

- NOTES:**
1. THIS DETAIL COVERS BOTH CONSTRUCTION SCENARIOS: WOOD DELIVERED VIA HELICOPTER AND PLACED WITH EQUIPMENT, AND WOOD SOURCED WITH EQUIPMENT AND PLACED WITH EQUIPMENT.
 2. THE EXACT LOCATION OF STRUCTURE SHALL BE LOCATED PRIOR TO INSTALLATION FOR APPROVAL BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
 3. SEE STRUCTURE SCHEDULE FOR NUMBER OF STRUCTURES, LOCATIONS, LOGS, AND ASSOCIATED MATERIAL QUANTITIES.
 4. WHOLE TREES SHALL BE HANDLED TO REDUCE LOSS OF LIMBS, FOLIAGE, ETC..
 5. RACKING AND SLASH MATERIAL SHALL BE INCORPORATED INTO THE STRUCTURE WHILE PLACING LAYERS SUCH THAT IT IS WOVEN INTO STRUCTURE IN BETWEEN PLACED LOGS AT EACH STEP THROUGHOUT CONSTRUCTION AS DIRECTED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
 6. WHEN UTILIZING EXISTING VEGETATION AS PASSIVE ANCHORS THERE SHALL BE AT A MINIMUM A TREE OF 20" DBH ON THE DOWNSTREAM SIDE, THIS REQUIREMENT MAY BE WAIVED AT THE DISCRETION OF THE C.O. REPRESENTATIVE.
 7. LOG PLACEMENT MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER TO PROVIDE VARIABILITY FROM STRUCTURE TO STRUCTURE.

| DEFLECTOR JAM MATERIAL SCHEDULE | | | | | |
|---------------------------------|------------|----------|------------------------|----------|-------------------|
| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHES | QUANTITY |
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 4 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

10 DEFLECTOR JAM (EQUIPMENT PLACED)
NTS



BEAR CREEK & LITTLE BEAR CREEK-SAUSAGE FISH HABITAT RESTORATION PROJECT
80% DESIGN DRAWINGS
 GRANDE RONDE MODEL WATERSHED
 BEAR CREEK
 GRANDE RONDE RIVER BASIN, OREGON

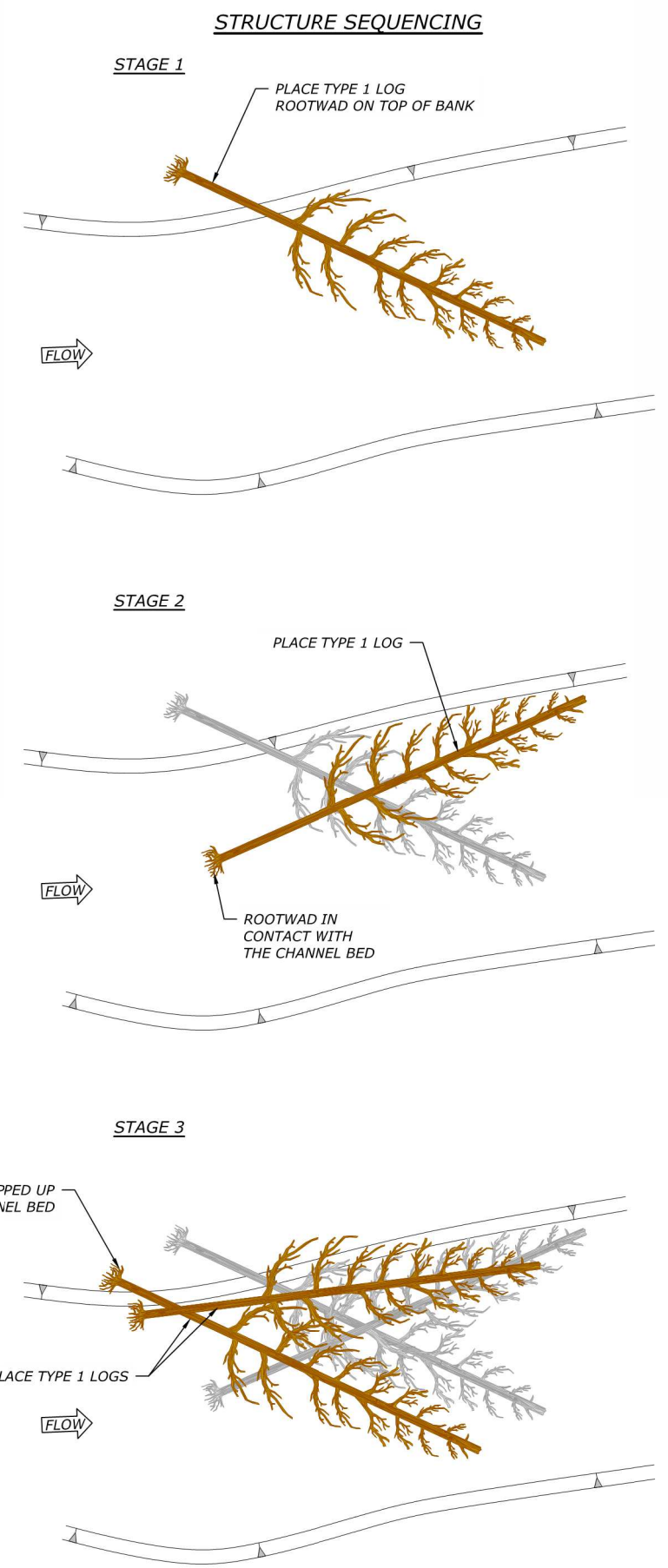
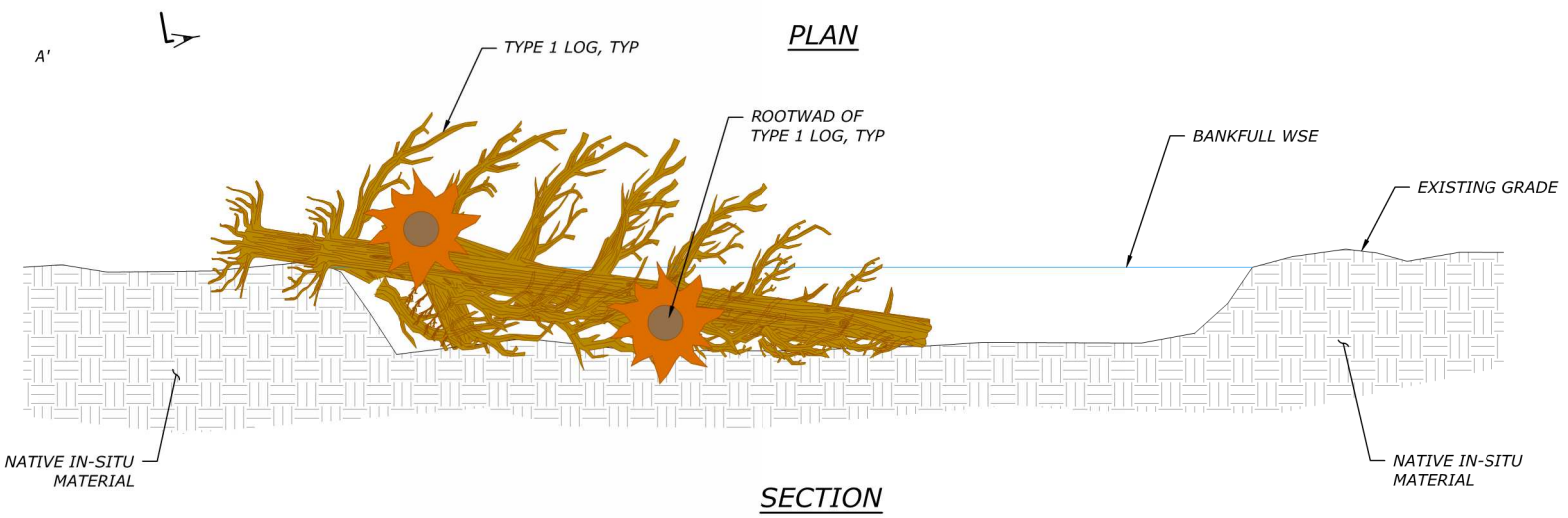
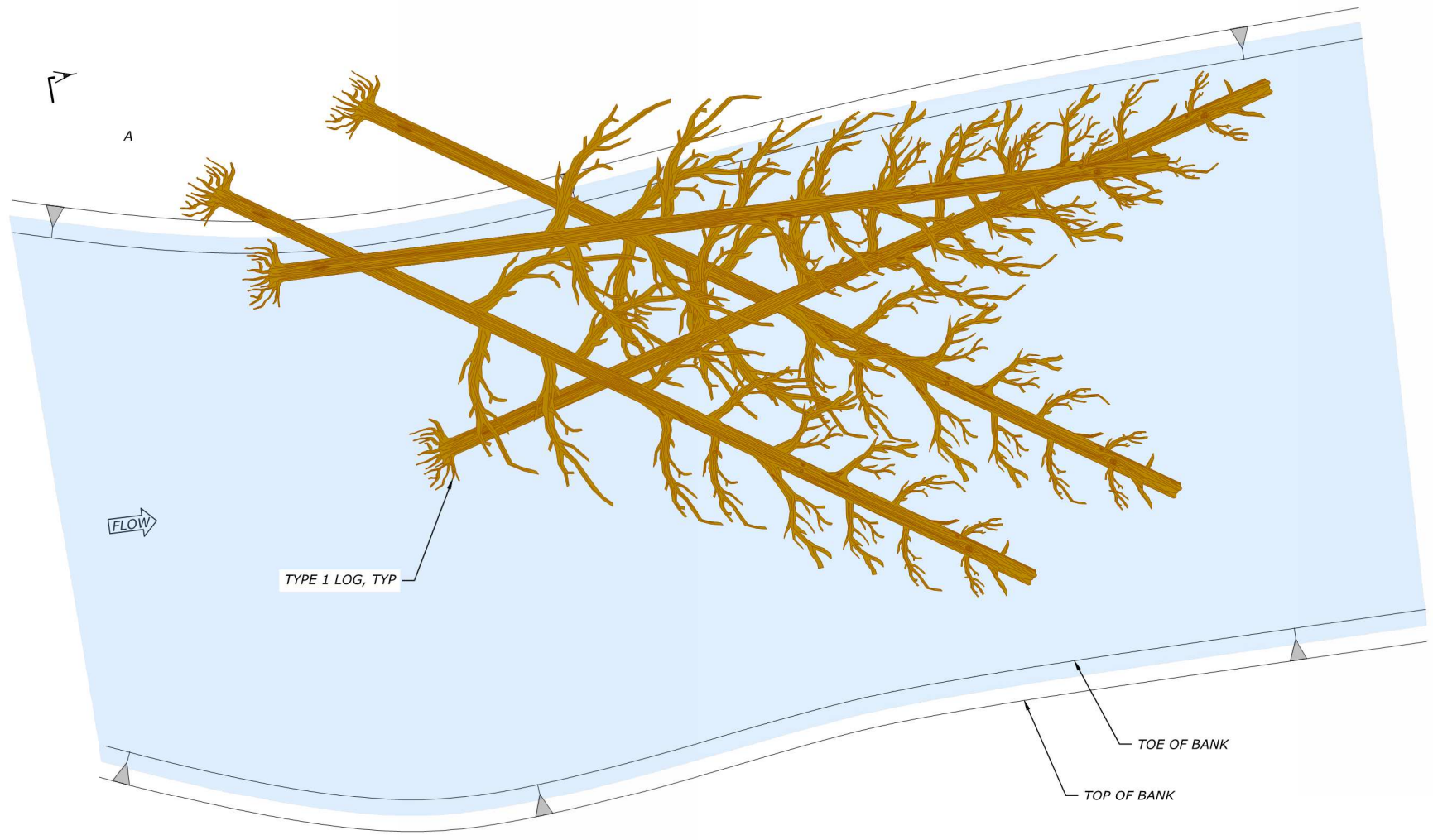
WORKING DRAFT
 FOR REVIEW AND
 REVISION

DATE: 10/15/2025
 DESIGNED: JF, RR, ZS, MG
 APPROVED: JF

DRAWING NAME
DETAILS
 DEFLECTOR JAM
 (EQUIPMENT)

DRAWING NO.
D6
 SHEET 46 OF 57

FILE: R:\PROJECTS\WALLOVA_HUC4141\BEAR_CR_DEVELOP\CAD\PRODUCTION\BEAR-CREEK-DETAILS.DWG, SAVED BY: ZACH SUDMAN, PLOT DATE: 10/14/2025 4:16 PM



- NOTES:**
1. THIS DETAIL COVERS THE CONSTRUCTION SCENARIO WHERE WOOD IS DELIVERED AND PLACED VIA HELICOPTER.
 2. STRUCTURES WITHOUT ROOTWADS ARE SHOWN IN THE DRAWINGS TO IDENTIFY AREAS WHERE LOGS WILL BE SOURCED AND PLACED WITHOUT AN EXCAVATOR.
 3. THE EXACT LOCATION OF STRUCTURE SHALL BE LOCATED PRIOR TO INSTALLATION FOR APPROVAL BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
 4. SEE STRUCTURE SCHEDULE FOR NUMBER OF STRUCTURES, LOCATIONS, LOGS, AND ASSOCIATED MATERIAL QUANTITIES.
 5. WHOLE TREES SHALL BE HANDLED TO REDUCE LOSS OF LIMBS, FOLIAGE, ETC..
 6. RACKING AND SLASH MATERIAL SHALL BE INCORPORATED INTO THE STRUCTURE WHILE PLACING LAYERS SUCH THAT IT IS WOVEN INTO STRUCTURE IN BETWEEN PLACED LOGS AT EACH STEP THROUGHOUT CONSTRUCTION AS DIRECTED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
 7. WHEN UTILIZING EXISTING VEGETATION AS PASSIVE ANCHORS THERE SHALL BE AT A MINIMUM A TREE OF 20" DBH ON THE DOWNSTREAM SIDE, THIS REQUIREMENT MAY BE WAIVED AT THE DISCRETION OF THE C.O. REPRESENTATIVE.
 8. LOG PLACEMENT MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER TO PROVIDE VARIABILITY FROM STRUCTURE TO STRUCTURE.

| DEFLECTOR JAM MATERIAL SCHEDULE | | | | | |
|---------------------------------|------------|----------|------------------------|----------|-------------------|
| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHES | QUANTITY |
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 4 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

11 DEFLECTOR JAM (HELICOPTER PLACED)
NTS



BEAR CREEK & LITTLE BEAR CREEK- SAUVAGE
 FISH HABITAT RESTORATION PROJECT
 80% DESIGN DRAWINGS
 GRANDE RONDE MODEL WATERSHED
 BEAR CREEK
 GRANDE RONDE RIVER BASIN, OREGON

WORKING DRAFT
 FOR REVIEW AND
 REVISION

DATE: 10/15/2025
 DESIGNED: JF, RR, ZS, MG
 APPROVED: JF

DRAWING NAME
 DETAILS
 DEFLECTOR JAM
 (HELICOPTER)

DRAWING NO.
 D7
 SHEET 47 OF 57

FILE: R:\PROJECTS\WALLOWA_HUC1418\BEAR_CR_ODD\CADD\PRODUCTION\BEAR-CREEK-DETAILS.DWG, SAVED BY: ZACH SUDMAN, PLOT DATE: 10/14/2025 4:16 PM

WORKING DRAFT FOR REVIEW AND REVISION

DATE: 10/15/2025
DESIGNED: JF, RR, ZS, MG
APPROVED: JF

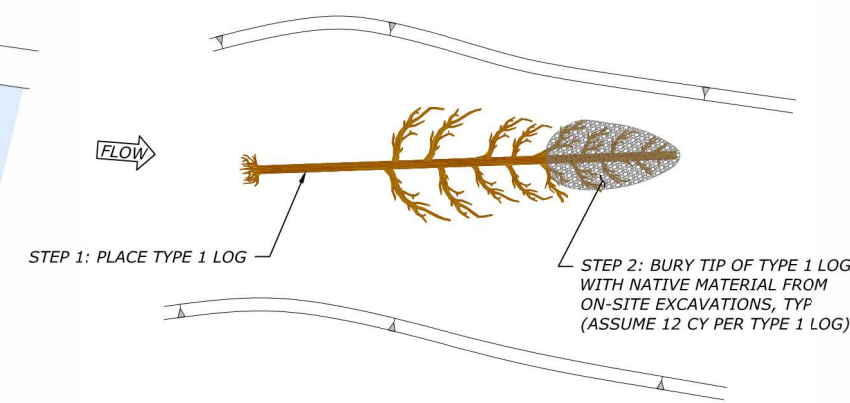
DRAWING NAME
DETAILS

MID-CHANNEL JAM (EQUIPMENT)

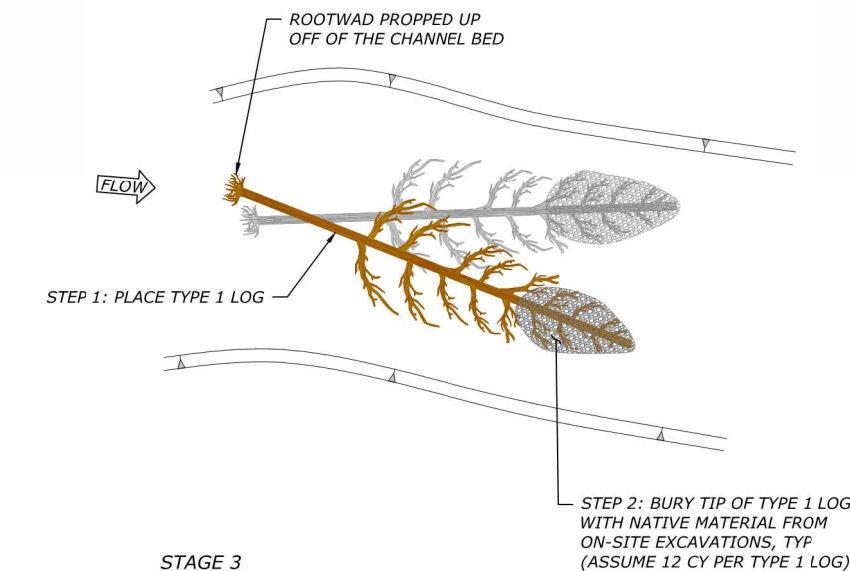
DRAWING NO.
D8
SHEET 48 OF 57

STRUCTURE SEQUENCING

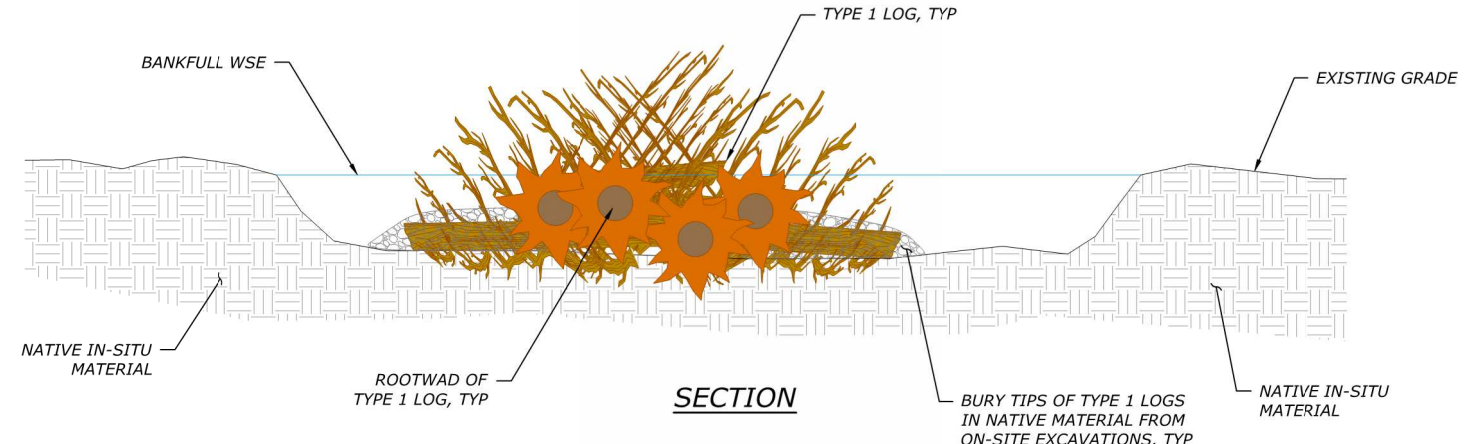
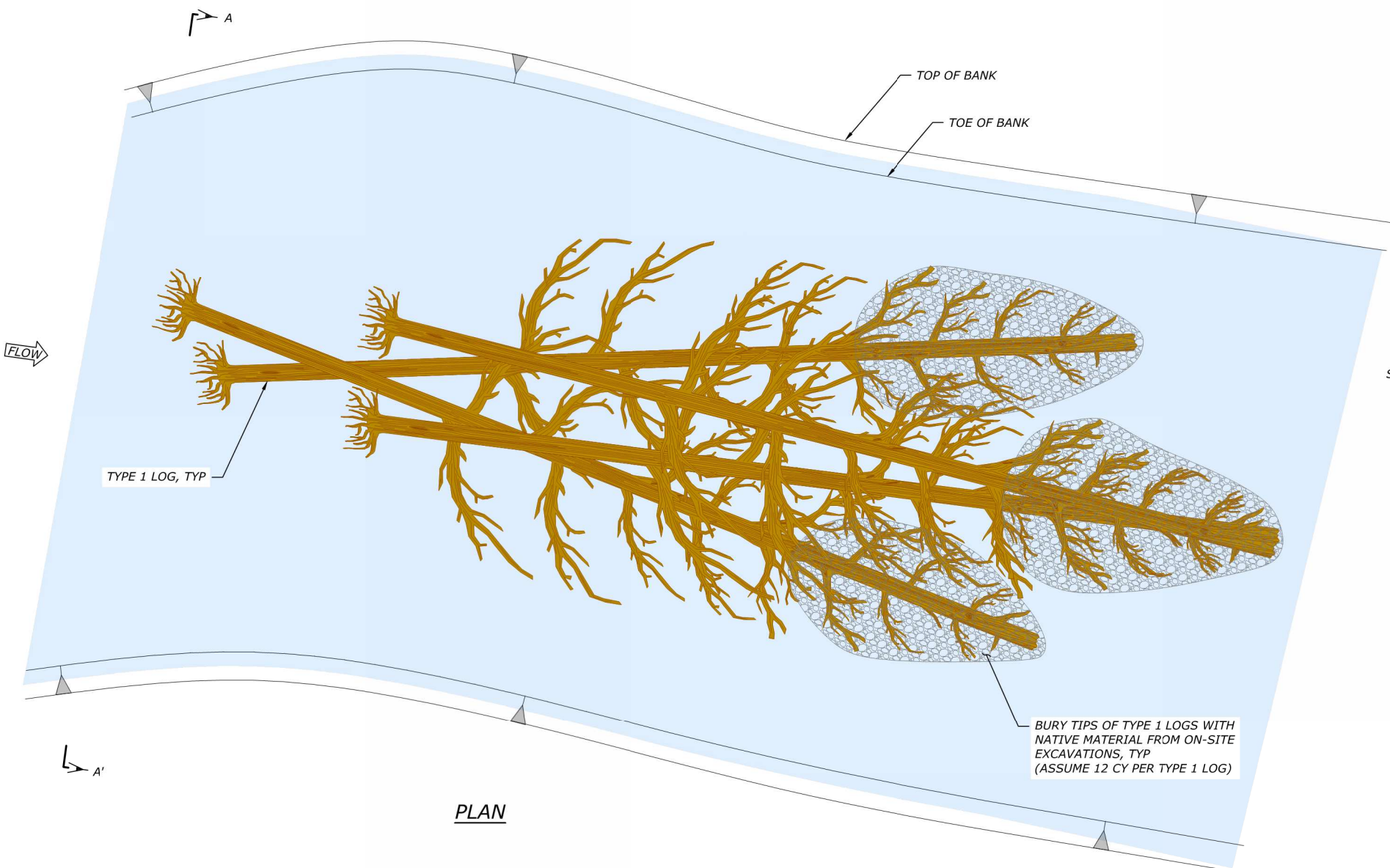
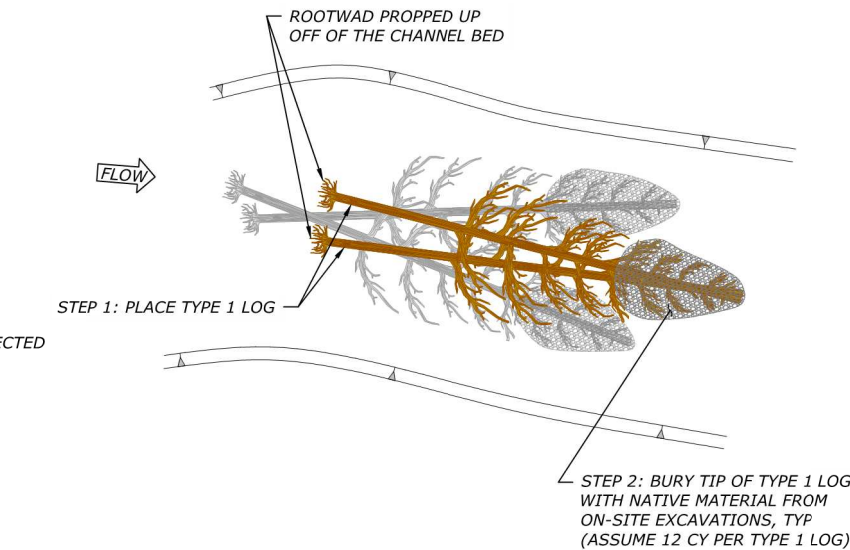
STAGE 1



STAGE 2



STAGE 3



- NOTES:**
1. THIS DETAIL COVERS BOTH CONSTRUCTION SCENARIOS: WOOD DELIVERED VIA HELICOPTER AND PLACED WITH EQUIPMENT, AND WOOD SOURCED WITH EQUIPMENT AND PLACED WITH EQUIPMENT.
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| MID-CHANNEL JAM MATERIAL SCHEDULE | | | | | |
|-----------------------------------|------------|----------|------------------------|----------|-------------------|
| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHES | QUANTITY |
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 4 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

12 MID-CHANNEL JAM (EQUIPMENT PLACED)
NTS

FILE: R:\PROJECTS\WALLOWA_HUC143\BEAR_CR_ODENV\CAD\PRODUCTION\BEAR-CREEK-DETAILS.DWG, SAVED BY: ZACH SUDMAN, PLOT DATE: 10/14/2025, 4:17 PM

WORKING DRAFT
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 REVISION

DATE: 10/15/2025
 DESIGNED: JF, RR, ZS, MG
 APPROVED: JF

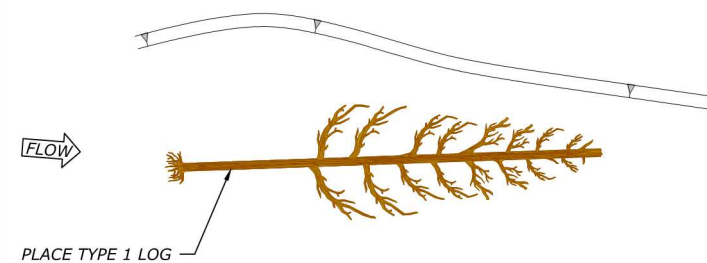
DRAWING NAME
 DETAILS

MID-CHANNEL JAM
 (HELICOPTER)

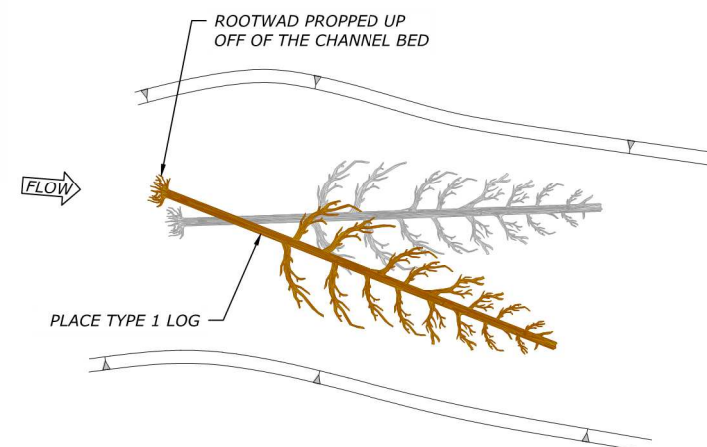
DRAWING NO.
 D9
 SHEET 49 OF 57

STRUCTURE SEQUENCING

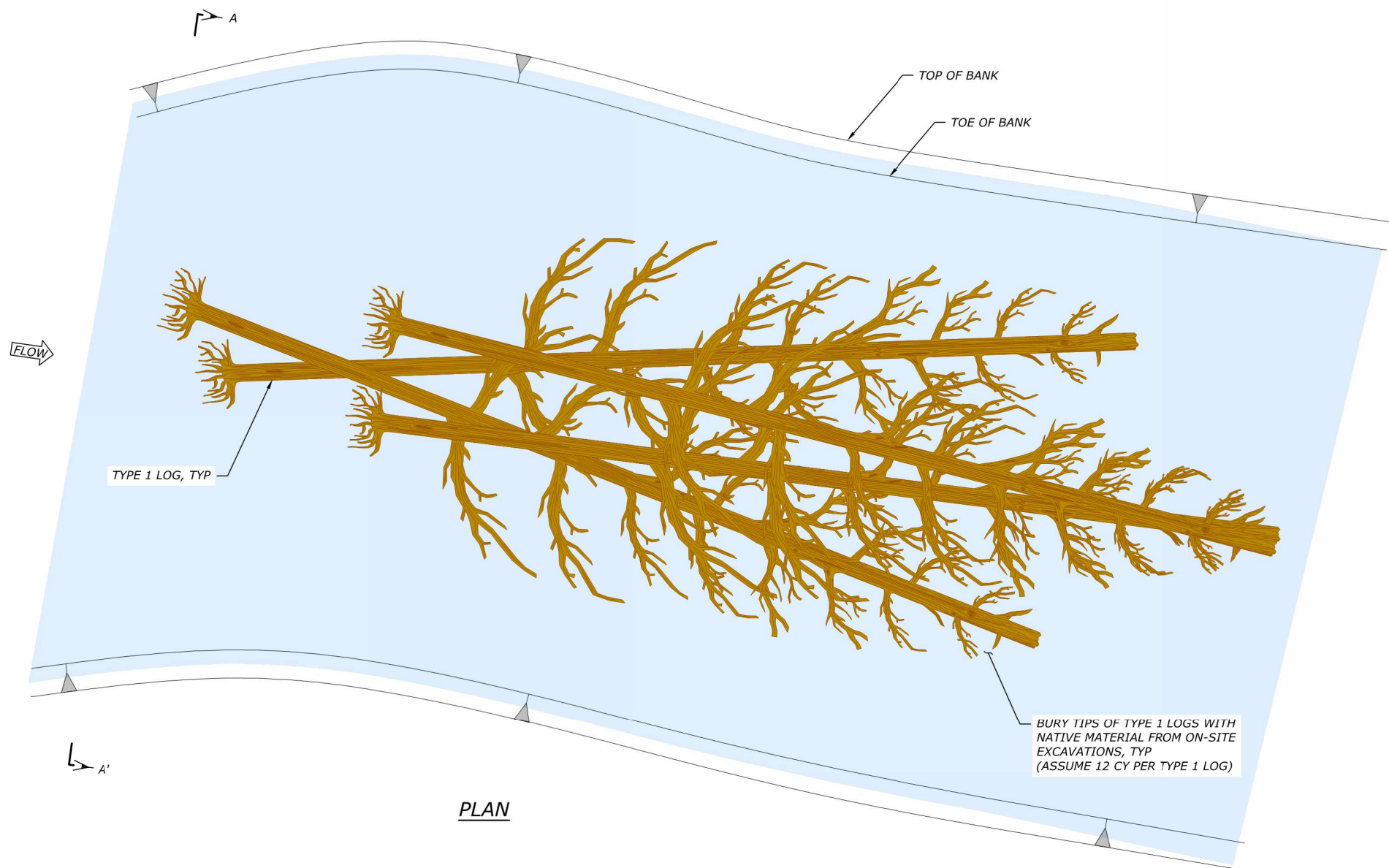
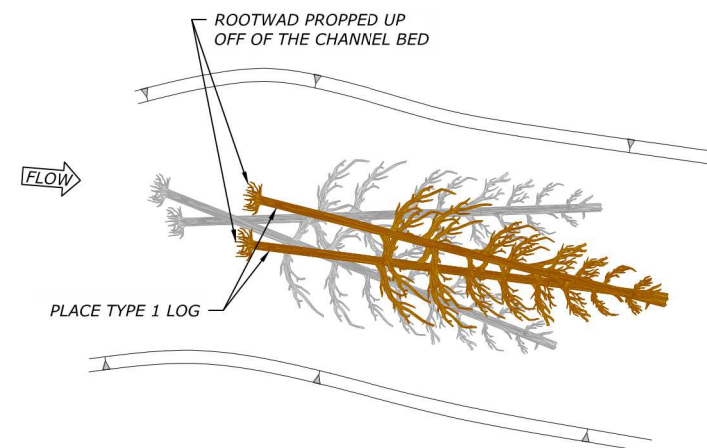
STAGE 1



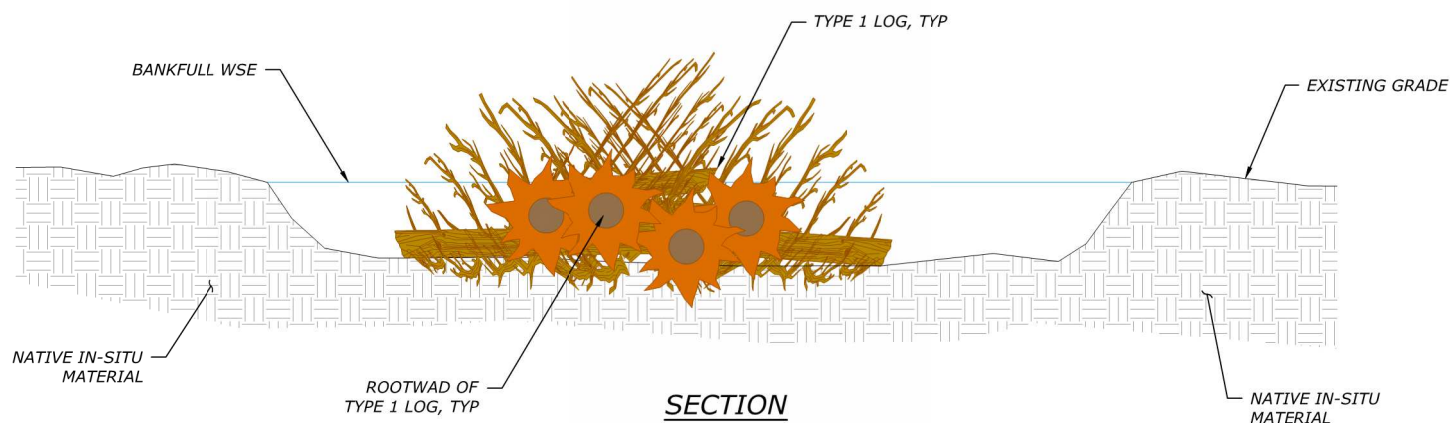
STAGE 2



STAGE 3



PLAN



SECTION

- NOTES:**
- THIS DETAIL COVERS THE CONSTRUCTION SCENARIO WHERE WOOD IS DELIVERED AND PLACED VIA HELICOPTER.
 - THE EXACT LOCATION OF STRUCTURE SHALL BE LOCATED PRIOR TO INSTALLATION FOR APPROVAL BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
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| MID-CHANNEL JAM MATERIAL SCHEDULE | | | | | |
|-----------------------------------|------------|----------|------------------------|----------|-------------------|
| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHES | QUANTITY |
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 4 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

13

MID-CHANNEL JAM (HELICOPTER PLACED)
NTS

FILE: R:\PROJECTS\WALLOWA_HUC141\BEAR_CR_OD\DWG\CAD\PRODUCTION\BEAR-CREEK-DETAILS.DWG, SAVED BY: ZACH SUDMAN, PLOT DATE: 10/14/2025 4:17 PM

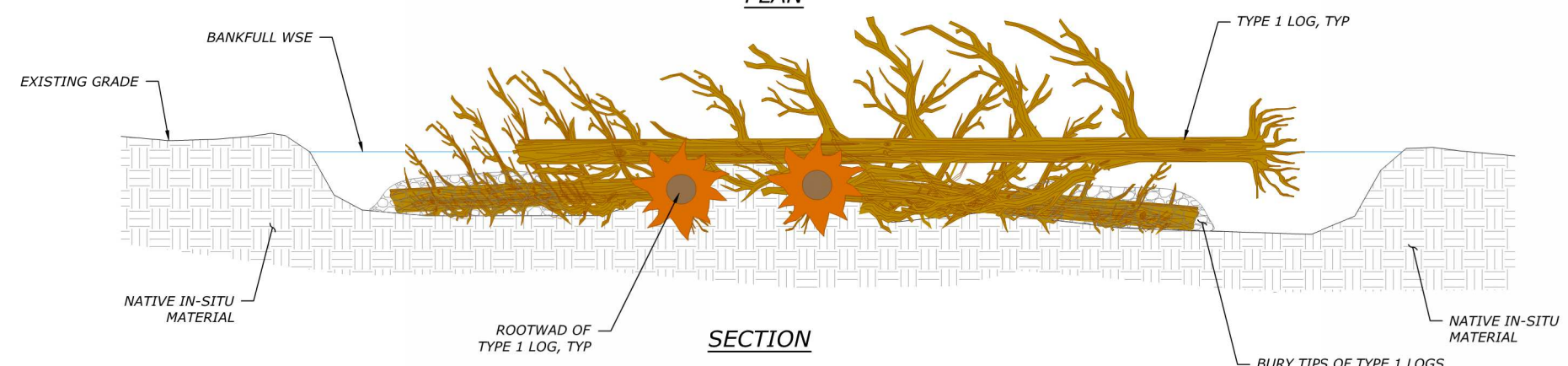
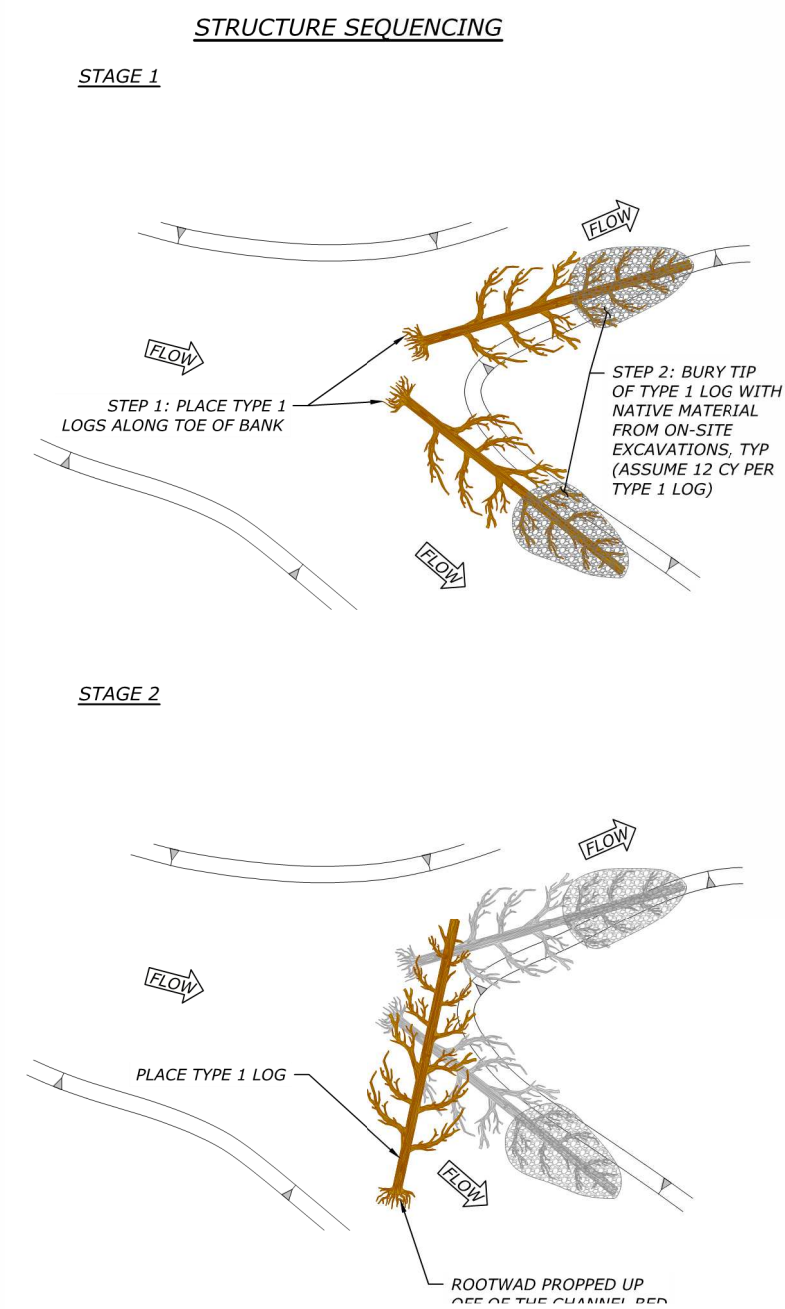
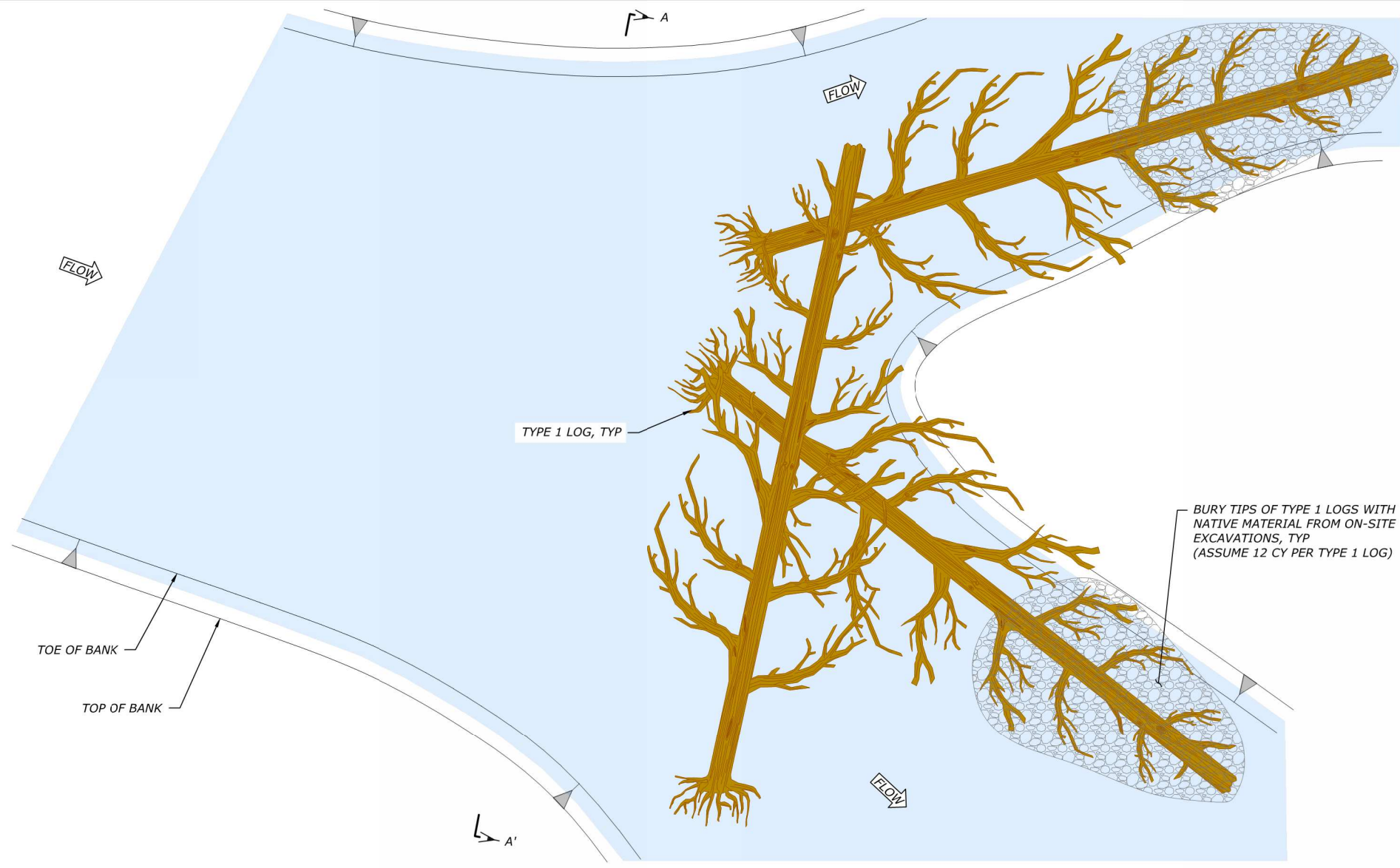
WORKING DRAFT FOR REVIEW AND REVISION

DATE: 10/15/2025
 DESIGNED: JF, RR, ZS, MG
 APPROVED: JF

DRAWING NAME
 DETAILS

APEX JAM (EQUIPMENT)

DRAWING NO.
D10
 SHEET 50 OF 57



- NOTES:**
- THIS DETAIL COVERS BOTH CONSTRUCTION SCENARIOS: WOOD DELIVERED VIA HELICOPTER AND PLACED WITH EQUIPMENT, AND WOOD SOURCED WITH EQUIPMENT AND PLACED WITH EQUIPMENT.
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APEX JAM MATERIAL SCHEDULE

| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHES | QUANTITY |
|-----------------|------------|----------|------------------------|----------|-------------------|
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 3 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

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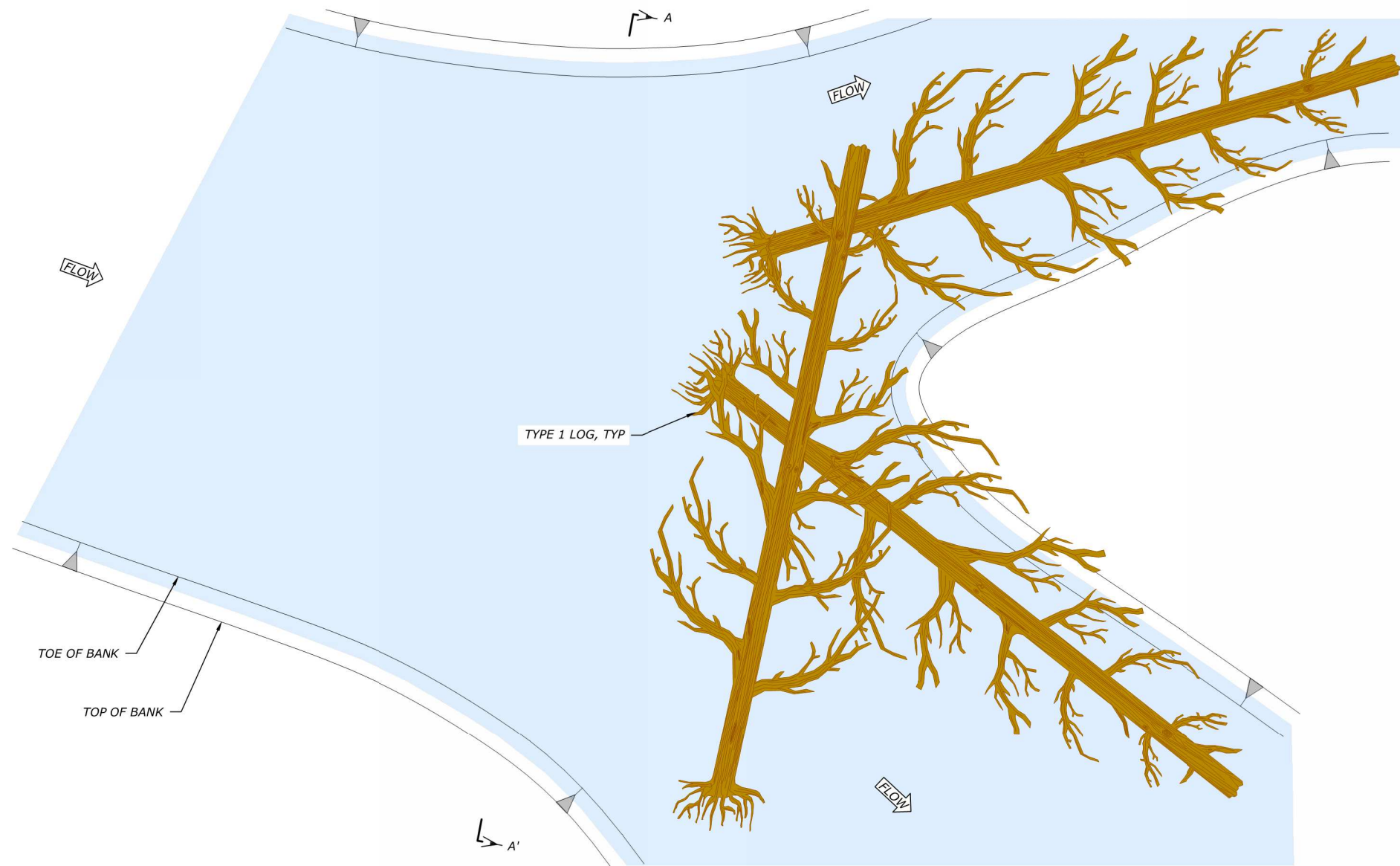
**WORKING DRAFT
FOR REVIEW AND
REVISION**

DATE: 10/15/2025
DESIGNED: JF, RR, ZS, MG
APPROVED: JF

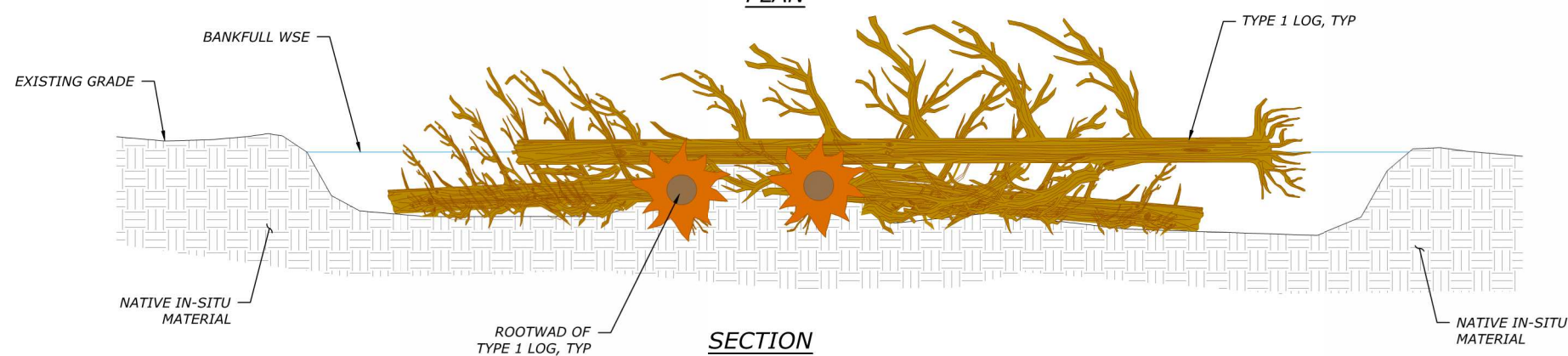
DRAWING NAME
DETAILS

APEX JAM (HELICOPTER)

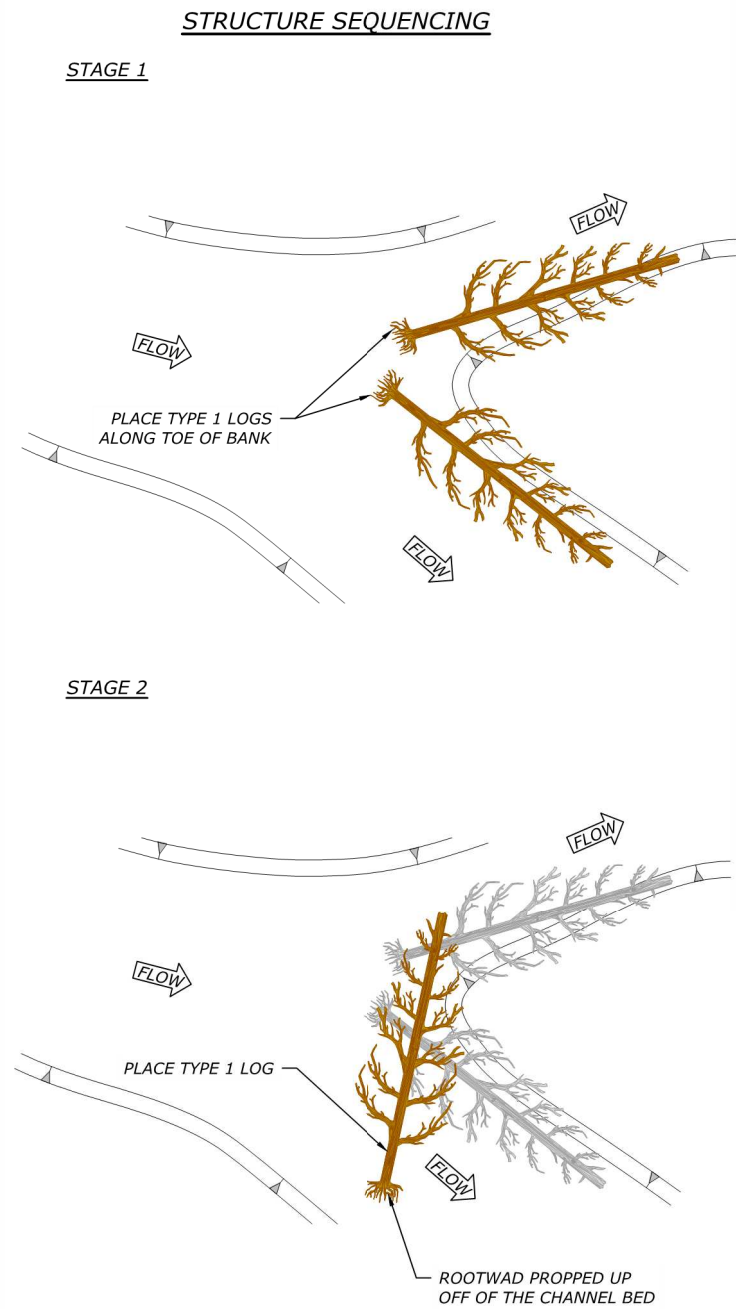
DRAWING NO.
D11
SHEET 51 OF 57



PLAN



SECTION



STAGE 1

STAGE 2

NOTES:

1. THIS DETAIL COVERS THE CONSTRUCTION SCENARIO WHERE WOOD IS DELIVERED AND PLACED VIA HELICOPTER.
2. THE EXACT LOCATION OF STRUCTURE SHALL BE LOCATED PRIOR TO INSTALLATION FOR APPROVAL BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
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6. LOG PLACEMENT MAY BE ADJUSTED IN THE FIELD BY THE CONTRACTING OFFICER TO PROVIDE VARIABILITY FROM STRUCTURE TO STRUCTURE.

| APEX JAM MATERIAL SCHEDULE | | | | | |
|----------------------------|------------|----------|------------------------|-----------|-------------------|
| LOG TYPE | SIZE (DBH) | ROOTWAD | MIN. ROOTWAD DIA. (FT) | BRANCHE S | QUANTITY |
| TYPE 1 | 24" (MIN.) | YES | 4.5 | YES | 3 EA |
| RACKING BUNDLES | 4" - 16" | OPTIONAL | NA | YES | 1 EA (ONE BUNDLE) |

FILE: R:\PROJECTS\WALLOWA_HUC431\BEAR_CR_02\DWG\CAD\PRODUCTION\BEAR-CREEK-DETAILS.DWG, SAVED BY: ZACH SUDMAN, PLOT DATE: 10/14/2025 4:18 PM