

Yakama Nation Fisheries Upper Columbia Habitat Restoration Project

Nason Creek and State Route 207 (Phase 1)

Presenter:
Chris Butler,

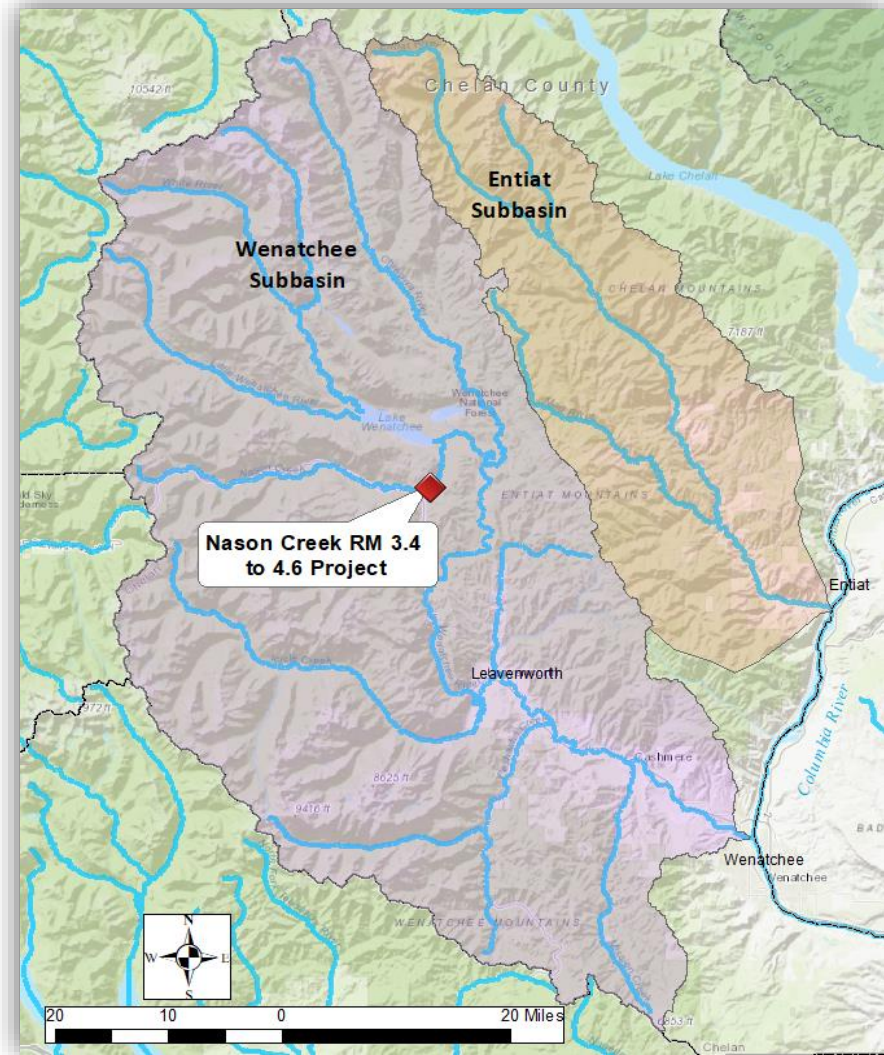
August 10, 2022



Project Location

Wenatchee Subbasin

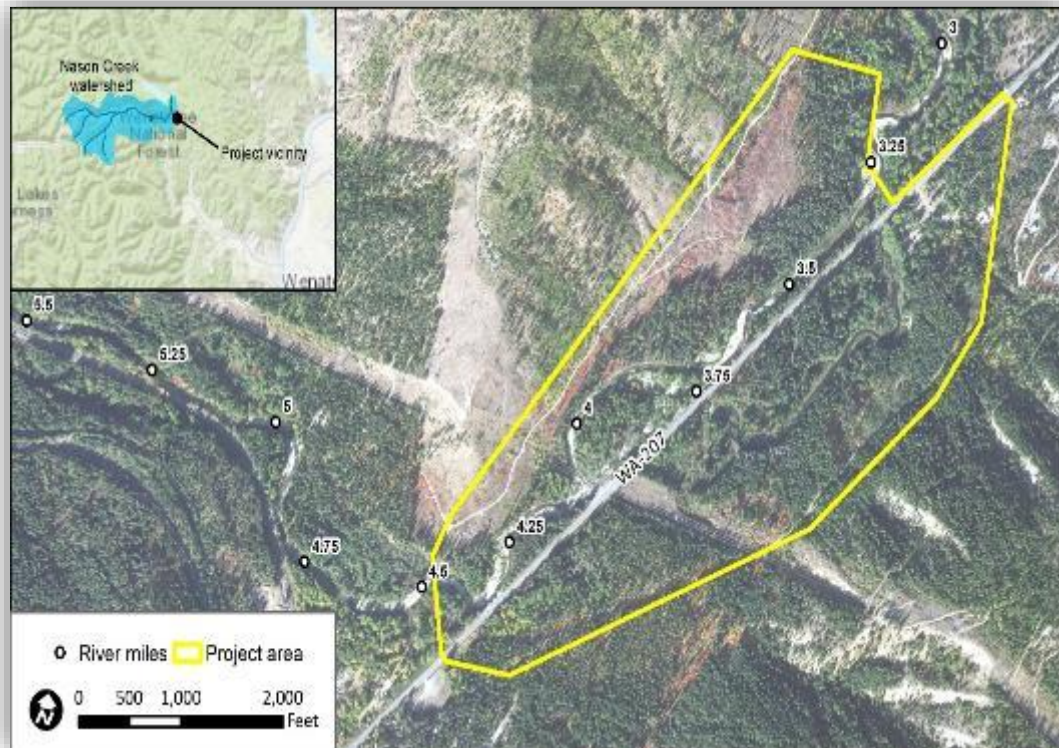
- **Nason Creek AU – Rank 2**
- **Project Partners**
 - WSDOT and USFS
- **Goals**
 - SR 207 Maintenance Issues
 - Improve Habitat Conditions
- **Mainstem Nason Creek**
 - Phases 1 through 3
between RM 3.2 to 4.6



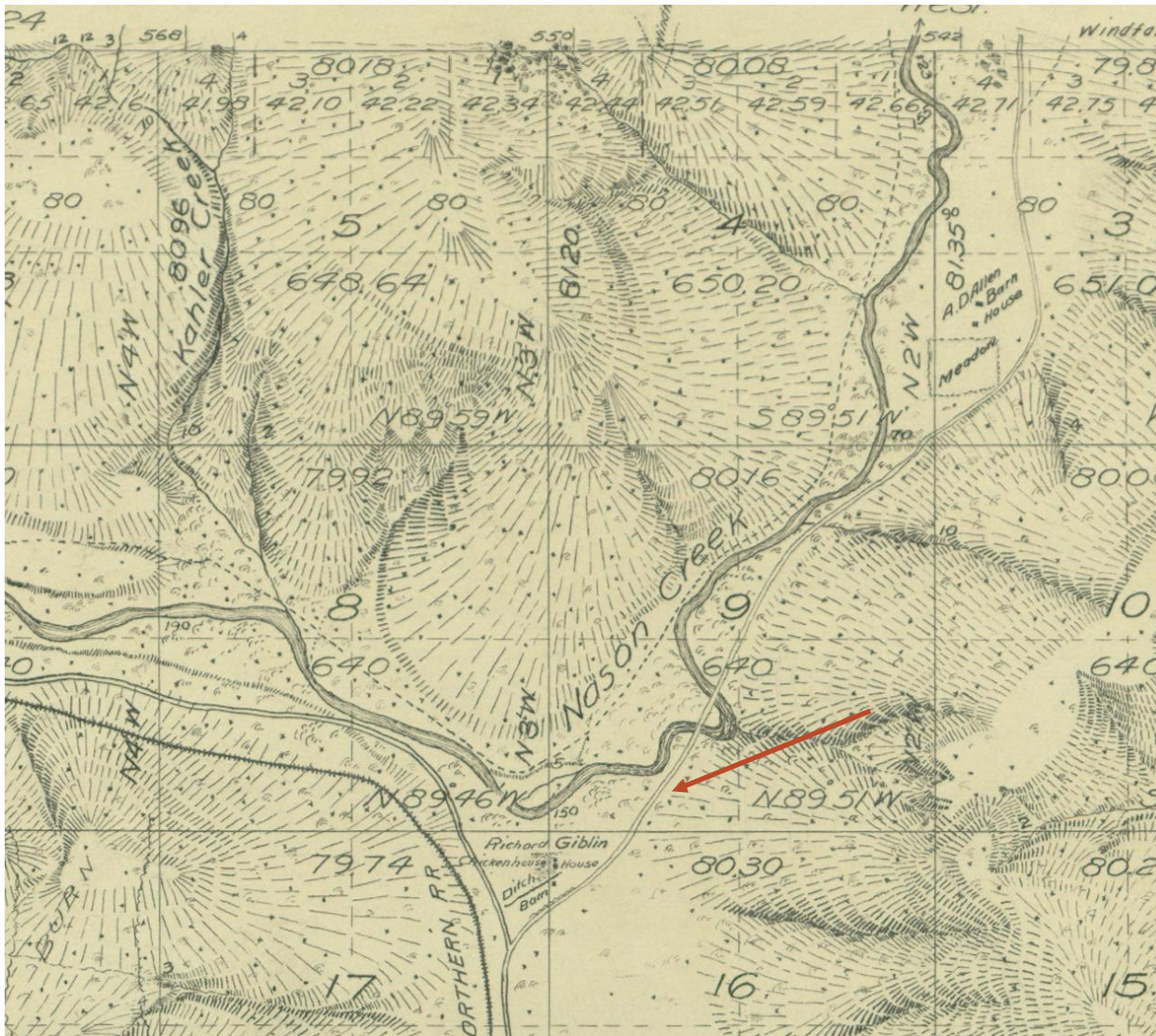
Project Setting



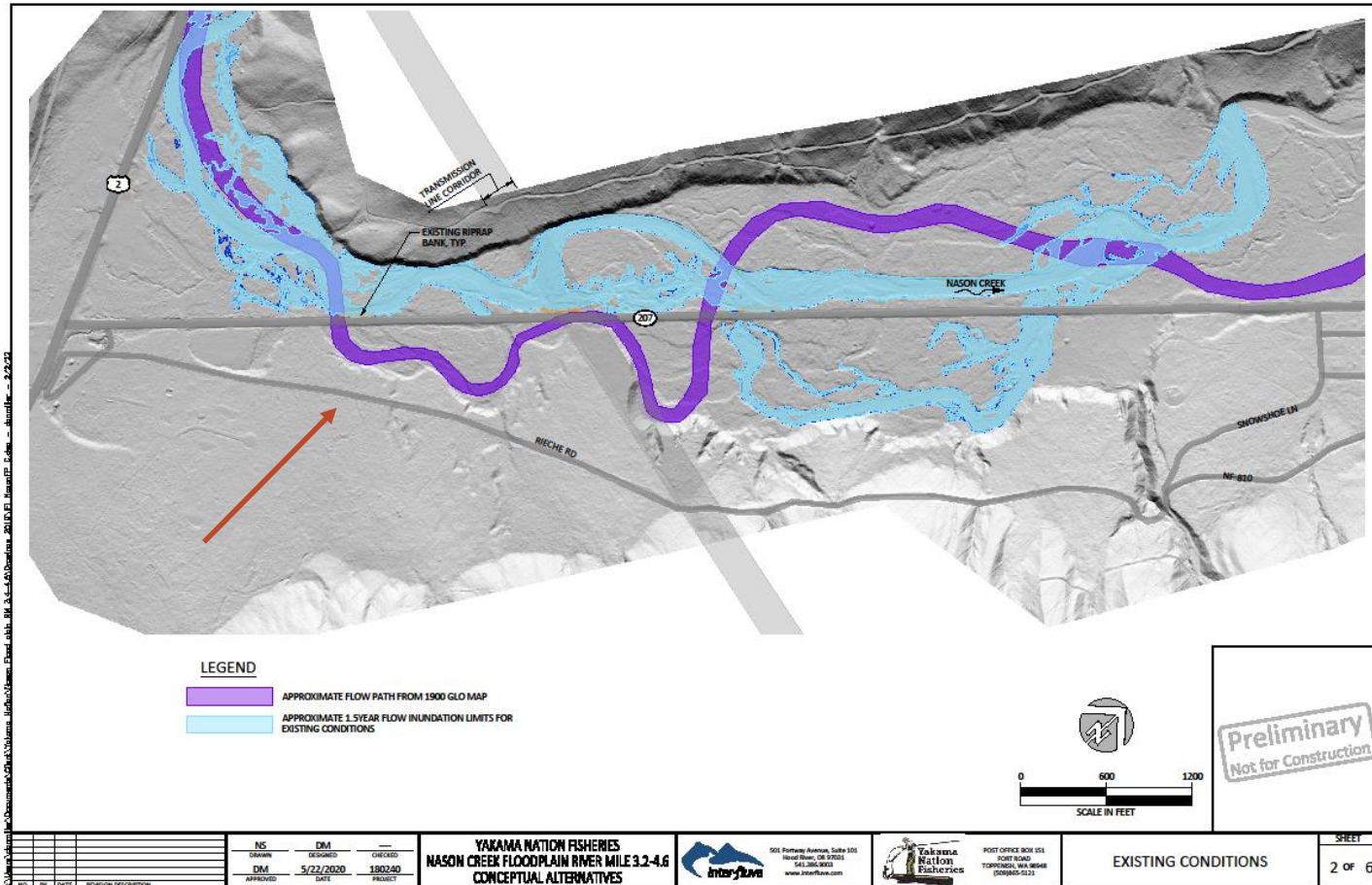
- Project Area is 1.4 river miles in length
- Ownership
 - USFS
 - WSDOT (SR 207 Easement)
 - Chelan County
 - Private
 - BPA Powerline (Easement)
 - Utilities (Easement)
- Current Fish Use
 - Spring Chinook (spawning/rearing)
 - Steelhead (spawning/rearing)
 - Bull trout (spawning/rearing)



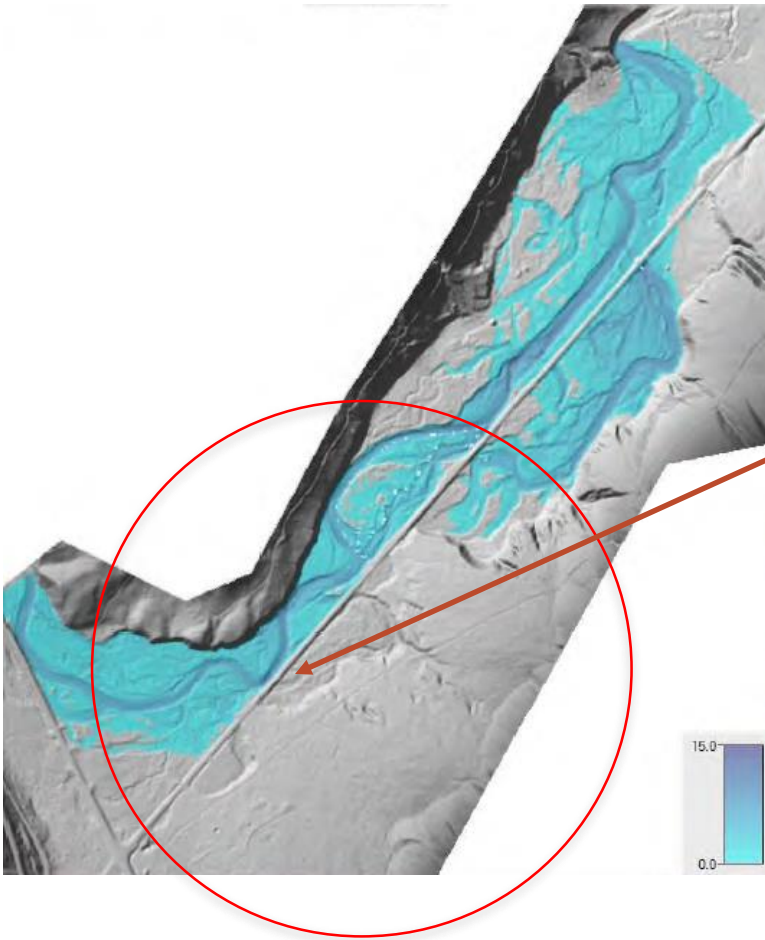
Historic General Land Office Map, 1900



Current Alignment along with GLO Map Alignment



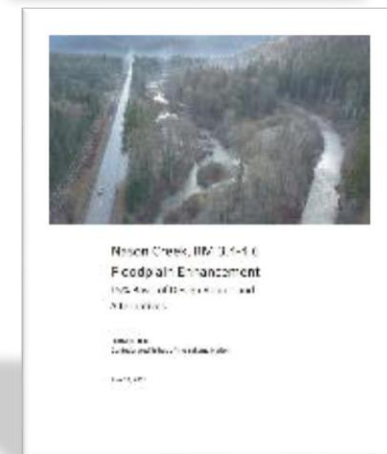
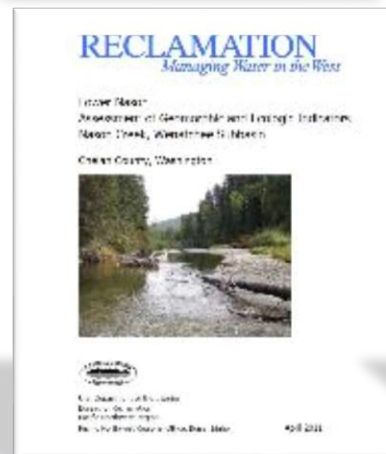
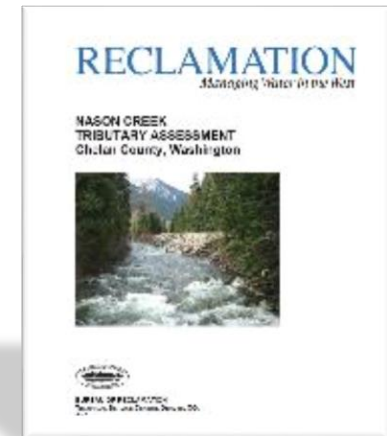
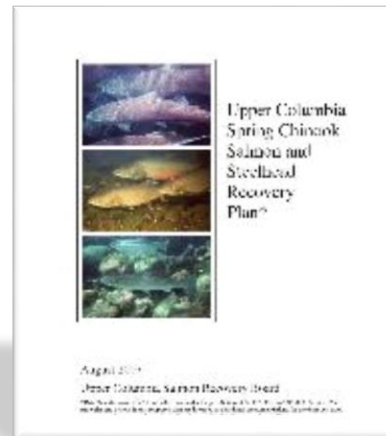
Existing Conditions and Current Problem



- Extensive cutoff floodplain and disconnected habitats caused by SR 207 alignment
- Direct highway and floodway interactions – continued high potential for extensive road damage
 - Constant Annual WSDOT maintenance cost for road repair and constant degraded fish habitat.

Guiding Documents

- Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, 2007
- Nason Creek Tributary Assessment, 2008
- Lower Nason Assessment of Geomorphic and Ecologic Indicators Nason Creek, Wenatchee Subbasin, 2011
- Salmon and Steelhead Biological Assessment for the Nason Creek N1 Floodplain Reconnection Project, 2012
- Nason Creek Feasibility Study, 2012
- Geomorphic Assessment, 2012
- Biological Strategy, 2017
- WSDOT, Chronic Environmental Deficiency Site, Priority 1, 2018
- Yakama Nation, UCHRP recommends SR 207 Reroute, 2019 and 2021
- And many more.....





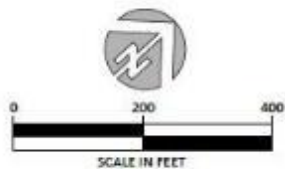
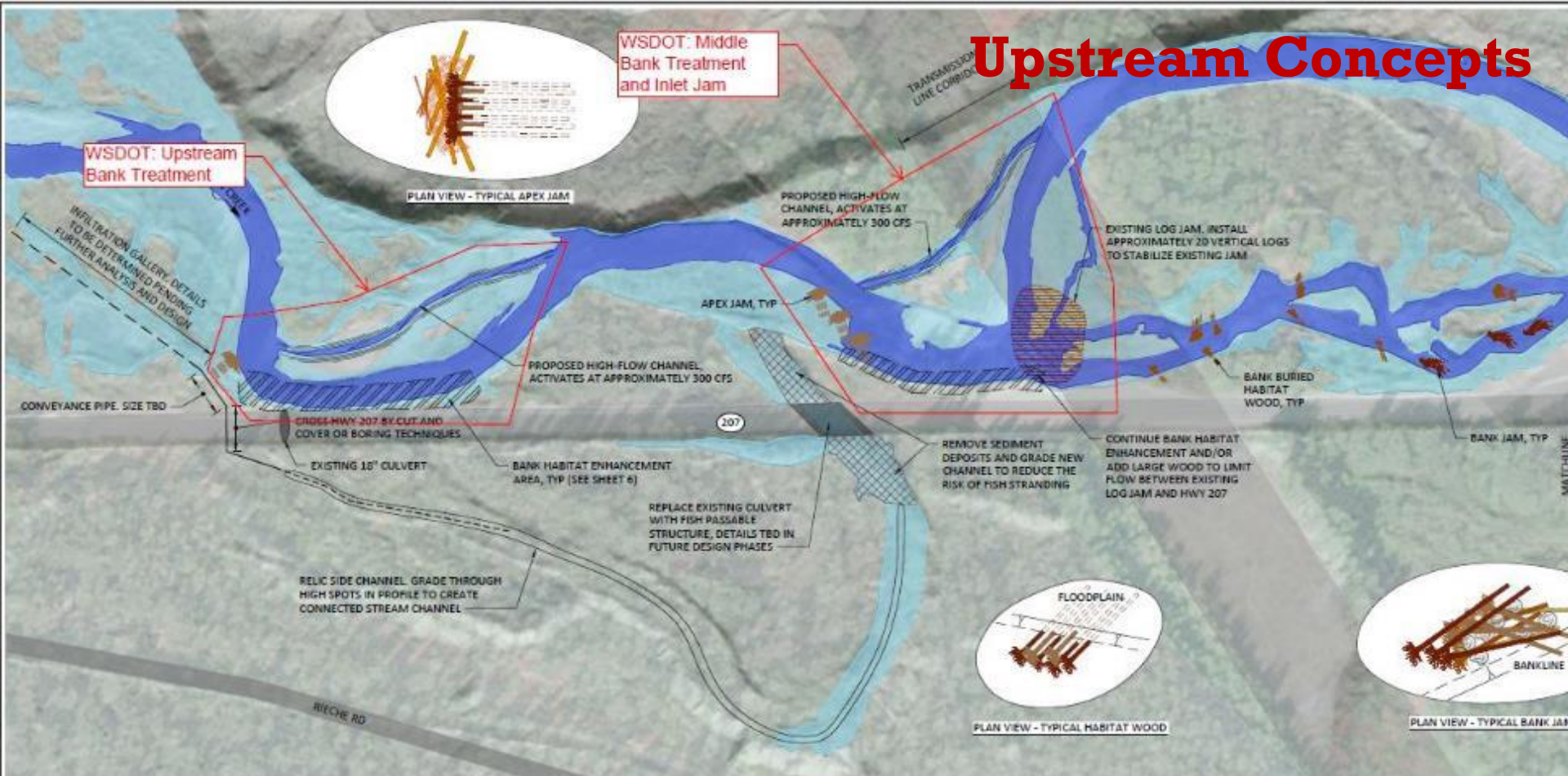
Guiding Documents Quotes

- “The State Highway cut off a large oxbow near Nason Creek”, (Upper Columbia Salmon Recovery Board, *Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan; 2007*)
- “The most significant anthropogenic impact was from an improved road (State Route 207) that longitudinally bisects the floodplain”, (Reclamation, *Lower Nason Assessment of Geomorphic and Ecologic Indicators Nason Creek, Wenatchee Subbasin; 2011*)
- “The state Highway, railroad, and private land development affect large wood recruitment, channel migration, and gravel recruitment”, (UCRTT, *A biological Strategy to Protect and Restore Salmonid Habitat in the Upper Columbia Region; 2017*)
- “Following realignment of the state highway that bisected the floodplain, the creek has been eroding SR 207 in several locations”, (WSDOT, *Site and Reach Assessment, Nason Creek at SR 207 MP 0.4, 0.65, 0.9; 2019*)
- “Construction of Highway 207 significantly reduced the size of the river migration corridor, resulting in a reduction in stream length”, (Interfluve Inc., *Nason Creek, RM3.2-4.6 Floodplain Enhancement; 2021*)

Chronic Environmental Deficiency Sites (CED)



Upstream Concepts



LEGEND

- PROPOSED CONTOURS (1-FT)
- APPROXIMATE 1.5-YEAR EVENT FLOW INUNDATION LIMITS FOR ALTERNATIVE A CONDITIONS
- APPROXIMATE ACTIVE CHANNEL FOR ALTERNATIVE A CONDITIONS
- EXISTING LOG JAM
- PROPOSED SEDIMENT REMOVAL
- BANK HABITAT ENHANCEMENT AREA (SEE SHEET 6)

WSDOT CED responsible for highlighted project elements

Preliminary
Not for Construction

NO.	BY	DATE	REVISION DESCRIPTION
1	NS	6/12/2019	DESIGNED
2	DM	6/12/2019	CHECKED
3	DM	6/12/2019	APPROVED

YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN RIVER MILE 3.4-4.6
CONCEPTUAL ALTERNATIVES



505 Parkway Avenue, Suite 101
Poulsbo, WA 98270
Tel: 360.300.3000
www.interfluvio.com



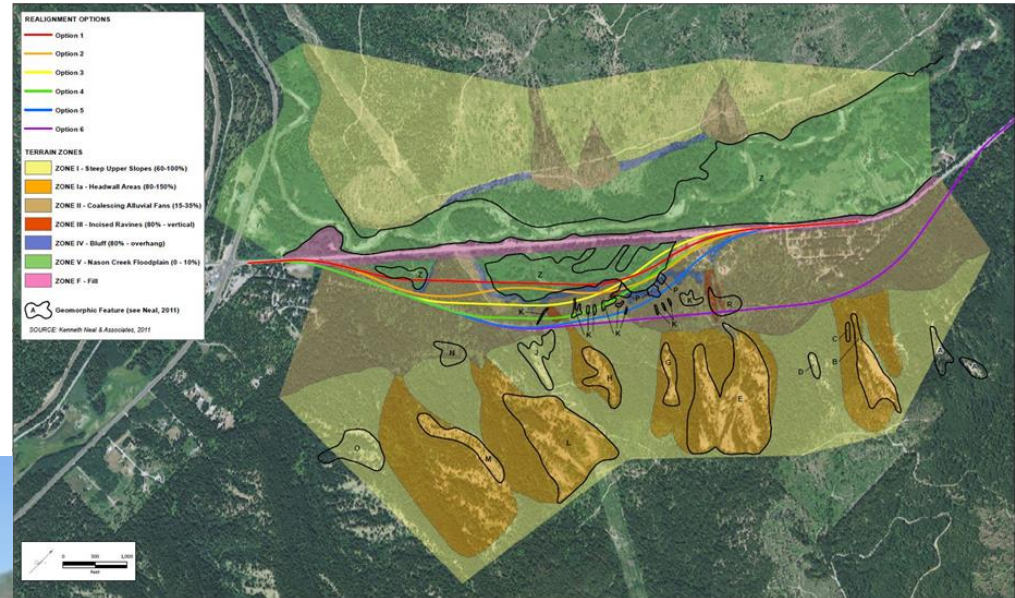
POST OFFICE BOX 141
FORT ROAD
TOPPENISH, WA 98948
(509) 855-5121

PROPOSED CONDITIONS -
UPSTREAM

HONOR. PROTECT. RESTORE.

Previous Alternative Analysis and Feasibility Study

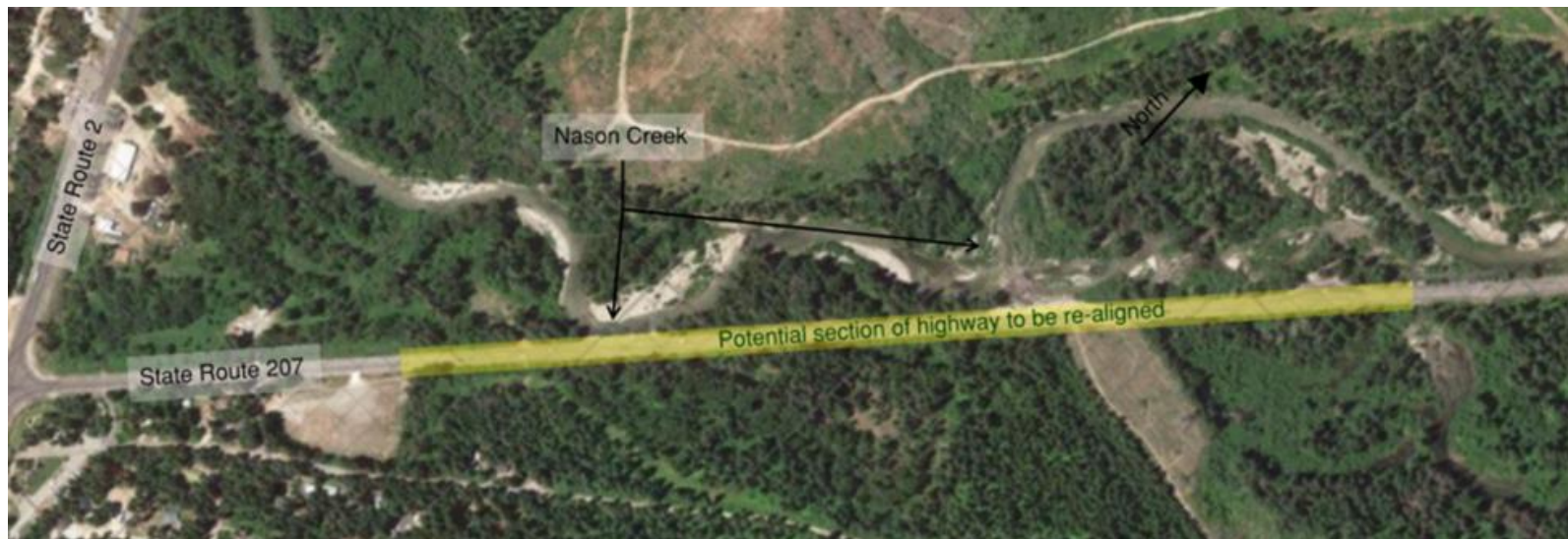
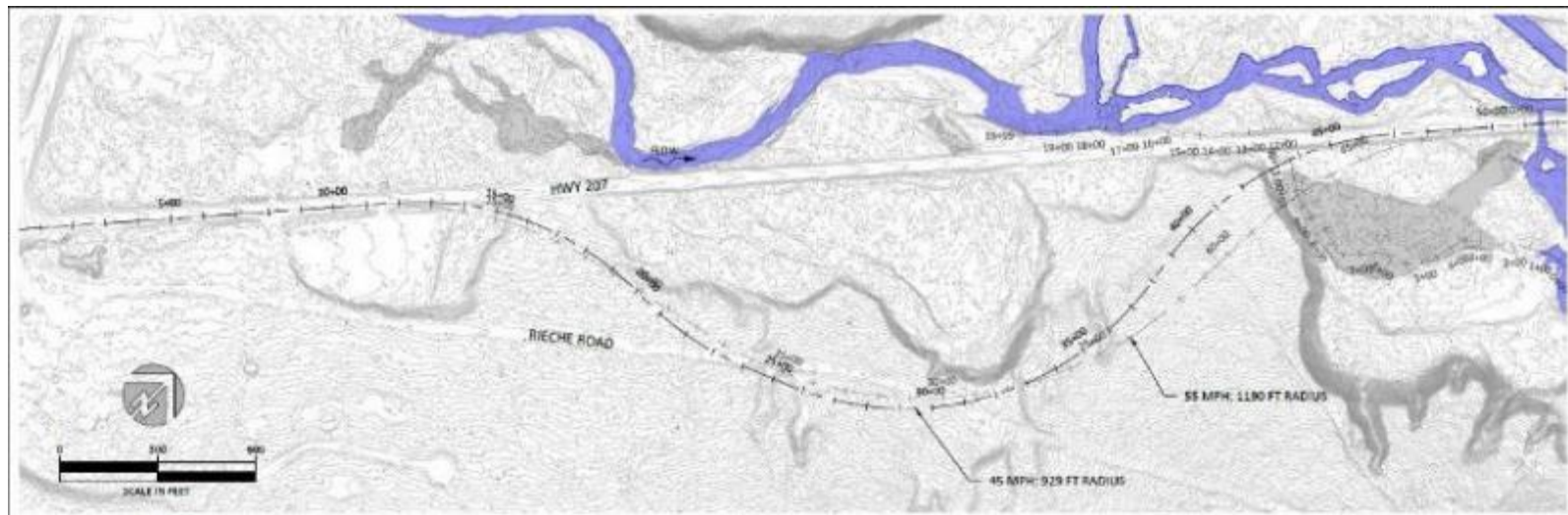
- Causeways
- Bridges
- Road Relocation



Not Implemented Due To:

- Expense
- Sensitive Area Impacts
- Safety
- Private Land Impact
- Complex Infrastructure with high O&M costs

New 2021 Road Re-Alignment Concept



2021 Feasibility Assessment

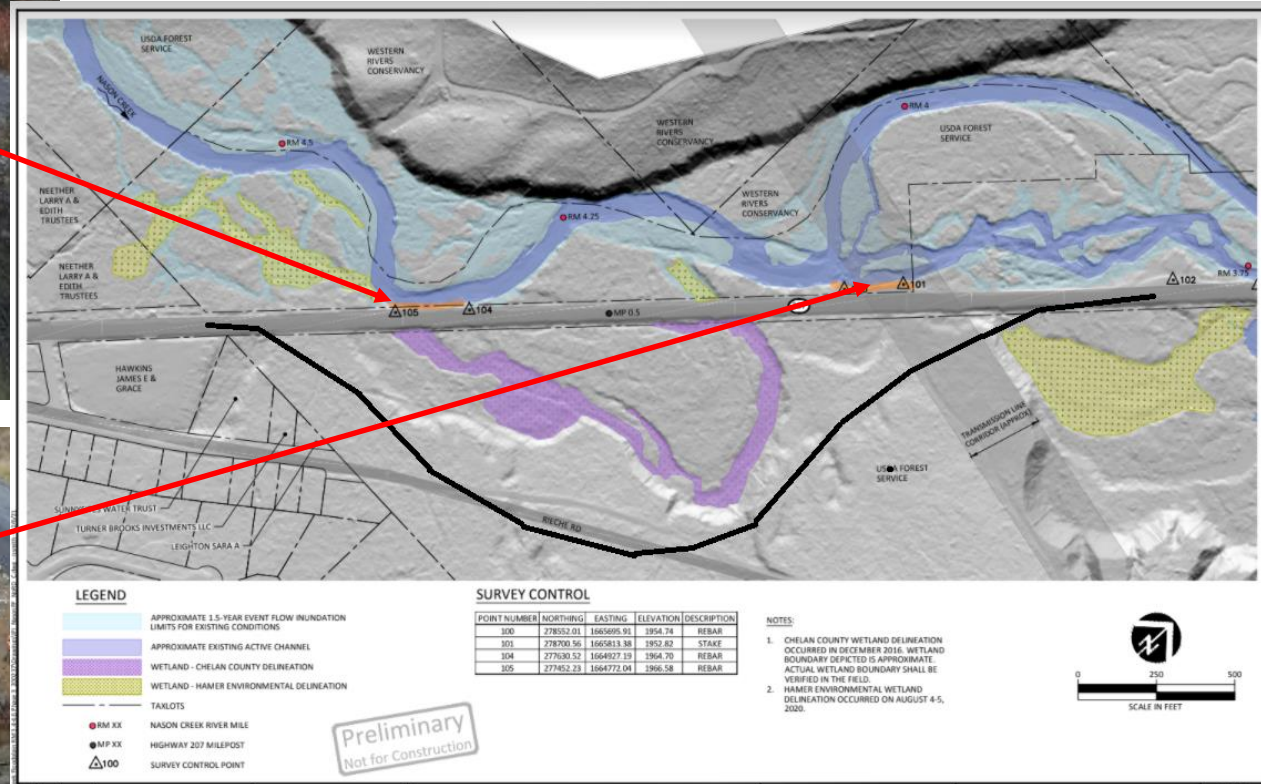
Road Realignment alternatives and feasibility analysis takes into account the following goals:

- Ensure Highway 207 maintains efficient and safe traffic flow similar to current conditions by constructing to American Association of State Highway and Transportation Office standard (AASHTO).
- Minimize impacts of Highway 207 to Nason Creek and associated critical areas and promote salmon habitat restoration opportunities.
- Decrease ongoing flooding impacts and damage to the Highway 207 road prism.
- Minimize earthwork and impacts to US Forest Service land.
- Avoid impacting private lands with the new highway alignment.



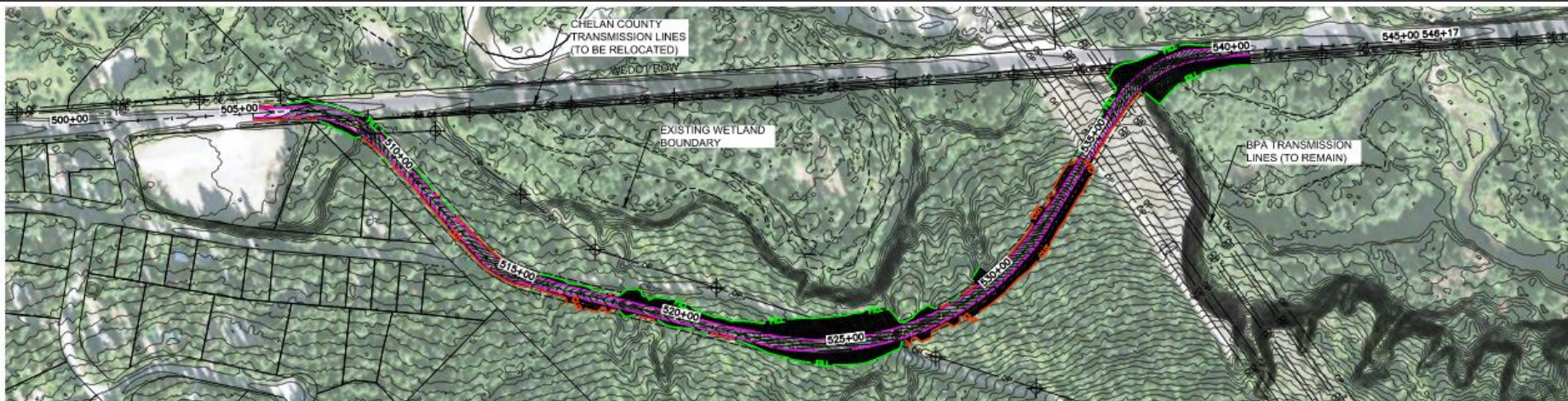
SR 207 Re-Alignment Benefits

■ Complete Removal of 2 Worst CED Sites

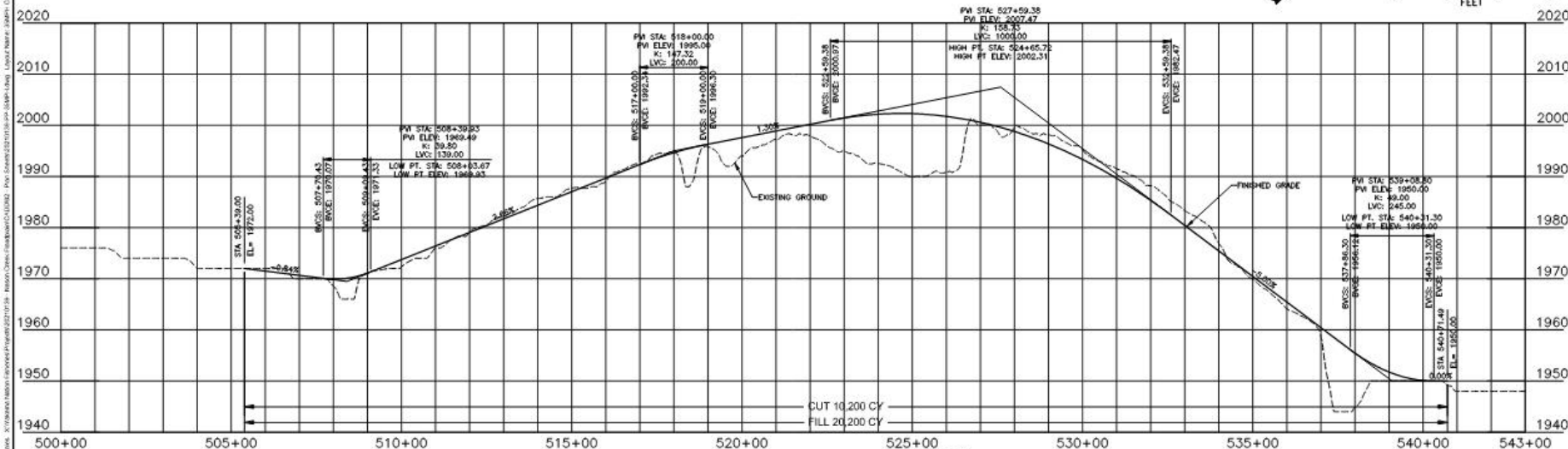


- Avoids Private Land Impacts
- Avoids Avalanche Areas
- Avoids Sensitive Areas
- Minimizes Infrastructure

Results – 35 MPH Concept



Cost Range: \$7.2M to \$7.7M



No.	Date	Revision	By	App.



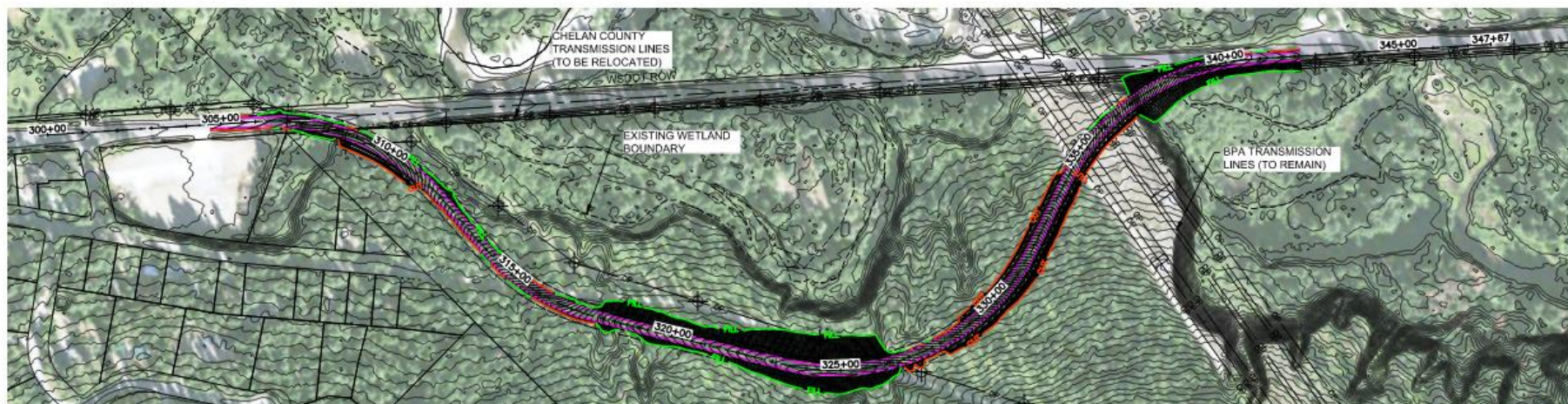
PRELIMINARY

Drawn By	Date
Checked By	Date
Designed By	Date
Approved By	Date
Project Number	30210139

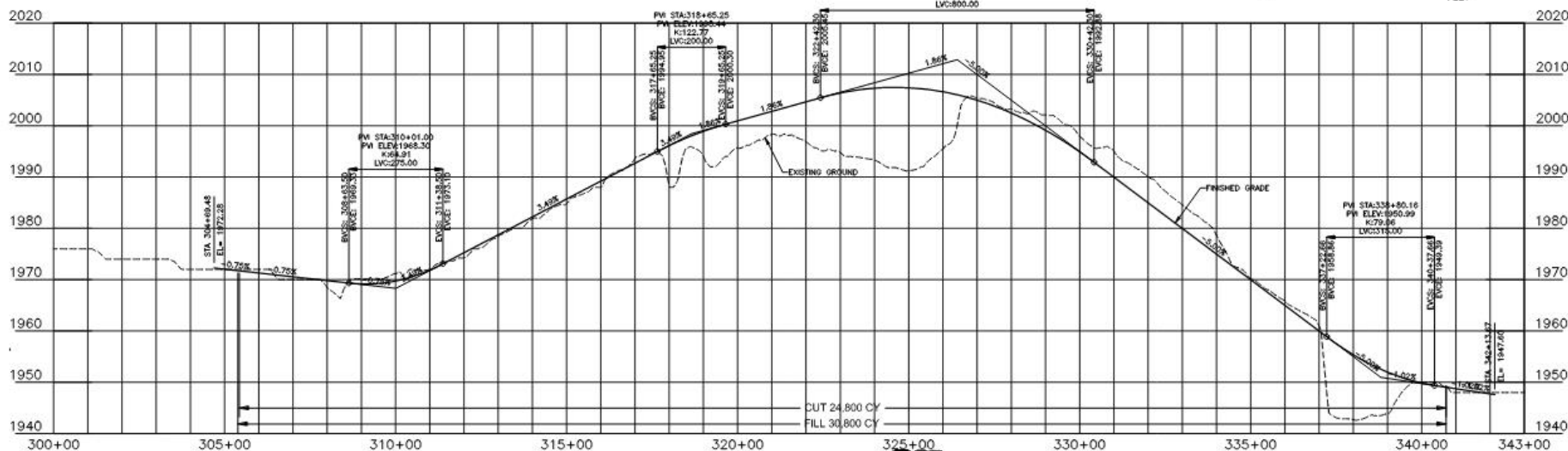
YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN
35 MPH CONCEPT

Drawing No.	AL1
Sheet No.	1
of total	4

Results – 45 MPH Concept



Cost Range: \$8.1M to \$8.5M



PRELIMINARY

Drawn By	Date
Designed By	8/2021
Checked By	8/2021
Approved By	8/2021
Project Number	20210139

YAKAMA NATION FISHERIES
NASON CREEK FLOODPLAIN

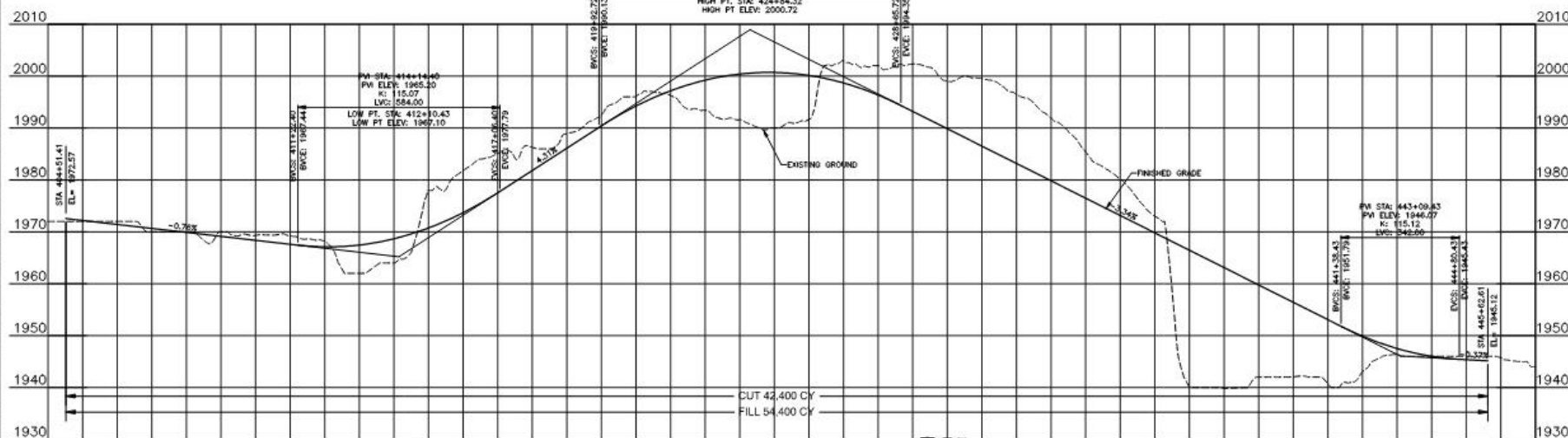
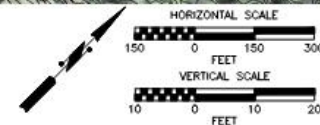
45 MPH CONCEPT

Drawing No.	AL2
Sheet No.	2
4 of 10	

Results – 55 MPH Concept



Cost Range: \$10.8M to \$11.5M



No.	Date	Revision	By	Appr.



PRELIMINARY

Drawn By	Date
Reviewed By	8/20/21
Checked By	8/20/21
Approved By	8/20/21
Project Number	20210129

YAKAMA NATION FISHERIES NASON CREEK FLOODPLAIN 55 MPH CONCEPT	Drawing No. AL3 Sheet No. 3 of 4
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2022 Supplemental Alternatives Analysis



Nason Creek RM 3.3 to 4.6 Supplemental Alternatives Analysis

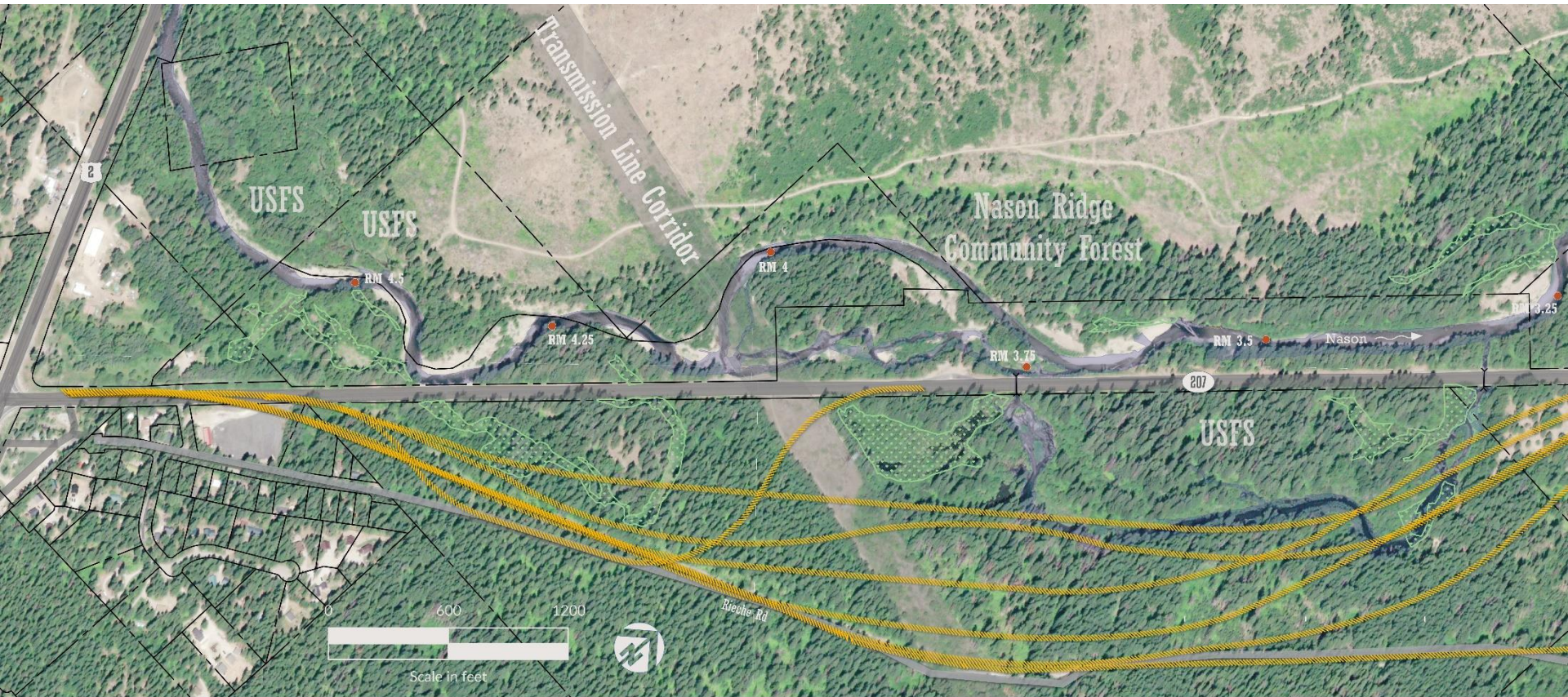
Yakama Nation Fisheries
July 18, 2022

2022 Supplemental Alternatives Analysis Matrix Table

Alternative ID:	Alternative Description	Count of Occurrences	Sum of Occurrences			
			Green	Yellow	Orange	Red
1	Chelan County Road Re-alignment		6	6	5	1
2	Chelan County Road Re-alignment		6	5	7	0
3	Chelan County Road Re-alignment		6	5	7	0
4	Chelan County Road Re-alignment		6	5	7	0
5	Chelan County Road Re-alignment		11	1	5	1
6	Chelan County Road Re-alignment		11	1	3	3
7	Yakama Nation Road Re-alignment		8	9	1	0
8	Chelan County Raised Road Causeway		7	3	8	0
9	Chelan County Floodplain Reconnect (Bridges)		7	3	8	0
10	Chelan County Floodplain Reconnect (Culverts)		8	2	8	0
11	Engineered Large Wood Jams		9	3	4	2
12	No Action		10	0	4	4

Green=exceeds objective/criteria.
Yellow=adequately meets objective/criteria.
Orange=only partially meets objective/criteria.
Red=does not meet objective/criteria, potential fatal flaws.

Proposed Alternatives



— ALIGNMENT ALTERNATIVES

EXISTING WETLAND

— CULVERT

EXISTING WETTED CHANNEL

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Selected Alternative

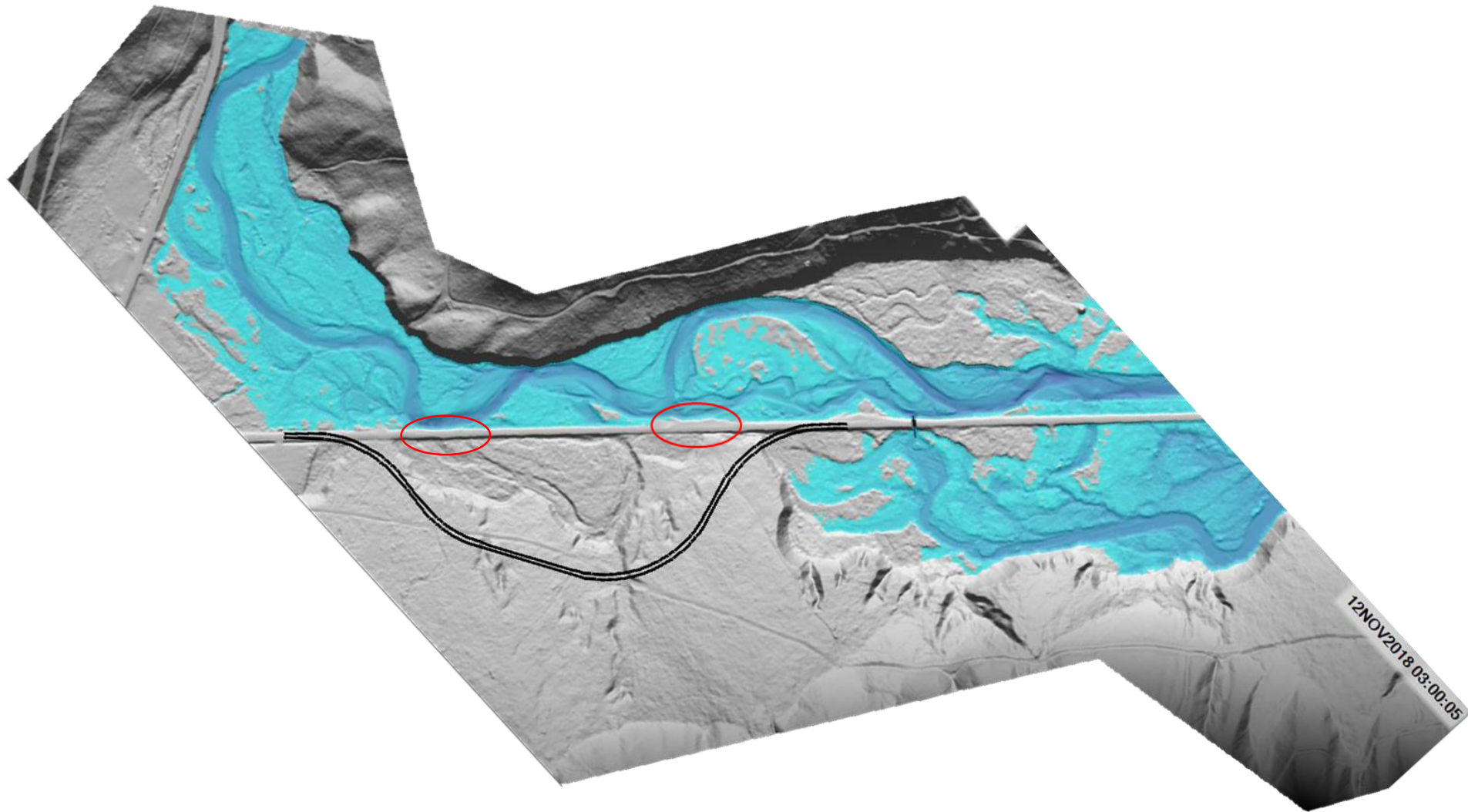


EXISTING WETLAND

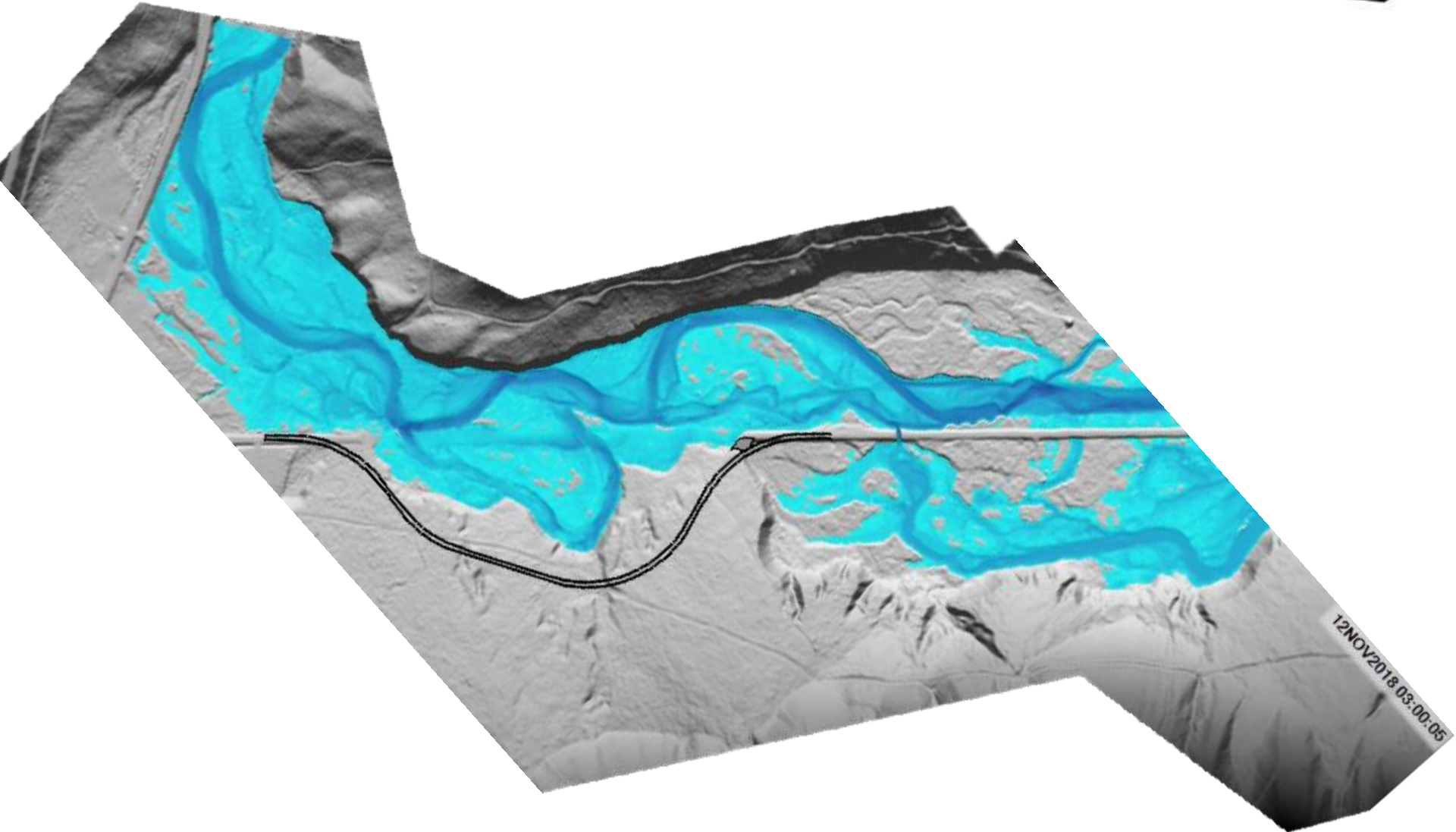
CULVERT

EXISTING WETTED CHANNEL

Existing 100-year inundation



SR 207 ReAlignment Alternative – Proposed 100-year inundation





Nason Creek and State Route 207 (Phase 1)



Road
Removal

Proposed Road
Alignment





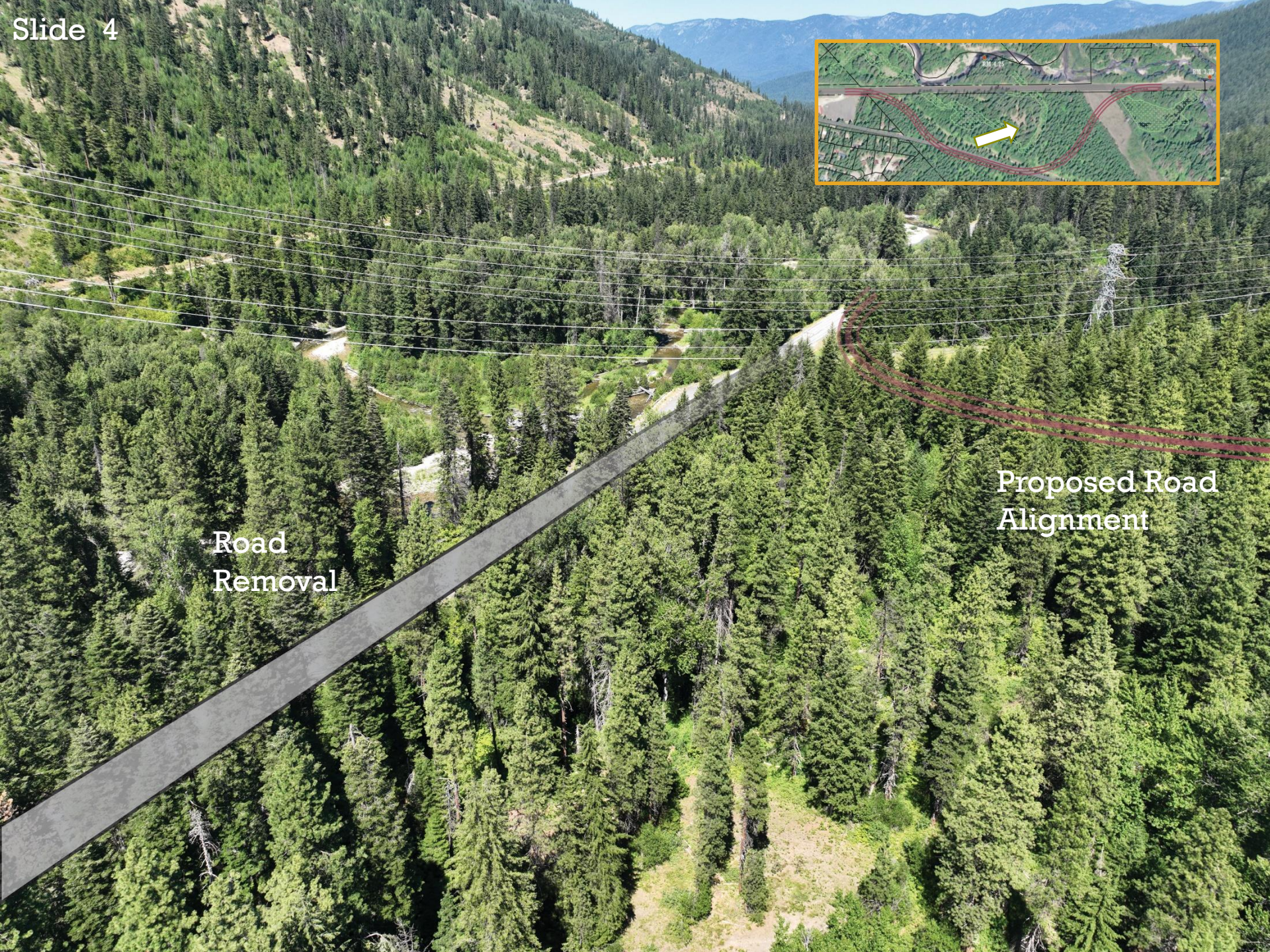
Road
Removal

Proposed Road
Alignment



Proposed Road
Alignment





Slide 4



Road
Removal

Proposed Road
Alignment



Proposed Road Alignment

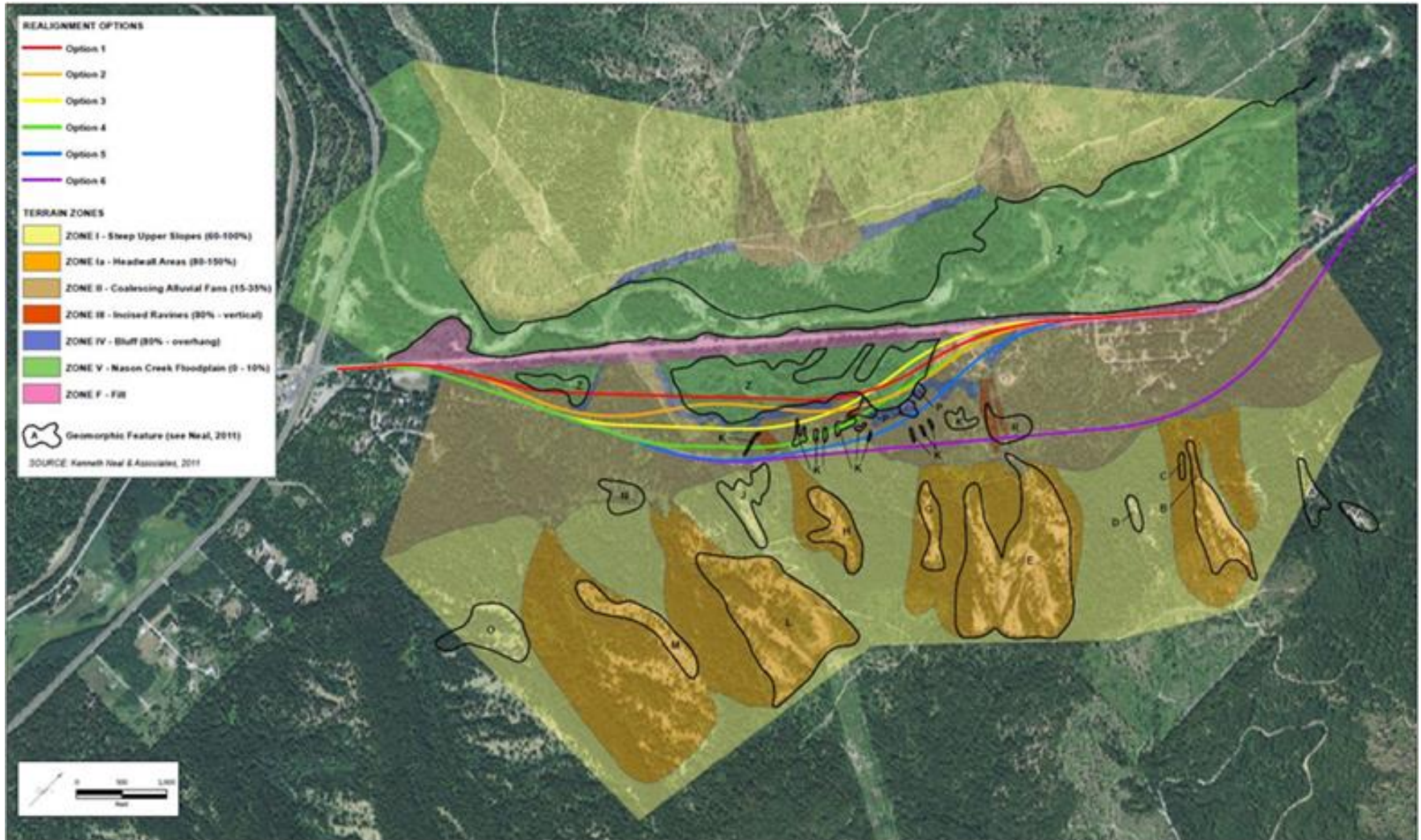
Road Removal



Proposed Road
Alignment

Road
Removal

Recap of SR 207 Realignment Prior Attempt



Preferred Alignment



EXISTING WETLAND

CULVERT

EXISTING WETTED CHANNEL

HONOR. PROTECT. RESTORE.



Current Funding with Large Cap Grant Funding and Tributary Funding

■ Entity & Contribution

- YN & WSDOT 3.8 Million
- Large Cap Grant – 4.8 million
- CWI and CFLRP – 3 million

■ Goal and Objective for Re-Alignment of SR 207

- Goal and Objective for any alignment is not met
- Re-Alignment of SR 207 35 mph and 45 mph– Goal and Objective met.
- Re-Alignment of SR 207 35 to 55 mph – Goal and Objective Met.



A Recap of Events

- 2018 – Initial Survey of Nason Creek between RM 3.2 to 4.6
- 2019 – Habitat Restoration Concept Development
- 2020 – State Route 207 Realignment Alternative Identified
- 2021 – Feasibility Study – Concept Road Realignment
- 2021 – Yakama Nation and Washington State Department of Transportation secured 3.8 million
- 2022 – Supplemental Alternatives Analysis
- 2022 – Application for the Large Cap Grant
- 2022 – Application for United States Forest Service CFLRP and CWI Initiatives



Next Steps & Time Line

- Continue to Solicit for Funding from the different Committees for Design and Construction
- Continue our Discussions of our findings and Continue to Coordinate with our Project Partners, (WSDOT, USFS, and BPA)
- Continue Coordination Efforts with Utilities, Private Landowners, Chelan County, Special Interest Groups, and Overall Public Outreach
- Continue coordination efforts with permitting agencies
- Currently we are working towards permit-level design of SR 207 45 mph Re-Alignment.
- Go to Construction of the SR 207 Realignment option in 2025.

QUESTIONS



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