### Base Bid Items - Ragland Reach Site 1

<table>
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<tr>
<th>Item #</th>
<th>Item Description</th>
<th>Specification</th>
<th>Quantity</th>
<th>Unit</th>
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<tr>
<td>1</td>
<td>Mobilization</td>
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<td>4</td>
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<td>2</td>
<td>Temporary Construction Access and Staging</td>
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<tr>
<td>3</td>
<td>Type 1 ELJ</td>
<td>6</td>
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<tr>
<td>4</td>
<td>Key Piece Placements</td>
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### Additive Bid Items - Heart K Reach Sites 2, 4, 5

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### MATERIALS SUMMARY

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<tr>
<th>MATERIAL</th>
<th>DIAMETER (IN)</th>
<th>LENGTH (FT)</th>
<th>ROOTWAD DIAMETER (FT)</th>
<th>TOTAL QUANTITY</th>
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<th>TOTAL QUANTITY SITE 2</th>
<th>TOTAL QUANTITY SITE 3</th>
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<th>TOTAL QUANTITY SITE 5</th>
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<td>BATTER PILE</td>
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<td>PROJECT SPONSOR SUPPLIED AND STAGED; CONTRACTOR INSTALLED</td>
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</table>
HIP GENERAL CONSERVATION MEASURES APPLICABLE TO ALL ACTIONS

THE ACTIVITIES COVERED UNDER THE HIP ARE INTENDED TO PROTECT AND RESTORE FISH AND MOLUKE HABITATS AND TO ENSURE THAT THE ACTIONS ARE THE FISHERIES SPECIFIC MEASURES TO PROVIDE FOR THE PROTECTION AND RESTORATION OF THE FISHERIES SPECIFIC MEASURES TO PROVIDE FOR THE PROTECTION AND RESTORATION OF THE

1. PROJECT DESIGN AND SITE PREPARATION.

A. ALL APPROPRIATE REGULATORY PERMITS AND OFFICIAL PROJECT AUTHORIZATIONS WILL BE OBTAINED BEFORE PROJECT IMPLEMENTATION.

B. THESE PERMITS AND AUTHORIZATIONS RELATE TO THE SPECIFIC PROJECTS, NOT TO THE GENERAL CONSERVATION MEASURES OR TO THE GENERAL CONSERVATION MEASURES.

2. TIMELINE FOR WATER WORKS

A. ADEQUATE TIMELINE FOR WATER WORKS WILL BE OBTAINED FROM THE STATE ENVIRONMENTAL PROTECTION AGENCY (SEPA) AND THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

B. CONSTRUCTION TIMESHEET WILL BE OBTAINED FROM THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

C. TIMELINE FOR WATER WORKS WILL BE OBTAINED FROM THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

3. CHANGES TO EXISTING WORK WINDOWS WILL BE APPROVED BY THE STATE ENVIRONMENTAL PROTECTION AGENCY (SEPA) AND THE NATIONAL ENVIRONMENTAL PROTECTION AGENCY (NEPA).

A. BULLE-PROOF WORK WINDOWS WILL BE DESIGNED AND INSTALLED ON THE EXISTING WORK WINDOWS.

B. BULLE-PROOF WORK WINDOWS WILL BE DESIGNED AND INSTALLED ON THE EXISTING WORK WINDOWS.

C. BULLE-PROOF WORK WINDOWS WILL BE DESIGNED AND INSTALLED ON THE EXISTING WORK WINDOWS.

4. TIMELINE FOR WATER WORKS

A. ADEQUATE TIMELINE FOR WATER WORKS WILL BE OBTAINED FROM THE STATE ENVIRONMENTAL PROTECTION AGENCY (SEPA) AND THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

B. CONSTRUCTION TIMESHEET WILL BE OBTAINED FROM THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

C. TIMELINE FOR WATER WORKS WILL BE OBTAINED FROM THE LOCAL ENVIRONMENTAL PROTECTION AGENCY (LEPA).

5. TEMPOERARY ACCESS ROADS AND PATHS

A. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.

B. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.

C. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.

6. TEMPOERARY STREAM CROSSINGS

A. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.

B. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.

C. TEMPORARY ACCESS ROADS AND PATHS WILL BE PREPARED FOR USE AS NEEDED TO PROVIDE ACCESS TO THE WORK AREA.
PROJECT DESIGN AND SITE PREPARATION (CONTINUED).

11. SPILL PREVENTION, CONTROL, AND CONTINGENCY MEASURES

A. A DESCRIPTION OF HAZARDOUS MATERIALS THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES THAT WERE AVAILABLE ON-SITE.

B. WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.

C. SPILL CONTINGENCY KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.

D. WORKERS WILL BE TRAINED IN SPILL CONTINGENCY PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTINGENCY KITS.

E. ANY WASTE LIQUIDS GENERATED AT THE WORKING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPROVISED CHEMICAL-STORED, SUCH AS HARMLESS MATERIALS, UNTIL THEY CAN BE PROPERLY TRANSFERRED TO AND DISPOSED OF AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.

F. PUMPS USED ADJACENT TO WATER SHALL USE SPILL CONTAINMENT SYSTEMS.

12. INVASIVE SPECIES CONTROL

A. PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT WILL BE POWER WASHED, ALLOWED TO DRY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.

B. WATERCRAFT, BOATS, AND NUCular ALLOWED TO BE USED, BUT WILL BE INSPECTED FOR INVASIVE PLANT SPECIES.

C. WORKERS WITH FEET SOLES ARE NOT TO BE ALLOWED TO USE THEIR FEET AS A SUBSTITUTE FOR SHOES, TO AVOID GROWTH OF INVASIVE PLANT SPECIES.

WORK AREA ISOLATION AND FISH SALVAGE.

1. WORK AREA ISOLATION

A. ANY WORK AREA WITHIN THE WATERED CHANNEL WILL BE ISOLATED FROM THE ACTIVE STREAM VIA EMBANKMENTS, DAMS, WALLS, OR SIMILAR STRUCTURES.

B. WORK AREA ISOLATION AND FISH SALVAGE ACTIVITIES WILL COMPLY WITH THE IN-WATER WORK GUIDELINES.

C. DESIGN PLANS WILL INDICATE ALL ISOLATION ELEMENTS AND AREAS (COFFER DAMS, PUMPS, DISCHARGE AREAS, FISH SCREENS, FISH RELEASE AREAS, ETC.).

D. WORK AREA ISOLATION AND FISH CAPTURE ACTIVITIES WILL OCCUR DURING PERIODS OF LOW WATER TEMPERATURES IN THE WINTER AND DURING CONDITIONS APPROPRIATE TO MANAGE STRESS AND DEATH OF SPECIES PRESENT.

2. FISH SALVAGE

A. MONITORING AND RECORD KEEPING WILL TAKE PLACE FOR DURATION OF SALVAGE. THE SALVAGE REPORT WILL BE COMMUNICATED TO AGENCIES VIA THE PROJECT COMMISSION FIRM (PFC).

B. SALVAGE ACTIVITIES WILL BE LIMITED TO TIMES WHEN TEMPERATURES ALLOW CAPTURING AND TRANSFER TO THE ANIMAL SPECIES, TYPICALLY PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES WHICH OCCUR DURING THE WINTER.

C. SALVAGE OPERATIONS WILL FOLLOW THE FOLLOWING STEPS:

1. SLOWLY REDUCE WATER FROM THE WORK AREA TO ALLOW SOME FISH TO LEAVE VOLUNTARILY.

2. BLOCK NETS WILL BE INSTALLED AT UPSTREAM AND DOWNSTREAM LOCATIONS AND MAINTAINED IN A SECURED POSITION TO EXCLUDE FISH FROM ENTERING THE WORK AREA.

3. BLOCK NETS WILL BE SECURED TO THE stream CHANNEL, BED AND BANKS. FISH Capture AND TRANSPORT ACTIVITIES ARE COMPLETE. BLOCK NETS MAY BE LEFT IN PLACE FOR THE DURATION OF THE PROJECT TO EXCLUDE FISH AS LONG AS PASSAGE REQUIREMENTS ARE NOT MET.

4. NETS WILL BE MONITORED DAILY, DURING IN-STREAM DISTURBANCE.

E. IF BLOCK NETS REMAIN IN PLACE MORE THAN ONE DAY, THE NETS WILL BE MONITORED AT LEAST ONCE DAILY. FISH THAT ARE SECURED AND FREE OF ORGANIC ACUMULATION AT BULL TROUT ARE PRESENT, NETS ARE TO BE CHECKED EVERY 4 HOURS FOR FISH MOVEMENT.

F. CAPTURE FISH THROUGH SCREENING AND RELABEL TO STREAMS.

G. WHILE REMOVING, ANY REMAINING FISH WILL BE COLLECTED BY HAND OR DIP NETS.

H. DENY A FISH WITH A DESIGNED SIZE OF CAPTURE OF THE RESIDING SEA-FISHED LISTED FISH WILL BE USED.

I. MIDWAY TRAPS WILL BE LEFT IN PLACE OVERNIGHT AND IN USE CONDITON WITH SEWING.

J. ELECTRICFISH TO CAPTURE AND RELEASED FISH THAT ARE NOT CAUGHT DURING SEWING PER ELECTRICFISH CONSIDERATION MEASURES.

K. CONTINUE TO SLOWLY DRAIN STREAM RICHE.

L. COLLECT ANY REMAINING FISH IN COLE-WATER BUCKETS AND RELEASED TO THE SITE.

M. UNIT THE TUBE FISH ARE IN A TRANSPORT BUCKET.

N. MANIPULATE POPULATION BY TRANSFERRING COMPARE SIZE IN BUCKETS.

O. BUCKET WATER TO BE CHANGED EVERY 15 MINUTES OR NEEDED.

P. BUCKETS WILL BE KEPT IN SHAD STORAGE OR COVERED.

Q. DEAD FISH WILL NOT BE STORED IN TRANSIT BUCKETS, BUT WILL BE LEFT ON THE STREAM BANK TO AVOID NURSERY GROWTH.

R. SALVAGE GUIDELINES FOR BULL TROUT, LAMPREY, MUSSELS, AND NATIVE FISH.

S. CONDUCT SITE SURVEY TO ESTIMATE SALVAGE NUMBERS.

T. SELECT-FISH DESIGN FOR RELEASE AND/or MUSSELS ARE NEEDED.

U. SALVAGE OF BULL TROUT: WILL NOT TAKE PLACE WHEN WATER TEMPERATURES EXCEED 15 DEGREES CELSIUS.

V. IF DRAINING WATER LESS THAN 10 HOURS DURING A WATER TEMP. LIMIT OF 10 DEGREES CELSIUS, MUSSELS MAY NOT BE NECESSARY AT WATER TEMPERATURES SUPPORT SURVIVAL, ENSURE THERMAL.

W. MUSSELS MAY BE TRANSFERRED IN COOLERS.

X. MUSSELS WILL BE PLACED IN A SURFACE TO ENFORCE ABILITY TO BURROW INTO NEW HABIT.

3. ELECTRICFISHING

A. INITIAL SITE SURVEY AND INITIAL SETTINGS.

1. IDENTIFY SPANNING ADULTS AND ACTIVE REDDS TO AVOID.

2. RECORD WATER TEMPERATURE. ELECTRICFISHING WILL NOT OCCUR WHEN WATER TEMPERATURES ABOVE 18 DEGREES CELSIUS.

3. IF POSSIBLE, A BLOCK NET WILL BE PLACED DOWNSTREAM AND CHECKED REGULARLY TO CAPTURE SUSPENDED FISH THAT DRIFT DOWNSTREAM.

4. INITIAL SETTINGS WILL BE 100 VOLTS, PULSE WIDTH OF 500 MICRO SECONDS AND PULSE RATE OF 33 HERTZ.

5. RECORDS FOR CONDUCTIVITY, WATER TEMPERATURE, AIR TEMPERATURE, ELECTRICFISHING CURRENT, ELECTRICFISHING LOAD, ELECTRICFISHING CALIBRATION, ELECTRICFISHING MODE, ELECTRICFISHING SELECT, ELECTRICFISHING CALIBRATION, FISH MOVEMENTS, AND FATALITIES, AND CAPTURE RA辐射 WILL BE IN CURED IN THE SALVAGE LOG BOOK.

4. ELECTRICFISHING TECHNIQUE

1. SAMPLING WILL BE STARTED USING STRAIGHT DC. POWER WILL BE USED ALONG WITH THE FALLING RELAY."
4. DEWATERING

A. DEWATERING WILL OCCUR AT A RATE SLOW ENOUGH TO ALLOW SPECIES TO NATURALLY Migrate out of the work area.

B. WHERE A GRAVITY FEED DIVERSION IS NOT POSSIBLE, A PUMP MAY BE USED. PUMPS WILL BE INSTALLED TO AVOID REPEETITIVE DEWATERING AND REMATERING.

C. WHEN FISH ARE PRESENT, PUMPS WILL BE SCHEDULED IN ACCORDANCE WITH HABS FISH SCREEN CRITERIA. HABS ENGINEERING REVIEW AND APPROVAL WILL BE OBTAINED FOR PUMPS EXCEEDING 3 CUBIC FEET PER SECOND.

D. DESTRUCTION OF FLOW ENERGY AT THE BYPASS OUTFLOW WILL BE PROVIDED TO PREVENT DAMAGE TO THE STREAM CHANNEL AND RIPARIAN VEGETATION.

E. SEPARATE WATER WILL BE PUMPED TO A TEMPORARY STORAGE AND TREATMENT SITE OF UPLAND AREA TO ALLOW WATERS TO PERCOLATE THROUGH SOIL AND VEGETATION PRIOR TO REINTEGRATING THE STREAM CHANNEL.

2. CONSTRUCTION AND POST CONSTRUCTION CONSERVATION MEASURES.

1. FISH PASSAGE

A. FISH PASSAGE WILL BE PROVIDED FOR ADULT AND JUVENILE FISH LIKELY TO BE PRESENT DURING CONSTRUCTION UNLESS PASSAGE DID NOT EXIST BEFORE CONSTRUCTION, THE STREAM IS NATURALLY IMPASSABLE, OR PASSAGE WILL NOT IMPACT EIA-LISTED SPECIES OR THEIR HABITAT.

B. FISH PASSAGE ALTERNATIVES WILL BE APPROVED BY THE EPA EC LEAD UNDER ADJUISTMENT BY THE NMM'S HABITAT BIOLOGIST.

2. CONSTRUCTION AND DISCHARGE WATER

A. SURFACE WATER MAY BE EMERGED TO MEET CONSTRUCTION NEEDS ONLY IF DEVELOPED SOURCES ARE UNAVAILABLE OR INEFFECTIVE.

B. OVERTURES WILL NOT EXCEED 10% OF THE AVAILABLE FLOW.

C. CONSTRUCTION DISCHARGE WATER WILL BE COLLECTED AND TREATED TO REMOVE DECRS, NUTRIENTS, SCUM, PETROLEUM HYDROCARBONS, METALS, AND OTHER POLLUTANTS.

3. TIME AND EXTENT OF DISCHARGE

A. EARTHWORK REQUIREMENTS IN-STREAM MECHANIZED EQUIPMENT (INCLUDING DREDGING, DISCHARGE, OVERTURING, FILLING, AND COMPACTING) WILL BE COMPLETED AS QUICKLY AS POSSIBLE.

B. MECHANIZED EQUIPMENT WILL WORK FROM THE TOP OF BANK UNLESS WORK FROM ANOTHER LOCATION WILL RESULT IN LESS HABITAT DISTURBANCE (TURBIDITY, VEGETATION DISTURBANCE, ETC.).

4. DESTRUCTION OF WORK

A. PROJECT OPERATIONS WILL CAUSE WHEN HIGH FLOW CONDITIONS MAY RESULT IN PULVERIZATION OF THE PROJECT AREA (FLOOD EFFORTS TO DECREASE DAMAGE TO NATURAL RESOURCES PERMITTED).

B. WATER QUALITY LEVELS EXCEEDED. SEE CMA SECTION 401 WATER QUALITY CERTIFICATION AND TURBIDITY MEASURES.

5. SITE RESTORATION

A. DISTURBED AREAS, STREAM BANKS, SOILS, AND VEGETATION WILL BE CLEANED UP AND RESTORED TO APPROVED OR PRE-PROJECT CONDITIONS.

B. PROJECT-RELATED WASTE WILL BE REMOVED.

C. TEMPORARY ACCESS ROADS AND STAGING WILL BE DECOMPACTED AND RESTORED. SOILS WILL BE LOOSENED IF NEEDED FOR REVEGETATION OR WATER INFILTRATION.

D. THE PROJECT SPONSOR WILL RETAIN THE RIGHT OF REASONABLE ACCESS TO THE SITE TO MONITOR AND MAINTAIN THE SITE OVER THE LIFE OF THE PROJECT.

E. REVEGETATION

A. PLANTING AND SEEDING WILL OCCUR PRIOR TO OR AT THE BEGINNING OF THE FIRST GROWING SEASON AFTER CONSTRUCTION.
NOTES
1. ACCESS ROUTES ARE APPROXIMATE AND SHALL BE REFINED
   PRIOR TO CONSTRUCTION AND APPROVED BY PROJECT
   SPONSOR.
2. STREAM DIVERSION AND Dewatering IS NOT ANTICIPATED.
   LOGS WILL BE PLACED IN THE INLET, BUT MACHINES SHALL
   NOT ENTER THE DIVERTED CHANNEL. CONSTRUCTION SHALL
   OCCUR FROM BANKS AND DRY GRAVEL BARS.
3. EQUIPMENT MUST BE STAPED MORE THAN 150 FT AWAY
   FROM STREAM CHANNEL. NATURAL MATERIALS CAN BE
   STAPED CLOSER.
4. FOLLOWING CONSTRUCTION, ALL ACCESS ROUTES, STAGING
   AREAS, AND OTHER DISTURBED AREAS ARE TO BE
   DECOMPACTED AND PREPARED FOR SEEDING. SEEDING SHALL
   BE DONE BY THE PROJECT SPONSOR AND IS NOT
   RESPONSIBILITY OF CONTRACTOR.
NOTES:
1. KEY PIECE PLACEMENT DETAILS AND QUANTITIES ARE SHOWN ON SHEET 13. LOCATIONS SHOWN ARE APPROXIMATE AND WILL BE DETERMINED IN THE FIELD BY THE ENGINEER OR PROJECT SPONSOR.
2. NOT ALL KEY PIECE ARE SHOWN. SEE SHEET 13 FOR KEY PIECE ZONE STATION INTERVALS.
NOTES:
1. STRUCTURE INTENT IS TO DISSIPATE ENERGY WITHIN THE EXISTING LOW FLOW CHANNEL OVER A SERIES OF LOG STEPS IN ORDER TO TRAP AND STORE STREAMBED GRAVEL WHICH WILL INCREASE THE WATER TABLE, INCREASE FLOODEPLAIN CONNECTIVITY, CREATE POOLS, AND ADD COMPLEX COVER FOR SALMONIDS.
2. NO EXCAVATION BELOW DRYM IS PROPOSED; THIS TURBIDITY SHALL BE MANAGED. LITTERING OF THE FLOWING CHANNEL IS NOT PROPOSED.
3. STRUCTURE LOCATIONS AND DESIGN ELEVATIONS OF LOGS TO BE DETERMINED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION. SITE CONDITIONS VARY AND EROSION OF HIGH EXPOSED BANKS WAS LIKELY OCCURRED SINCE THE TOPOGRAPHIC SURVEY.
4. TYPICAL INSTALLATION SEQUENCE IS AS FOLLOWS:
   4.1 Review the drawing set by the engineer and the owner to understand the orientation and desired elevations of each log.
   4.2 Place a layer or slab (usually 12" thick, 4" wide and 45° long) beneath location of each log.
   4.3 Add roughly 10 pieces of racks beneath location of each log.
   4.4 Place key log on top of racks and slash with boards in location determined by engineer or owner.
   4.5 Where excavation may be needed to facilitate key logs on steep vertical banks, excavation may only occur outside of channel and should not result in turbidity entering the stream channel. Any material excavated will be loosely stockpiled, then backfilled over the log at the end of construction.
   4.6 Stack batter piles around all wood material, to trap all wood material to the channel. Red batter piles should have direct contact with the wood material and cross to prevent any gaps that wood can float outside of.
   4.7 Move remaining racking material between driven piles to extend into the wetted channel.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>DIAMETER (IN)</th>
<th>LENGTH (FT)</th>
<th>ROOTWAD DIAMETER (FT)</th>
<th>QUANTITY PER STRUCTURE</th>
<th>UNIT</th>
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<tbody>
<tr>
<td>BATTER PILE</td>
<td>16</td>
<td>20</td>
<td>NA</td>
<td>15</td>
<td>EA</td>
</tr>
<tr>
<td>SURFING</td>
<td>18-20</td>
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<td>SLASH</td>
<td>&lt;1 TO 6</td>
<td>5-10</td>
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<td>30</td>
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## Bank Planting Typical Details

- **Scale:** Not to Scale
- **Approximate Planting Treatment Area (TP):**

## Bank Planting Area 1 Photo

**Scale:** Not to Scale

## Bank Planting Area 2 Photo

**Scale:** Not to Scale

## Bank Planting Area 5 Photo

**Scale:** Not to Scale

### Bank Planting Area Quantities

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<tr>
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</tr>
<tr>
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<td><strong>Total</strong></td>
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### Notes

- The project sponsor will perform bank planting. The contractor is not responsible for bank planting and it is not included as a bid item.
## TEMPORARY LOG CROSSING

### Not to Scale

### TEMPORARY ACCESS ROAD THROUGH RIPARIAN CORRIDOR

### Not to Scale

### TEMPORARY ACCESS ROAD THROUGH GRAVEL BAR

### Not to Scale

---

### Seed Mix

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<td>Elymus glaucus</td>
<td>Blue wildrye</td>
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</tr>
<tr>
<td>Bromus marginatus</td>
<td>Mountain brome</td>
<td>3</td>
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<tr>
<td>Festuca arundinacea</td>
<td>Brome reed</td>
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<tr>
<td>Elymus lanceolatus</td>
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<tr>
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<td>Baltic rush</td>
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<td>Deschampsia cespitosa</td>
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<tr>
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---

### Notes for Temporary Clearing Access

1. Clearing access to be routed to minimize vegetation disturbance and forest clearing.
2. Contractor shall mark clearing limits with flags. Clearing limits to be approved by engineer or project sponsor prior to any clearing activity.
3. Any trees greater than 6 in. dbh shall be removed by rooftop intact and stocked for use in logjam construction.
4. Trees and shrubs with 2-6 in. dbh shall be stockpiled for use as packing material in logjam construction.
5. Removal of vegetation and riparian soil shall be stockpiled, stockpiled, and/or stockpiled on road alignment following termination of work.
6. Access shall be maintained by minor grading and importation of wood chips, gravel, and/or quarry spalls.
7. Clearing access shall be scarified and deconstructed to prevent future access at the termination of work.
8. Replication of road alignment following construction will be performed by contractor.
9. All gravel or quarry spalls placed shall be vacuumed with a centrifuge and removed at termination of work if required.

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### Notes for Temporary Bar Access Road

1. Bar access roads to be routed to minimize vegetation disturbance.
2. Contractor shall stake edges of proposed bar access road for approval by engineer or project sponsor.
3. Equipment shall operate only within staked bar access road alignment or other defined project areas.
4. Bar access road shall be scarified at termination of work.