

WASHINGTON STATE



attle District

Date received:

Agency reference #: _____

AGENCY USE ONLY

Tax Parcel #(s):

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2}

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]

Nason Creek Fill Removal and Oxbow Enhancement

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Mid	ddle)		
Kaputa, Mike			
2b. Organization (If app	licable)		
Chelan County Natural	Resources Department		
2c. Mailing Address (S	treet or PO Box)		
316 Washington Street	t Suite 401		
2d. City, State, Zip			
Wenatchee, WA 98801			
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail
(509) 667-6584	()	()	Mike.Kaputa@co.chelan.wa.us

Additional forms may be required for the following permits:

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ora.wa.gov.

[•] If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.

If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx.

Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county
government to make sure they accept the JARPA.

²To access an online JARPA form with [help] screens, go to <u>http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx</u>.

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [help]

3a. Name (Last, First, Mi	ddle)		
Goodridge, Jennifer			
3b. Organization (If app	blicable)		
Chelan County Natura	I Resources Department		
3c. Mailing Address (S	Street or PO Box)		
316 Washington Stree	t Suite 401		
3d. City, State, Zip			
Wenatchee, WA 9880	1		
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
(509) 667-6682	()	()	Jennifer.goodridge@co.chelan.wa.us

Part 4–Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [help]

Same as applicant. (Skip to Part 5.)

Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

There are multiple upland property owners. Complete the section below and fill out <u>JARPA Attachment A</u> for each additional property owner.

☐ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete <u>JARPA Attachment E</u> to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Mid	dle)		
Rivera, Jeff			
4b. Organization (If appli	cable)		
US Forest Service			
4c. Mailing Address (Str	eet or PO Box)		
600 Sherbourne			
4d. City, State, Zip			
Leavenworth, WA 9882	6		
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail
(509)548-2553	()	()	jrivera02@fs.fed.us

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

There are multiple proj <u>Attachment B</u> for each		· • ·	ojects). Complete the section I	below and use <u>JARPA</u>
5a. Indicate the type of c	wnership c	of the property.	(Check all that apply.) [help]	
 Private Federal Publicly owned (state, or the state) Tribal Department of Natural 			schools, ports, etc.) aged aquatic lands (Complete	JARPA Attachment E)
5b. Street Address (Cann	ot be a PO B	ox. If there is no ad	dress, provide other location informa	ion in 5p.) [<u>help]</u>
Hwy 207 approximately (Corner	0.3 (fill remo	oval) and 0.9 (o	xbow enhancement) miles nor	th of the intersection with Coles
5c. City, State, Zip (If the	project is not	in a city or town, pro	ovide the name of the nearest city or	town.) [<u>help]</u>
Coles Corner, WA				
5d. County [help]				
Chelan County				
5e. Provide the section,	ownship, a	and range for the	e project location. [help]	
¹ ⁄ ₄ Section	Section Township Range			
			•	•
	9		26 North	17 East
	9		-	
47.782556 N latitude / 12		W longitude and	-	17 East
47.782556 N latitude / 12 5g. List the tax parcel nu • The local county asse	20.725919 Model (S) for	r the project loca	26 North 47.7603 N latitude / 120.7359 ation. [help]	17 East
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5i. List all wetlands on or adjacent to the project location. [help]

Floodplain wetland adjacent to the fill removal area

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [help]

Nason Creek

5k. Is any part of the project area within a 100-year floodplain? [help]

Yes No Don't know

51. Briefly describe the vegetation and habitat conditions on the property. [help]

This project proposes to remove fill from the floodplain of Nason Creek and enhance conditions in an oxbow connected to Nason Creek (Sheet 1 and Figure 1; all Engineering Plan Sheets are included in Attachment B and Figures are included in Attachment C). The floodplain fill was placed as part of an historic bridge crossing over Nason Creek. This bridge washed out in the mid-nineties, however, the bridge abutment fill remains on the north side of Nason Creek and the road approach fill remains south of Nason Creek. This section describes the vegetation and habitat conditions at the two work sites.

Vegetation is limited on the north side of Nason Creek in the vicinity of the historic bridge crossing (Figure 6 Photo 1). Vegetation adjacent to the bridge abutment fill consists of Ponderosa pine (*Pinus ponderosa*), Doug fir (*Pseudotsuga menziesii*), alder (*Alnus sp.*), ocean spray (*Holodiscus discolor*), vine maple (*Acer circinatum*), serviceberry (*Amalanchier alnifolia*), snowberry (*Symphoricarpus albus*), and hawthorne (*Crategus douglassii*). There are also black cottonwood (*Populus balsamifera*) trees growing closer to the river.

There is no vegetation growing on top of the road approach fill (Figure 6, Photo 2). Floodplain vegetation growing adjacent to the road approach fill is dominated by a black cottonwood (*Populus balsamifera*) overstory with red osier dogwood (*Cornus sericea*), rose (*Rosa spp.*), hardhack (*Spirea douglassii*), and reed canarygrass (*Phalaris arundinaceae*) understory. There are upland species growing between the road approach fill and SR 207 including Ponderosa pine (*Pinus ponderosa*), ocean spray (*Holodiscus discolor*), vine maple (*Acer circinatum*), serviceberry (*Amalanchier alnifolia*), and Oregon grape (*Berberis sp.*).

Figure 7 (Photos 3 and 4) depicts high and low water conditions in the oxbow. Dominant species growing adjacent to the oxbow include willow (*Salix spp.*), red osier dogwood (*Cornus sericea*), and upland forested species such as Ponderosa pine (*Pinus ponderosa*) and Doug fir (*Pseudotsuga menziesii*). Cattail (*Typha latifolia*) and pond lilly (*Nuphar polysepalum*) are also growing in the inundated areas.

5m. Describe how the property is currently used. [help]

The state land use description is designated forest land for both parcels. The Chelan County Comprehensive Plan zoning includes commercial forest land and rural residential (10 acre minimum) zoning overlays. The fill removal actions will occur on public (USFS) and private forest land. The oxbow enhancements will occur on USFS land. There will be some traffic control and staging within the right-of-way for SR 207 which WSDOT currently operates on a Special Use Permit with USFS.

5n. Describe how the adjacent properties are currently used. [help]

Land use consists of public and commercial forest land and includes a right-of-way for SR 207.

50. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]

There are no structures in the vicinity of the proposed work. SR 207 is near the work areas.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]

From Hwy 2, turn north on SR 207 near the intersection with Coles Corner. The floodplain fill removal site is

approximately 0.3 mile north of the intersection of Hwy 2 and SR 207 on the west side of SR 207. The project location is depicted on Sheet 1 of the project plans (Plan Sheets are included as Attachment B).

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]

This project proposes the following actions (Figure 2 and Plan Sheet 2):

- 1. Bridge Abutment Fill Removal (Nason Creek RM 4.7): This action removes 1,325 cubic yards (0.14 acre) of fill associated with a relic abutment of a historical bridge. This action will restore channel migration potential on river left.
- 2. Road Approach Floodplain Fill Removal (Nason Creek RM 4.6): This action removes 0.61 acre (1,825 cy) of fill from the Nason Creek floodplain and restores floodplain wetland conditions.
- 3. Oxbow Enhancement (Nason Creek RM 3.9): This action adds 28 pieces of large wood and willow plantings to enhance side channel habitat.

6b. Describe the purpose of the project and why you want or need to perform it. [help]

In the Wenatchee watershed, Nason Creek has been identified as the top priority for habitat restoration actions. In Nason Creek, the largest impact on fish has been from human activities occurring outside of the main channel. The construction of roads, highways, and railroads has resulted in the reduction in natural habitatforming processes, the disconnection of off-channel habitats and floodplains, and an increase in instream sedimentation. Specifically, the construction of highways and roads with elevated embankments has disconnected about 29% (132.7 acres of 100-year floodplain) of historical channel paths and floodplain area in Lower Nason Creek. Nason Creek has a high potential to increase salmonid abundance and productivity; therefore, the restoration of ecosystem function through the reconnection of off-channel habitats and floodplain is a high priority.

Nason Creek is a major spawning area for spring Chinook and steelhead and a bull trout foraging, migration and over-wintering habitat. The purpose of the project is to improve floodplain function and enhance off-channel habitats for rearing and refuge for juvenile spring Chinook and steelhead during the high-flow season in Nason Creek. The project would restore floodplain function by removing floodplain fill associated with a parking area and a relict bridge abutment, while improving habitat complexity in peripheral habitats through the oxbow enhancements. Floodplain reconnection provides peripheral and transitional habitats, which is the highest priority ecological concern to be addressed in Nason Creek as outlined in the Biological Strategy prepared by the Upper Columbia Regional Technical Team (2013).

The following text describes the specific habitat functions gained by each of the project elements:

- 1. Bridge Abutment Fill Removal (Nason Creek RM 4.7): This action removes 1,325 cubic yards (0.14 acre) of fill associated with a relic abutment of an historical bridge. This action restores channel migration potential and natural stream channel processes. Removing the bridge abutment fill will enhance activation of a nearby side channel, restore the confluence of a tributary just upstream of the abutment fill, and allow greater river migration to river left.
- 2. Road Approach Floodplain Fill removal (Nason Creek RM 4.6): This action removes 0.61 acre (1,825 cy) of fill in the Nason Creek floodplain and restores floodplain wetland conditions. The fill is surrounded by wetland and a small intermittent creek that runs north along SR 207 and then around the existing fill before flowing into Nason Creek. Hydraulic modeling conducted by ICF indicates that once the fill is removed the area would be inundated at approximately the 5-year event and higher. Thus, most of the time, this area would function primarily as a stream and wetland complex. However, during high flows (5-year event and higher) this fill removal provides increased flood prone area and increased flood-storage capacity. In addition, the stream channel through this area would provide high-flow refuge habitat for spring Chinook and steelhead when it is backwatered by Nason Creek.
- 3. Oxbow Enhancement (Nason Creek RM 3.9): The oxbow was hydrologically reconnected by the CCNRD via the installation of two 12-foot- diameter culverts along SR 207 in 2007. When this feature was hydrologically reconnected to Nason Creek in 2007, there was a decision made to make the connection and see what happens without additional habitat enhancement work in the existing oxbow. Since 2007, monitoring efforts have shown that the oxbow is used by juvenile and adult salmonids as off-channel refuge, rearing, and spawning habitat. Given the abundant juvenile fish use, the proposed actions will improve habitat in the upstream area of the oxbow where wide, shallow habitats that lack cover have persisted since the 2007 reconnection. The installation of large wood, brush bundles, and

make some wide sha structures will create structure at the water	Illow areas narrower and dee slightly higher areas on the o	e and potentially alter sedime eper. Sediment deposition ac edges that can be planted to exity and overhanging vegeta	ljacent to the large wood increase vegetation
6c. Indicate the project cate	gory. (Check all that apply) [help]		
	Residential Institution Environmental Enhancement		Recreational
6d. Indicate the major element	ents of your project. (Check all	that apply) [help]	
 Aquaculture Bank Stabilization Boat House Boat Launch Boat Lift Bridge Bulkhead Buoy Channel Modification 	 Culvert Dam / Weir Dike / Levee / Jetty Ditch Dock / Pier Dredging Fence Ferry Terminal Fishway 	 Float Floating Home Geotechnical Survey Land Clearing Marina / Moorage Mining Outfall Structure Piling/Dolphin Raft 	 Retaining Wall (upland) Road Scientific Measurement Device Stairs Stormwater facility Swimming Pool Utility Line
Other: Floodplain fill removal and h	abitat enhancement		

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

Sheets 1 and 2 of the engineering plans depict the locations of the proposed actions. Sheets 4-6 depict the location of site access and staging areas. This section describes construction methods and equipment for each of the three project elements.

1. Bridge Abutment Fill Removal (Nason Creek RM 4.7):

This action proposes to remove a former bridge abutment that forms a hard point on river left at RM 4.7. Sheets 10-12 depict the proposed excavation and disposal grades in plan and cross section view. Removing the 1,325 cubic yards (0.14 acre) of bridge abutment fill would be accessed from the north side of Nason Creek through Longview Timber property on USFS Butcher Creek road # 6910.

CCNRD staff will remove fish from the work area following NOAA de-watering protocols as outlined in the Habitat Improvement Project Biological Opinion. The work area would be isolated from the mainstem flows in Nason Creek by coffer dams. The exact locations of cofferdams and pumps (the need for pumping would be determined by the contractor) would be determined at the time of construction. Generally they would be as near the limits of earthwork as the contractor determines is appropriate.

Once the work area is isolated, excavation will commence using a backhoe or excavator. The abutment removal is expected to take 1 day of in-water work and approximately 4 days total. Fill material will be removed using an excavator. The equipment would work from the bank and in the dry. Fill material will be disposed of on site within the footprint of the historical roadbed. This area is well above the 100-year floodplain and outside of the channel migration zone. The 1,700 square feet of disturbed slopes will be restored with staked erosion control fabric, seeding, and planting native riparian trees and shrubs. Following grading this area would be seeded and planted with native shrubs similar to the adjacent floodplain area. Sheet 17 in the plan set includes

a planting plan to restore this area. Approximately 1,235 native trees and shrub will be installed in this 0.49 acre area which is a planting density of ~4.5 foot on center. Near the base of the fill removal slope, a brush mattress and sedge mat will be installed to provide quick cover and erosion control. The slopes will be seeded with native species specified on Sheet 19.

2. Road Approach Floodplain Fill Removal (Nason Creek RM 4.6):

This action will remove 1,825 cubic yards (0.61 acre) of fill that constituted the former bridge approach. The grading plan for excavation is depicted in plan and section view on Sheets 8-9. This fill material is located in a floodplain wetland adjacent to Nason Creek near RM 4.6. Currently this fill area is accessible from a driveway off of SR 207. The excavation would remove 2 to 3 feet of fill to match the adjacent floodplain wetland elevations and support hydrophytic vegetation. The small tributary stream channel would be reestablished through the fill removal area. At the south side of the fill the channel would be routed north through the restoration area and then reconnect with its current channel at the north side of the fill prior to the confluence with Nason Creek. The proposed channel dimensions are based on the existing channel dimensions, which would average 2 feet deep and 10 feet in top width with a v-shaped bottom. Staging for the fill removal will be near the existing entrance to the site. Fill material will be removed using a tracked excavator. Fill material removed will be hauled off-site and disposed off-site in an approved upland location. A small ditch and berm will be constructed at the entrance to block vehicle re-entry once the fill material has been removed (see detail on sheet 9). Once the fill has been removed, remaining soils will be ripped 6-12" deep to reduce soil compaction. This deep scarification will increase the soil pore space and improve soil structure for vegetation establishment and water infiltration. Construction specifications will include that the top 12" (topsoil) must consist of 50% solids and 50% pore space. Following grading, this area would be seeded and planted with native shrubs similar to the adjacent floodplain area. The planting plan is depicted on Sheet 16 with three communities that correspond to the sites wet, mesic, and drier elevations. A total of 1540 trees and shrubs plus 260 carex plugs will be installed in 0.61 acres which is a density of approximately 4' on center.

3. Oxbow Enhancement (Nason Creek RM 3.9):

This action adds 28 pieces of large wood and willow plantings to enhance side channel habitat. The large wood will be staged off site and flown in by helicopter to minimize site disturbance. All wood, brush bundles, and vegetation would be placed by hand with a WCC work crew. CCNRD does not anticipate the need for earth-moving equipment or any vegetation clearing to complete the oxbow enhancements.

There are four specific areas of enhancement (Sheet 13).

- Area 1. Place seven logs with rootwads ranging in size from 12 inches to 16 inches diameter at breast height (DBH) and 20 to 30 feet in length on an existing gravel bar. The intent of this structure is to induce scour and deposition and improve flow depth/pool formation, while protecting existing willow and cottonwood saplings.
- Area 2. Place four logs with rootwads 12 inches DBH and 20 feet long on an existing gravel bar in the flow shadow of the Area 1 structure. The intent of this structure is to induce scour and deposition and improve flow depth/pool formation, while protecting willow plantings. This area would also include the addition of slash and one willow fascine.
- Area 3. Place nine logs with rootwads approximately 12-16 inches DBH and 15-30 feet long on the existing gravel bar. The rootwads would be facing flows to induce scour and pool formation. Willow fascines would be added as well.
- Area 4. Place eight treetops with branches 16 inches DBH and 30 feet in length around the perimeter of the open water habitat. This action would provide cover along the margins of the oxbow habitat for juvenile salmonids. A row of willow stakes would be planted (3 feet on center for a total of 60 willow stakes) around the perimeter of the area. Six to eight willow fascines (brush bundles) would also be installed around the wood.

The off-site staging areas for logs and helicopter landing is depicted on Sheet 6. Traffic control will be required when the helicopter flies over SR 207 to deliver the wood.

In total, the project will involve fill removal and placement of large wood within the 100 year floodplain. The project will result in a net cut of so it is not anticipated to raise the 100 year flood stage.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [help]

If the project will be constructed in phases or stages, use <u>JARPA Attachment D</u> to list the start and end dates of each phase or stage.

End date: November 15, 2014

In-water work start date: July 15, 2014

In-water work end date: August 15, 2014

See JARPA Attachment D for the construction sequence

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

\$150,000

6h. Will any portion of the project receive federal funding? [help]

• If yes, list each agency providing funds.

🛛 Yes	🗌 No	🗌 Don't know
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Project design and construction have been funded by the Washington State Department of Recreation and Conservation Salmon Recovery Funding Board, however, a portion of these funds are federal dollars from the Pacific Coastal Salmon Recovery Fund.

Part 7–Wetlands: Impacts and Mitigation

Check here if there are wetlands or wetland buffers on or adjacent to the project area. (If there are none, skip to Part 8.) [help]

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

Not applicable

The project has been designed to avoid and minimize wetland impacts. The bridge approach fill removal is located at the edges of a floodplain wetland. Excavation will match adjacent grades in the floodplain fill removal area. However, grading and clearing will be limited to the minimal amount needed at the edges to remove the floodplain wetland fill. Grading limits and work areas will be staked or flagged in the field so that earthwork and clearing does not occur outside of the designated footprint. Excavator access into the work area will be from the existing cleared fill area. Trees over 6" DBH will not be removed for construction access, staging, or fill removal. There will be some shrubby species at the edge of the wetland that are cut to facilitate equipment access to the edge of the fill removal area. Cut plant material will remain on site and be used as groundcover during revegetation. Any vegetation removed in access areas will be restored following temporary disturbance.

7b. Will the project impact wetlands? [help]

🗌 Yes 🛛 No 🗌 Don't know

Excavation will occur up to the wetland edge, some vegetation at the edges of the wetland may need to be cut.

7c. Will the project impact wetland buffers? [help]

Yes No Don't know

There will be excavation up to the edge of the wetland, however, the existing "buffer" consists of a filled parking lot; see Photo1.

7d. Has a wetland delineation report been prepared? [help]

• If Yes, submit the report, including data sheets, with the JARPA package.

🗌 Yes 🛛 No

There is wetland up to the edge of the parking lot fill area, however, since earthwork will not extend into

wetland areas. a	a wetland delinea	tion report has n	ot been prepa	ared.		
		•				
7e. Have the wetlan System? [help]	ds been rated us	ing the Western	Washington o	or Eastern Wa	shington Wetla	ind Rating
	ne wetland rating form	ns and figures with t	he JARPA pack	ade		
		Ç		490.		
			- 1 - 6			
7f. Have you prepa	0 1	•		iverse impacts	to wetlands?	[help]
	ne plan with the JARF plicable, explain bel		-	be required		
			pian should not	be lequiled.		
	o 🛛 🖂 Not appli	cable				
7g. Summarize wha used to design	• ·	lan is meant to a	iccomplish, ar	nd describe ho	ow a watershed	l approach was
N/A						
	elow to list the typ type and amount u can state (below	of mitigation pro	oposed. Or if	you are submi	tting a mitigatio	
Activity (fill,	Wetland	Wetland	Impact	Duration	Proposed	Wetland
drain, excavate, flood, etc.)	Name ¹	type and rating	area (sq. ft. or	of impact ³	mitigation type⁴	mitigation area (sq. ft. or
		category ²	Acres)		-960	acres)
7i. For all filling activ					•	amount in cubic
yards that will be		ind where it will I	be placed into	the wetland.	[help]	
Wetland fill is not pro	•					
7j. For all excavating cubic yards you					ype and amou	nt of material in
Excavation will not e	xtend into wetlan	d areas.				

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]	
Not applicable	

The following construction methods for wood placement in the oxbow have been designed to avoid and minimize impacts to the oxbow waterway areas:

- Wood will be flown in by helicopter so that heavy equipment will not be used to deliver or place the logs. This will avoid earthwork and vegetation impacts in this sensitive area.
- Wood will be placed by hand to avoid earthwork and soil disturbance. This will reduce the footprint of the work area and minimize turbidity released downstream during construction.
- Wood will be anchored using other pieces of wood to avoid earthwork and there will be no ferrous material for anchoring.

Temporary erosion and sediment control consists of implementing standard erosion control best management practices (BMPs) and minimizing the input of sediment into Nason Creek. Standard BMPs for the site include the installation of silt fencing at the edge of the clearing limits for the project, vehicle fueling and maintenance

performed at approved locations a distance away from the creek, covering of excavated material with straw mulch, and hydroseeding with native grass seed mix.

Below is a listing of conservation measures that follow typical BMPs.

- Construction impacts will be confined to the minimum area necessary to complete the project and boundaries of clearing limits associated with site access and construction will be marked to avoid or minimize disturbance of riparian vegetation, wetlands, and other sensitive sites.
- The following actions will be completed before significant alteration of the project area.
 - flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands, and other sensitive sites beyond the flagged boundary; and
 - ensure that a supply of sediment control materials are on site (e.g., silt fence, straw bales) and an oilabsorbing floating boom is available whenever surface water is present.
- Project operations will cease under high-flow conditions that may inundate the project area, except for efforts to avoid or minimize resource damage.
- Work below the ordinary high water mark (OHWM) of the Nason Creek will be completed during an approved extension to the in-water work window (July 15 through August 15).
- Spill prevention and cleanup kits will be on site when heavy equipment is operating within 25 feet of the water.
- All pumps used for dewatering will have screened intakes according to WDFW specifications and juvenile fish screening criteria. All sediment-laden water will be contained within a WDFW-approved or required gravel cofferdam or berm system. Floodplain areas will be isolated from Nason Creek, or will be routed or pumped to other floodplain areas, to a small settling basin, bioswale, non-stream connecting ditch or channel, uplands area, or other WDFW-approved detention or filtering system, and temporarily detained or filtered so as to allow the removal of fine sediments or other contaminants prior to being allowed to reenter Nason Creek.
- Near the bridge abutment fill removal, temporary impoundment structures, commonly referred to as
 cofferdams, will be placed between the extents of grading and the river to keep water and fish from
 entering the active construction area. The cofferdam will consist of woven polyethylene gravel bags with
 a polyfilm sheet wrapped around them to minimize conveyance of water between the work site and the
 active flow in the river.
- No mechanized equipment will enter or operate within the wetted perimeter of Nason Creek.
- All of the trees placed in the oxbow will be clean of mud, dirt, and other material that could temporarily degrade water quality in the project area. If materials are required to be cleaned on site, it will be done in such a manner that run-off does not enter wetlands or waterways.
- Clearing limits for the fill removal areas will be marked with flagging to limit disturbance to adjacent vegetated areas.
- Native vegetation disturbed during site preparation will be saved on site for site restoration.
- Earthwork (including excavation, filling, and compacting of the bridge abutment area) will be completed as quickly as possible.
- Construction equipment will be limited to the practical minimum access and construction footprint required.
- A Pollution and Erosion Control Plan will be prepared and implemented to prevent pollution caused by survey, construction, operation, and maintenance activities. The plan will be available for inspection upon request by the National Marine Fisheries Service (NMFS) and contain the following elements:

- the name and address of the party or parties responsible for accomplishment of the Pollution and Erosion Control Plan;
- practices to prevent erosion and sedimentation associated with access roads, construction sites, haul roads, equipment and material storage sites, fueling operations and staging areas;
- practices to confine, remove, and dispose of excess materials, including measures for washout facilities;
- a description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring;
- a spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment; and
- practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.
- All temporary erosion controls will be in place and appropriately installed downslope of project activity within the riparian buffer area until site rehabilitation is complete.
- A hazardous material spill kit will be located on site.
- The contractor will designate at least one employee as the Erosion and Spill Control Lead (ESCL). The ESCL will be responsible for installing and monitoring erosion control measures and maintaining spill containment and control equipment. The ESCL will also be responsible for ensuring compliance with all local, state, and federal erosion and sediment control requirements. Moreover, the ESCL will be responsible for inspecting all temporary erosion and sediment control measures on a regular basis, as well as maintaining and repairing such measures and ensuring their continued performance.
- Dewatering may be performed to maintain drier conditions in the areas of excavation. Dewatering is not a required part of the project but will be an allowable item performed if determined necessary by the contractor. Water pumped from excavations as part of dewatering will be discharged in upland areas, a minimum of 100 feet away from wetlands or the main Nason Creek channel. Discharge areas for dewatering will be selected to encourage infiltration of the discharge into the ground and/or to sheet flow through upland vegetation which will filter sediments out of the flow.
- Turbidity (water clarity) will be measured and recorded (in NTU's) using a turbidimeter during in-water work. The turbidimeter will be calibrated once a week and samples will be taken at least twice a day. Samples will be collected 100' upstream and 300' downstream of each work area to document that any sediment released from the site does not increase stream turbidity levels. Readings will be consistent with the following DOE water quality standards:

During salmon spawning, rearing and migration (August 1 – August 10) turbidity shall not exceed:

- 5 NTU over background when the background is 50 NTU or less; or
- A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

During salmon rearing and migration (July 15 – July 31) turbidity shall not exceed:

- 10 NTU over background when the background is 50 NTU or less; or
- A 20 percent increase in turbidity when the background turbidity is more than 50 NTU.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

Yes INO There will be earthwork below the OHW of Nason Creek

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

• If Yes, submit the	he plan with the JARI	PA package and a	inswer 8d.		
 If No, or Not ap 	oplicable, explain bel	low why a mitigati	on plan should not	be required.	
🗌 Yes 🗌 No	o 🛛 Not applic	able			
				ary construction impacts a adjacent floodplain wetlanc	
8d. Summarize what to design the p	v .	lan is meant to	accomplish. D	escribe how a watershed	approach was used
 If you already compared 	ompleted 7g you do r	not need to restate	e your answer here	e. [<u>help]</u>	
N/A					
8e. Summarize impa	act(s) to each wa	terbody in the	table below. [<u>h</u>	elp]	
Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Excavation	Nason Creek	RM 4.65	Permanent	3 cubic yards	160 square feet
8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]					
the oxbow. Bridge Abutment Fill	or rocks) will not <u>I Removal:</u> ill resulting from a	abutment fill ex	cavation will be	here will be 28 pieces of la e isolated from Nason Crea e work area.	
				be the method for excavati naterial will be disposed. [t	
location of the bridge total fill removed is 1	e abutment fill rer 1325 cubic yards,	noval is depict however, the	ed on Plan She volume located	nd silt will be removed fron eets 10-12. Excavation de below OHW elevation is a cut for the bridge approach	pths vary and the approximately 3

Part 9–Additional Information

9a. If you have already wo	rked with any government a	gencies on this project, li	st them below. [help]
Agency Name	Contact Name	Phone	Most Recent Date of Contact
Washington Dept. of Fish and Wildlife	Gina McCoy	(509) 996-8248	Feb. 18 email re. scheduling a March 10-20 site visit
Washington Dept. of Fish and Wildlife	Amanda Barg	(509) 888-8004	Feb. 18 email re. scheduling a March 10-20 site visit
US Army Corps of Engineers	Tim Erkel	(206) 316-3166	2-6-14 email re. setting up a site visit in mid-March
USFS Resource Specialists: Cindy Raekes and Richard Vacirca, Fisheries Matt Karrer, Hydrology Don Youkey, Wildlife Lindsey Smith, Cultural Resources	Mick Mueller, NEPA Interdisciplinary Team Lead	(509) 548-2550	December 4, 2013 meeting

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]
• If Yes, list the parameter(s) below.
 If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at:
http://www.ecy.wa.gov/programs/wq/303d/_
Nason Creek is on the 303d list for Temperature
9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]
Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC. Lower Nason Creek (White Pine to the mouth) HUC #170200110602
 9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help] Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #.
WRIA 45
9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]
 Go to <u>http://www.ecy.wa.gov/programs/wq/swqs/criteria.html</u> for the standards.
Yes No Not applicable
9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline
environment designation? [help]
 If you don't know, contact the local planning department. For more information, go to: <u>http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html</u>.
□ Rural □ Urban □ Natural □ Aquatic ⊠ Conservancy □ Other
9a What is the Washington Department of Natural Resources Water Type? [help]
 9g. What is the Washington Department of Natural Resources Water Type? [help] Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest
Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest
Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System. Shoreline Fish Non-Fish Perennial Non-Fish Seasonal 9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater
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 Go to <u>http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx</u> for the Forest Practices Water Typing System. Shoreline Fish Non-Fish Perennial Non-Fish Seasonal 9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help] If No, provide the name of the manual your project is designed to meet. Yes No 9i. Does the project site have known contaminated sediment? [help] If Yes, please describe below.
Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System. Shoreline Fish Non-Fish Perennial Non-Fish Seasonal Ph. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help] If No, provide the name of the manual your project is designed to meet. Yes No Pi. Does the project site have known contaminated sediment? [help] If Yes, please describe below. Yes No
Go to <u>http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx</u> for the Forest Practices Water Typing System. Shoreline Fish
Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System. Shoreline Fish Non-Fish Perennial Non-Fish Seasonal Ph. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help] • If No, provide the name of the manual your project is designed to meet. Yes No Sinces the project site have known contaminated sediment? [help] • If Yes, please describe below. Yes No Sinces the property was used for in the past, describe below. [help] The site has always consisted of floodplain wetlands, mainstem, and riparian areas of Nason Creek. Sk. Has a cultural resource (archaeological) survey been performed on the project area? [help] • If Yes, attach it to your JARPA package.
Go to <u>http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx</u> for the Forest Practices Water Typing System. Shoreline Fish

91. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

The project area contains the following species listed under the federal Endangered Species Act:

- Upper Columbia River Spring Chinook (*Oncorhynchus tshawytscha*) (Endangered)
- Upper Columbia River steelhead (*Oncorhynchus mykiss*) (Threatened)
- Bull trout (Salvelinus confluentus) (Threatened)

This reach of the Nason Creek supports steelhead and Chinook habitat for migration, adult holding, spawning and rearing. Figure 3 depicts the periodicity of fish use and 50% exceedance flows in Nason Creek. Steelhead and spring Chinook spawning location maps are included as Figures 4 and 5.

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

In addition to the species listed above, the following Priority Species are present near the site:

- Mule deer (*Odocoileus hemionus hemionus*) breeding occurrence and breeding area
- Rainbow trout (Oncorhynchus mykiss) occurrence/migration
- Northern spotted owl (Strix occidentalis)
- Westslope cutthroat (Oncorhyncus clarki lewisi) occurrence/migration
- Osprey (*Pandion haliaetus*)

The WDFW PHS web site is the source for the information listed above.

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.ecy.wa.gov/opas/.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or <u>help@ora.wa.gov</u>.
- For a list of addresses to send your JARPA to, click on <u>agency addresses for completed JARPA</u>.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]
 For more information about SEPA, go to <u>www.ecy.wa.gov/programs/sea/sepa/e-review.html</u>.
A copy of the SEPA determination or letter of exemption is included with this application.
A SEPA determination is pending with Chelan County (lead agency). The expected decision date is TBD
I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]
This project is exempt (choose type of exemption below).
Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?
Other:
SEPA is pre-empted by federal law.
10b. Indicate the permits you are applying for. (Check all that apply.) [help]
Local Government Shoreline permits:
Substantial Development Conditional Use Variance
X Shoreline Exemption Type (explain): Fish Habitat Enhancement per WAC 173-27-040 (o)(i)(C)
Other City/County permits:
Floodplain Development Permit Critical Areas Ordinance
STATE GOVERNMENT
Washington Department of Fish and Wildlife:
Hydraulic Project Approval (HPA)
Effective July 10, 2012, you must submit a check for \$150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. <u>Do not send cash.</u>
Check the appropriate boxes:
Signal State Attach check enclosed. Check # Attach check made payable to Washington Department of Fish and Wildlife.

My project is exempt from the application fee. (Check appropriate exemption)

Charge to billing account under agreement with WDFW. Agreement #____

HPA processing is conducted by applicant-funded WDFW staff.

Agreement #_____ Mineral prospecting and mining.

Project occurs on farm and agricultural land.

(Attach a copy of current land use classification recorded with the county auditor, or other proof of current land use.)

Project is a modification of an existing HPA originally applied for, prior to July 10, 2012. HPA #
Washington Department of Natural Resources:
Aquatic Use Authorization Complete <u>JARPA Attachment E</u> and submit a check for \$25 payable to the Washington Department of Natural Resources. <u>Do not send cash.</u>
Nason Creek has not been deemed jurisdictional per DNR to date.
Washington Department of Ecology:
Section 401 Water Quality Certification
This project will most likely qualify for a Nationwide Permit 27 for stream habitat restoration and the DOE water quality certification will most likely be covered under a statewide programmatic agreement between DOE and US Army Corps of Engineers.
FEDERAL GOVERNMENT
United States Department of the Army permits (U.S. Army Corps of Engineers):
Section 404 (discharges into waters of the U.S.)
United States Coast Guard permits:

JARPA Revision 2012.2

Part 11–Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [help]

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. __________(initial)

Applicant Printed Name

Applicant Signature

Date

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent Printed Name

Authorized Agent Signature

Date

11c. Property Owner Signature (if not applicant) [help] Not required if project is on existing rights-of-way or easements.

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner Printed Name

Property Owner Signature

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ENV-019-09 rev. 08/2013

Nason Creek Fill Removal and Oxbow Enhancements

- List of Attachments
- Attachment A: Additional Landowner Signature Page
- Attachment B: Engineering Design Plan Sheets
- Attachment C: Figures
- Attachment D: Construction Sequence

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WASHINGTON STATE of	S Army Corps Engineers ®	AGENCY USE ONLY Date received:
Joint Aquatic Resources Permit Application (JARPA) [help]		Agency reference #: Tax Parcel #(s):
Attachment A: For additional property owner(s)	help]	TO BE COMPLETED BY APPLICANT [help]
		Project Name:

Use this attachment <u>only</u> if you have more than one property owner. Complete <u>one</u> attachment for <u>each</u> additional property owner impacted by the project.

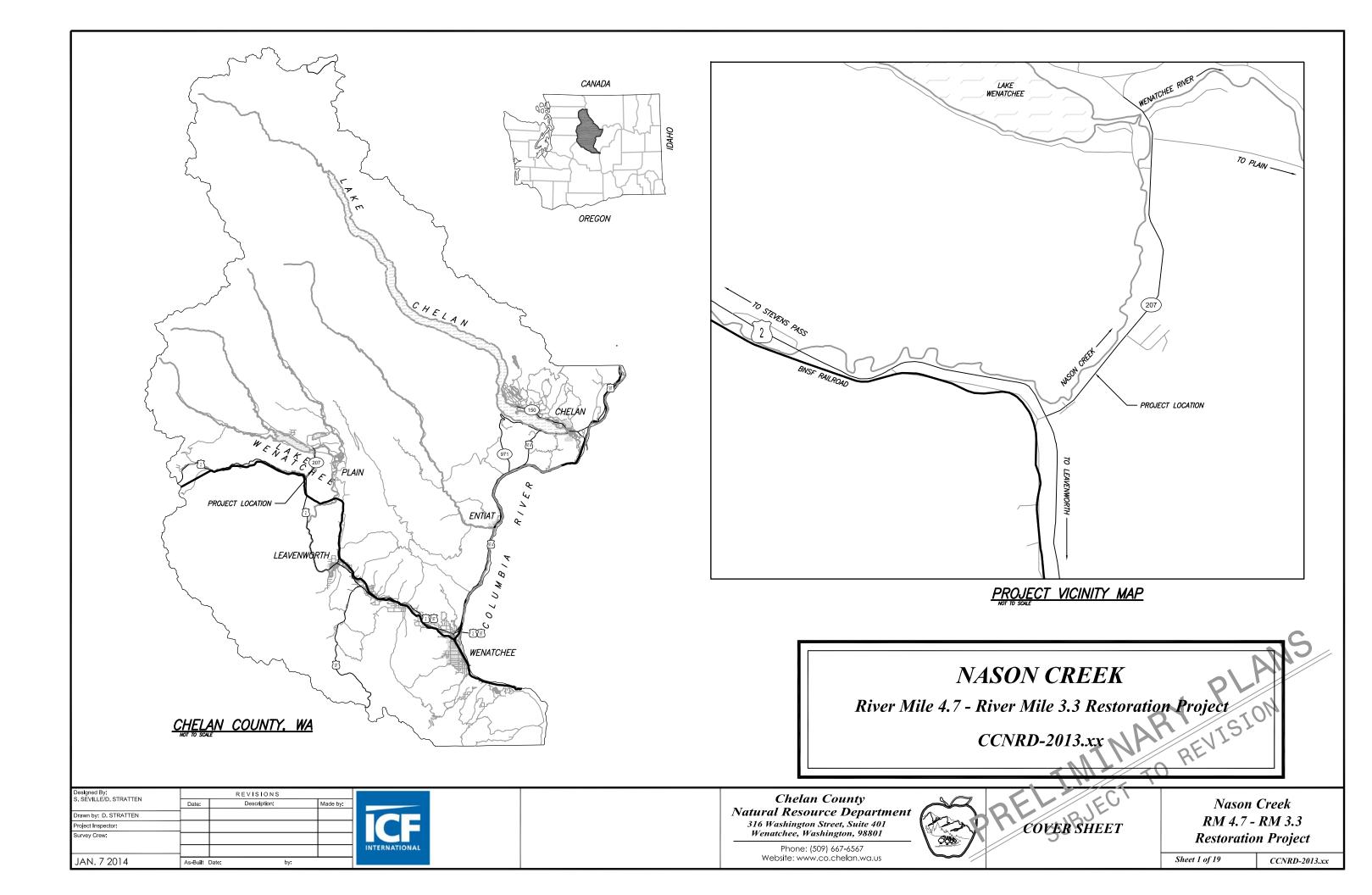
Signatures of property owners are not needed for repair or maintenance activities on existing rights-of-way or easements.

Use black or blue ink to enter answers in white spaces below.

1. Name (Last, First, Middle) and Organization (if applicable)						
Weyerhauser Company, Attn: Wes Worden						
2. Mailing Address (Stre	eet or PO Box)					
PO Box 9777						
3. City, State, Zip						
Federal Way, WA 98063-9	9777					
4. Phone (1)	5. Phone (2)	6. Fax	7. E-mail			
(360) 355-0386	()	()				
Address or tax parcel n	umber of property you c	wn:				
Township 26 North Ra	ange 17 East Section	9 Tax lot 310050				
Signature of Property Owner						
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.						
Printed Name	Printed Name Signature					

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ENV-020-09 rev. 08/2013

Attachment B: Engineering Design Plan Sheets

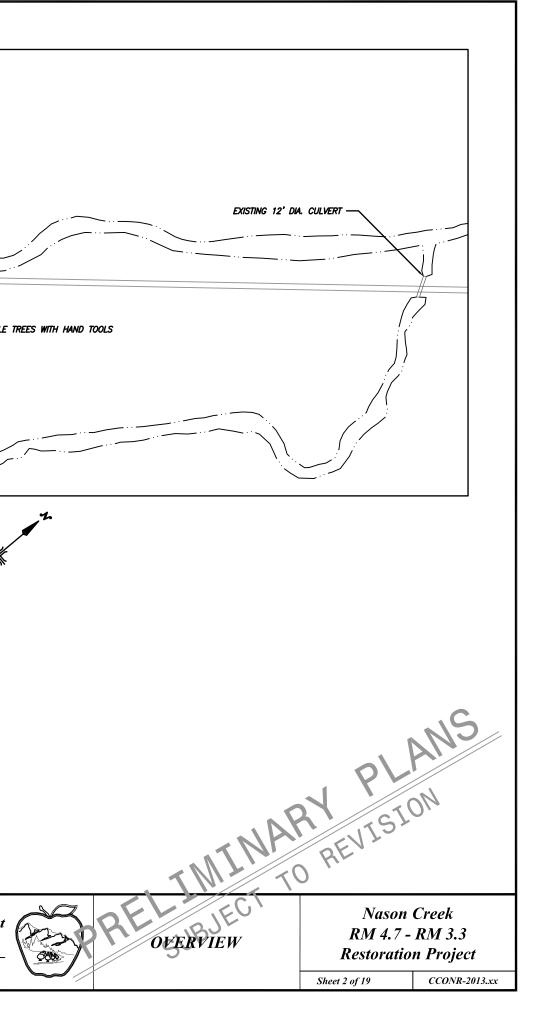


	PRIVATE LOGGING RD PLACE REMOVED ABUTMENT REMOVE ABUTMENT FILL	T FILL	
Ling .	aux (EXISTING 12' DIA. CULVERT	
	BARRIER BERM REROUTE EXISTING STREAM CHANNEL AND REMOVE PARKING LOT	CONSTRUCT HABITAT STRUCTURES WITH HAND TOOLS PLACE WHOLE TREES WITH	1 HAND
		BPA TRANSMISSION LINE	
	SHEET INDEX	200 1 9 200 400 600 SCALE OF FEET	
	SHEET # SHEET TITLE 1 COVER SHEET		
	2 OVERVIEW 3 GENERAL NOTES AND QUANTITIES		
	4 SITE ACCESS 5 GRADING STAGING AND SITE PREP		
	6 HABITAT STRUCTURE STAGING AND SITE PR	REP	
	7 GRADING OVERVIEW 8 PARKING LOT REMOVAL PLAN		
	9 PARKING LOT REMOVAL PLAN 9 PARKING LOT REMOVAL SECTIONS		
	10 ABUTMENT REMOVAL EXCAVATION PLAN		
	11 ABUTMENT REMOVAL FILL PLAN 12 ABUTMENT REMOVAL SECTIONS		
	13 HABITAT STRUCTURE OVERVIEW		
	14 HABITAT STRUCTURE DETAILS		
	15 HABITAT STRUCTURE DETAILS 16 PLANTING PLAN		
	17 PLANTING PLAN		
	18 PLANTING DETAILS 19 PLANTING DETAILS		
Ву:	REVISIONS		
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JAN. 7 2014

As Built Date:

by:



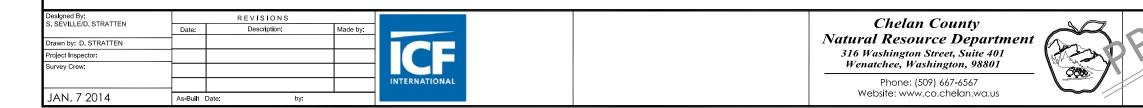
GENERAL NOTES

- 1. ANY ITEM NOT SPECIFICALLY DISCUSSED IN THE GENERAL CONTRACT FOR THIS PROJECT OR IN NOTES ON SHEETS IN THIS PLAN SET SHALL BE AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND MUNICIPAL CONSTRUCTION, 2012 PUBLISHED BY THE STATE OF WASHINGTON DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR IS RESPONSIBLE TO BE FAMILLAR WITH THE STANDARD SPECIFICATIONS AND TO HAVE THE STANDARD SPECIFICATIONS AT THE PROJECT SITE TO ENSURE THAT CONSTRUCTION OF THE PROJECT IS IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS.
- 2. THE DRAWINGS AND NOTES IN THIS PLAN SET SUPERSEDE ANY ITEMS IN THE STANDARD SPECIFICATIONS.
- 3. HORIZONTAL DATUM: STATE PLANE COORDINATE SYSTEM, WASHINGTON NORTH ZONE, NAD 83/91, US SURVEY FEET. VERTICAL DATUM: NAVD88, FEET.
- 4. TOPOGRAPHIC MAPPING OF THE PROJECT AREA WAS PERFORMED BY LANLINE SURVEYORS IN 2006. SUPPLEMENTAL TOPOGRAPHIC MAPPING OUTSIDE THE AREA OF CONSTRUCTION IS BASED ON LIDAR IMAGING, CHELAN COUNTY, WASHINGTON.
- 5. ELEVATIONS AND DISTANCES SHOWN ARE IN FEET AND DECIMALS WITH CONTOUR INTERVALS AT ONE FOOT INCREMENTS.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- 7. SEVERAL UTILITY LINES ARE PRESENT IN THE PROJECT AREA AND ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO CONSTRUCTION AND PROTECTING UTILITIES DURING CONSTRUCTION AS DESCRIBED IN SECTION 1–07.17 OF THE STANDARD SPECIFICATIONS. THE TELEPHONE NUMBER FOR THE ONE CALL CENTER FOR UTILITY LOCATES IS 1–800–424–5555.
- 8. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE THE CONTRACTING AGENCY WITH A DETAILED CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN HAVE BEEN APPROVED BY THE CONTRACTING OFFICER.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT CONSTRUCTION.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AT THE CONTRACTOR'S EXPENSE, ALL CONSTRUCTION PERMITS AS REQUIRED BY THE LOCAL AGENCIES. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
- 11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.
- 12. THE CONTRACTOR SHALL PLACE TEMPORARY COFFERDAMS BETWEEN THE ACTIVELY FLOWING CREEK OR PONDED WATER AND THE EXTENTS OF ANY EARTHWORK TO KEEP WATER AND FISH FROM ENTERING THE ACTIVE CONSTRUCTION AREA. ALL IN-WATER WORK, INCLUDING CONSTRUCTION OF TEMPORARY COFFERDAMS, ABUTMENT REMOVAL, AND COFFERDAM REMOVAL, SHALL BE COMPLETED BETWEEN JULY 1, AND AUGUST 10, 2014.
- 13. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 5 WORKING DAYS IN ADVANCE OF COFFERDAM CONSTRUCTION TO COORDINATE FISH REMOVAL. THE CONTRACTING AGENCY WILL BE RESPONSIBLE FOR ALL FISH REMOVAL AND HANDLING.
- 14. DEWATERING WITHIN COFFERDAMS SHALL BE PERFORMED TO THE EXTENT NECESSARY TO COMPLETE THE WORK SHOWN ON THESE PLANS. DISCHARGE FROM DEWATERING WITHIN THE WORK AREA SHALL BE ROUTED TO FLOODPLAIN AREAS, A SMALL SETTLING BASIN, BIOSWALE, NON-STREAM CONNECTING DITCH, UPLANDS AREA, OR OTHER WORW-APPROVED DETENTION OR FILTERING SYSTEM, AND TEMPORARILY DETAINED OR FILTERED SO AS TO ALLOW THE REMOVAL OF FINE SEDIMENTS OR OTHER CONTAMINANTS PRIOR TO BEING ALLOWED TO REENTER NASON CREEK. ALL PUMPS USED BY THE CONTRACTOR FOR DEWATERING SHALL HAVE SCREENED INTAKES THAT MEET WOFW SPECIFICATIONS AND JUVENILE FISH SCREENING CRITERIA.
- 15. ALL EQUIPMENT CONDUCTING IN-WATER WORK, WORKING WITHIN THE ACTIVELY FLOWING CREEK CHANNEL, WORKING WITHIN AN AREA SEPARATED FROM THE ACTIVELY FLOWING CHANNEL BY A COFFERDAM, AND WORKING ON THE TOP OF A BANK ADJACENT TO THE ACTIVELY FLOWING CREEK, SHALL USE VEGETABLE OIL FOR HYDRAULIC FLUID.

SUMMARY				
ITEM NO.	TOTAL QUANITITY	UNITS	ITEM	
1	LUMP SUM	<i>L.S</i> .	MOBILIZATION	
2	0.91	ACRE	CLEARING AND GRUB	
3	1,050	<i>L.F</i> .	HIGH VISIBILITY FENC	
4	LUMP SUM	L.S.	COFFERDAM	
5	575	C.Y.	DITCH EXCAVATION IN	
6	1,825	C.Y.	FLOODPLAIN EXCAVAT	
7	LUMP SUM	<i>L.S</i> .	CHANNEL PLUG	
8	1,325	C.Y.	ABUTMENT EXCAVATIO	
9	1,325	C.Y.	PLACEMENT OF EXCA	
10	LUMP SUM	<i>L.S</i> .	HABITAT STRUCTURE	
11	LUMP SUM	<i>L.S</i> .	HABITAT STRUCTURE	
12	LUMP SUM	<i>L.S</i> .	HABITAT STRUCTURE	
13	LUMP SUM	<i>L.S</i> .	HABITAT STRUCTURE	
14	0.32	ACRE	SEEDING - WETLAND	
15	0.78	ACRE	SEEDING – UPLAND	
16	2.2	TON	STRAW MULCH	
17	2775	EACH	CONTAINER PLANT -	
18	260	EACH	CONTAINER PLANT -	
19	6	EACH	WILLOW BUNDLE	
20	58	L.F.	BRUSH MAT	
21	3	EACH	PRE-PLANTED COIR	
22	1,000	DOLLAR	EROSION/WATER POL	
23	LUMP SUM	<i>L.S</i> .	SPCC PLAN	

<u>LEGEND</u>

OHW
ORDINARY HIGH WATER MARK
ORDINARY HIGH WATER MARK
WETLAND BOUNDARY
BPA TRANSMISSION LINE
CG
CG
HVF
HVF
HVF
HIGH VISIBILITY FENCE
LIMIT OF EXCAVATION
FILL
LIMIT OF FILL



F QUANTITIES

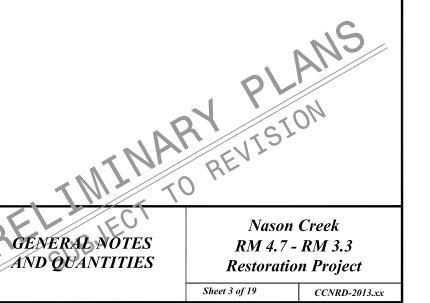
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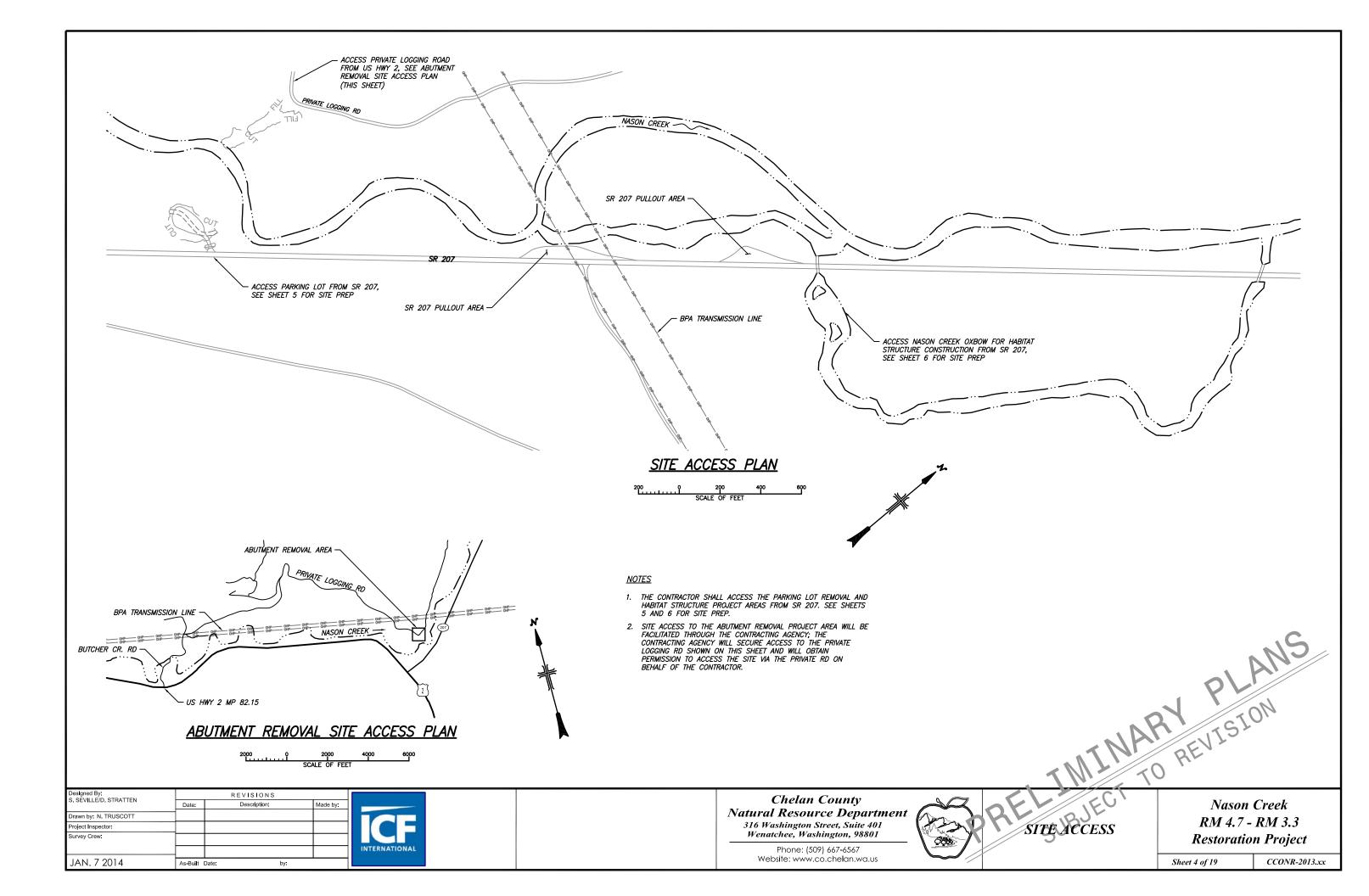
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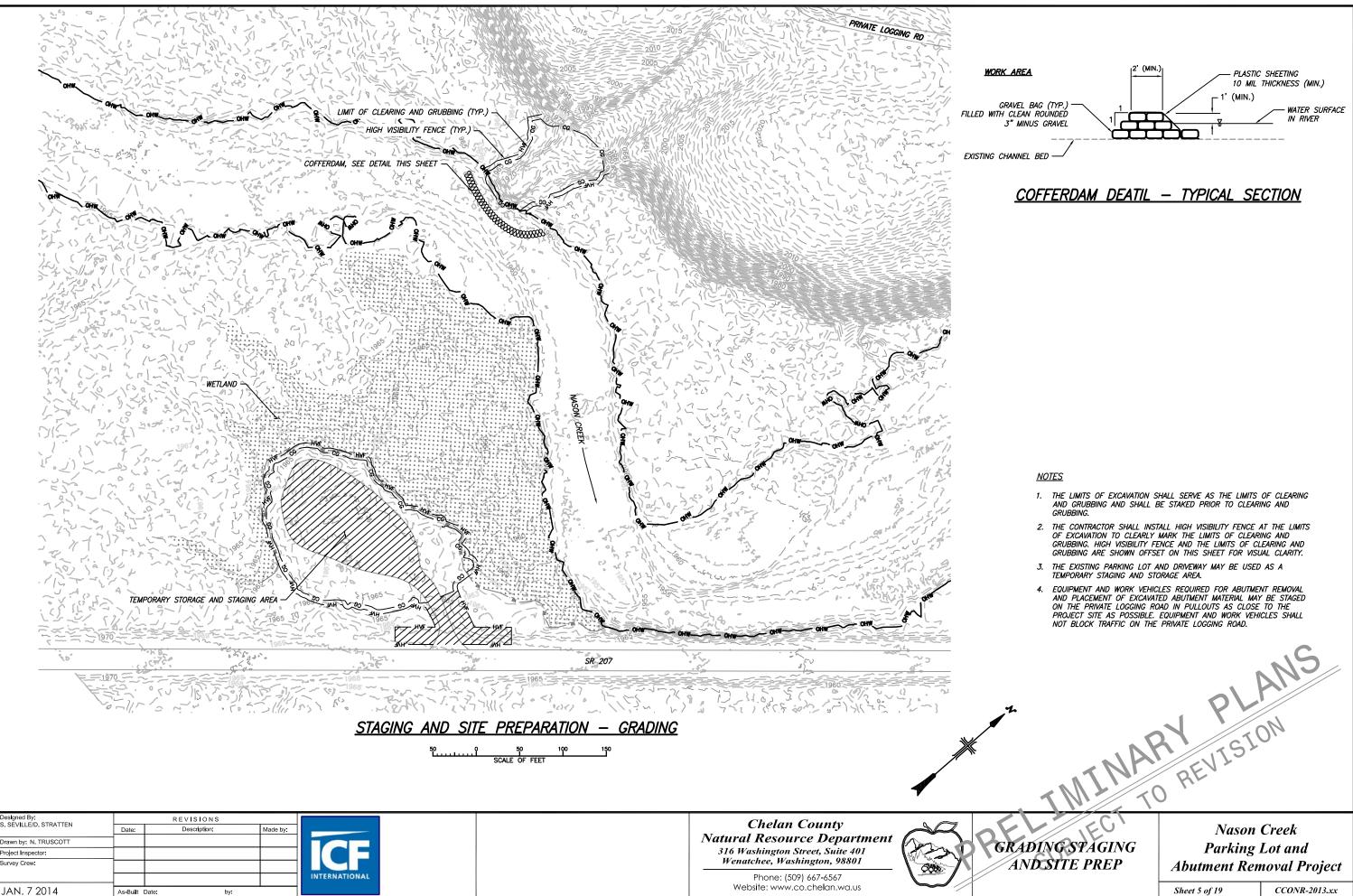
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ON AVATED ABUTMENT MATERIAL #1 #2 #3 #4 D MIX MIX - TP414 TREEPOT - 10 CI PLUG

SEDGE MAT LLUTION CONTROL







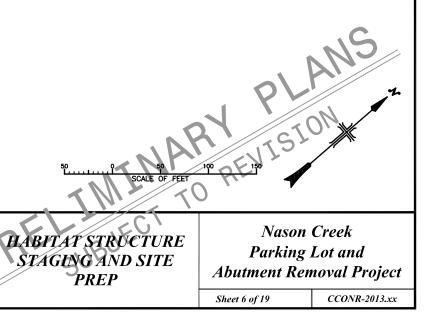
TNINA	REVIS	ANS
GRADING STAGING AND SITE PREP	Parkin	n Creek g Lot and emoval Project
	Sheet 5 of 19	CCONR-2013.xx

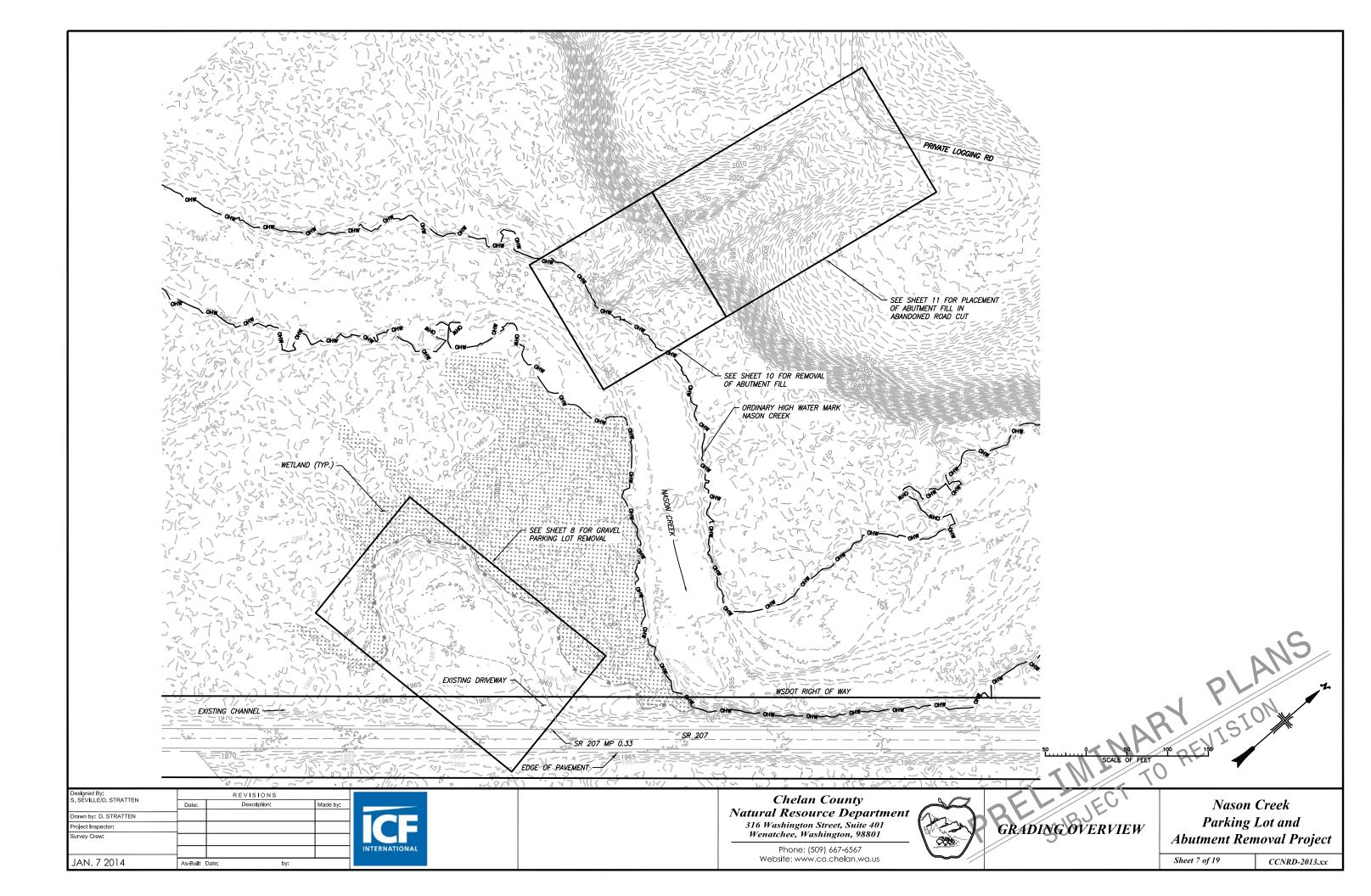
			DN CREEK		
· · ·		NASON CREEK SIDE CHANNEL -	USE EXISTING PULLOUT AT TEMPORARY STAGING AND STORAGE AREA (TYP.)		
			SR 207 EMPORARY STORAGE AND STAGING AREA (TYP.)		
Designed By: S. SEVILLE/D. STRATTEN Drawn by: N. TRUSCOTT Project Inspector: Survey Crew: JAN. 7 2014	REVISIONS Date: Description: M As-Built Date: by:	ade by:		Chelan Count Natural Resource De 316 Washington Street, S. Wenatchee, Washington, Phone: (509) 667-65 Website: www.co.chelar	uite 401 , 98801

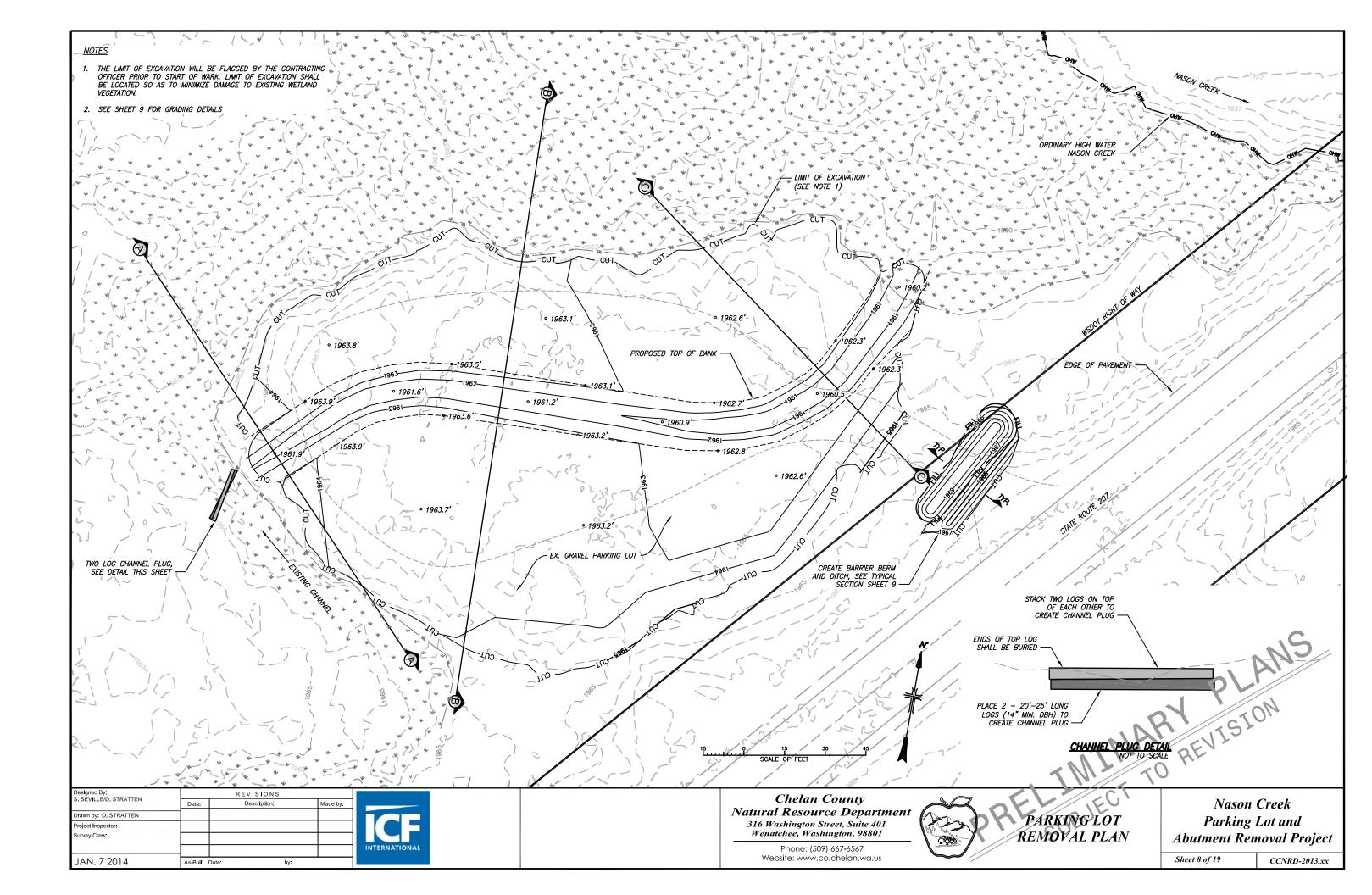
<u>NOTES</u>

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 THERE IS LIMITED SPACE AVAILABLE FOR STAGING AND STORAGE OF WORK RELATED VEHICLES AND EQUIPMENT NEAR THE HABITAT STRUCTURES. THE CONTRACTOR SHALL MAKE USE OF EXISTING PULLOUTS ON SR 207 FOR TEMPORARY STAGING AND STORAGE AREAS.

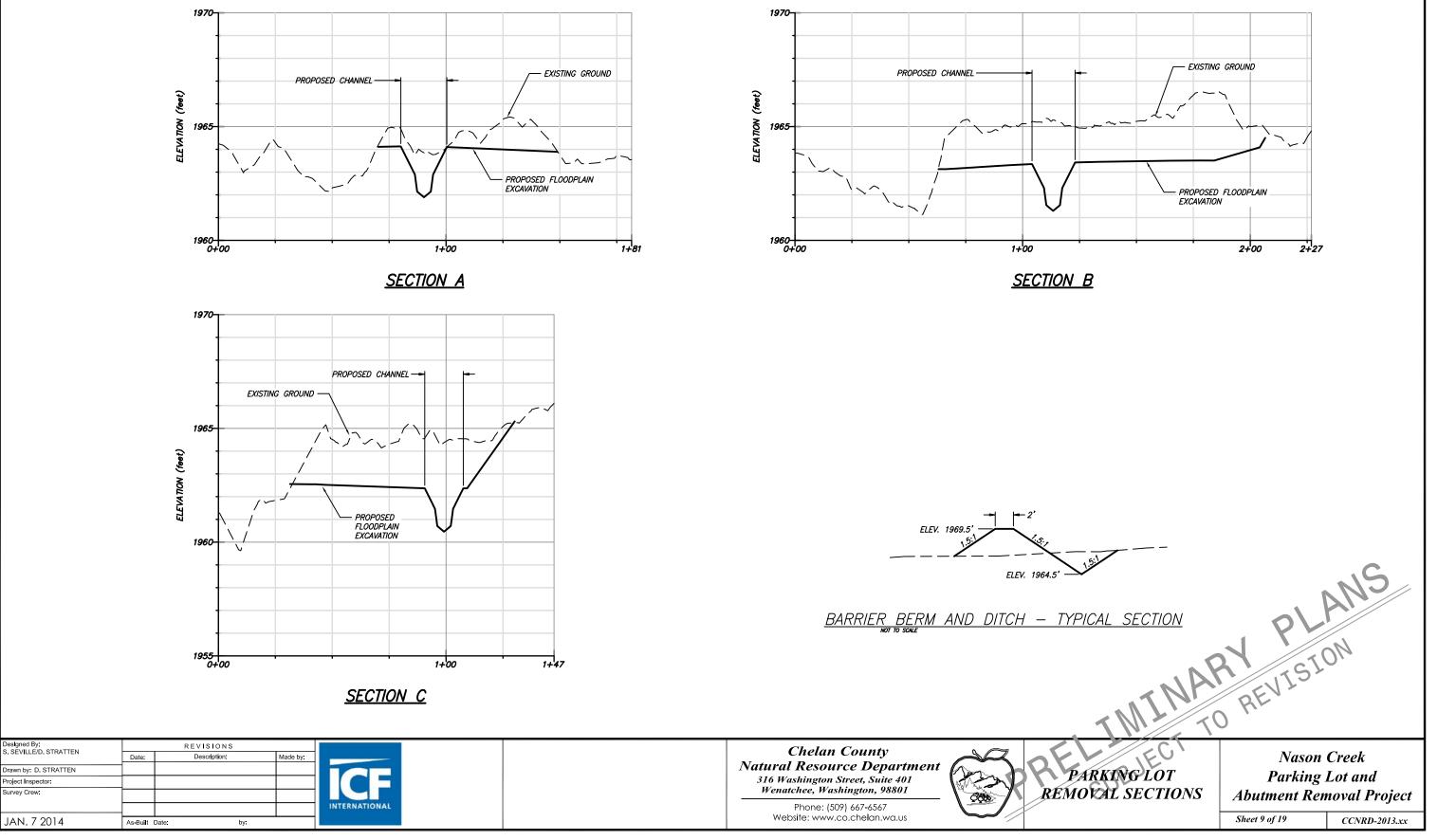


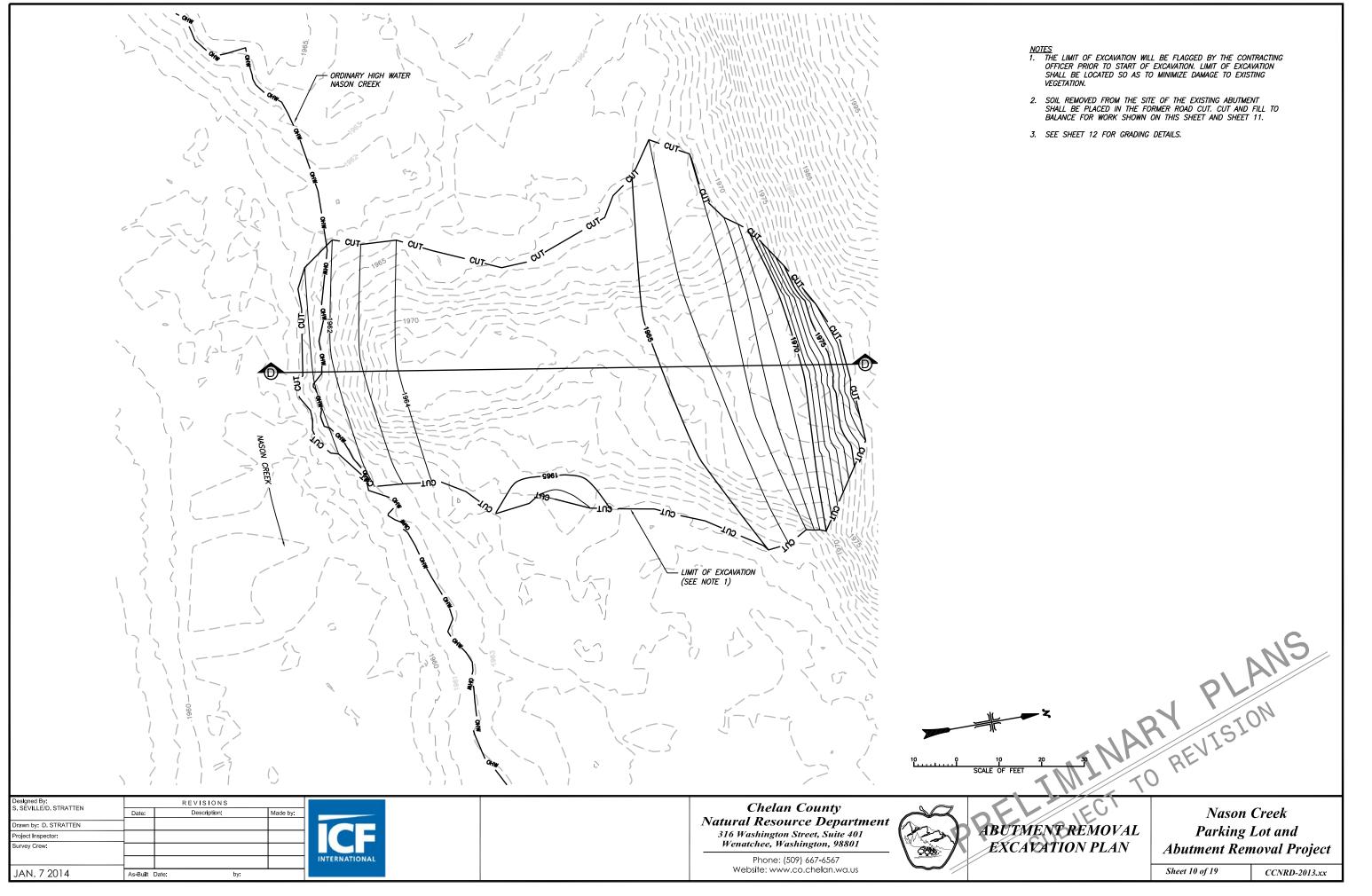


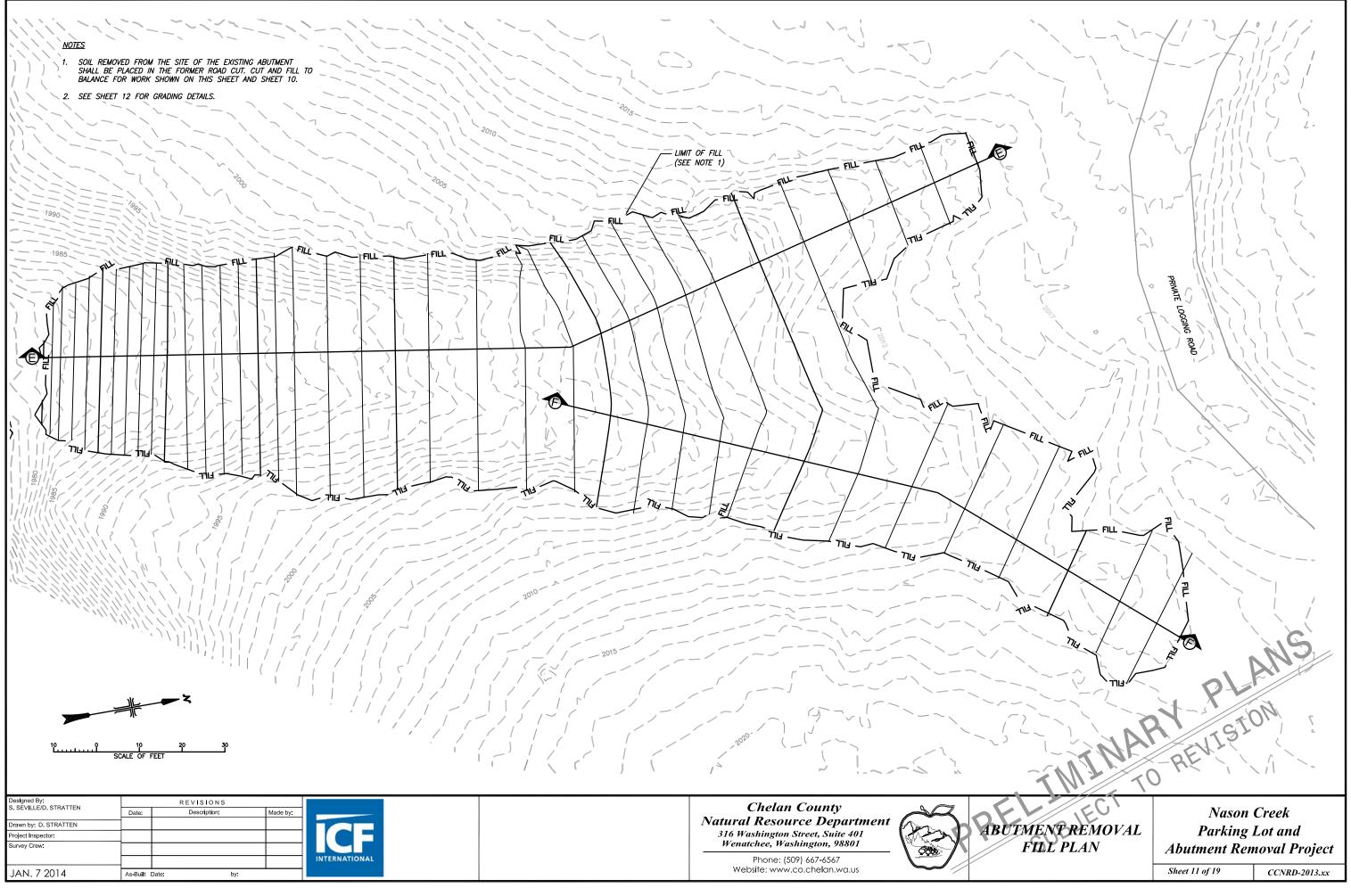


<u>NOTES</u>

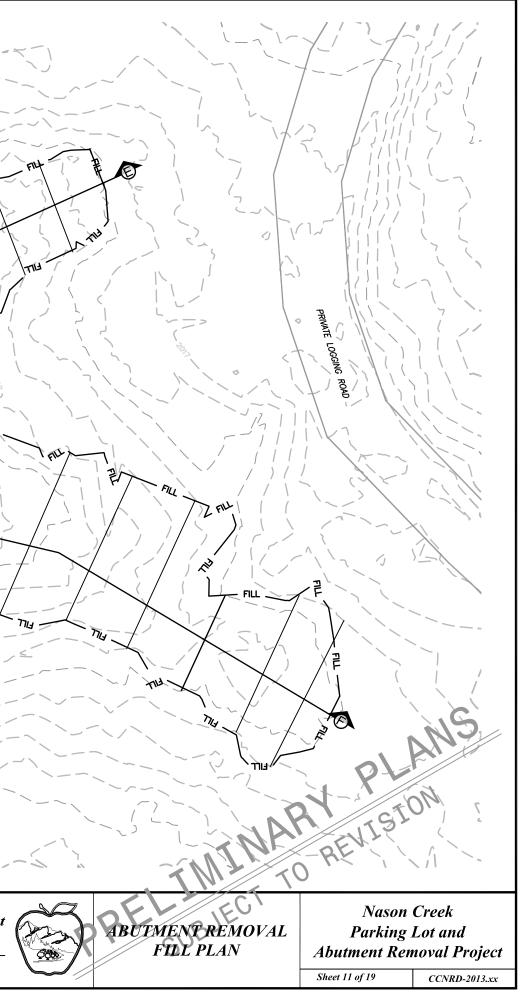
- 1. SEE SHEET 8 FOR LOCATION OF CROSS-SECTIONS SHOWN ON THIS SHEET.
- VERTICAL DIMENSIONS ARE EXAGGERATED BY A FACTOR OF 10 ON THIS SHEET. REFERENCE THE Y-AXIS FOR DEPTHS AND ELEVATIONS.

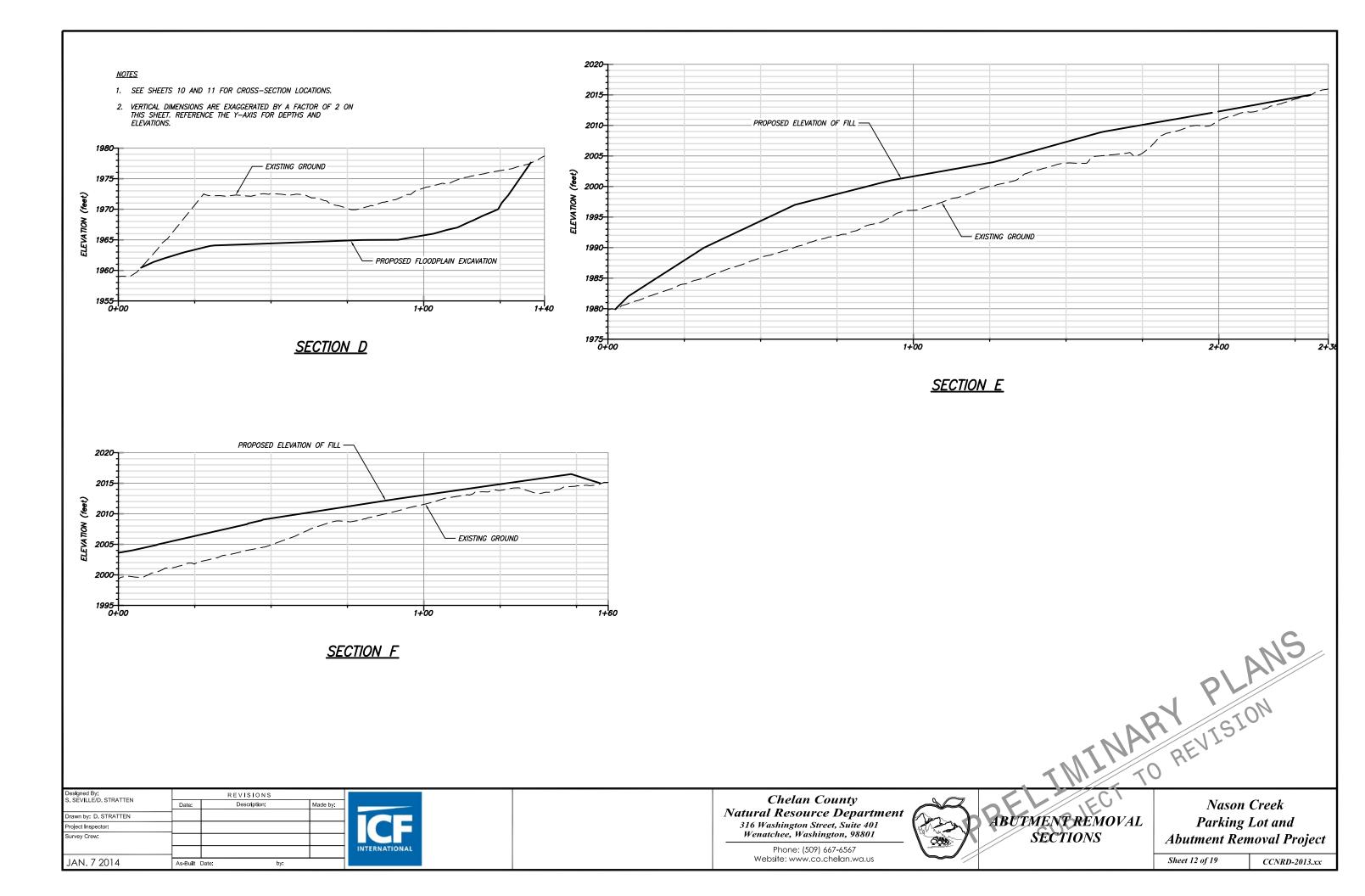


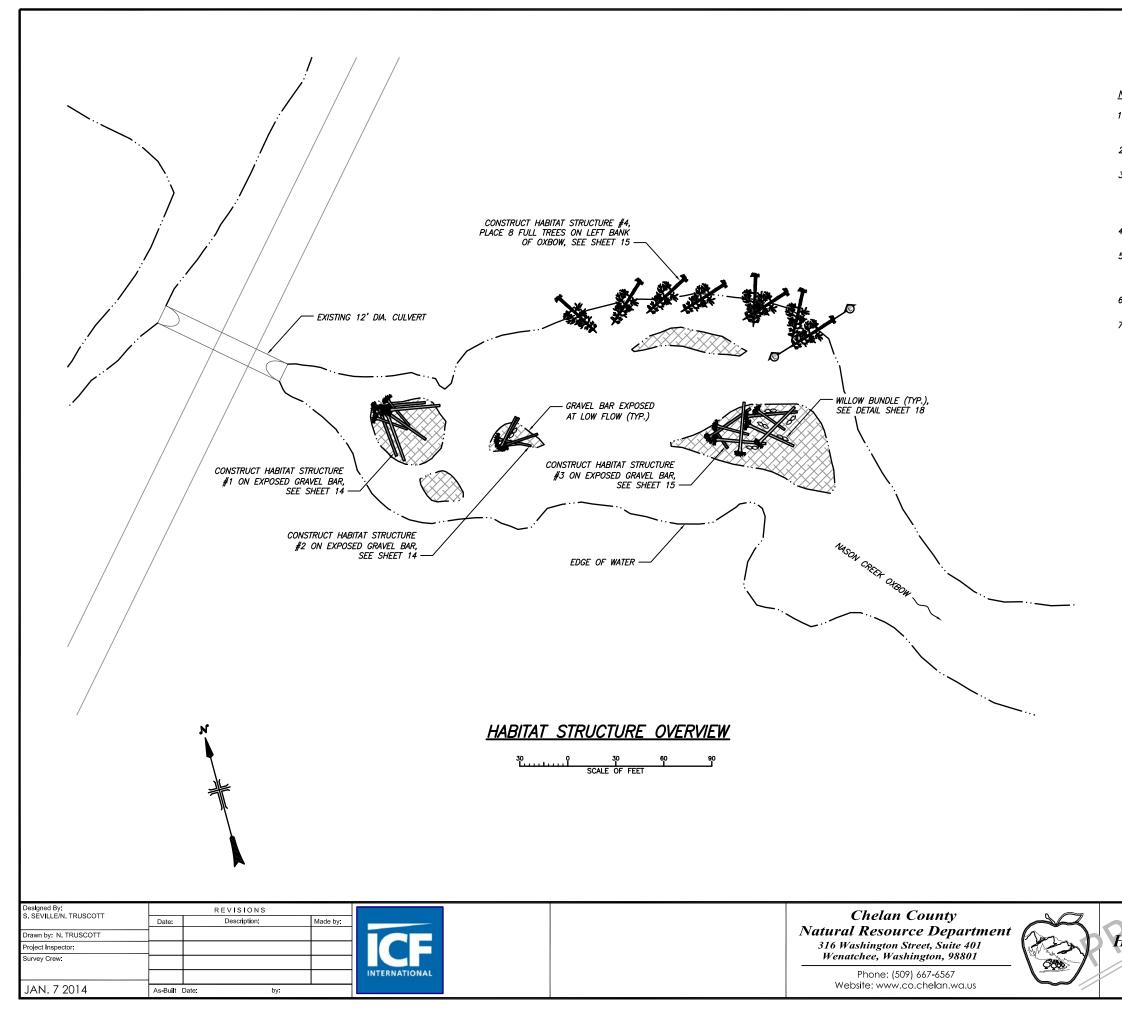




S SEVILLE/D STRATTEN	REVISIONS				
S. SEVILLE/D. STRATTEN	Date:		Description:	Made by:	
Drawn by: D. STRATTEN					
Project Inspector:					
Survey Crew:					
					INTERNATI
JAN. 7 2014	As-Built	Date:	by:	1	







<u>NOTES</u>

- 1. ALL LOGS AND TREES REQUIRED FOR CONSTRUCTION WILL BE SUPPLIED BY THE CONTRACTING AGENCY AND AND STAGED NEAR THE PROJECT SITE.
- 2. A HELICOPTER WILL BE USED TO TRANSPORT LOGS FROM THE STAGING AREA TO THE APPROPRIATE STRUCTURE LOCATION.
- THE CONTRACTOR MAY NOT USE HEAVY EQUIPMENT TO MANIPULATE LOGS INTO POSITION. AFTER THE LOGS ARE DELIVERED TO THE APPROPRIATE STRUCTURE LOCATION THEY SHALL BE MANIPULATED USING HAND TOOLS (CHAINSAW WINCHES, CABLES, PRYBARS, ETC.).
- 4. THE CONTRACTOR SHALL MINIMIZE DAMAGE TO LOGS AND ROOTWADS WHILE MANIPULATING THEM INTO POSITION.
- 5. NO EXCAVATION IS REQUIRED TO CONSTRUCT THE HABITAT STRUCTURES SHOWN ON THIS SHEET. LOGS SHALL BE PLACED DIRECTLY ON TOP OF EXPOSED GRAVEL BARS, OR STACKED ON TOP OF EACH OTHER.
- 6. SEE SHEETS 14 AND 15 FOR DETAILS ON EACH HABITAT STRUCTURE.
- A TOTAL OF 6 WILLOW BUNDLES SHALL BE INSTALLED AMONG HABITAT STRUCTURES 2 AND 3. THE EXACT LOCATIONS OF THE WILLOW BUNDLES WILL BE DETERMINED BY CONTRACTING OFFICER AT THE TIME OF CONSTRUCTION.

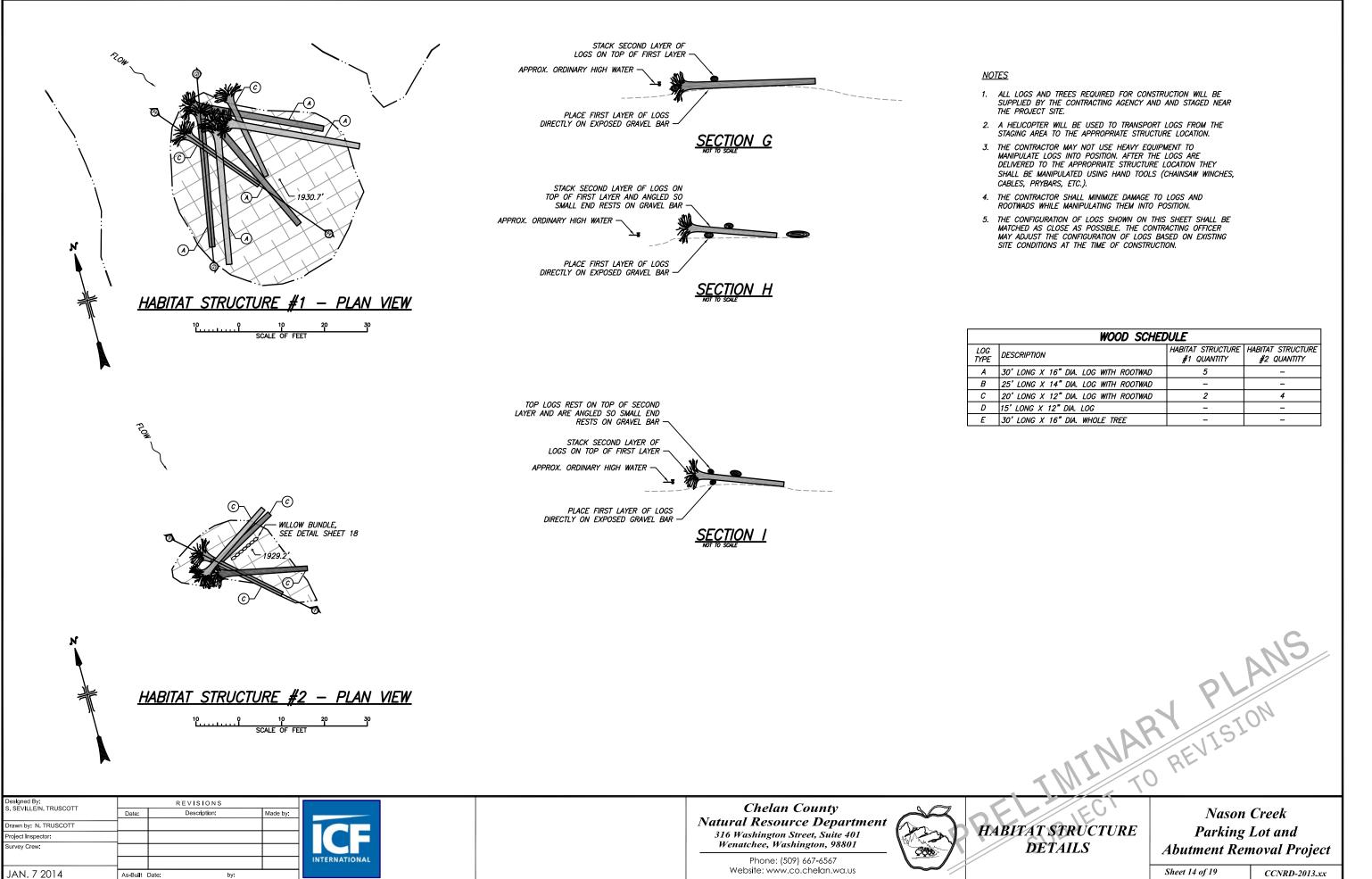


Nason Creek Parking Lot and Abutment Removal Project

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Sheet 13 of 19

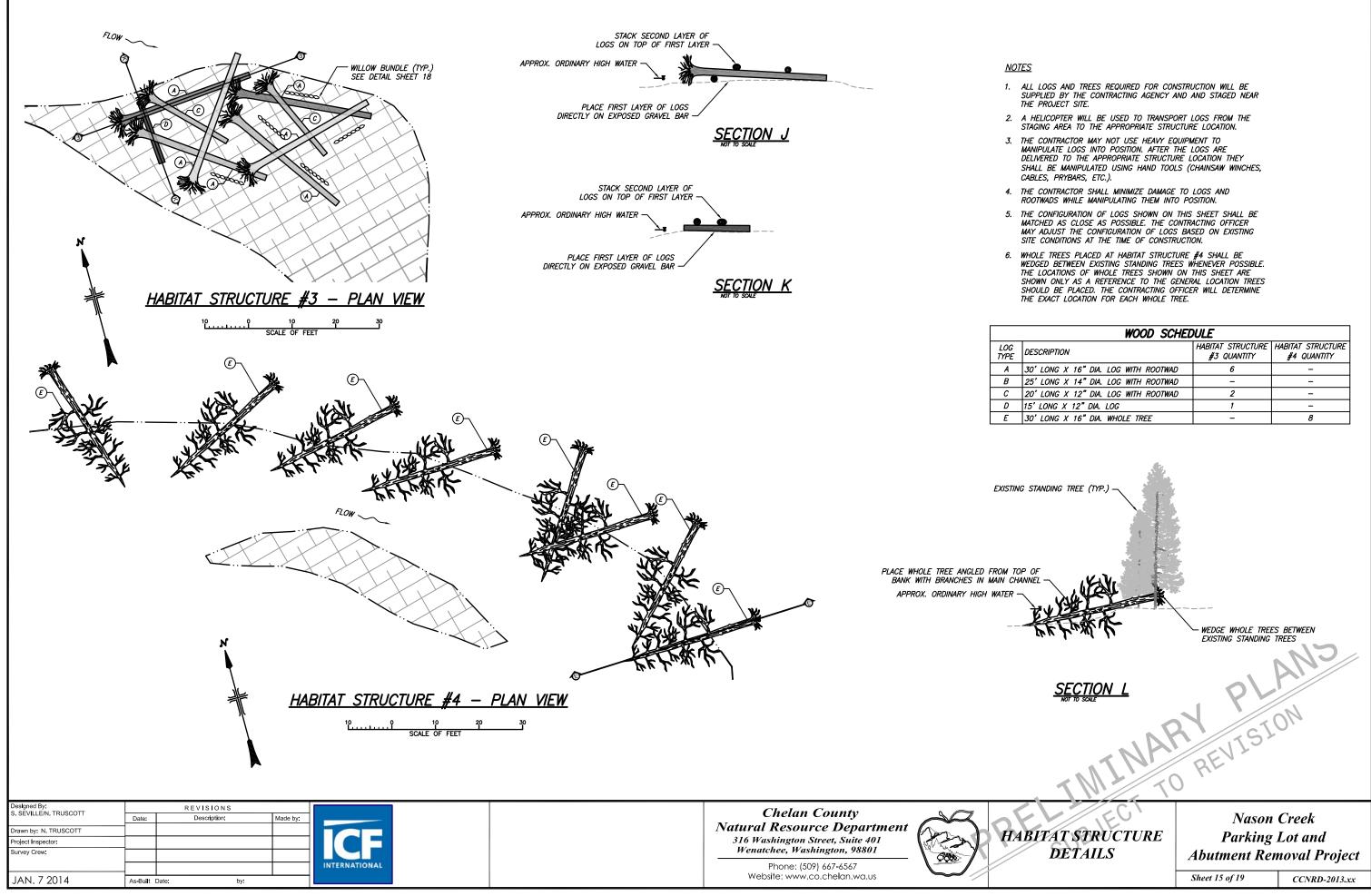
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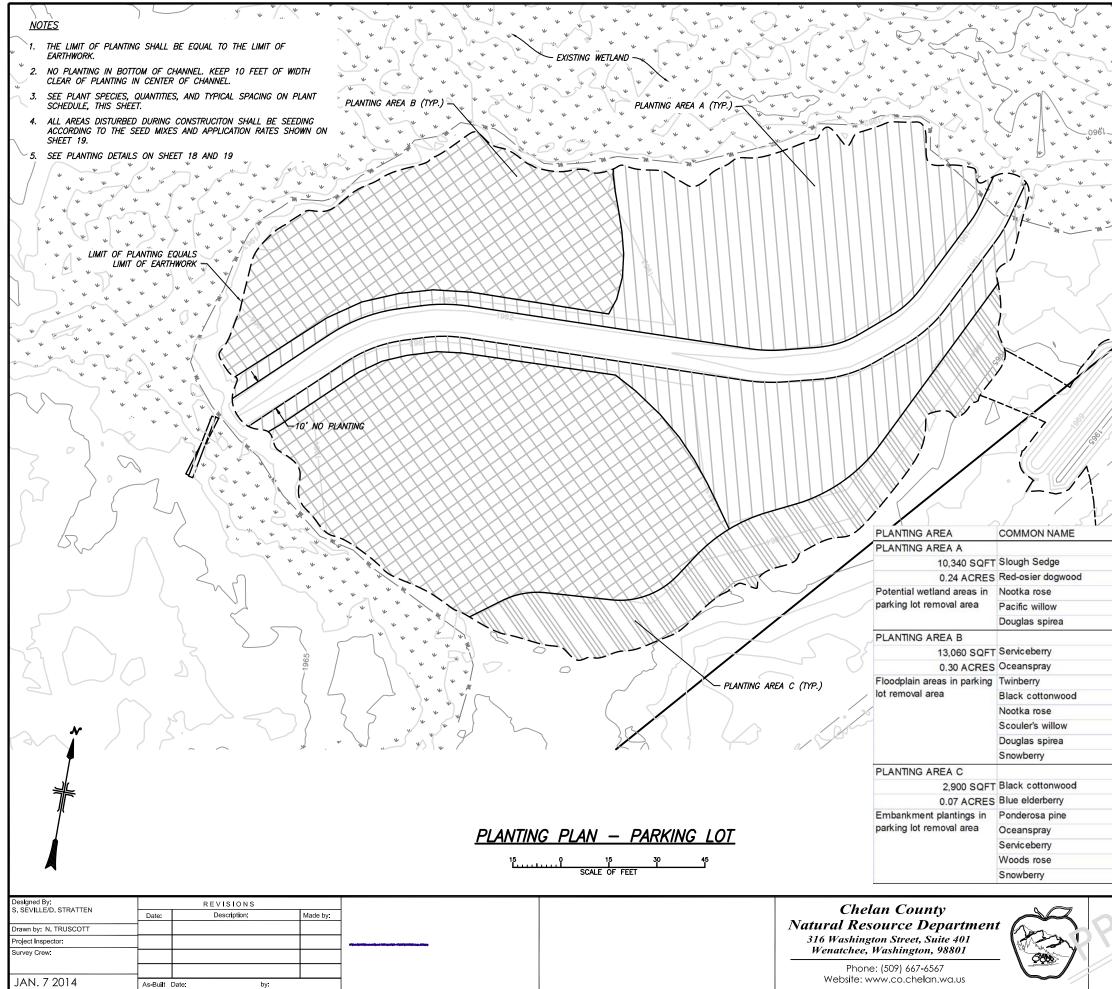
- SUPPLIED BY THE CONTRACTING AGENCY AND AND STAGED NEAR
- SHALL BE MANIPULATED USING HAND TOOLS (CHAINSAW WINCHES,
- MATCHED AS CLOSE AS POSSIBLE. THE CONTRACTING OFFICER MAY ADJUST THE CONFIGURATION OF LOGS BASED ON EXISTING SITE CONDITIONS AT THE TIME OF CONSTRUCTION.

	WOOD SCHEDULE						
OG PE	DESCRIPTION	HABITAT STRUCTURE #1 QUANTITY	HABITAT STRUCTURE #2 QUANTITY				
A	30' LONG X 16" DIA. LOG WITH ROOTWAD	5	-				
В	25' LONG X 14" DIA. LOG WITH ROOTWAD	-	-				
С	20' LONG X 12" DIA. LOG WITH ROOTWAD	2	4				
D	15' LONG X 12" DIA. LOG	-	-				
Ε	30' LONG X 16" DIA. WHOLE TREE	-	-				

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	WOOD SCHEDULE						
OG PE	DESCRIPTION	HABITAT STRUCTURE #3 QUANTITY	HABITAT STRUCTURE #4 QUANTITY				
A	30' LONG X 16" DIA. LOG WITH ROOTWAD	6	-				
В	25' LONG X 14" DIA. LOG WITH ROOTWAD	-	-				
С	20' LONG X 12" DIA. LOG WITH ROOTWAD	2	-				
D	15' LONG X 12" DIA. LOG	1	-				
Ε	30' LONG X 16" DIA. WHOLE TREE	1	8				



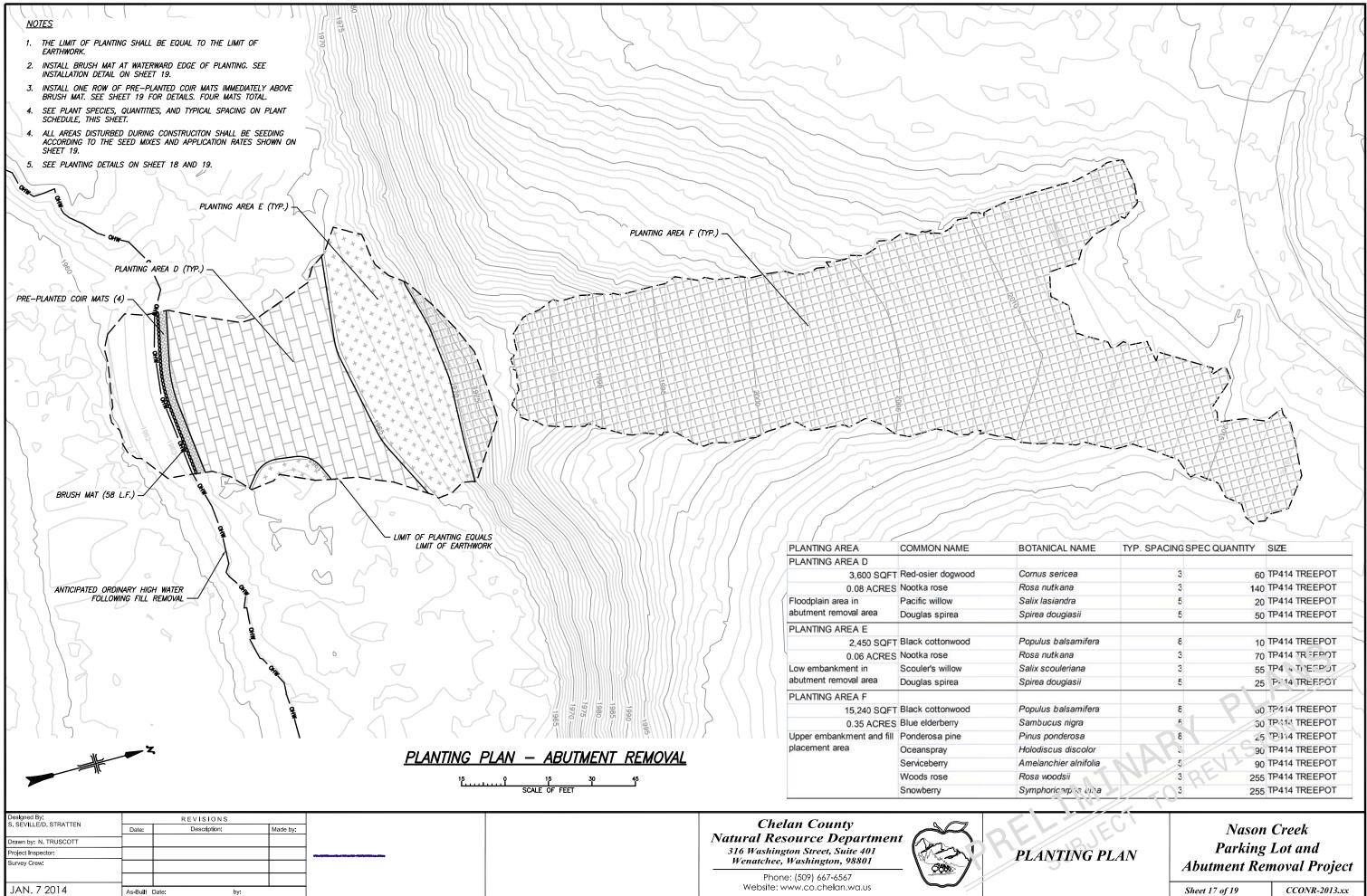
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_ 	BOTANICAL NAME		SPEC QUANTITY	SIZE
	BOTANICAL NAME Carex obnupta		260	10 c.i. plugs
		TYP. SPACINGS	260 115	10 c.i. plugs TP414 TREEPOT
	Carex obnupta	TYP. SPACINGS	260 115	10 c.i. plugs
	Carex obnupta Cornus sericea Rosa nutkana	TYP. SPACINGS	260 115 400	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra	TYP. SPACINGS 2 3 3 5	260 115 400 40	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana	TYP. SPACINGS	260 115 400 40	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii	TYP. SPACINGS 2 3 3 5 5 5	260 115 400 40 145	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia	TYP. SPACINGS 2 3 3 5 5 5 8	260 115 400 40 145 20	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor	TYP. SPACINGS 2 3 3 5 5 8 8 5	260 115 400 40 145 20 50	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia	TYP. SPACINGS 2 3 3 5 5 5 8	260 115 400 40 145 20 50	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor	TYP. SPACINGS 2 3 3 5 5 8 8 5	260 115 400 145 20 50 75	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
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	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutkana	TYP. SPACINGS 2 2 3 3 5 5 5 8 8 5 3 8 3 8 3	260 115 400 145 20 50 75 50 220	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutk ana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutk ana Salix scouleriana	TYP. SPACINGS 2 2 3 3 5 5 5 8 8 5 3 8 3 5 5 5 5 5 5 5 5 5	260 115 400 145 20 50 75 50 220 50	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutk ana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutk ana Salix scouleriana Spirea douglasii	TYP. SPACINGS 2 2 3 3 5 5 5 8 8 5 3 8 3 5 5 5 5 5 5 5 5 5	260 115 400 40 145 20 50 75 50 220 50 80	10 c.i. plugs TP414 TREEPOT TP414 TREEOT TP414 TREEOT TP414 TREEOT
	Carex obnupta Cornus sericea Rosa nutk ana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutk ana Salix scouleriana	TYP. SPACINGS 2 2 3 3 5 5 5 8 8 5 3 8 3 5 5 5 5 5 5 5 5 5	260 115 400 40 145 20 50 75 50 220 50 80	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutk ana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutk ana Salix scouleriana Spirea douglasii	TYP. SPACINGS 2 2 3 3 5 5 6 8 8 5 3 8 3 5 5 3 8 3 5 5 3 8 3 6 3 6 5 5 3 8 6 5 5 3 8 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	260 115 400 40 145 20 50 75 50 220 50 80 145	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutk ana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutk ana Salix scouleriana Spirea douglasii	TYP. SPACINGS 2 2 3 3 5 5 5 8 8 5 3 8 3 5 5 5 5 5 5 5 5 5	260 115 400 40 145 20 50 75 50 220 50 80 145	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP.14 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutkana Salix scouleriana Spirea douglasii Symphoricarpos alba	TYP. SPACINGS 2 2 3 3 5 5 6 8 8 5 3 8 3 5 5 3 8 3 5 5 3 8 3 6 3 6 5 5 3 8 6 5 5 3 8 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	260 115 400 40 145 20 50 75 50 220 50 80 145	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT
	Carex obnupta Cornus sericea Rosa nutkana Salix lasiandra Spirea douglasii Amelanchier alnifolia Holodiscus discolor Lonicera involucrate Populus balsamifera Rosa nutkana Salix scouleriana Spirea douglasii Symphoricarpos alba Populus balsamifera Sambucus nigra	TYP. SPACINGS 2 2 3 3 5 5 8 8 5 3 3 5 5 3 8 3 8 3 5 5 3 8 8 8 8	260 115 400 40 145 20 50 75 50 220 50 80 145 19 55	10 c.i. plugs TP414 TREEPOT TP414 TREEPOT TP.14 TREEPOT
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PLANTING PLAN

Nason Creek Parking Lot and Abutment Removal Project

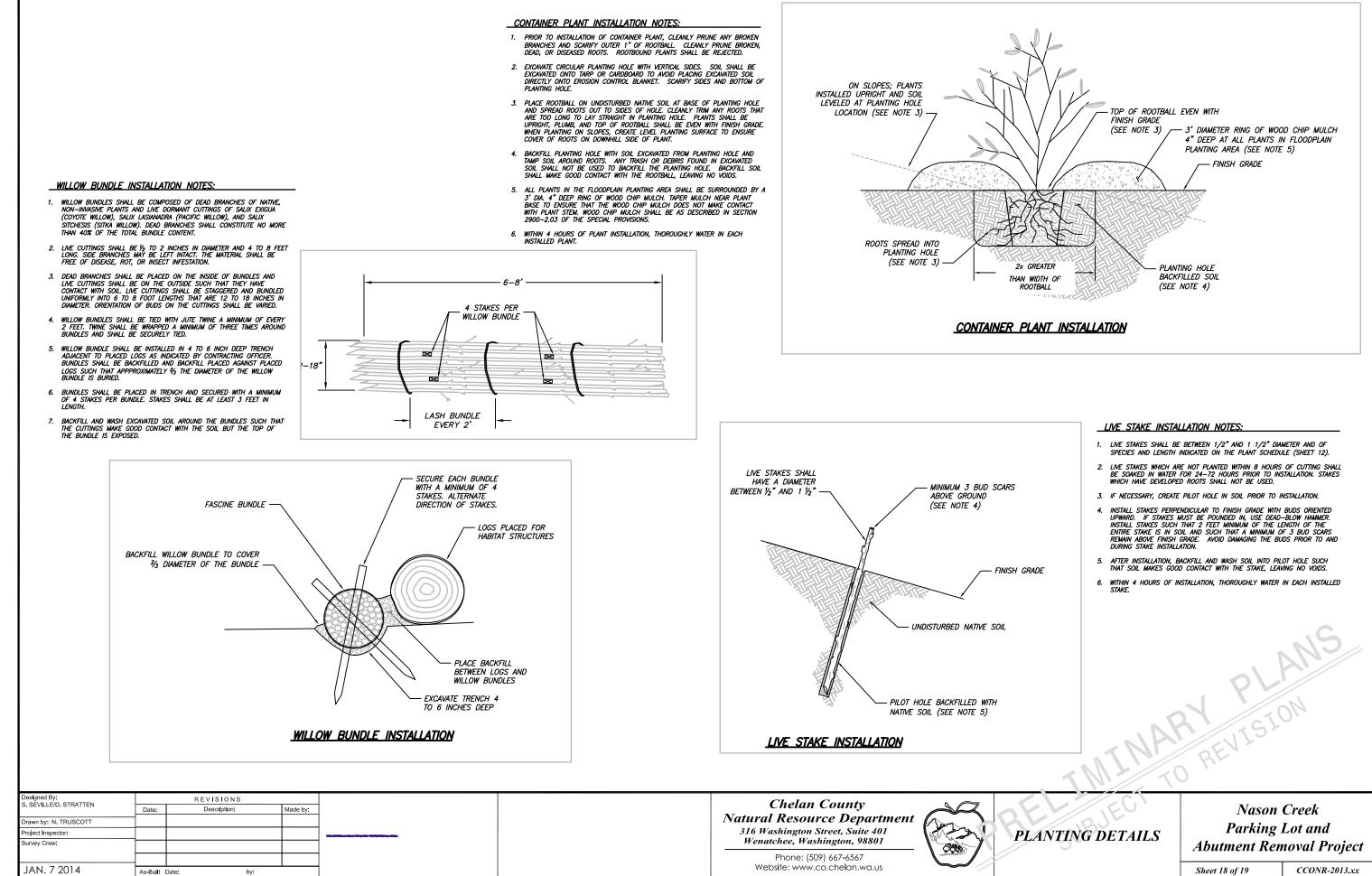
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CCONR-2013.xx



BOTANICAL NAME	TYP. SPACING	SPEC QUANTITY	SIZE
Cornus sericea	3	60	TP414 TREEPOT
Rosa nutkana	3	140	TP414 TREEPOT
Salix lasiandra	5	20	TP414 TREEPOT
Spirea douglasii	5	50	TP414 TREEPOT
Populus balsamifera	8	10	TP414 TREEPOT
Rosa nutkana	3	70	TP414 TR = FP01
Salix scouleriana	3	55	TP4 + THEEPUT
Spirea douglasii	5	25	P-14 TREEPOT
Populus balsamifera	8	00	TP414 TREEPOT
Sambucus nigra	5	30	TP.: 1.1 TREEPOT
Pinus ponderosa	8	25	TP-114 TREEPOT
Holodiscus discolor		90	TP414 TREEPOT
Amelanchier alnifolia	5	90	TP414 TREEPOT
Rosa woodsii	3	255	TP414 TREEPOT
Symphoric arpas enia	3	255	TP414 TREEPOT

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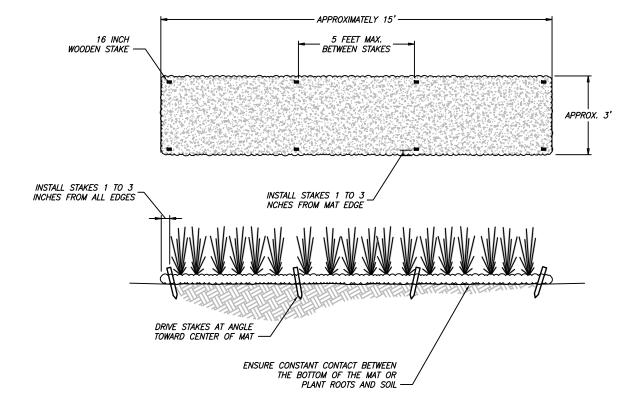


	1. LIVE STAKES SHALL E SPECIES AND LENGTH	RE BETWEEN 1/2" AND 1 1/2" INDICATED ON THE PLANT SCH	DIAMETER AND OF EDULE (SHEET 12).
	2. LIVE STAKES WHICH A BE SOAKED IN WATER	RE NOT PLANTED WITHIN 8 HOL FOR 24-72 HOURS PRIOR TO ED ROOTS SHALL NOT BE USED	IRS OF CUTTING SHALL INSTALLATION. STAKES
	3. IF NECESSARY, CREAT	e pilot hole in soil prior to	O INSTALLATION.
	UPWARD. IF STAKES INSTALL STAKES SUCH ENTIRE STAKE IS IN S	PENDICULAR TO FINISH GRADE W MUST BE POUNDED IN, USE DE H THAT 2 FEET MINIMUM OF THE SOIL AND SUCH THAT A MINIMUM (GRADE. AVOID DAMAGING THE LATION.	AD-BLOW HAMMER. LENGTH OF THE OF 3 BUD SCARS
RADE		BACKFILL AND WASH SOIL INTO OD CONTACT WITH THE STAKE, L	
	6. WITHIN 4 HOURS OF STAKE.	INSTALLATION, THOROUGHLY WATE	ER IN EACH INSTALLED
		X // C	
	MINA	O REVIS	a Cuaak
LANTIN	G DETAILS	Parking	1 Creek g Lot and emoval Project

<u>SEED MIXES</u>

WETLAND SEED MIX	SPECIES NAME	COMMON NAME	LBS PLS/ACRE
0.32 ACRES	AGROTIS SCABRA	HAIR BENTGRASS	1
PLANTING AREAS A & D	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	2
	JUNCUS TENUS	SLENDER RUSH	1
	FUSTUCA RUBRA	RED FESCUE	4
	TRITICUM AESTIVUM X SECALE CEREALE	STERILE TRITICALE	60
UPLAND SEED MIX	SPECIES NAME	COMMON NAME	LBS PLS/ACRE
0.78 ACRES	ACHNATHERUM HYMENOIDES	INDIAN RICEGRASS	12
PLANTING AREAS B, C, E & F	AGROPYRON SPICATUM	BLUEBUNCH WHEATGRASS	12
	ELYMUS TRACHYCAULUS	BLUE WILD RYE	8
	FESTUCA IDAHOENSIS	IDAHO FESCUE	6
	TRITICUM AESTIVUM X SECALE CEREALE	STERILE TRITICALE	60
	POA SECUNDA	SANDBERG BLUEGRASS	4

BRUSH MAT SHALL BE COMPOSED OF LIVE CUITINGS AND DEAD BRUSH ↓ ORDINARY HIGH WATER



PRE-PLANTED COIR MAT INSTALLATION DETAIL

PRE-PLANTED COIR MATS INSTALLATION NOTES:

- 1. PRE-PLANTED COIR MATS SHALL BE POPULATED WITH LIVE PLANTS INCLUDING AT LEAST 3 SPECIES FROM THE TABLE BELOW.
- 2. PLANTS SHALL BE MATURE ENOUGH AS TO PROVIDE COVERAGE TO APPROXIMATELY 50 PERCENT OF THE COIR MAT.
- 3. PRE-PLANTED COIR MAT DELIVERY SHALL BE SCHEDULED TO COINCIDE WITH IMMEDIATE JOB SITE INSTALLATION. IF MATS CANNOT BE IMMEDIATELY INSTALLED, THEY SHALL BE STORED IN A SHADY LOCATION FOR NO MORE THAN THREE DAYS AND SHALL BE KEPT THOROUGHLY SATURATED AND COVERED DURING THAT TIME.
- 4. PLANTING AREAS SHALL BE CLEARED OF LARGE ROCKS, TREE BRANCHES, OR OTHER OBJECTS THAT WOULD PREVENT THE MAT FROM MAKING DIRECT CONTACT WITH THE SOIL. VERY ROUGH GROUND SHALL BE SMOOTHED PRIOR TO MAT INSTALLATION.
- MATS SHALL BE MOVED TO THE INSTALLATION SITE, UNROLLED AND STAKED DOWN. ENSURE THAT THE PLANT ROOTS AND THE BOTTOM OF THE MAT ARE IN DIRECT CONTACT WITH THE SOIL PRIOR TO STAKING. LEAVE NO VOIDS.
- 6. ALL EDGES SHALL BE STAKED WITH 16" WOODEN STAKES SPACED AT A MAXIMUM OF EVERY 5 FEET ALONG THE EDGE OF THE MAT. STAKES SHALL BE INSTALLED 1 TO 3 INCHES FROM THE EDGE OF THE MAT.
- 7. STAKES SHALL BE INSTALLED AT AN ANGLE TOWARD THE CENTER OF THE MAT. FOUR INCHES OF EACH STAKE SHALL REMAIN ABOVE THE SURFACE OF THE MAT.
- 8. MATS MAY BE INSTALLED IN UP TO 4 INCHES OF STANDING WATER.

Designed By: S. SEVILLE/D. STRATTEN		REVISIONS			Chelan County	. ~		
S. SEVILLE/D. STRATTEN	Date:	Description:	Made by:			-		
Drawn by: N. TRUSCOTT						Natural Resource Department	hon !	
Project Inspector:					316 Washington Street, Suite 401	AT LE AND	1 PL	
Survey Crew:				1		Wenatchee, Washington, 98801	5885	
				1		Phone: (509) 667-6567		
JAN. 7 2014	As-Built Date	e: by:		1		Website: www.co.chelan.wa.us	\sim	

SEEDING NOTES

SHEFT

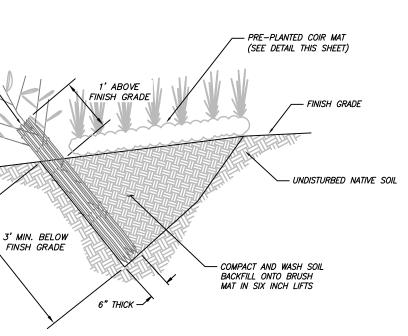
1. FOLLOWING CONSTRUCTION, ALL AREAS ABOVE SURFACE WATER DISTURBED DUE TO EARTHWORK, CLEARING, ACCESS, STAGING, OR OTHER CONSTRUCTION ACTIVITIES SHALL BE SEEDED ACCORDING TO THE SEED MIXES AND APPLICATION RATES SHOWN ON THIS

2. ALL SEEDING AREAS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 8–01.3 OF THE STANDARD SPECIFICATIONS. SEEDING AREAS NEED NOT BE CULTIVATED, BUT SHALL BE RAKED OR CHAINED TO ENSURE A FRIABLE SURFACE FREE OF SOIL CLUMPS

3. APPLICATION OF SEED SHALL BE FOLLOWED BY THE APPLICATION

OF STRAW MULCH APPLIED AT A RATE OF 2 TONS/ACRE.

LARGER THAN 2 INCHES IN DIAMETER.



<u>BRUSH MAT INSTALLATION</u>

BRUSH MAT INSTALLATION NOTES:

- 1. BRUSH MAT SHALL BE COMPOSED OF DEAD BRANCHES OF NATIVE, NON-INVASIVE PLANTS AND LIVE DORMANT CUTTINGS OF SALLX EXIGUA (COYOTE WILLOW), SALLX LASIANADRA (PACIFIC WILLOW), AND SALLX SITCHESIS (SITKA WILLOW). DEAD BRANCHES SHALL CONSTITUTE NO MORE THAN 40% OF THE TOTAL CONTENT.
- 2. LIVE CUTTINGS SHALL BE ½ TO 2 INCHES IN DIAMETER AND A MINIMUM OF 4 FEET LONG. SIDE BRANCHES MAY BE LEFT INTACT. THE MATERIAL SHALL BE FREE OF DISEASE, ROT, OR INSECT INFESTATION.
- 3. A TRENCH SHALL BE EXCAVATED FROM APPROXIMATELY 1963.5' ELEVATION TO 3 FEET BELOW FINISH GRADE. LIVE CUTINGS AND BRUSH SHALL BE PLACED UNIFORMLY ALONG THE TRENCH TO A COMRESSED DEPTH OF 6 INCHES. LIVE CUTTINGS SHALL BE INSTALLED WITH BUDS ORIENTED UPWARD AND SHALL BE EVENLY DISTRIBUTED THROUGHOUT THE MAT.
- 4. SOIL SHALL BE BACKFILLED IN SIX INCH LIFTS. THE FIRST LIFT SHALL BE WASHED INTO THE BRUSH MAT WITH WATER TO ELIMINATE VOIDS. SUPPLEMENTAL LIFTS SHALL BE COMPACTED..

15

-	PRE-PLANTED COII	<u>R MAT SPECIES SE</u>	LECTION
D	SPECIES NAME	COMMON	NAME
CA	CAREX AQUATILIS	WATER SE	DGE
CL	CAREX LANGUINOSA	WOOLY SE	EDGE
CN	CAREX NEBRASCENSIS	NEBRASKA	SEDGE
си	CAREX UTRICULATA	BEAKED S	SEDGE
JB	JUNCUS BALTICUS	BALTIC RU	JSH
ANTIN	NG DETAILS	Nason Creek Parking Lot and Abutment Removal Project	
		Sheet 19 of 19	CCONR-2013.xx

Attachment C: Figures

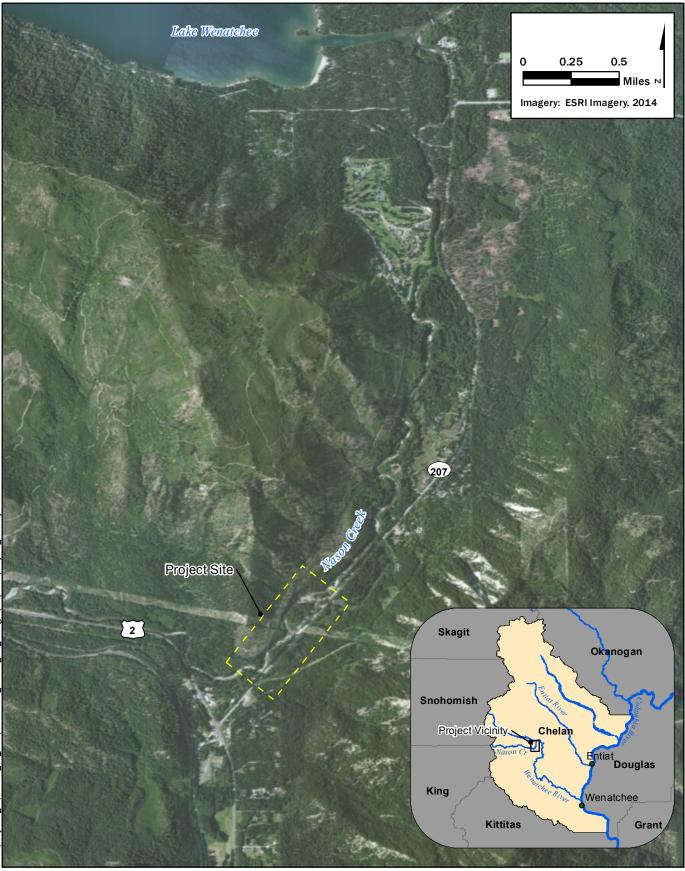
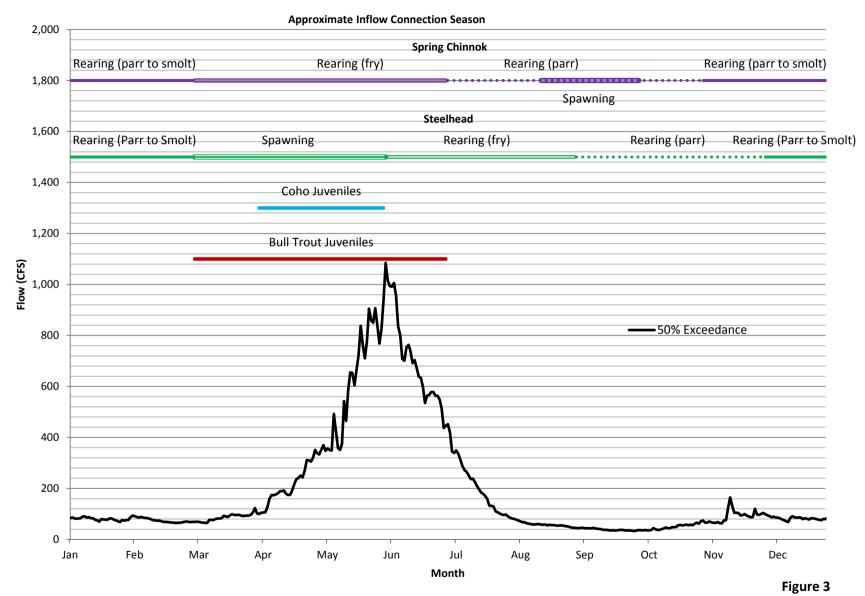






Figure 2 Project Overview RM 4.7 - RM 3.3 Restoration Project





Life History Stage and Timing in Lower Nason Creek

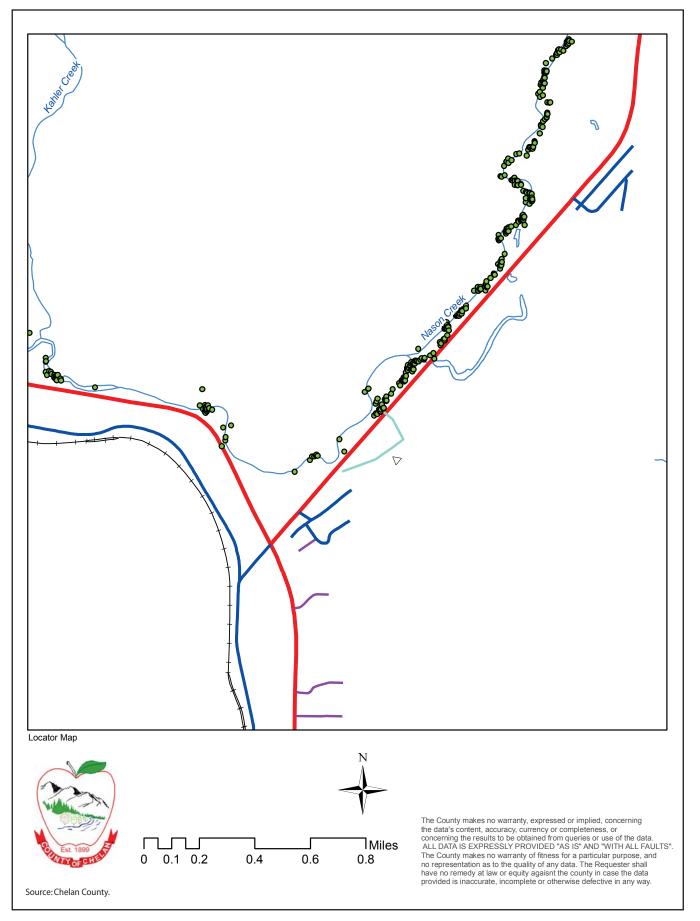




Figure 4 2005–2007 Spring Chinook Spawning Locations in Mainstem Nason Creek Nason Creek–RM 4.6 Floodplain Reconnection Project

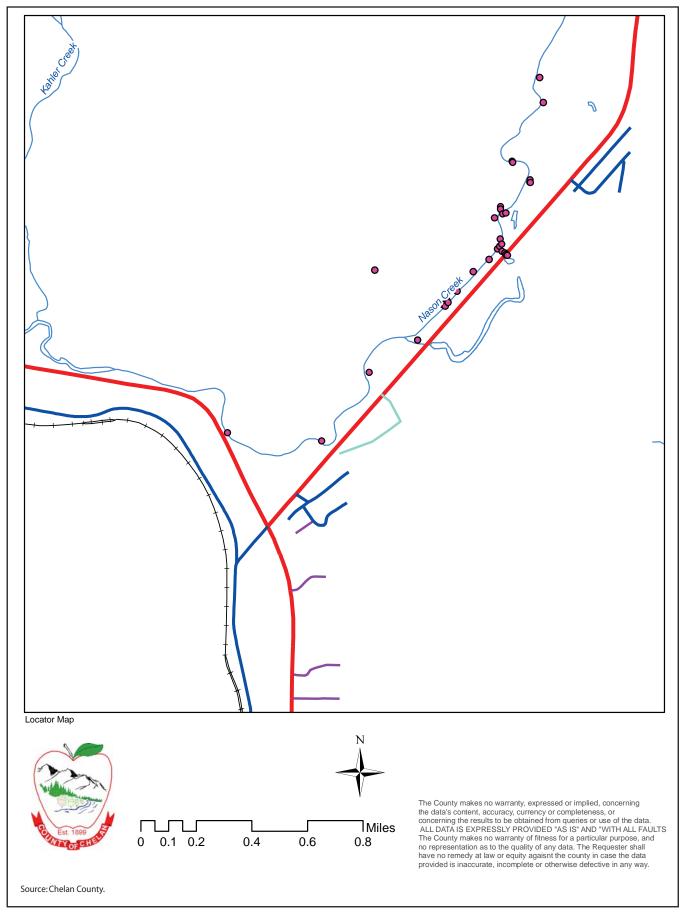




Figure […] 2005–2012 Steelhead Spawning Locations in Mainstem Nason Creek Nason Creek–RM 4.6 Floodplain Reconnection Project

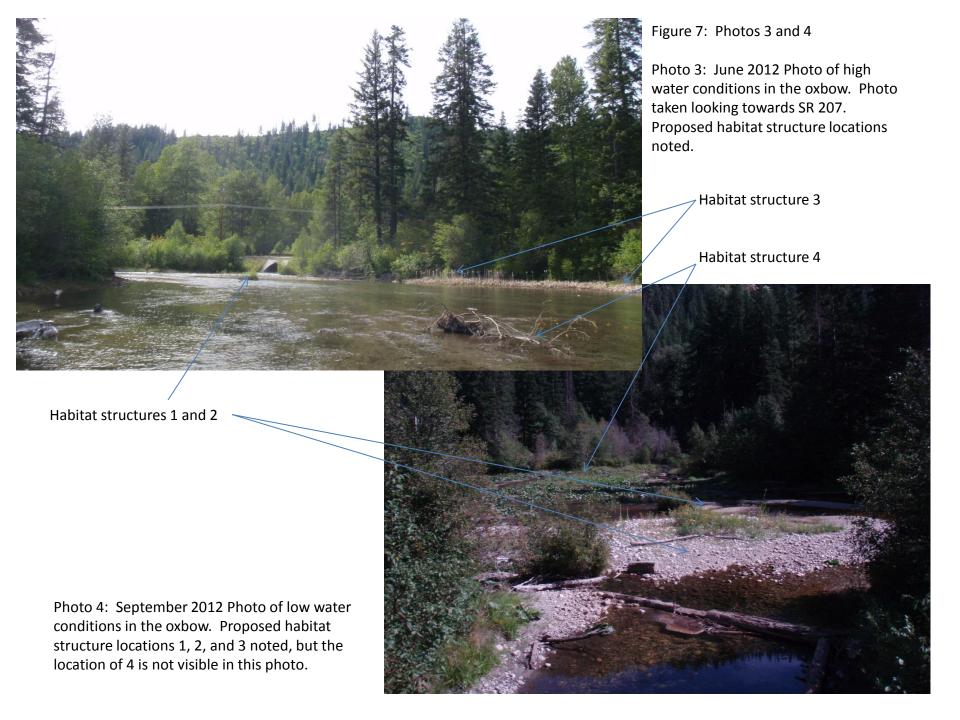


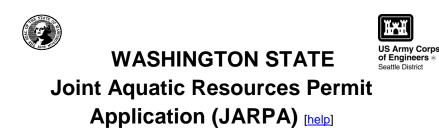
Figure 6: Photos 1 and 2

Photo 1: Looking across Nason Creek at the bridge abutment fill removal area.



Photo 2: Looking across the floodplain fill removal area.





Attachment D: Construction sequence [help]

Use this attachment <u>only</u> if your project will be constructed in phases or stages. Complete the outline showing the construction sequence and timing of activities, including the start and end dates of each phase or stage.

Use black or blue ink to enter answers in white spaces below.

AGENCY USE ONLY
Date received:
Agency reference #:
Tax Parcel #(s):

Phase or Stage	Start Date	End Date	Activity Description
Staging and Clearing	June 1	July 15	Contractor prepares staging areas and stockpile construction materials. Flagging work areas. Removal of vegetation (in the fill removal area) to prepare for construction. Installs block nets, de- fishing in work zone.
In water work	July 15	August 15	Contractor removes fill and places trees in oxbow.
Construction close out	August 15	October 31	Contractor removes all equipment from the site, restores staging and disturbed areas. Prepares site for re-vegetation.
Re- vegetation	September 1	November 15	Site restoration through installation of native plant materials

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