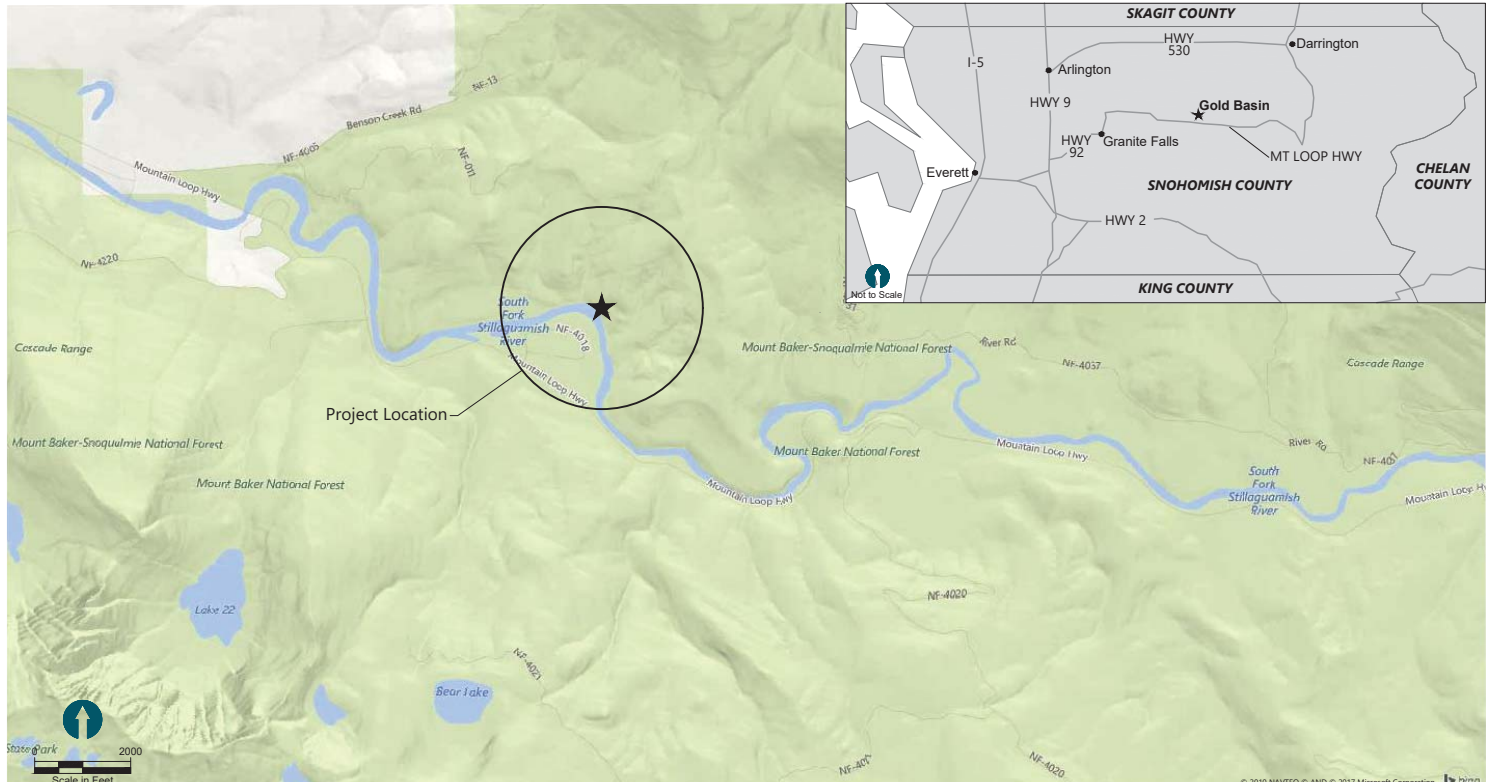


Date: 18. 2020 10:45am Project: 0364-stillaguamish_river_of_instream_habitat_restoration_permit_0364-01-001 Site: Stillaguamish River Site and Vicinity Map



Site and Vicinity Map

PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION

 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:49am Project: 0264-stillaguamish_river_of_watershed Permit: 0264-JA-002-Existing and Existing Conditions Plan



Existing Conditions Plan

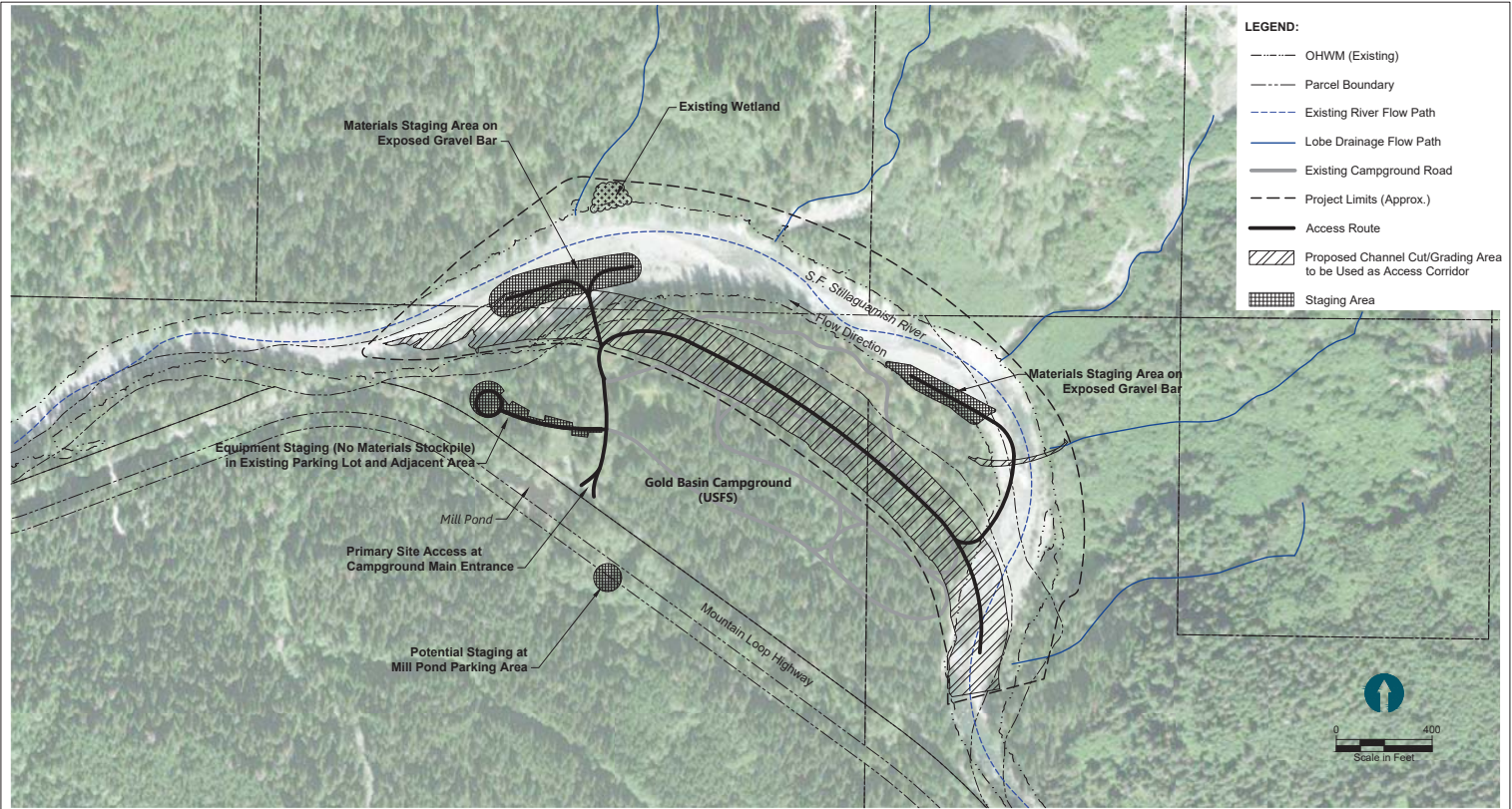
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:45am Project: 0364-stillaguamish_river_of_watershed Permit: 0364-JK-003-Access and Staging Area Access and Staging Plan



Access and Staging Plan

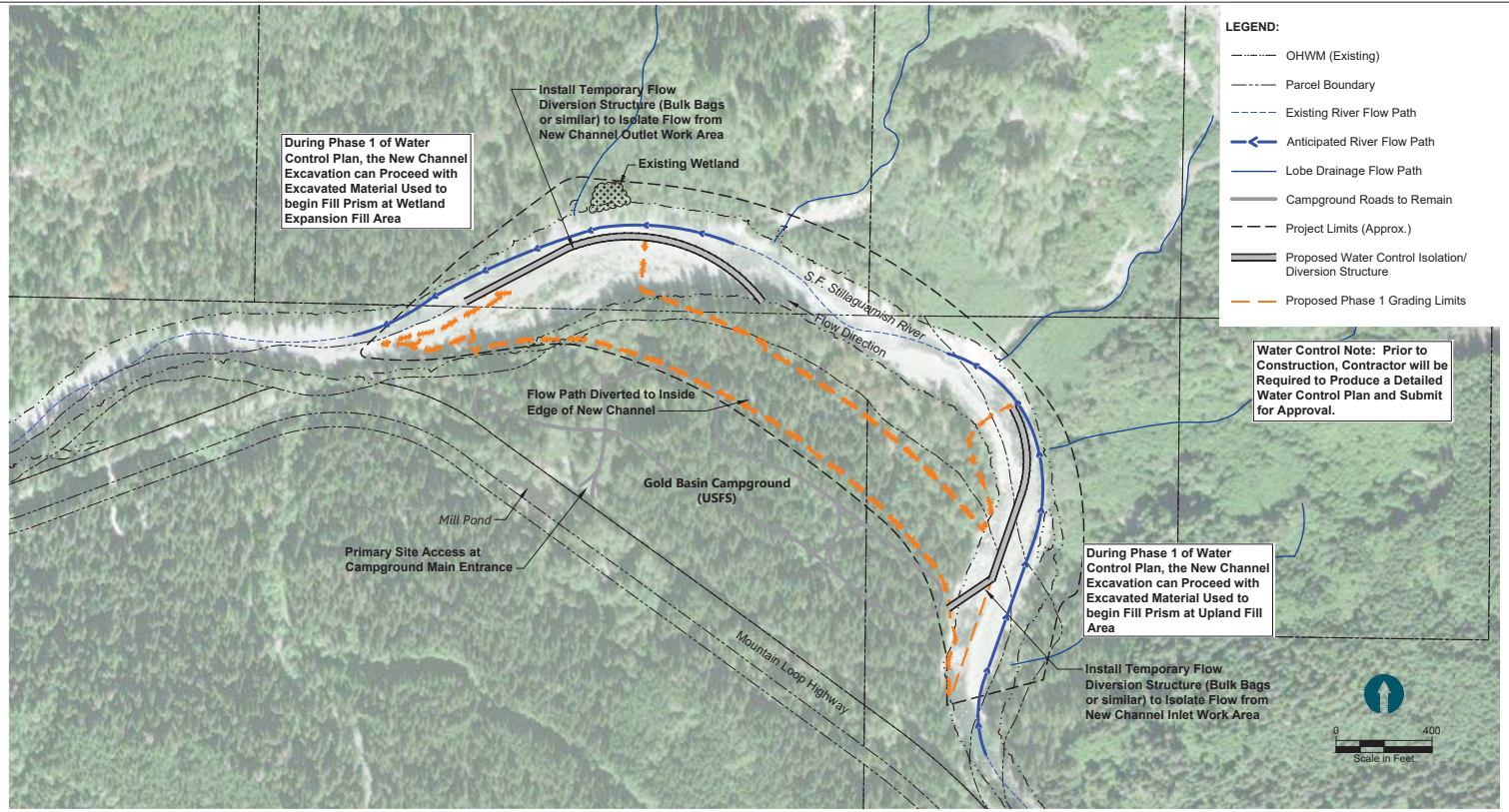
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:45am Project: 0364-stillaguamish_river_of_willamette_basin\Permit\0364-St-004-Water Control.dwg 1. Water Control Plan

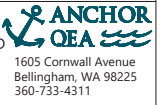


Water Control Plan: Phase 1

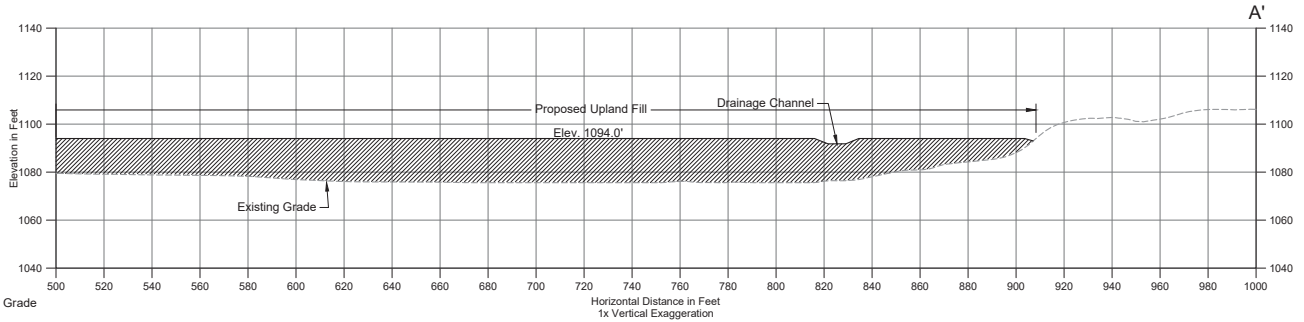
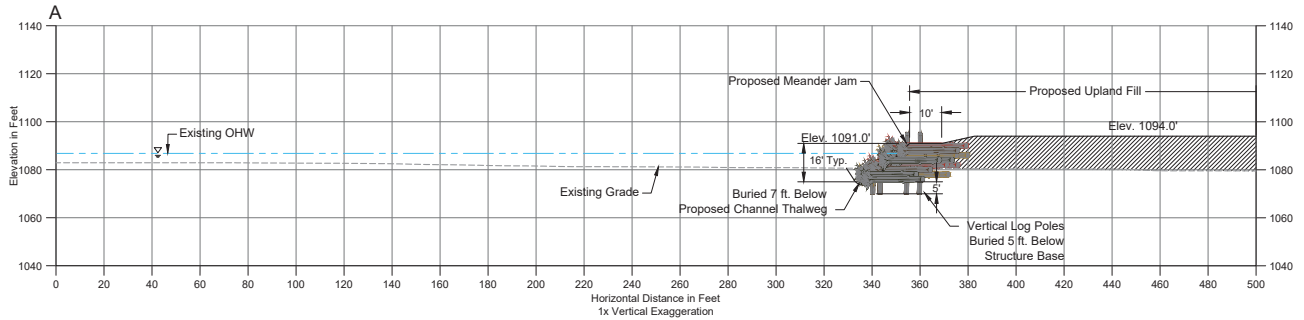
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:50am In: Stillaguamish_Lib_4_Stillaguamish_Permit0364-JA-003-Proposed.dwg 7 Cross Sections A-A'



- LEGEND:**
- Existing Grade
 - Proposed Grade
 - ▽ Ordinary High Water (Existing)
 - ▽ Ordinary High Water (Proposed)
 - ▨ Proposed Upland Fill

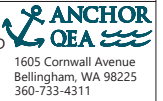


Cross Sections A-A'

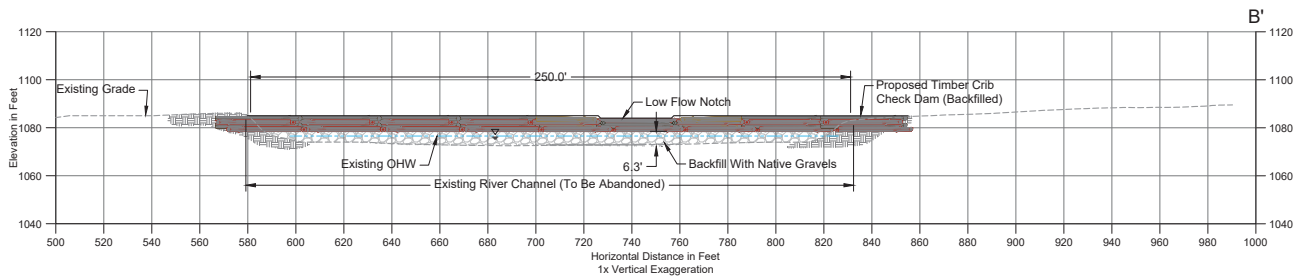
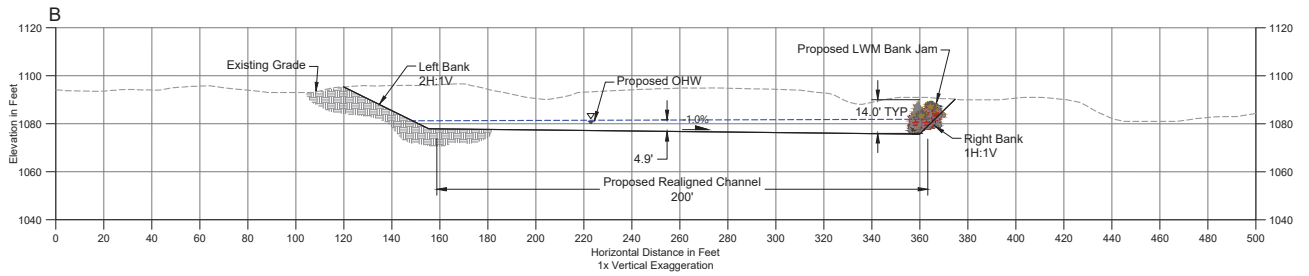
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:50am Project: 034-stillaguamish_river_of_instream_habitat_restoration Permit: 034-JA-003-Proposed.dwg 8 Cross Sections B-B'



LEGEND:

- Existing Grade
- Proposed Grade
- ▽— Ordinary High Water (Existing)
- - -▽ - - Ordinary High Water (Proposed)

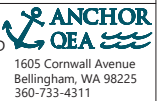


Cross Sections B-B'

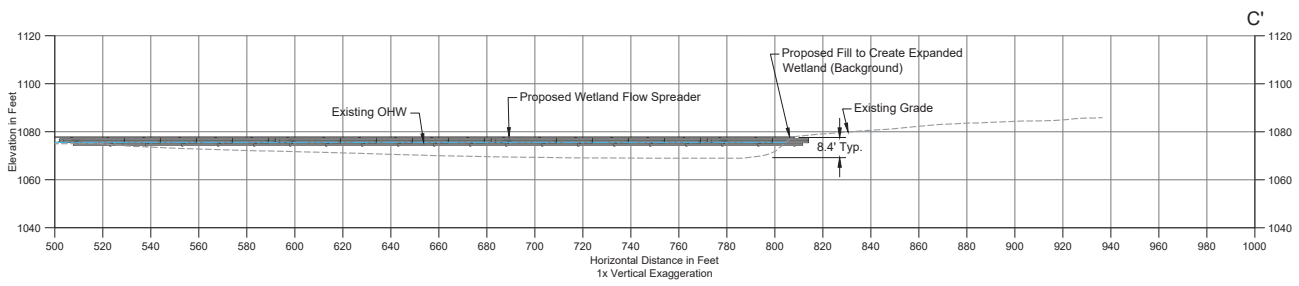
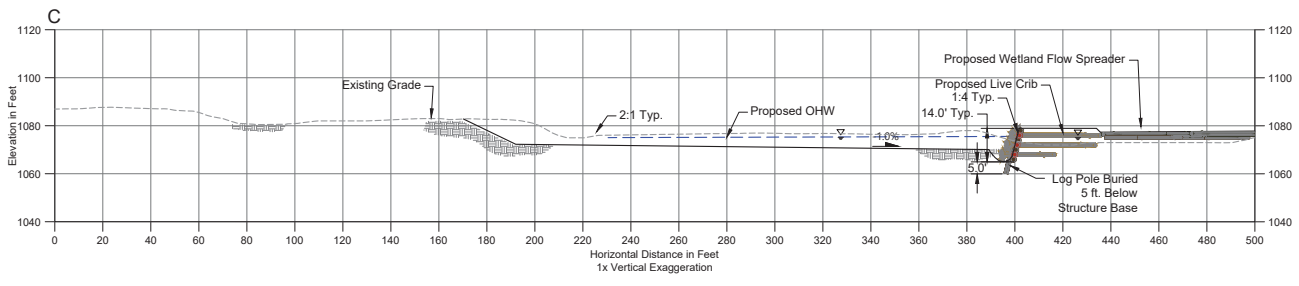
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



Date: 18. 2020 10:50am Author: hmc/hmc
 I:\Projects\0364-stillaguamish_river_of_inland\gd\hmc\Final\Final\0364-JA-003-Proposed.dwg 0 Cross Sections C-C'



- LEGEND:**
- Existing Grade
 - Proposed Grade
 - ▽— Ordinary High Water (Existing)
 - ▽— Ordinary High Water (Proposed)



Cross Sections C-C'

PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION

ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

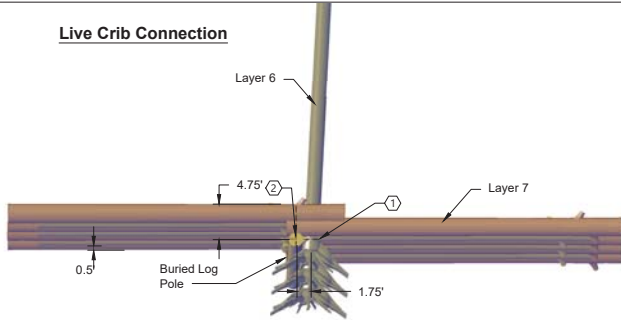
PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.

IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



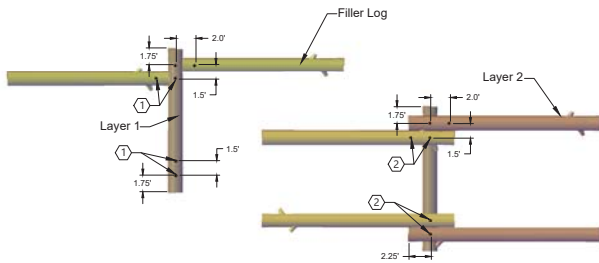
Date: 18. 2020 09:50am Author: J. Johnson File: I:\Projects\0364-Stillaguamish_Libor_of_instantiated\swa\Permit\0364-JA-003-Connection_Details.dwg 10 Connection Details (1 of 2)

Live Crib Connection



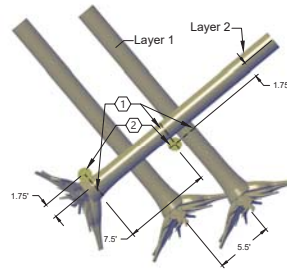
- Notes:
1. Drill 1" diameter hole at location shown on Layer 6. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
 2. Drill 1" diameter hole at location shown on Layer 7. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
 3. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Timber Crib Cross Log Connection

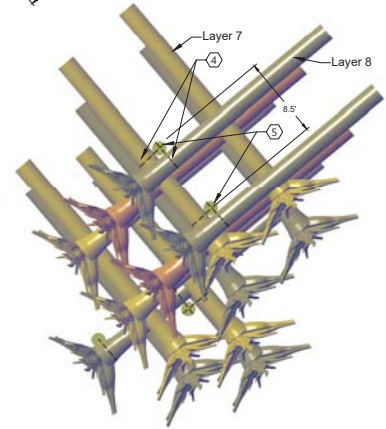


- Notes:
1. Drill 1" diameter hole at locations shown on Layer 1. Start Threaded Rod Stacked Vertical Connection (6 Locs.) See Sheet 11.
 2. Finish Threaded Rod Stacked Vertical Connection on Layer 2 (6 Locs.). See Sheet 11.
 3. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Meander Jam Connection



- Notes:
1. Drill 1" diameter holes in Layers 1 and 2 (3 Locs.).
 2. Drill 1" diameter hole in buried log poles (3 Locs.).
 3. Complete Threaded Rod Vertical Log Connection on Layers 1 and 2 (3 Locs.) See Sheet 11.
 4. Drill 1" diameter holes in Layers 7 and 8 (4 Locs.).
 5. Drill 1" diameter hole in buried log poles (4 Locs.).
 6. Complete Threaded Rod Vertical Log Connection on Layers 7 and 8 (4 Locs.) See Sheet 11.
 7. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

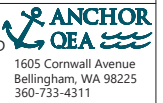


Connection Details (1 of 2)

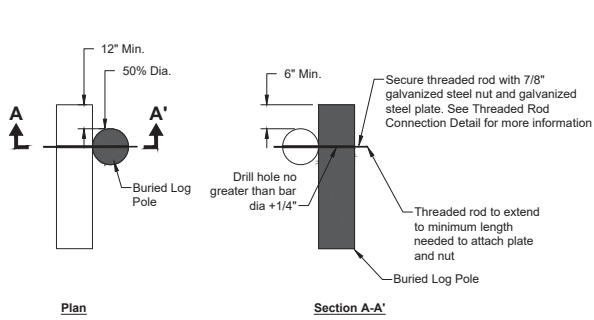
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION
 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

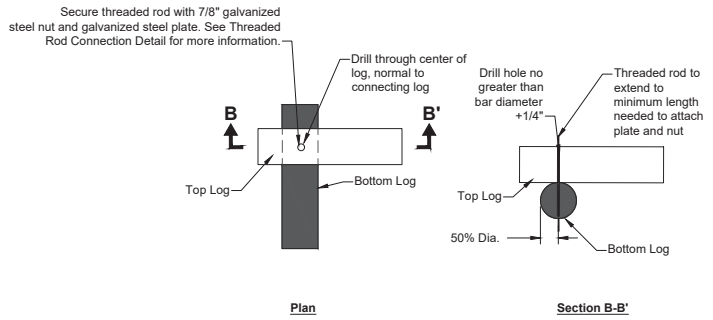
PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020



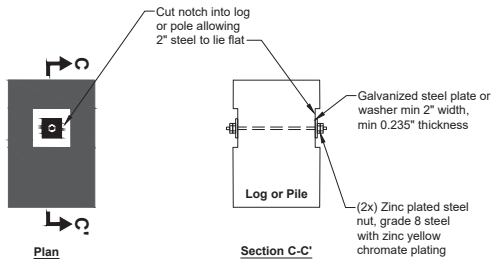
Date: 18. 2020 10:56am Project: 0364-stillaguamish_tba_of_instream_log_barr Permitt0364-JK-003-Connection_Details.dwg 11 Connection Details (2 of 2)



Threaded Rod Vertical Log Connection Detail



Threaded Rod Stacked Vertical Connection Detail



Threaded Rod Washer and Nut Connection Detail

General Notes:

1. All connections shall be approved by the engineer.
2. Steel threaded rod shall be 7/8-inch grade 8 galvanized steel, meeting the requirements of ASTM 354BD.
3. Plates shall be galvanized steel and shall be sized to fit the threaded rod.
4. Nuts shall be zinc yellow chromate-plated grade 8 and be sized to fit the threaded rod.
5. Contractor shall submit shop drawings and product cut sheets for any proposed alterations to the details shown on this sheet for approval by the engineer. Proposed alterations to the details shown on this sheet shall in the opinion of the engineer meet or exceed the design intent of the connection.

Connection Details (2 of 2)

PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
 DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
 LATITUDE: 48.07982N
 LONGITUDE: -121.73334W
 S-T-R: 13/14-30N-8E
 SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION

 ADJACENT PROPERTY OWNERS:
 1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
 2 - SNOHOMISH COUNTY
 3 - NORTH CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT.
 IN: SOUTH FORK STILLAGUAMISH RIVER
 NEAR/AT: GRANITE FALLS, WA
 COUNTY OF: SNOHOMISH
 STATE: WASHINGTON
 DATE: DECEMBER 2020

