance Rate Maps. Panel 5300150775B. Downloaded from FEMA Map Service Center and provided by Department of Ecology as Q3 Data through ArcGIS Online.

US Department of Agriculture Web Soil Survey. Accessed through <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

US Fish and Wildlife Service National Wetlands Inventory. Accessed through ArcGIS Online USA Wetlands data hosted by ESRI and <https://www.fws.gov/wetlands/data/mapper.html>.

Washington Department of Fish and Wildlife SalmonScape Map. Accessed through <https://apps.wdfw.wa.gov/salmonscape/>.

Washington Department of Fish and Wildlife Priority Habitat Species on the Web Map. Accessed through <https://geodataservices.wdfw.wa.gov/hp/phs/>.

Washington Department of Health SWAP Map. Accessed through ArcGIS Online and <https://fortress.wa.gov/doh/swap/index.html>.

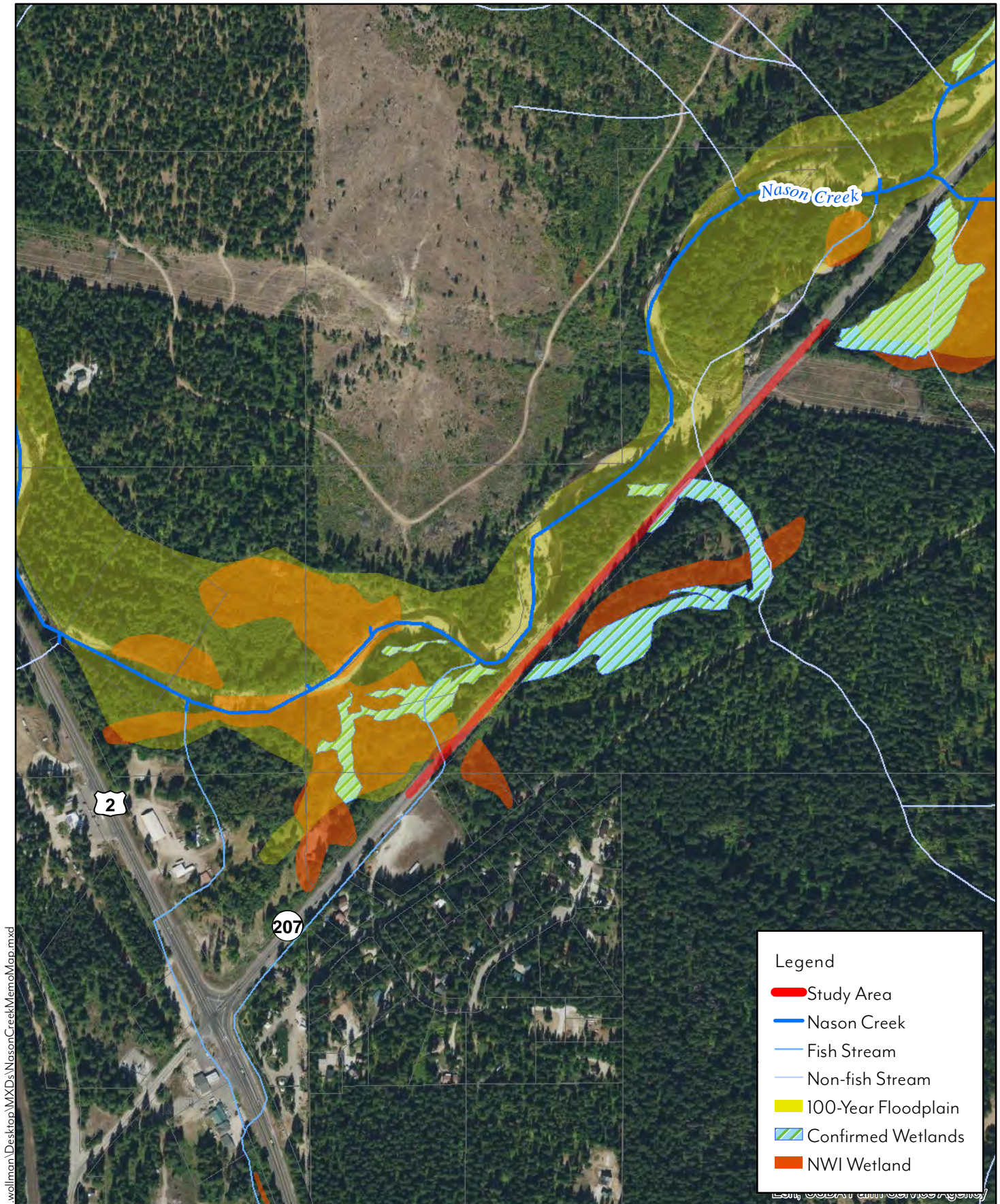
Washington Department of Natural Resources Geologic Information Portal. Accessed through <https://geologyportal.dnr.wa.gov/>. Data downloaded from <https://www.dnr.wa.gov/programs-and-services/geology/publications-and-data/gis-data-and-databases>.

Washington Department of Natural Resources Forest Practices Application Mapping Tool. Accessed through <https://fpamt.dnr.wa.gov/default.aspx>.

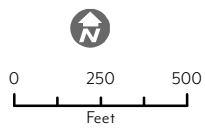
MEMORANDUM

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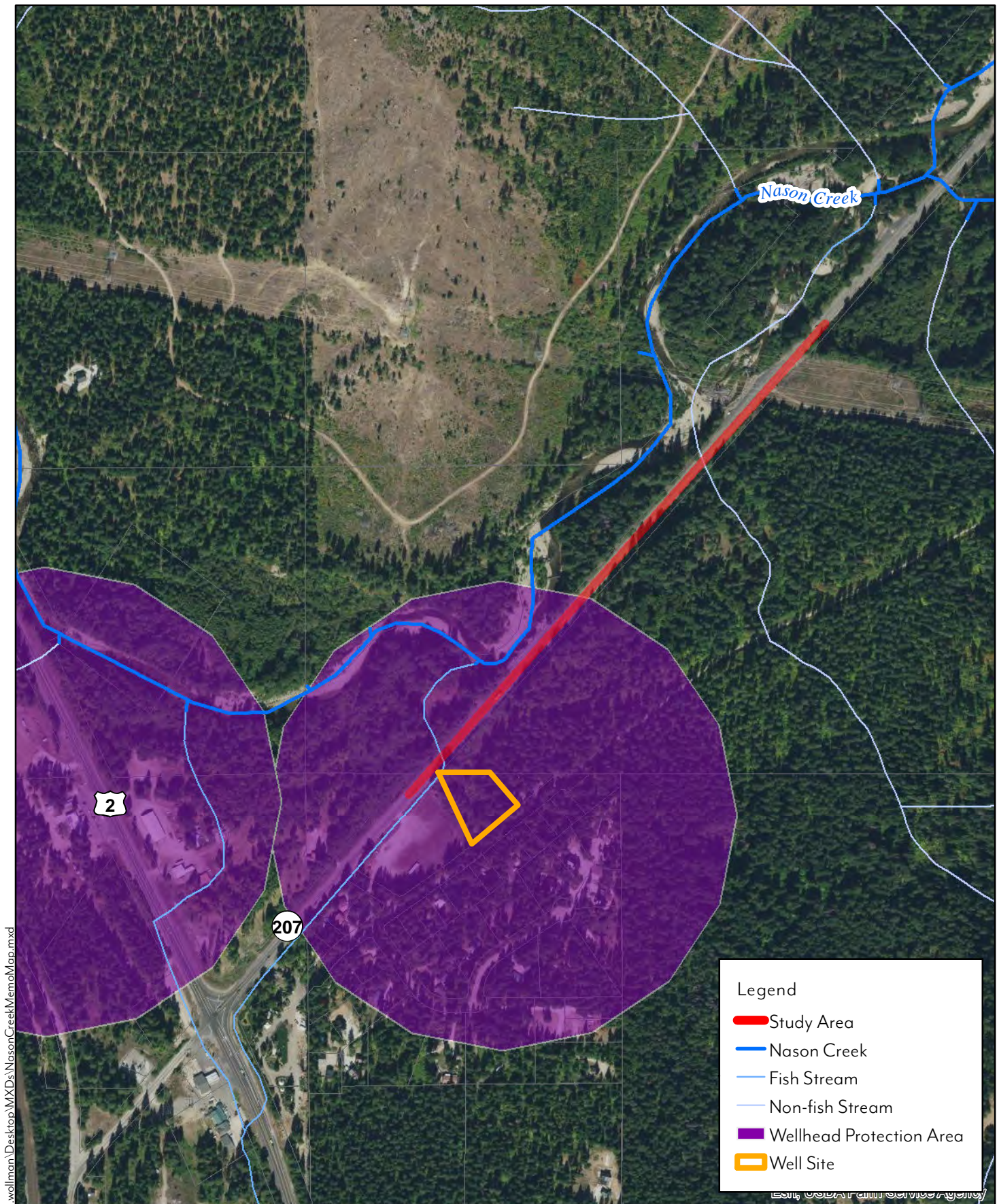
Corps	US Army Corps of Engineers
DNR	Washington Department of Natural Resources
EFH	Essential Fish Habitat
ESA	Endangered Species Act
HPA	Hydraulic Project Approval process
JARPA	Joint Aquatic Resources Permit Application
NWI	National Wetland Inventory
PHS	Priority Habitat Species
SWAP	Source Water Assessment Program
SMP	Chelan County Shoreline Management Program
USFW	US Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife



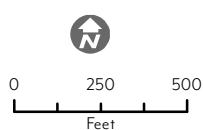
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Nason Creek Floodplain Wetlands, Floodplain, and Riparian Areas



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Nason Creek Floodplain Wellhead Protection Area

APPENDIX D

Memorandum of Understanding between WSDOT and USDA Forest Service

MEMORANDUM OF UNDERSTANDING
between the
STATE OF WASHINGTON
DEPARTMENT OF TRANSPORTATION
WSDOT Agreement No. GCB 1336
and the
USDA, FOREST SERVICE
PACIFIC NORTHWEST REGION

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the State of Washington, Department of Transportation, hereinafter referred to as "WSDOT," and the USDA, Forest Service, Pacific Northwest Region, hereinafter referred to as the "U.S. FOREST SERVICE," both herein referred to individually or collectively as "Party" or "Parties."

Title: State Highways Over National Forest Lands

I. PURPOSE AND SCOPE:

1. The purpose of this MOU is to document the cooperation between the Parties to coordinate transportation activities of mutual interest involving state highways on, or accessing, lands managed by the U.S. FOREST SERVICE. The scope of this MOU is limited to construction activities, maintenance and operation of state highways within the road easement or right-of-way. This MOU supersedes the MOU between the Parties dated June 25, 2013 covering the same subject.
2. U.S. FOREST SERVICE, Forest Supervisors, and WSDOT Regional Administrators, are encouraged to coordinate and establish the appropriate document for activities of mutual interest that are not covered by this MOU (e.g., winter recreation, etc.).

II. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

This MOU establishes procedures for coordination of transportation activities involving State highways to and on lands administered by the U.S. FOREST SERVICE. Both WSDOT and the U.S. FOREST SERVICE will benefit from this coordination. WSDOT has jurisdiction over the highways, and is responsible for their management and operation. The U.S. FOREST SERVICE has a vested interest in the highways as they provide critical access to National Forest lands it is responsible for managing. Therefore, it is of mutual interest to, as well as the responsibility of, both Parties to ensure safe access over these highways.

In consideration of the above premises, the Parties agree as follows:

III. COORDINATION

1. U.S. FOREST SERVICE Forest Supervisors and WSDOT Regional Administrators will coordinate all activities included herein, unless otherwise noted. They will jointly agree on items

to be coordinated by the U.S. FOREST SERVICE District Rangers and WSDOT Area Maintenance Superintendents or Project Engineers.

2. The U.S. FOREST SERVICE Regional Transportation Program Leader and WSDOT Technical Services Manager will coordinate programs, final easements, and any items where the U.S. FOREST SERVICE Forest Supervisor or the WSDOT Regional Administrator request assistance.
3. The U.S. FOREST SERVICE Regional Transportation Program Leader and WSDOT Technical Services Manager will coordinate an annual meeting to review concerns, practices, any MOU modification recommendations, and to share organizational/contact information.

IV. PROGRAMS

1. For State highways accessing, or on, National Forest lands, WSDOT will consult with U.S. FOREST SERVICE during development of the WSDOT four-year Statewide Transportation Improvement Program (STIP). Copies of the draft and approved program will be provided to all U.S. FOREST SERVICE Forest Supervisors in Washington and Regional Forester by WSDOT or by notification of where it can be accessed electronically.
2. The Federal Lands Access Program provides funds to improve state/local routes providing access to Federal lands. Funding decisions will be made locally by the Programming Decisions Committee (PDC) comprised of WSDOT, FHWA-Western Federal Lands Highway Division (WFLHD), and the relevant political subdivision of the State.
3. The PDC will consult with all federal land management agencies, including the U.S. FOREST SERVICE, prior to making programming decisions.

V. PLANNING

1. WSDOT will coordinate with U.S. FOREST SERVICE at project inception for projects using or affecting National Forest lands or interests. U.S. FOREST SERVICE will consult with WSDOT on projects that may affect State highways, including State highways on National Forest lands by easement.
 - a. U.S. FOREST SERVICE will provide early guidance and advice to WSDOT regarding project consistency with the applicable forest plan(s).
 - b. WSDOT and U.S. FOREST SERVICE will coordinate on needed environmental documents and lead agency responsibility when WSDOT conducts work outside WSDOT's existing right-of-way and easement, seeks to expand the transportation right-of-way and easement, or seeks to acquire new right-of-way or easement within U.S. FOREST SERVICE lands. WSDOT will have the primary responsibility for highway related projects and will follow the NEPA Guidance for U.S. FOREST SERVICE Consultation attached hereto as Appendix 5
 - c. WSDOT will collaborate closely with U.S. FOREST SERVICE and share environmental documents and information, as requested, for transportation projects occurring fully within WSDOT's existing right-of-way/easement.
 - d. WSDOT is responsible for all applicable state and federal environmental laws and regulations while conducting transportation projects that are fully located within WSDOT's existing right of way/easement including but not limited to the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA)

- e. WSDOT and U.S. FOREST SERVICE will cooperate in development of a single set of environmental documents for each project where WSDOT conducts work outside WSDOT's existing right-of-way and easement, seeks to expand the transportation right-of-way and easement, or seeks to acquire new right-of-way or easement within U.S. FOREST SERVICE lands, and jointly seek public involvement when necessary.
- f. Draft and final environmental documents will be circulated to each Party for review, comment, and agreement before distribution for public comment.
- g. WSDOT and U.S. FOREST SERVICE will prevent the introduction and spread of invasive plants and pathogens in proposed projects. (See WSDOT Standard Specifications 8-02.3(3), 9-14.1, 9-14.4(1), and 9-14.4(2))
- h. The 2015 Pollinator-Friendly Best Management Practices for Federal Lands (May 11, 2015), issued by the United States Department of Agriculture, the United States Department of the Interior, and the United States Environmental Protection Agency, as may be amended or superseded, will be used for promotion of pollinator habitat.
- i. WSDOT and U.S. FOREST SERVICE will reference the revised Roadside Revegetation: An Integrated Approach to Establishing Native Plants and Pollinator Habitat, as well as the Ecoregional Revegetation Application (ERA) online utility when appropriate (www.nativerrevegetation.org).

VI. PRECONSTRUCTION

- 1. WSDOT and U.S. FOREST SERVICE will coordinate early in project development/design and participate in field reviews for projects.
- 2. WSDOT and U.S. FOREST SERVICE will agree which requirements will be provided in the plans, specifications and provisions, and which requirements will be placed in the stipulations that accompany the Letter of Consent. Written stipulations should be kept to a minimum.
- 3. WSDOT and U.S. FOREST SERVICE agree that designs and construction plans for projects shall comply with "[*Preventing and Managing Invasive Plants Record of Decision*](#)," (U.S. FOREST SERVICE Region 6, October 2005) (which amended Forest Land Management Plans), standards 2 (equipment washing), 3 (weed free straw and mulch), 7 (weed free gravel, fill, sand, and rock), and 13 (using genetically appropriate native plant materials for revegetation work). Standard 7 can be met by using U.S. FOREST SERVICE, WSDOT, or County weed specialists to review material sources before integrating materials into the road. Standard 13 can be met by having a U.S. FOREST SERVICE revegetation specialist develop or review/approve the revegetation prescription, including species and seed sources.'

VII. RIGHTS-OF-WAY

- 1. The form of "U.S. Department of Transportation (USDOT) Easement Deed" as agreed to between WSDOT and FHWA will be used on all Forest Highway and Federal-Aid System rights-of-way within National Forest boundaries. WSDOT and U.S. FOREST SERVICE will adhere to the requirements set forth in the 1998 Memorandum of Understanding between United States Department of Agriculture, Forest Service and USDOT Federal Highway Administration Regarding the Appropriation and Transfer of National Forest System Lands for Highway Purposes.

2. WSDOT will submit proposed right-of-way and construction plans and specifications for projects to U.S. FOREST SERVICE for review and approval. If right-of-way is necessary, U.S. FOREST SERVICE will prepare and submit draft stipulations to WSDOT. U.S. FOREST SERVICE and WSDOT will cooperate to prepare easement or right-of-way plan/plat that meets legal requirements for monumentation, based on approved construction plans, specifications and stipulations.
3. When required pursuant to 23 CFR 710.601, WSDOT will submit an application (letter) to FHWA Division Administrator requesting a USDOT easement for National Forest System lands needed for a project. The application will include the accepted plan/plat and description of the land.
4. U.S. FOREST SERVICE Forest Supervisor will issue Letter of Consent with stipulations, if any, upon receipt of application from FHWA Division Administrator. Said Letter of Consent will provide for immediate entry upon National Forest lands for construction or reconstruction of said highway and for the transfer of right-of-way to WSDOT through issuance of a USDOT Easement Deed.
5. Significant changes in easement or right-of-way width occurring during construction will require an amendment to the recorded Easement Deed.
6. Use or occupancy of National Forest lands for other highway related uses outside the easement areas, including temporary construction areas, will require a U.S. FOREST SERVICE issued Special Use Permit.
7. WSDOT and U.S. FOREST SERVICE agree to issue each other the appropriate permits and easements necessary for construction in a timely manner, provided that the conditions of Sections III, IV, V and VI of this MOU have been fulfilled.
8. WSDOT and U.S. FOREST SERVICE agree that they will convert, as funding permits, older rights of use and special use permits to USDOT easements.

VIII. CONSTRUCTION/RECONSTRUCTION

1. WSDOT will designate a project manager who will represent WSDOT in all matters pertaining to a project. WSDOT will inform U.S. FOREST SERVICE of project advertisement and award.
2. WSDOT will notify and obtain approval from U.S. FOREST SERVICE for any changes that will affect National Forest lands beyond that of the original contract. U.S. FOREST SERVICE will act promptly to provide approval.
3. WSDOT will notify U.S. FOREST SERVICE when a project nears completion, at which time U.S. FOREST SERVICE will indicate if they choose to participate in the final review.
4. WSDOT will follow the Inadvertent Discovery Plan, attached as Appendix 6.

IX. MAINTENANCE

1. The term "maintenance" means the preservation of the entire highway, including surface, shoulders, roadsides, structures, and such traffic-control devices as are necessary for safe and efficient utilization of the highway (23 U.S.C. 101).
2. Road maintenance activities that are state funded and state directed on state highway rights of way and/or easements through National Forest lands are not subject to NEPA requirements because these activities are not subject to Forest Service control and responsibility (FSH 1909.15 Chapter 01 and 40 CFR 1508.18). However, WSDOT is responsible for meeting all other

applicable state and federal environmental regulatory requirements, including the Endangered Species Act.

3. WSDOT has consulted on Road Maintenance activities with NOAA Fisheries and will operate under best management practices. Because consultation has occurred, WSDOT will operate under best management practices as described in "The Regional Road Maintenance Endangered Species Act Program Guidelines" and "The Best Management Practices Field Guide for ESA & 4d Habitat Protection." NOAA Fisheries has stated in a Biological Opinion dated August 15, 2003 (NMFS Tracking No. 2003/00313) that prohibitions of section 4(d) of the Endangered Species Act will not apply to actions carried out in compliance with the "Regional Road Maintenance Endangered Species Act Program Guidelines". These consultations and associated best management practices will be shared and/or coordinated with the U.S. FOREST SERVICE as they relate to projects on rights of ways/easements and affecting National Forest System lands. All three documents referenced in this paragraph are available at <https://www.wsdot.wa.gov/Maintenance/Roadside/Esa.htm>. The versions in effect as of the date of execution of this agreement are incorporated herein).
4. WSDOT will consult with U.S. Fish and Wildlife Services to ensure that requirements of the Endangered Species Act (ESA), the Migratory Bird Treaty Act, and all current directives and laws are met during routine maintenance activities. If consultation has occurred, WSDOT will share and/or coordinate these consultations and associated best management practices with the U.S. FOREST SERVICE as they relate to projects on rights of ways/easements and/or affecting National Forest System land.
5. WSDOT will consult with WA DAHP to ensure that requirements of the National Historic Preservation Act (NHPA) and all current directives and laws are met during routine maintenance activities. If consultation has occurred, WSDOT will share and/or coordinate these consultations with the U.S. FOREST SERVICE and affected tribes as they relate to projects on rights of way/easements and/or affecting National Forest System land.
6. The provisions contained in this section pertain only to maintenance work performed under WSDOT's control that may affect National Forest lands. The WSDOT Regional Administrator will coordinate such maintenance activities with local U.S. FOREST SERVICE staff.
7. During winter operations, surface anti-icing/deicing solutions may be used to provide a safer driving surface. These operations will be performed according to the "Routine Road Maintenance Water Quality and Habitat Guide, Best Management Practices" and use chemicals within the Qualified Products List of the Pacific Northwest Snowfighter products list.
8. WSDOT maintenance activities to be coordinated with the U.S. FOREST SERVICE shall include, but are not limited to:
 - a. All maintenance activities that involve slash burning, the marking of trees over 6 inches dbh (diameter at breast height) to be felled except for danger trees classified as a danger (see Danger Tree Removal below), and the purchase of any timber to be removed.
 - b. All maintenance activities that involve disposal of slough material or rockfall, changes in road drainage patterns, and similar actions that affect National Forest lands outside the right-of-way/easement.
 - c. The development of any material source or storage area not shown on approved construction plans.
 - d. Snow and avalanche control (removal/storage).
9. For those activities that will be coordinated with the U.S. FOREST SERVICE, the U.S. FOREST SERVICE will:

- a. Expedite review on maintenance items requiring U.S. FOREST SERVICE concurrence. U.S. FOREST SERVICE will respond within 30 days of receiving the request for concurrence. Not providing a response within the 30 day period constitutes concurrence to those maintenance activities for which the concurrence was requested.
 - b. Assist WSDOT maintenance forces with matters related to equipment parking and materials storage, emergency communications needs, material sources, and designation of slough and slide material disposal areas.
 - c. Advise WSDOT of planned U.S. FOREST SERVICE activities that may have an impact on highway maintenance.
10. **Danger Tree Removal:** Danger trees will be identified using the most recent edition of the "Field Guide for Danger Tree Identification and Response" (Filip, G.; Barger, M.; Bronson, J.; Chadwick, K.; Collins, R.; Goodrich, B.; Kearns, H.; McWilliams, M.; Oblinger, B.; Omdal, D.; Ramsey, A.; and Saavedra, A. 2016. Field Guide for Danger-Tree Identification and Response along Forest Roads and Work Sites in Oregon and Washington. R6-NR-TP-021-2016. USDA Forest Service, Forest Health Protection, Pacific Northwest Region, Portland, OR. 120 pp).
- a. According to the referenced publication, trees have three failure potentials; Imminent, Likely, or Low. Typically, those trees that are classified with imminent failure potential that will intersect the travel way or clear zone represent a danger to the traveling public and workers and will be mitigated.
 - b. The following describes mitigation required:
 - i. Trees identified as a Danger, which typically are those with imminent failure potential, may be cleared by WSDOT. Resultant logs can be positioned so they are stable and will not roll into the travel way or clear zone or decked for U.S. FOREST SERVICE disposal. WSDOT is responsible for identification of these trees. U.S. FOREST SERVICE will communicate concerns over particular trees to the WSDOT Area Maintenance Superintendent.
 - ii. Trees that are not identified as a Danger, which typically are those with Low or Likely Failure Potential, will be identified jointly by WSDOT and U.S. FOREST SERVICE personnel and removed by the U.S. FOREST SERVICE by whatever mechanism is available. When U.S. FOREST SERVICE does not have a mechanism available for the removal of potential danger trees, then the U.S. FOREST SERVICE and WSDOT will cooperate in removal of these trees.
 - iii. Warning signage, flaggers and other safety measures deemed necessary to protect highway traffic during danger tree removal operations will be required. WSDOT is responsible for approval of all safety measures and traffic control plans before danger tree removal commences by any party or contractors thereof.
11. **Vegetation Treatment:** Vegetation treatments beyond that needed for highway maintenance (see paragraph 2 above), should be consistent with NEPA decisions and Forest Land Management Plans (Forest Plans), as amended by "*Preventing and Managing Invasive Plants Record of Decision*" (Forest Service Region Six, October 2005)" or more recent forest plan direction. Use of herbicides to treat invasive or native vegetation is subject to specific project design criteria that vary from Forest to Forest, and will be consistent with relevant Forest Plans.
12. **Invasive Plant Prevention:** "*Preventing and Managing Invasive Plants Record of Decision* (Forest Service Region Six, October 2005)" includes standards for invasive plant prevention. The standards relevant to road maintenance include Standards 2 (equipment washing), 3 (weed

free straw and mulch), 7 (weed free gravel, fill, sand, and rock) and 8 (coordination of blading, brushing, and ditch cleaning). Standard 7 can be met by using U.S. FOREST SERVICE, WSDOT, or County weed specialists to review material sources before integrating materials into the road. Standard 8 can be met by local weed specialists at U.S. FOREST SERVICE, WSDOT, or County Extension Agent consulting with WSDOT Area Maintenance Superintendents on location of invasive plant populations and appropriate timing of brushing and ditch cleaning operations.

13. Pesticide Use: WSDOT is responsible for obtaining National Pollution Discharge Elimination System (NPDES) or other applicable permits for pesticide use. The Forest Service is required to coordinate with states and others applying pesticides within National Forest system lands (FSH 2109.14 Chapter 13.11.) The primary tool for this coordination is the pesticide use proposal (see Appendix 4 attached). WSDOT will annually submit a pesticide use proposal to the local Forest Service Pesticide Use Coordinator applicable for the calendar year at least 30 days ahead of the first scheduled application for that year. If there are any changes in the treatment prescription through the year, an updated pesticide use proposal will need to be submitted. Pesticide use outside of state rights of way and easements are subject to Forest Service approval. In addition, WSDOT will submit a report outlining pesticide use performed by the state on each National Forest, due by October 15 of each year.

X. SIGNS

1. Installing and Maintaining Signs. WSDOT has authority and responsibility for the installation and maintenance of all signs within the right-of-way/easement of the State Highway System, except as noted in paragraph 3 in this section. All such signage will be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), the Washington Supplements to the MUTCD, the "WSDOT Traffic Manual" and Sign and Poster Guidelines for the Forest Service EM 7100-15 as appropriate.
2. WSDOT is financially responsible for and will furnish, install, and maintain guide signs within the right-of-way/easement as requested by the U.S. FOREST SERVICE and approved by WSDOT, for the following sign categories (Examples shown in Appendix 1). Sign requests will be made to the WSDOT Region Traffic Engineer at least sixty (60) calendar days in advance by the U.S. FOREST SERVICE Forest Supervisor. A proposed sign plan will be provided by the US Forest Service that shows the signs and their proposed locations. WSDOT will review, modify, and approve or deny the request.
 - a. Approach signs for National Forest administrative facilities such as Ranger District and Supervisor offices that provide public services or functions
 - b. Junction signs for important National Forest arterial routes.
 - c. Directional signs to important destinations within the National Forest. The following conditions apply:
 - i. Messages will be limited to no more than three (3) destinations at any single location, using location names identified on public use maps.
 - ii. At areas where there are more than one Agency's facilities from one point on the highway, a generic recreation sign will be used with the represented Agencies' logos below the generic message.
 - iii. Up to four symbol plaques may be used on single destination signs, but they will not be used on generic multi-agency signs.

- iv. Local road numbers as well as Agency road numbers may be used where appropriate. U.S. FOREST SERVICE provided distinctive route marker(s) may be used.
- v. Advance destination signs will only be used where special emphasis is required. Examples are limited sight distance; high traffic volumes; multi-lane (more than 2) highways; and high-speed areas.
- vi. The Parties are encouraged to work together to develop specific signage to multiple destinations.

3. U.S. FOREST SERVICE is financially responsible for and will furnish, install, and maintain the following sign categories:

- a. Signs with pedestal bases such as large boundary or administrative site signs (Examples shown in Appendix 2).
 - i. The following signs are included in this category: National Forest Boundary (FE or FL); Recreation Site (RS); Headquarters (A or AS); and special interpretive. These signs are normally located outside the highway right-of-way/easement or at parking areas. A permit from WSDOT is required for placement within the highway right-of-way/easement. All signs within the highway right-of-way/easement shall be installed on breakaway sign supports, or protected by barrier, or shall be removed by U.S. FOREST SERVICE when requested by WSDOT.
- b. Emergency, Construction, and Maintenance Traffic Control Signs and Devices.
- c. Temporary warning, regulatory, and guide signs; other traffic control devices (such as delineators, barricades, and temporary pavement markings); and all other appropriate devices which are needed to warn and control traffic during emergencies, construction, or maintenance activities.

4. WSDOT and U.S. FOREST SERVICE will cooperate in installation and maintenance of the following sign categories (Examples shown in Appendix 3). Sign requests will be made to the WSDOT Region Traffic Engineer at least sixty (60) calendar days in advance by the U.S. FOREST SERVICE Forest Supervisor. A proposed sign plan will be provided by the US Forest Service that shows the signs and their proposed locations. WSDOT will review, modify, and approve or deny the request.

- a. Recreation Fee signs and logos will be furnished by the U.S. FOREST SERVICE. WSDOT will maintain the signs and logos including installing new signs and logos on existing posts as appropriate to inform motorists when recreation fees will be charged. This maintenance will be provided at WSDOT expense. Installations requiring new posts will be charged to the U.S. FOREST SERVICE. . Logos on existing guide signs that direct motorists to National Forest facilities where fees are required will be installed and maintained at WSDOT expense.
- b. National Forest Scenic Byway signs will be furnished by the U.S. FOREST SERVICE. WSDOT will install and maintain the signs at WSDOT expense. Installations requiring new posts will be charged to the U.S. FOREST SERVICE.
- c. U.S. FOREST SERVICE administrative and recreation signs within the state highway right-of-way/easement not covered in other categories will be furnished by the U.S. FOREST SERVICE. WSDOT will install and maintain these signs. Installations requiring new posts will be charged to the U.S. FOREST SERVICE. The U.S. FOREST SERVICE

and WSDOT will agree in a separate project agreement as to how maintenance and other installation expenses will be shared.

5. Highway Advisory Radio Signs. U.S. FOREST SERVICE will coordinate with and abide by WSDOT requirements to obtain a permit for Highway Advisory Radio (HAR) signs. Requirements are listed in WSDOT's "Traffic Manual." These signs will provide the U.S. FOREST SERVICE the capability to communicate forest information to motorists using the vehicle's AM radio receiver. The Forest Service "shield," "National Forest" logo, and "Northwest Forest Pass" logo may be incorporated into the HAR sign layout. U.S. FOREST SERVICE will reimburse WSDOT for all costs involved in the fabrication, installation, and maintenance of the HAR signs. Any reimbursement(s) will be authorized by a separate appropriate document.
6. Signs off the Right-of-way/Easement. Signs installed off the right-of-way/easement, and visible to highway travelers, will comply with "The Federal Highway Beautification Act of 1965, Part 750, Subpart B, National Standards for Official and Directional Signs (750.153 and 750.154)," Revised Code of Washington (RCW) 47.42, Scenic Vistas Act of 1971; Washington Administrative Code (WAC) 468-66; and WSDOT Traffic Manual (M 51-02). Permits for such signage will be obtained from the WSDOT Traffic Operations Division – Highway Advertising Control.
7. U.S. FOREST SERVICE Shield. The Parties recognize the U.S. FOREST SERVICE "shield" and "National Forest" script logo are copyrighted by the Department of Agriculture and will be allowed and should be used as U.S. FOREST SERVICE identification as approved by the U.S. FOREST SERVICE. The U.S. FOREST SERVICE logo is not needed on a sign if specific words such as "National Forest" are used.

XI. INCIDENT MANAGEMENT

1. During an incident management activity such as a fire suppression emergency, the U.S. FOREST SERVICE and WSDOT maintenance personnel will coordinate to identify the signage requirements and accomplish the installation of signs and traffic control devices as soon as possible after the emergency occurs. WSDOT will work with the U.S. FOREST SERVICE to identify any hazards that may not be visible at night and have the necessary signs, barricades, and flashers in place prior to darkness to protect both the traveling public and firefighting personnel.
 - a. In addition to the above, the Parties agree as follows:
 - i. All temporary traffic control (TTC) devices and activities, including signage, piloting, and flagging on WSDOT roads shall comply with the standards and guidelines of the Manual on Uniform Traffic Control Devices (MUTCD), WSDOT supplements to the MUTCD, the WSDOT Traffic Manual, and the ELM-provided sign catalog and drawings to the degree practicable.
 - ii. WSDOT, the Incident Management Team (IMT) for incident activities, and/or local agencies will cooperatively develop TTC plans where warranted.
 - iii. Traffic control flaggers must be certified to conduct flagging operations on WSDOT roads. WSDOT recognizes certification acquired in other states as being valid on WSDOT roads. All standards in MUTCD Section 6E shall be followed for all flagging operations. Flaggers shall wear safety apparel meeting the requirements of International Safety Equipment Association of American National Standard for High Visibility Apparel and labeled as meeting the current American National Standards Institute standard performance for Class 2 risk exposure, and these requirements are hereby incorporated herein by reference.

- iv. WSDOT is the only authority that can establish speed-limits on roads under WSDOT jurisdiction. Advisory or regulatory speed zones will not be allowed below 45 MPH unless special circumstances or situations warrant.
- v. WSDOT is the only authority that can designate and legally close roads under WSDOT jurisdiction. WSDOT grants Incident Commanders (IC) of incident management activities limited authority to institute initial emergency road closures that are necessary for immediate safety concerns under this MOU. WSDOT will be notified immediately, which is typically within the first half-hour of an emergency closure. The sooner the notification the sooner traveler information can be disseminated to the traveling public for alternate routing. The decision to re-open, keep the road closed and any new closures will thereafter be the responsibility of WSDOT. The Traffic Management Control (TMC) for regional WSDOT contacts for emergency use are as follows:

WSDOT Regional TMC

Northwest (Seattle)	206-440-4406
Olympic (Tacoma)	253-548-2420/ 253-377-9517
South Central (Yakima)	509-577-1910/ 509-577-1990
Southwest (Vancouver)	360-759-1300/ 360-905-2269
Eastern (Spokane)	509-343-6401/ 509-323-8495
North Central (Wenatchee)	509-667-2802

- vi. WSDOT is the only authority that can design and implement a detour of a highway under their jurisdiction.
 - vii. All Parties will mutually work together within the Incident Command System (ICS). WSDOT is willing to bring its authority into the unified command structure as necessary.
- b. All Parties will document information related to TTC decisions, requests, orders, etcetera, in order to determine appropriate fiscal responsibility, as needed on a case-by-case basis. Reimbursement is situation dependent and accurate records must be kept. The mechanism required for payment and required order or documentation will be determined by the paying agency depending on its standard payment practices. The agency receiving the bill will determine what type of format constitutes a suitably executed bill.
- i. An accurate record is defined as:
 - A detailed description of work ordered by the IMT (date, time and name of IMT member ordering the work)
 - 1. Inclusive dates and locations of work performed.
 - 2. Number of WSDOT resources (employees, signs, etc.) and rates of each involved.
 - ii. Payment will be made for the cost of services that are necessary due to U.S. FOREST SERVICE incident management activities, such as a closure to enable a back burn or to use highway as a firebreak/control line, or signage for establishment of a base camp (except as provided in this section under 3a below)

A U.S. FOREST SERVICE incident management activity is defined as an activity adjacent to, on, or above the roadway involving: personnel, equipment such as trucks or helicopters, and congestion related to managing the incident, such as traffic in and out of a staging area or command post that alters the primary use of the highway as a transportation structure that provides safe and open travel for the public and therefore requires highway closure, signs, TIC, or other resources to manage.

- iv. In general the U.S. FOREST SERVICE is financially responsible for any road closures, TTC, signage, or other services or resources necessary or requested due to incident management-related activities or decisions, after the initial WSDOT response.
- v. If there is any incident management activity triggering the need for traffic control in a 24 hour period as defined from midnight to midnight, the costs for the entire 24 hour period is treated in its entirety as an incident management activity for accounting purposes. This will be determined on a daily basis and agreed to by both Parties.
- vi. Damages may be reimbursable through the appropriate agency claim process.
- vii. The U.S. FOREST SERVICE may request special use or closure of the highway to enable such operations as a back burn or may request special signage for certain instances (such as for establishment of base camp), through the WSDOT Area Maintenance Superintendent or designee.
- c. The U.S. FOREST SERVICE and WSDOT will coordinate on the removal of incident-caused and other hazard trees within striking distance of the highway to alleviate this risk in the most safe and efficient manner as is practical.

2. The U.S. FOREST SERVICE shall:

- a. Assume responsibility including financial responsibility for furnishing, installing, maintaining, and operating warning and directional signage, flagging, and piloting needed for incident management activities beyond the initial WSDOT response and throughout the duration of any such incident management activities. The initial WSDOT response is limited to the first 24 hours. The assumption of this responsibility will only take place after a transfer of responsibility from WSDOT to the IC through the WSDOT Area Maintenance Superintendent or designee.
- b. Coordinate with the appropriate WSDOT Area Maintenance Superintendent or designee if special circumstances or situations warrant WSDOT establishing regulatory speed zones or other regulatory traffic control, such as "no stopping" and "no parking" zones on roads under WSDOT jurisdiction. Depending on availability of WSDOT signs and personnel, the U.S. FOREST SERVICE may be asked by WSDOT to provide regulatory signage as necessary for incident management activities.
- c. Coordinate with the appropriate WSDOT Area Maintenance Superintendent or designee if special circumstances or situations warrant posting advisory speeds below posted speeds on roads under WSDOT jurisdiction.
- d. Notify the appropriate WSDOT Area Maintenance Superintendent or designee at the earliest time practicable of planned incident management, activities including air operations, back burn, or utilization of the state highway as a firebreak, that can impact traffic on roads under the jurisdiction of WSDOT, and include in its notification to the appropriate WSDOT Area Maintenance Superintendent or designee relevant information such as size and duration of the activity.
- e. Provide a catalog of standard signs with approved messages conforming to the MUTCD, and provide standard drawings showing typical layout of the catalog signage for the most common incident activities needing temporary traffic control. The U.S. FOREST SERVICE sign catalog can be found at:
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3810021.pdf.
- f. Coordinate with WSDOT when standard sign messages do not meet specific on-site conditions, and when circumstances require the use of messages not identified in the catalog.
- g. Remove all traffic control devices when no longer appropriate or necessary for incident management activities.
- h. Coordinate all proposed state highway traffic detours through the WSDOT Area Maintenance Superintendent or designee.

- i. Make available to WSDOT a list of appropriate U.S. FOREST SERVICE regional and local contacts, including the 24-hour duty officer.
3. WSDOT shall:
 - a. Assume responsibility including financial responsibility for furnishing, installing, and maintaining initial temporary traffic controls as necessary; including regulatory and warning signs, flagging, and piloting operations for the first 24 hours of incident management activities, such as the establishment of an incident base, that impact WSDOT highways. After that, WSDOT may authorize the U.S. FOREST SERVICE to furnish, install, and maintain at the U.S. FOREST SERVICE's expense, continued and any additional temporary traffic control signage as deemed necessary by the WSDOT Area Maintenance Superintendent or designee for U.S. FOREST SERVICE incident management activities on highways in accordance with the provided catalog and sign placement drawings (noted in 2e). Any additional documents or permits such as encroachments permits will not be required under this MOU for temporary traffic control.
 - b. Assume responsibility including financial responsibility for furnishing, installing, and maintaining traffic control beyond the initial 24 hours for all services not related to U.S. FOREST SERVICE incident management activities, such as smoke caused reductions of visibility or other highway safety related issues.
 - c. Grant limited authority to the IC to institute initial emergency closures of roads under WSDOT jurisdiction where incident effects, such as fire behavior, are changing rapidly and may have substantial immediate effects on public safety. The IC shall notify the WSDOT District Manager or designee as soon as feasible to coordinate additional legal closures if warranted.
 - d. Furnish liaison officer to the IC where substantial impacts from incident management activities are or may involve roads under WSDOT jurisdiction.
 - e. Each year make available to the U.S. FOREST SERVICE an electronic (pdf) map and supplemental documents that details WSDOT:
 - i. Maintenance Administrative areas.
 - ii. WSDOT Area Maintenance Superintendent names, e-mail addresses and phone numbers.
 - iii. Maintained routes with route numbers and reference points.
 - iv. List of Remote Weather Information System (RWIS) sites.
 - v. List of permanent variable message sign locations.
 - vi. WSDOT Highway Advisory Radio (HAR) system and Fixed and Portable Variable Message signs, if available, for public and/or overall safety messages as appropriate for incident management. Messages will be developed on a case-by-case basis as conditions warrant in coordination with WSDOT. Variable Message Sign messages will be in compliance with WSDOT's "VMS Operational Policy." HAR messages will be in compliance with WSDOT's "Policy on the Use of Highway Advisory Radio."

XII. ACCESS MANAGEMENT

1. All Washington State highways are distinguished as either limited access or managed access. Therefore, access to all state highways will be in accordance with the current, appropriate access rules and regulations governing these state highway system designations.
2. On Fully Controlled Limited Access Highways, access will only be allowed at interchanges, except for emergency use (section 6 below).

3. On Partially Controlled and Modified Controlled Limited Access Highways, an access approach may be allowed, after submittal of a written request by U.S. FOREST SERVICE and approval by WSDOT, within the constraints outlined in the current WSDOT Design Manual, the Revised Code of Washington (RCW) chapter 47.52 RCW, the Washington Administrative Code (WAC) 468.54 and WAC 468-58.
4. On Managed Access Controlled Highways, it will be necessary for the U.S. FOREST SERVICE and its permittees to obtain an Access Connection Permit that is in accordance with the current WSDOT Design Manual, 47.50 RCW, WAC 468-51 and WAC 468-52.
5. Construction of new access connections and approaches will be at the expense of U.S. FOREST SERVICE or its permittee. Future maintenance of access approaches on limited access facilities will be in accordance with the applicable rules and regulations as specified in Section 3 above. Future maintenance of access connections on managed access facilities will be covered in the access connection permit as specified in Section 4 above.
6. Temporary approaches required by U.S. FOREST SERVICE during firefighting or other emergencies may be constructed as necessary without formal WSDOT approval. The appropriate WSDOT Regional Administrator will be notified immediately or as soon as practical, and will follow up with a written notice of the emergency and an estimation of use of access. Necessary obliteration and restoration measures will be at no expense to WSDOT and shall meet WSDOT standards. U.S. FOREST SERVICE will take precautions during such emergencies to safeguard the highway users through the proper use of approved traffic control devices, and other measures as deemed necessary by WSDOT.

XIII. THIRD PARTY OCCUPANCY

1. All third party occupants of rights-of-way on National Forest lands must apply for and obtain a special use authorization.
2. WSDOT will accept applications from public and private utility organizations seeking permits or franchises for utility facility installations on WSDOT easements within National Forest boundaries. Such proposals will be evaluated with regard to potential interference with the free flow of traffic and potential impairment of the integrity, full use, and safety of the highway.
3. WSDOT will advise the applicant utility that an approved U.S. FOREST SERVICE Special Use Permit and/or easement will also be required.
4. WSDOT will provide any draft proposed permit or franchise to U.S. FOREST SERVICE for review and comment.
5. Within 30 days of receipt of said draft document, U.S. FOREST SERVICE will return comments to WSDOT with recommendation for approval or reasons for denial.
6. If, after the 30-day review period, WSDOT has not received comments from U.S. FOREST SERVICE, WSDOT will proceed to final approval or denial of the application.
7. Any approved WSDOT permit or franchise will contain a requirement, by special provision, that the WSDOT approval is contingent upon the applicant utility obtaining an approved U.S.

FOREST SERVICE Special Use Permit and/or easement for use of National Forest System land prior to construction.

8. The U.S. FOREST SERVICE will not issue a Special Use Permit or easement until the applicant utility has an approved WSDOT permit or franchise for utility facility installation on a WSDOT easement within National Forest boundaries.

XIV. IT IS MUTUALLY UNDERSTOOD AND AGREED BY AND BETWEEN THE PARTIES THAT:

1. **ESTABLISHMENT OF RESPONSIBILITY.** This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person. Furthermore, the terms of this MOU establish a working relationship between the Parties and are not for the benefit of any third party.
2. **RESPONSIBILITIES OF PARTIES.** U.S FOREST SERVICE and WSDOT and their respective agencies and office will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each Party will carry out its separate activities in a coordinated and mutually beneficial manner.
3. **PRINCIPAL CONTACTS.** Individuals listed below are authorized to act in their respective areas for matters related to this MOU.

Principal WSDOT Contacts:

WSDOT Program Contact	WSDOT Administrative Contact
Steve Roark, P.E., Development Division Director WSDOT PO Box 47329 Olympia, WA 98504-7329 Phone: (360) 705-7231 FAX: (360) 704-6381 Roarks@wsdot.wa.gov	Ahmer Nizam, Technical Services Manager WSDOT PO Box 47329 Olympia, WA 98504-7329 Phone: (360) 705-7271 FAX: (360) 704-6381 Nizama@wsdot.wa.gov

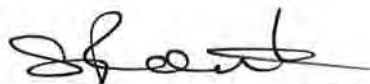
Principal U.S. FOREST SERVICE Contacts:

U.S. FOREST SERVICE Program Contact	U.S. FOREST SERVICE Administrative Contact
Christy Darden, Director of Engineering Pacific Northwest Region 1220 SW 3rd Avenue Portland, OR. 97204 Telephone: (503) 808-2500 FAX: (503) 808-2511 Email: Christy.Darden@usda.gov	Amanda Warner Thorpe, Regional Transportation Program Manager Pacific Northwest Region 1220 SW 3rd Avenue Portland, OR 97204 Telephone: (503) 808-2512 FAX: (503) 808-2511 Email: Amanda.WarnerThorpe@usda.gov

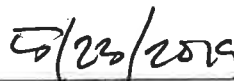
4. NOTICES. Any communications affecting the operations covered by this agreement given by the U.S. FOREST SERVICE or WSDOT is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:
 - a. To the U.S. FOREST SERVICE Program or Administrative Contact, at the address specified in the MOU.
 - b. To WSDOT, at WSDOT's address shown in the MOU or such other address designated within the MOU.
 - c. Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.
5. PARTICIPATION IN SIMILAR ACTIVITIES. This MOU in no way restricts the U.S. FOREST SERVICE or WSDOT from participating in similar activities with other public or private agencies, organizations, and individuals.
6. NONBINDING AGREEMENT. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity. The Parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the Parties to obligate or transfer anything of value.
 - a. Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate agreements and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides, nor meets these criteria. If the Parties elect to enter into an obligation agreement that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective agreement, each party operates under its own laws, regulations, and/or policies, and any U.S. FOREST SERVICE obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective agreements must comply with all applicable law.
 - b. Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.
7. USE OF U.S. FOREST SERVICE INSIGNIA. In order for WSDOT to use the U.S. FOREST SERVICE insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the U.S. FOREST SERVICE's Office of Communications. A written request must be submitted and approval granted in writing by the Office of Communications (Washington Office) prior to use of the insignia.

8. FREEDOM OF INFORMATION ACT (FOIA). Public access to MOU or agreement records must not be limited, except when such records must be kept confidential and would have been exempted from disclosure pursuant to Freedom of Information Act regulations (5 U.S.C. 552).
9. U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS AND ELECTRONIC MEDIA. WSDOT shall acknowledge U.S. FOREST SERVICE support in any publications, audiovisuals, and electronic media developed as a result of this MOU.
10. TERMINATION. Any of the Parties, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration. Such termination must be preceded by at least thirty (30) calendar days prior written notice to the other Party.
11. MODIFICATIONS. Modifications within the scope of this MOU must be made by mutual consent of the Parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change.
12. COMMENCEMENT/EXPIRATION DATE. This MOU is executed as of the date of the last signature and is effective through December 31, 2029, at which time it will expire, unless extended by an executed modification, signed and dated by all properly authorized, signatory officials.
13. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual Parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the Parties hereto have executed this MOU as of the last date written below.

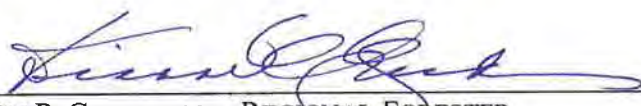
APPROVALS:



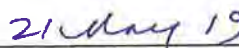
STEVE ROARK, DEVELOPMENT DIVISION DIRECTOR
Washington State Department of Transportation



Date



GLENN P. CASAMASSA, REGIONAL FORESTER
U.S. FOREST SERVICE, Pacific Northwest Region



Date

Appendix 1 –
Examples of signs where WSDOT is responsible for installation and
maintenance



**Appendix 2 –
Example of signs where U.S. FOREST SERVICE is responsible for
installation and maintenance.**



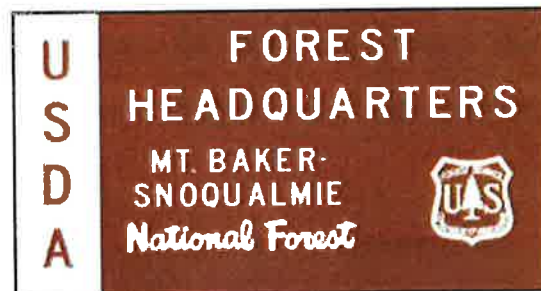
RS-Recreation Site Identification sign



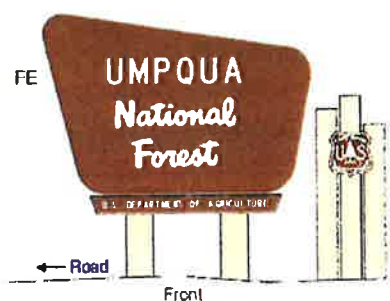
NRA-National Recreation Area sign



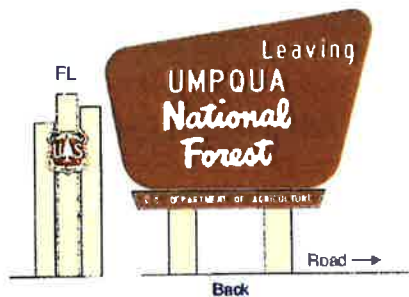
AS-Administrative Site Sign



Administrative Site Sign - Urban



FE-National Forest Entrance Sign



FL-Forest Boundary Leaving sign

Appendix 3 – Examples of signs where U.S. FOREST SERVICE/WSDOT share financial or performance responsibility for installation and maintenance

National Forest Scenic Byway (Chapter 3A.13.1)



SBL

Note: Department of Transportation designated byways prevail in priority over Forest Service byway designations and should be signed according to the MUTCD, Section 2D.55.

Recreation Fee Sign Examples and Fee Logo



Fee Logo



Appendix 4 – Pesticide Use Proposal Form

PESTICIDE - USE PROPOSAL (Reference FSM 2150)	DEPARTMENT/AGENCY		CONTACT/PHONE NO.
	REGION	FOREST	DATE SUBMITTED
1) OBJECTIVE a) Project No. b) Specific Target Pest c) Purpose	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
2) PESTICIDE a) Common Name b) Formulation c) % AI, AE, or lb / Gal. d) Registration No.	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
3) a) Form Applied b) Use Strength (%) or Dilution Rate c) Diluent	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
4) lbs. AI Per Acre or Other Rate	<div style="margin-bottom: 5px;">_____</div>		
5) APPLICATION a) Method b) Equipment	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
6) a) Acres or Other Unit to be Treated b) Number of Applications c) Number of Sites d) Specific Description of Sites	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
7) a) Month(s) of Year b) States	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
8) SENSITIVE AREAS a) Areas to be Avoided b) Areas to be Treated with Caution	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		
9) REMARKS a) Precautions to be Taken b) Use of Trained / Certified Personnel c) State and Local Coordination d) Other Pesticides Being Applied to Same Site e) Monitoring f) Other	<div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div> <div style="margin-bottom: 5px;">_____</div>		

Appendix 5

Guidance for USFS Consultation on State Highway Easement Land

What level of coordination is required by the [Highways Over National Forest Land MOU](#) between WSDOT and the USDA and the USDA Forest Service, Pacific NW Region? (Agreement GCB 1336 and 13-RU-11060051-021)

Section III. Coordination

- (1) USFS Forest Supervisors and WSDOT Regional Administrators will coordinate all activities included herein, unless otherwise noted. They will jointly agree on items to be coordinated by the USFS District Rangers and WSDOT Area Maintenance Superintendents or Project Engineers.
- (2): The USFS Regional Director of Engineering and WSDOT Regional Administrators or their designee, will coordinate programs, final easements, and any items where the USFS Forest Supervisor, or the WSDOT Maintenance Engineer or Project Development Engineer request assistance.
- (3): The USFS Engineering Partnerships Program Leader and WSDOT Technical Services Manager will coordinate an annual meeting to review concerns, practices, any MOU modification recommendations, and to share organizational/contact information.

Section V. Planning

- (4): WSDOT will coordinate with USFS at project inception for projects using or affecting National Forest lands or interests. The USFS will consult with WSDOT at project inception on projects that may affect State Highways, including State highways on National Forest lands by easement.
- (5): WSDOT and U.S. FOREST SERVICE will coordinate on needed environmental documents and lead agency responsibility when WSDOT conducts work outside WSDOT's existing right-of-way and easement, seeks to expand the transportation right-of-way and easement, or seeks to acquire new right-of-way or easement within USFS lands. WSDOT will have the primary responsibility for highway related projects

Section VII. Rights-of-Way

- (6): Significant changes in easement or right-of-way width occurring during construction will require an amendment to the recorded Easement Deed.

Appendix 5

Guidance for USFS Consultation on State Highway Easement Land

(7): Use or occupancy of National Forest lands for other highway related uses outside the easement areas, including temporary construction areas, will require a USFS issued Special Use Permit.

Section IX. Maintenance

(8): The term “maintenance” means the preservation of the entire highway, including surface, shoulders, roadsides, structures, and such traffic-control devices as are necessary for safe and efficient utilization of the highway (23 USC 101).

(9): Road maintenance activities that are state funded and state directed on state highway rights of way and/or easements through National Forest lands are not subject to NEPA requirements because these activities are not subject to Forest Service control and responsibility (FSH 1909.15 Chapter 01 and 40 CFR 1508.18). However, WSDOT is responsible for meeting all other applicable state and federal environmental regulatory requirements, including the Endangered Species Act

(10): WSDOT maintenance activities to be coordinated with the USFS shall include, but are not limited to:

- a. All maintenance activities that involve disposal of slough material, changes in road drainage patterns, and similar actions that affect National Forest lands outside the right-of-way.

(11): For those activities that will be coordinated with the USFS, the USFS will:

- a. Expedite review on maintenance items requiring USFS concurrence. The USFS will respond within 30 days of receiving the request for concurrence. Not providing a response within the 30 day period constitutes concurrence to those maintenance activities for which the concurrence was requested.

The MOU between WSDOT and the USFS complies with the [1998 MOU](#) between the US Department of Agriculture Forest Service and the US Department of Transportation Federal Highway Administration that:

- Provides a nationally consistent procedure by which FHWA may appropriate National Forest System lands for use under Chapters 1 and 2 of Title 23 USC.
- Requires notification of the USFS, as far in advance as possible, for any highway project being contemplated to determine if the project is consistent with the adopted forest plan.

Appendix 5

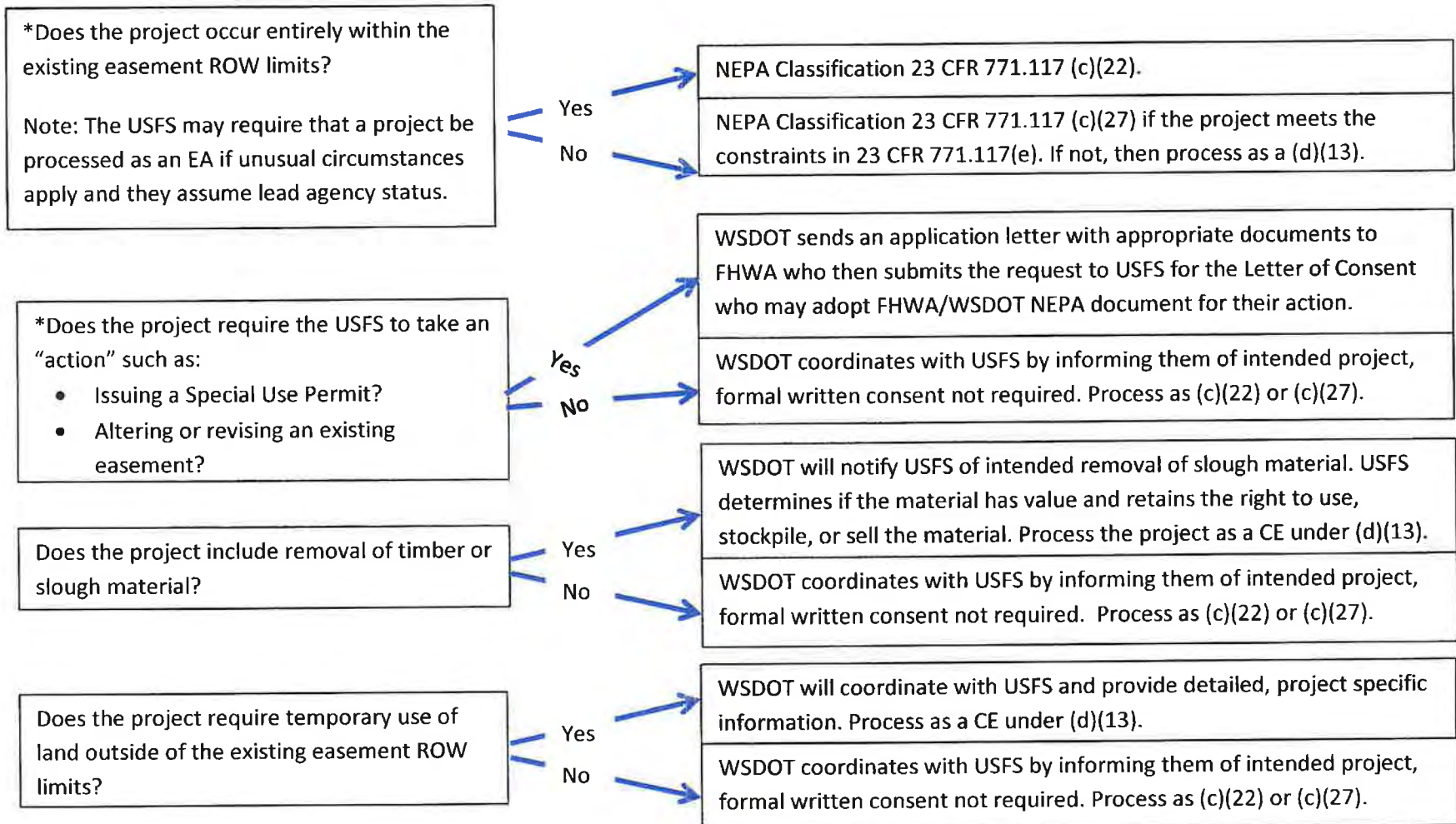
Guidance for USFS Consultation on State Highway Easement Land

- Stipulates that FHWA is responsible for the final road design and compliance with NEPA, and coordination on the determination of the appropriate environmental analysis in accordance with 23 CFR Part 771, 40 CFR 1501.6 and 1501.5(b), (c), and (e).
- Stipulates that USFS agreement will be in the form of a “letter of consent” which clearly states the conditions under which the agreement is given and will be sent to both the FHWA and the State (WSDOT sends application to FHWA who then submits request to USFS).
- The USFS will retain the right to any merchantable timber and all other resource materials not specifically appropriated, within the boundaries of the appropriation. The State will notify the USFS which timber or other resource materials within the appropriation are scheduled to be removed and the USFS will determine whether a timber sale or other authorization for removal is appropriate.

Appendix 5

Guidance for USFS Consultation on State Highway Easement Land

Key Questions

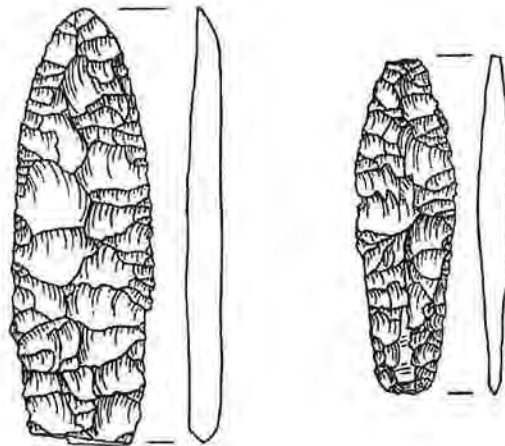


Appendix 5

Guidance for USFS Consultation on State Highway Easement Land

***Note:** The above assumes a federal nexus with FHWA. If the project does not have an FHWA nexus and you believe there is a “strong transportation interest” (23 CFR 710.601), contact WSDOT HQ RES and FHWA Washington Division ROW Program Manager during project scoping to make a determination. A strong transportation interest may exist if the project meets one, or a combination of, the following: on federal land, a bridge replacement, transportation emergency, route vulnerability (includes weather-related, freight movement, detour impacts, through route or similar impacts to the transportation route).

**Inadvertent Discovery Plan
For
Archaeological Resources
And
Human Remains for
National Forest System Lands:
Gifford Pinchot, Mt. Baker-Snoqualmie, Okanogan-
Wenatchee, Olympic, Umatilla & Columbia River
Gorge National Scenic Area
WSDOT MOU Attachment 2019**



Heritage Program
U.S. Forest Service
Pacific Northwest Region



September 2013, updated March 2019
*(Much of the information from this guide taken directly
from the Gifford Pinchot NF Inadvertent Discovery Plan)*

Overview- Inadvertent Discovery in the Course of Project Implementation

It is the policy of the Forest Service to ensure that land use decisions and management practices do not have an inadvertent adverse effect on cultural resources (FSM 2364.03). When agency or agency-authorized undertakings have the potential to affect cultural resources, Section 106 of the National Historic Preservation Act (NHPA) requires the inventory (survey) of the project area to identify and protect significant resources. No matter how thorough the inventory, there is always the possibility that archaeological resources or human remains will be inadvertently discovered during the course of project implementation. Heritage Program planning direction includes development of protocols for responses to the unanticipated discovery of archaeological resources or human remains (FSM 2362.3).

The Pacific Northwest Region, Forest Service's inadvertent discovery plan includes the following basic and general procedures:

1. Clauses will be included in Forest Service contracts, Agreements, and Special Use Permits specifying that if previously unidentified archaeological materials, sites or human remains are discovered during project implementation, project work in the vicinity of the discovery will be halted and the appropriate Heritage Specialist will be notified (See Forest Contact List).
2. Reasonable measures will be implemented to protect the discovery site, including appropriate stabilization, covering, installation of barriers, or designated protective buffers.
3. Confidentiality of the discovery site will be ensured, and access restricted, if necessary.
4. If the inadvertent discovery involves archaeological resources, protocol for the discovery of archaeological resources (see below) will be followed.
5. If human remains or funerary materials are discovered, Native American Graves Protection and Repatriation Act (NAGPRA) protocol (see below) will be followed.
6. The Heritage Specialist shall make a preliminary assessment of whether the cultural material or site is potentially significant and recommend additional steps for emergency treatment and stabilization, as needed.
7. Final mitigation procedures will be developed on a case-by-case basis, in consultation with the Washington Department of Archeology & Historic Preservation (WA DAHP) and appropriate tribal cultural resources staff.

These procedures apply in the case of all ground-disturbing projects, including contracted or permitted activities, force-account work, and the activities of individual volunteers or volunteer organizations operating under agreements with the agency.

Discovery of Archaeological Resources

In the event of an inadvertent discovery of archaeological resources, the process set forth in 36 CFR 800.11 for recording standards and 800.13 for post-implementation discoveries will be followed (see Appendix A for 36 CFR 800.11 and .13). Specific procedures shall include the following steps:

A. Initial Discovery

1. Cease project activity and secure the area. The "area" is defined as any ground surrounding the discovery location needed to ensure protection of the site and any exposed and vulnerable archaeological resources. At a minimum, securing of the area will include reasonable measures to protect the discovery location, including stabilization or covering of exposed material, restricting access, and, if the circumstances of the discovery make it reasonable to do so, posting a monitor at the site until the proper authorities are notified.
2. If there is no activity underway, secure the area as stated above.
3. Forest Service personnel receiving the discovery information will promptly contact a Heritage Specialist (Forest, Zone, or District Archaeologist), and take reasonable steps to ensure the confidentiality of the discovery location.

B. Site Inspection and Documentation

1. The Heritage Specialist will make every effort to inspect the site on the same day the discovery is reported, and perform the following steps.
2. Document the area of the discovery. At a minimum, the documentation will include a map showing the location of the discovery, photographs, or sketches, and an inventory and description of the items observed. Pertinent physical and environmental data regarding characteristics of the discovery location will also be recorded (topography, soils, features). As necessary, surface artifacts at risk of theft or loss may be documented and removed for further analysis and curation.
3. Assess needs for additional field investigation, such as subsurface sampling for boundary determination, or sampling and recovery of displaced sediments.
4. Assess potential for further project effects; coordinate with project personnel regarding protection, avoidance, or monitoring requirements.
5. Provide any additional temporary stabilization necessary, and secure the site to ensure no further disturbance.

C. Assessment, Notification, and Further Action

1. Notify SHPO (State Archaeologist) and appropriate Tribes (Cultural Resources Program Managers), and Advisory Council on Historic Places (ACHP) by telephone or email within 48 hours of the discovery (35 CFR 800.13 (b)(3)). Allow 48 hours for response.
2. Based on the information collected during the site/discovery inspection, the Heritage Specialist will assess the significance of the archaeological resources with respect to the eligibility criteria of National Register of Historic Places (NRHP). If further field data are needed to make the Determination of Eligibility, a plan will be developed for additional field investigations.

3. Taking into account the recommendations of SHPO and Tribes, develop a plan of action to resolve adverse effects. If the site is significant (eligible to National Register of Historic Places) the preferred treatment is avoidance and protection in place. Treatment options are dependent upon the nature of the site and the type of disturbance and will be designed to minimize further damage, disturbance, and loss of archaeological values.
4. Archaeological data recovery may be an option if other treatments would not be effective or possible. A data recovery plan would be developed in consultation with appropriate tribes and the Washington SHPO following procedures under 36 CFR 800.6.
5. The nature of the archaeological resources and the extent of disturbance may require a formal damage assessment.
6. Implement treatments, mitigation measures, and appropriate actions.



Backhoe trenching in 1990 resulted in the inadvertent discovery of the Beech Creek archaeological site a pre-contact residential location with occupations dating to more than 9,000 years ago.

Native American Graves Protection and Repatriation Act (NAGPRA) Protocol: Discovery of Human Remains

Past human use of the lands now administered as National Forest System lands included Native American interment of the deceased. Known burial sites are typically associated with the use of cairns and are of historic (19th century) age. Associated funerary objects are generally limited to glass trade beads. Other forms of interment, representing different funerary practices and traditions, may also exist. For all activities undertaken within National Forest Systems Lands, the general policy has been strict avoidance of potential burial sites and grave locations. In circumstances where possible or confirmed grave sites have been identified, consultation with appropriate tribal authorities has been prompt, and avoidance measures have been effective.

The purpose of this protocol is to establish Forest-wide procedures in the event of the inadvertent discovery of human remains and/or artifacts on public lands administered by the Forest Service that could potentially be Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony. These procedures have been developed in consultation with local Tribes to assist in the discovery and identification process, and to afford protection measures in compliance with NAGPRA (Public Law 101-601; U.S.C. 3001-3013; 104 Stat. 3048-3059, Section 3) and implementing regulations (43 CFR Part 10, Section 10.4).

In situations where unanticipated discovery of human remains occurs, procedures that follow will be conducted with dignity, respect, and sensitivity to the traditions and beliefs of descendant groups. The determination of which group(s) to contact will be based on the location of the site, with respect to ceded lands and/or proximity to usual and accustomed (traditional) use areas.

A. Initial Discovery

1. Cease project activity and secure the area. The "area" is defined as any ground surrounding the discovery location needed to ensure protection of the find that may contain additional materials. At a minimum, securing the area will include reasonable measures to protect the discovery location, including stabilization or covering of exposed material, restricting access, and, if the circumstances of the discovery make it reasonable to do so, posting a monitor at the site until the proper authorities are notified.
2. If there is no activity underway, secure the area as stated above.
3. Forest Service personnel receiving the discovery information will directly contact the Heritage Specialist and local Forest Law Enforcement Officer (LEO). Reasonable steps will be taken to ensure the confidentiality of the discovery location.

B. Site Inspection and Documentation

1. The Heritage Specialist and/or LEO will make every effort to visit the site on the same day as the discovery.
2. The Heritage Specialist will document the area of the discovery. At a minimum, the documentation will include a map showing the location of the discovery, photographs, or sketches, and an inventory and description of the items observed. Pertinent physical

and environmental data regarding characteristics of the discovery location will also be recorded (topography, soils, features). Nothing will be removed from the site.

C. Identification and Notification: Cultural Items

1. Upon encountering cultural items, either by receiving them from the public or through inadvertent discovery, Forest Service personnel will promptly contact the Heritage Specialist.
2. Cultural items as defined under NAGPRA are funerary objects, sacred objects, and objects of cultural patrimony. Examples of such items may include, but are not limited to, glass or shell beads, copper ornaments, or carved stone items.
3. The Heritage Specialist will notify the Tribal Historic Preservation Officer and/or Tribal Cultural Resources Protection Specialist by telephone, email, or text message within 24 hours of the potential discovery, and will request a meeting with the Tribe to review recovered material and records, and, if necessary schedule a field inspection of the discovery site.
4. The Heritage Specialist will review site records and related files to determine if the location has been previously documented as an archaeological, historic, or traditional cultural resource.
5. If the Tribe identifies the cultural items as funerary objects, sacred objects, or objects of cultural patrimony, compliance with Section 10.4, Section 3(d) of NAGPRA will be implemented immediately.

D. Identification and Notification: Human Remains

1. If skeletal material is brought to Forest personnel either in the field or in the office, and it seems reasonable that the material is human, the person receiving the material will contact the Heritage Specialist or the LEO on duty. The Heritage Specialist or LEO will arrange a site visit with the Sheriff/Coroner.
2. If the location of skeletal remains is identified to Forest Service personnel, the person receiving the information about the location will contact the LEO on duty. The LEO will visit the site on the same day, and identify the type of remains, if possible. If the LEO reasonably believes the remains are human, he/she will immediately secure the area and contact the Sheriff/Coroner and Heritage Specialist by phone or radio regarding the potential for Native American human remains.
3. If the skeletal material cannot be reasonably identified as non-human, do not disturb the material, call the Sheriff/Coroner within 24 hours, and secure the area as described above (A)(1).
4. Under no circumstances will any unauthorized Forest Service personnel remove the skeletal material or use potentially destructive means (trowel, shovel, probe) to determine if the remains are human.
5. The Sheriff/Coroner will obtain non-destructive forensic analysis, if necessary, to determine if the remains are human and of Native American origin. The Sheriff/Coroner will report the findings to the Heritage Specialist by phone or email.

6. Heritage Program personnel will report the findings to the Tribal Historic Preservation Officer and/or Tribal Cultural Resources Protection Specialist and appropriate Line and Staff Officers, or actings, by telephone or email within 24 hours of receipt.
7. All health and safety requirements will prevail in situations where contamination from hazardous waste and materials is present on archaeological sites, or where an archaeological deposit is encountered during removal of such materials, and/or in cases where hazardous materials may have contaminated burials and associated items where re-interment is necessary. In these cases the Forest Hazardous Materials coordinator will be contacted.

E. Implementation of 43 CFR Part 10 Regulations

1. Human Remains
 - a. If human remains are identified as Native American in origin, the Forest will initiate compliance with NAGPRA, Section 3(d), and implementing regulations 43 CFR Part 10, S10.4 (Appendix A, attached).
2. Cultural Objects
 - a. If cultural objects are identified by the Tribe as funerary objects, sacred objects, or objects of cultural patrimony, the Forest will initiate compliance with NAGPRA, Section 3(d), and implementing regulations 43 CFR Part 10, S10.4 (Appendix B, attached).

Forest Service Heritage Specialists Contact Information

Columbia River Gorge NSA

Chris Donnermeyer, Archaeologist/Heritage Program Manager
Columbia River Gorge NSA
902 Wasco Avenue
Hood River, Oregon 97031
(541) 308-1711; Fax (541) 386-1916
christopher.donnermeyer@usda.gov

Colville NF

Alicia Beat, Forest Archaeologist, Heritage and Tribal Relations Program Manager
Colville NF
765 S. Main
Colville, WA 99114
(509) 684-7251
alicia.beat@usda.gov

District Arch: Stu Chilvers stuart.chilvers@usda.gov Staff Officer: Craig Newman

Gifford Pinchot NF

Matt Mawhirter, Forest Archaeologist/Heritage Program Manager
Gifford Pinchot National Forest
2455 Highway 141, Trout Lake, WA 98650
(509) 395-3421; Fax: (509) 395-3424
matthew.mawhirter@usda.gov
Cowlitz Valley District Arch: Kevin Flores 360-497-1167 kevin.flores@usda.gov

Mt. Baker-Snoqualmie NF

Paul Alford, Heritage Program Manager
Mt. Baker-Snoqualmie NF
2930 Wetmore Ave. Suite 3A
Everett, WA 98201
(425) 783-6025; fax (425) 783-0214
paul.alford@usda.gov

Okanogan-Wenatchee NF

Pete Cadena, Heritage Program Leader/Forest Anthropologist
Okanogan-Wenatchee NF
215 Melody Lane
Wenatchee, WA 98801
(509) 664-9394
pete.cadena@usda.gov
District Archs: Stephanie Welch, Naches RD 509-653-1417
Racheal Reckin- Chelan RD rreckin@fs.fed.us

Olympic NF

Kristen Hauge, Forest Archaeologist
Olympic NF
1835 Black Lake Blvd SW
Olympia, WA 98512
(360) 956-2361 Olympia
kristen.hauge@usda.gov

Umatilla NF

Allen Madril, Heritage Program/Tribal Liaison

Umatilla NF

Pendleton, OR 97801

Office: (541) 278-3719; Fax: (541) 278-3730

allen.madril@usda.gov

District Archs:

Will Marquardt, Pomeroy RD wmarquardt@fs.fed.us

Leticia Neal, leticia.neal@usda.gov

PNW Regional Office

Allie Wenzl, Heritage Program Lead

Pacific Northwest Region- Edith Green Wendell Wyatt Federal Building

1220 SW 3rd Ave., Portland, OR 97204,

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Appendix A

36 CFR 800.11 Documentation standards.

(a) *Adequacy of documentation.* The agency official shall ensure that a determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis. The agency official shall provide such documentation to the extent permitted by law and within available funds. When an agency official is conducting phased identification or evaluation under this subpart, the documentation standards regarding description of historic properties may be applied flexibly. If the Council, or the SHPO/THPO when the Council is not involved, determines the applicable documentation standards are not met, the Council or the SHPO/THPO, as appropriate, shall notify the agency official and specify the information needed to meet the standard. At the request of the agency official or any of the consulting parties, the Council shall review any disputes over whether documentation standards are met and provide its views to the agency official and the consulting parties.

(b) *Format.* The agency official may use documentation prepared to comply with other laws to fulfill the requirements of the procedures in this subpart, if that documentation meets the standards of this section.

(c) *Confidentiality.*

(1) *Authority to withhold information.* Section 304 of the act provides that the head of a Federal agency or other public official receiving grant assistance pursuant to the act, after consultation with the Secretary, shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy; risk harm to the historic property; or impede the use of a traditional religious site by practitioners. When the head of a Federal agency or other public official has determined that information should be withheld from the public pursuant to these criteria, the Secretary, in consultation with such Federal agency head or official, shall determine who may have access to the information for the purposes of carrying out the act.

(2) *Consultation with the Council.* When the information in question has been developed in the course of an agency's compliance with this part, the Secretary shall consult with the Council in reaching determinations on the withholding and release of information. The Federal agency shall provide the Council with available information, including views of the SHPO/THPO, Indian tribes and Native Hawaiian organizations, related to the confidentiality concern. The Council shall advise the Secretary and the Federal agency within 30 days of receipt of adequate documentation.

(3) *Other authorities affecting confidentiality.* Other Federal laws and program requirements may limit public access to information concerning an undertaking and its effects on historic properties. Where applicable, those authorities shall govern public access to information developed in the section 106 process and may authorize the agency official to protect the privacy of non-governmental applicants.

(d) *Finding of no historic properties affected.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary;

- (2) A description of the steps taken to identify historic properties, including, as appropriate, efforts to seek information pursuant to § 800.4(b); and
- (3) The basis for determining that no historic properties are present or affected.
- (e) *Finding of no adverse effect or adverse effect.* Documentation shall include:
 - (1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, and drawings, as necessary;
 - (2) A description of the steps taken to identify historic properties;
 - (3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register;
 - (4) A description of the undertaking's effects on historic properties;
 - (5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and
 - (6) Copies or summaries of any views provided by consulting parties and the public.
- (f) *Memorandum of Agreement.* When a Memorandum of Agreement (MOA) is filed with the Council, the documentation shall include, any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1), an evaluation of any measures considered to avoid or minimize the undertaking's adverse effects and a summary of the views of consulting parties and the public.
- (g) *Requests for comment without a memorandum of agreement.* Documentation shall include:
 - (1) A description and evaluation of any alternatives or mitigation measures that the agency official proposes to resolve the undertaking's adverse effects;
 - (2) A description of any reasonable alternatives or mitigation measures that were considered but not chosen, and the reasons for their rejection;
 - (3) Copies or summaries of any views submitted to the agency official concerning the adverse effects of the undertaking on historic properties and alternatives to reduce or avoid those effects; and
 - (4) Any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1).

36 CFR 800.13 Post-review discoveries.

(a) *Planning for subsequent discoveries.*

(1) *Using a programmatic agreement.* An agency official may develop a programmatic agreement pursuant to § 800.14(b) to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking.

(2) *Using agreement documents.* When the agency official's identification efforts in accordance with § 800.4 indicate that historic properties are likely to be discovered during implementation of an undertaking and no programmatic agreement has been developed pursuant to paragraph (a)(1) of this section, the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effects upon such properties. Actions in conformance with the process satisfy the agency official's responsibilities under section 106 and this part.

(b) *Discoveries without prior planning.* If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed

the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and:

(1) If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or

(2) If the agency official, the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or

(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

(c) *Eligibility of properties.* The agency official, in consultation with the SHPO/THPO, may assume a newly discovered property to be eligible for the National Register for purposes of section 106. The agency official shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects.

(d) *Discoveries on tribal lands.* If historic properties are discovered on tribal lands, or there are unanticipated effects on historic properties found on tribal lands, after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section and construction has commenced, the agency official shall comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action.

National Historic Preservation Act

<http://www.achp.gov/regs-rev04.pdf>

Appendix B

43 CFR 10.4 NAGPRA Inadvertent Discoveries.

(a) *General.* This section carries out section 3 (d) of the Act regarding the custody of human remains, funerary objects, sacred objects, or objects of cultural patrimony that are discovered inadvertently on Federal or tribal lands after November 16, 1990.

(b) *Discovery.* Any person who knows or has reason to know that he or she has discovered inadvertently human remains, funerary objects, sacred objects, or objects of cultural patrimony on Federal or tribal lands after November 16, 1990, must provide immediate telephone notification of the inadvertent discovery, with written confirmation, to the responsible Federal agency official with respect to Federal lands, and, with respect to tribal lands, to the responsible Indian tribe official. The requirements of these regulations regarding inadvertent discoveries apply whether or not an inadvertent discovery is duly reported. If written confirmation is provided by certified mail, the return receipt constitutes evidence of the receipt of the written notification by the Federal agency official or Indian tribe official.

(c) *Ceasing activity.* If the inadvertent discovery occurred in connection with an on-going activity on Federal or tribal lands, the person, in addition to providing the notice described above, must stop the activity in the area of the inadvertent discovery and make a reasonable effort to protect the human remains, funerary objects, sacred objects, or objects of cultural patrimony discovered inadvertently.

(d) *Federal lands.* (1) As soon as possible, but no later than three (3) working days after receipt of the written confirmation of notification with respect to Federal lands described in §10.4 (b), the responsible Federal agency official must:

(i) Certify receipt of the notification;

(ii) Take immediate steps, if necessary, to further secure and protect inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony, including, as appropriate, stabilization or covering;

(iii) Notify by telephone, with written confirmation, the Indian tribes or Native Hawaiian organizations likely to be culturally affiliated with the inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony, the Indian tribe or Native Hawaiian organization which aboriginally occupied the area, and any other Indian tribe or Native Hawaiian organization that is reasonably known to have a cultural relationship to the human remains, funerary objects, sacred objects, or objects of cultural patrimony. This notification must include pertinent information as to kinds of human remains, funerary objects, sacred objects, or objects of cultural patrimony discovered inadvertently, their condition, and the circumstances of their inadvertent discovery;

(iv) Initiate consultation on the inadvertent discovery pursuant to §10.5;

(v) If the human remains, funerary objects, sacred objects, or objects of cultural patrimony must be excavated or removed, follow the requirements and procedures in §10.3 (b) of these regulations; and

(vi) Ensure that disposition of all inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony is carried out following §10.6.

(2) *Resumption of activity.* The activity that resulted in the inadvertent discovery may resume thirty (30) days after certification by the notified Federal agency of receipt of the written confirmation of notification of inadvertent discovery if the resumption of the activity is otherwise lawful. The activity may also resume, if otherwise lawful, at any time that a written, binding agreement is executed between the Federal agency and the affiliated Indian tribes or Native Hawaiian organizations that adopt a recovery plan for the excavation or removal of the human remains, funerary objects, sacred objects, or objects of cultural patrimony following §10.3 (b)(1) of these regulations. The disposition of all human remains, funerary objects, sacred objects, or objects of cultural patrimony must be carried out following §10.6.

(e) *Tribal lands.* (1) As soon as possible, but no later than three (3) working days after receipt of the written confirmation of notification with respect to Tribal lands described in §10.4 (b), the responsible Indian tribe official may:

(i) Certify receipt of the notification;

(ii) Take immediate steps, if necessary, to further secure and protect inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony, including, as appropriate, stabilization or covering;

(iii) If the human remains, funerary objects, sacred objects, or objects of cultural patrimony must be excavated or removed, follow the requirements and procedures in §10.3 (b) of these regulations; and

(iv) Ensure that disposition of all inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony is carried out following §10.6.

(2) *Resumption of Activity.* The activity that resulted in the inadvertent discovery may resume if otherwise lawful after thirty (30) days of the certification of the receipt of notification by the Indian tribe or Native Hawaiian organization.

(f) *Federal agency officials.* Federal agency officials should coordinate their responsibilities under this section with their emergency discovery responsibilities under section 106 of the National Historical Preservation Act (16 U.S.C. 470 (f) *et seq.*), 36 CFR 800.11 or section 3 (a) of the Archeological and Historic Preservation Act (16 U.S.C. 469 (a-c)). Compliance with these regulations does not relieve Federal agency

officials of the requirement to comply with section 106 of the National Historical Preservation Act (16 U.S.C. 470 (f) *et seq.*), 36 CFR 800.11 or section 3 (a) of the Archeological and Historic Preservation Act (16 U.S.C. 469 (a-c)).

(g) *Notification requirement in authorizations.* All Federal authorizations to carry out land use activities on Federal lands or tribal lands, including all leases and permits, must include a requirement for the holder of the authorization to notify the appropriate Federal or tribal official immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony pursuant to §10.4 (b) of these regulations.

[60 FR 62158, Dec. 4, 1995, as amended at 62 FR 41293, Aug. 1, 1997]

Native American Graves Protection and Repatriation Act

<http://www.nps.gov/nagpra/MANDATES/INDEX.HTM>

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?type=simple;c=ecfr;cc=ecfr;sid=abefc428407c704d63fef71637939827;idno=43;region=DIV1;q1=NATIVE%20AMERICAN%20GRAVES%20PROTECTION%20AND%20REPATRIATION;rgn=div5;view=text;node=43%3A1.1.1.1.10#43:1.1.1.1.10.2.96.3>