NOTES:

1. CONTOUR INTERVAL 5FT.
2. SITE ACCESS, STAGING AND CARE OF WATER PLAN SHOWN IS A RECOMMENDATION AND MAY NOT CONTAIN ALL NECESSARY MEASURES TO MEET CONSTRUCTION PERMIT CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT OF A FINAL PLAN THAT SATISFIES ALL PERMIT REQUIREMENTS.
3. RECOMMENDED ACCESS ROUTES ARE SHOWN THROUGH THE FLOODPLAIN AND ACROSS THE RIVER IN SOME LOCATIONS. ACCESS MAY BE PERMITTED UP AND DOWN THE CHANNEL EITHER ON GRAVEL BARS OR IN FLOWING WATER. REFER TO PERMIT CONDITIONS FOR SPECIFIC REQUIREMENTS FOR IN WATER WORK.
4. CLEARING LIMITS SHALL NOT EXCEED THE EXTENTS NECESSARY TO COMPLETE THE WORK, AND NOT GREATER THAN 10' IN WIDTH FOR ACCESS ROUTES. CLEARING OF VEGETATION, ESPECIALLY TREES, SHALL REQUIRE PRIOR APPROVAL BY THE CONTRACTING OFFICER.
5. NO TREES GREATER THAN 3 INCHES IN DIAMETER WILL BE REMOVED TO ESTABLISH STAGING AREAS.
NOTES:

1. CONTOUR INTERVAL SET.
2. SITE ACCESS, STAGING AND CARE OF WATER PLAN SHOWN IS A RECOMMENDATION AND MAY NOT CONTAIN ALL NECESSARY MEASURES TO MEET CONSTRUCTION PERMIT CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT OF A FINAL PLAN THAT SATISFIES ALL PERMIT REQUIREMENTS.
3. RECOMMENDED ACCESS ROUTES AND SHOWN THROUGH THE FLOODPLAIN AND ACROSS THE CHANNEL EITHER ON GRAVEL BARS OR INFLOWING WATER. REFER TO PERMIT CONDITIONS FOR SPECIFIC REQUIREMENTS FOR IN WATER WORK.
4. FISH RESCUE AND RECOVERY REQUIRED IN ALL IN-WATER WORK AREAS. TO BE COMPLETED BY CONTRACTING AGENCY AND ITS AUTHORIZED AGENTS (SEE SPECIFICATIONS).
5. DISCHARGE Dewatering water in vegetated buffers for infiltration in accordance with approved plans.
6. EXCAVATION MAY ENCOUNTER BEDROCK WITHIN THE PROJECT AREA, CONTRACTOR SHALL IMMEDIATELY NOTIFY CONTRACTING OFFICER UPON ENCOUNTERING BEDROCK THAT IMPEDES THE PROGRESS OF WORK USING NORMAL CONSTRUCTION METHODS. WORK MAY PROCEED AFTER CONTRACTING OFFICER APPROVES CHANGES TO THE WORK, WHERE APPLICABLE.
7. CLEARING LIMITS SHALL NOT EXCEED THE EXTENTS NECESSARY TO COMPLETE THE WORK, AND NOT GREATER THAN 10' IN WIDTH FOR ACCESS ROUTES. CLEARING OF VEGETATION, ESPECIALLY TREES, SHALL REQUIRE PRIOR APPROVAL BY THE CONTRACTING OFFICER.
8. NO TREES GREATER THAN 3 INCHES IN DIAMETER WILL BE REMOVED TO ESTABLISH STAGING AREAS.
### Proposed Conditions (3 of 5)

**Description:**
- **BLUE LAKE OUTFALL**
- **72+00** to **71+00**
- **70+00** to **69+00**
- **68+00** to **67+00**
- **66+00** to **65+00**
- **64+00** to **63+00**
- **62+00** to **61+00**
- **60+00** to **59+00**
- **58+00** to **57+00**
- **56+00** to **55+00**
- **54+00** to **53+00**
- **52+00** to **51+00**

**Legend:**
- **SRb-3**: Single LWD Attached to Existing LWD (12) 15" DBH 35'
- **SRp-3**: Multiple Single LWD Attached
- **BA-3**: Existing Grade
- **CS-2**: Place at Existing Grade
- **TH LWD**: Multiple Locations
- **SR LWD**: Place at Existing Grade
- **S LWD**: Place at Existing Grade

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<tr>
<td>CS ELJ</td>
<td>23</td>
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**Notes:**
1. **CONTOUR INTERVAL 1 FOOT.**
2. **TOP ELEVATION MEASURED AT THE TOP OF THE LAST LAYER.**
3. **BOTTOM ELEVATION MEASURED AT THE TOP OF LAYER 1.**
4. **WOODY MATERIAL CLEARED FROM ACCESS ROUTES, PILOT CHANNEL EXCAVATIONS AND STRUCTURE/FEATURE FOOTPRINTS SHALL BE EITHER INCORPORATED INTO STRUCTURES/FEATURES OR DISTRIBUTED OVER THE CLEARED AREA AS APPROVED BY THE ENGINEER.**

**Diagram:**
- **EXCAVATE PILOT CHANNEL TO 2107.5'**
- **EXISTING GRADE**
- **PROPOSED EXCAVATION CUT**
- **CHANNEL EXCAVATION**

| HORIZ. SCALE: | 1" = 20' |
| VERT. SCALE:  | 1" = 5'  |
CAMPGROUND
TUCANNON RD

BB ELJ  BB-1  2106.0  2094.75
BB ELJ  BB-2  2104.0  2092.75
BB ELJ  BB-3  2101.0  2089.75
CS ELJ  CS-1  2097.5  2084.0
CS ELJ  CS-2  2091.5  2088.0
CS ELJ  CS-3  2090.0  2086.5

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<td>S LWD</td>
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NOTES:
1. CONTOUR INTERVAL 1 FOOT.
3. WOODY MATERIAL CLEARED FROM ACCESS ROUTES, PILOT CHANNELS, EXCAVATIONS AND STRUCTURE/FEATURE FOOTPRINTS SHALL BE EITHER INCORPORATED INTO STRUCTURE/FEATURES OR DISTRIBUTED OVER THE CLEARED AREA AS APPROVED BY THE ENGINEER.

DESIGNED BY:  JG
DRAWN BY:    TAD
CHECKED BY:  TAD
APPROVED BY:  JG
SCALE:       ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

FOR CONSTRUCTION
TUCANNON PROJECT AREA 14

PROPOSED CONDITIONS (4 OF 5)
NOTES:

1. CONTOUR INTERVAL 1 FOOT.
2. TOP ELEVATION IS MEASURED AT THE TOP OF THE LAST LAYER.
3. BOTTOM ELEVATION MEASURED AT THE TOP OF LAYER 1.
4. REMOVE THE ABANDONED TUCANNON RD BRIDGE AND ALL ASSOCIATED CONCRETE ABUTMENTS, FOOTINGS, AND PIERS. SEE SPECIFICATIONS FOR DISPOSAL REQUIREMENTS.
5. REMOVE AND DISPOSE OF ROAD SURFACING. EXCAVATE AND GRADE ROAD PRISM DOWN TO THE SURROUNDING FLOODPLAIN ELEVATION. EXCAVATED MATERIAL MAY BE SUITABLE FOR REUSE IN OTHER PROJECT FEATURES AS APPROVED BY THE ENGINEER.
6. WOODY MATERIAL CLEARED FROM ACCESS ROUTES, PILOT CHANNEL EXCAVATIONS AND STRUCTURE/FEATURE FOOTPRINTS SHALL BE EITHER INCORPORATED INTO STRUCTURE/FEATURES OR DISTRIBUTED OVER THE CLEARED AREA AS APPROVED BY THE ENGINEER.

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CONSTRUCTION NOTES:
1. S LWD WILL BE FIELD LOCATED AT TIME OF CONSTRUCTION BY THE ENGINEER.
2. EXCAVATE TRENCH FOR LOG.
3. PLACE ROOTWAD LOG IN TRENCH AND BACKFILL TO EXISTING GRADE. PLACE EXCESS MATERIAL IN LEE OF STRUCTURE.
4. ALTERNATIVELY, LOG MAY BE PLACED BETWEEN EXISTING TREES AND SECURED IN PLACE, SEE DETAIL 6 ON SHEET 22.
   4.1. USE 1/2" DIA. MANILA ROPE AND APPROVED KNOTS PER SECTION 02948.
5. DISTANCE BETWEEN TREES MAY VARY BETWEEN 10 AND 25 FEET.
RE-VEGETATION NOTE
6. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN AND AROUND THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

TYP. S LWD FEATURE LWM QUANTITIES

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<tr>
<th>ITEM</th>
<th>LOG DIA. (IN)</th>
<th>ROOTWAD DIA. (IN)</th>
<th>MIN. LOG LENGTH (FT)</th>
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<tr>
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TABLE NOTES:
1. MINIMUM LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ROOTWAD LOG LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.
3. ROOTWAD LOG DIAMETER IS MEASURED AT BREAST HEIGHT.
4. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.
CONSTRUCTION NOTES:

ALL TH AND THb LWD WILL BE FIELD LOCATED AT TIME OF CONSTRUCTION BY THE ENGINEER.

FOR TH LWD BURIED INTO THE BANK:
1. EXCAVATE TRENCH FOR LOG PERPENDICULAR TO FLOW AS APPROVED BY THE ENGINEER.
2. PLACE THE ROOTWAD LOG PARALLEL TO FLOW AT THE TOE OF THE BANK AS SHOWN.
3. PLACE THE ROOTWAD LOG PERPENDICULAR TO THE BANK INTO THE TRENCH AND POSITION OVER THE PARALLEL TO FLOW ROOTWAD LOG AS SHOWN. ALTERNATIVELY A LOG POLE MAY BE USED AS APPROVED BY THE CONTRACTING OFFICER.
4. DRILL A HOLE THROUGH BOTH ROOTWAD LOGS AT THEIR INTERSECTION AND CONNECT THE ROOTWAD LOGS TOGETHER USING 1/2" DIA. MANILA ROPE AND APPROVED KNOTS PER SECTION 02948.
5. BACKFILL THE TRENCH OVER THE BOLE OF THE ROOTWAD LOG.

FOR TH LWD PLACED BETWEEN EXISTING TREES
6. PLACE THE ROOTWAD LOG PARALLEL TO FLOW AT THE TOE OF THE BANK AS SHOWN.
7. PLACE THE ROOTWAD LOG PERPENDICULAR TO THE BANK BETWEEN EXISTING TREES. DISTANCE BETWEEN TREES MAY VARY BETWEEN 8 AND 15 FT. ALTERNATIVELY A LOG POLE MAY BE USED AS APPROVED BY THE CONTRACTING OFFICER.
8. LASH THE ROOTWAD LOG TO THE EXISTING TREES USING 1/2" DIA. MANILA ROPE AND APPROVED KNOTS PER SECTION 02948.

FOR THb (WITH BOULDERS)
9. INSTALL ROCK ANCHORS AND EYE BOLTS, ONE EACH PER BOULDER.
10. PLACE BOULDERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.
11. PLACE THE ROOTWAD LOG PARALLEL TO FLOW AT THE TOE OF THE BANK OR LOW WATER LINE.
12. PLACE BOULDERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.
13. PLACE ROOTWAD LOGS AS SHOWN.
14. INSTALL ROCK ANCHORS AND EYE BOLTS, ONE EACH PER BOULDER.
15. PLACE BOULDERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.
16. PLACE THE ROOTWAD LOG PARALLEL TO FLOW AT THE TOE OF THE BANK OR LOW WATER LINE.
17. PLACE BOULDERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.
18. PLACE THE ROOTWAD LOG PARALLEL TO FLOW AT THE TOE OF THE BANK OR LOW WATER LINE.

RE-VEGETATION NOTE
14. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN AND AROUND THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

Table Notes:
1. MINIMUM LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ROOTWAD LOG LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.
3. ROOTWAD LOG DIAMETER IS MEASURED AT BREAST HEIGHT.
4. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.
CONSTRUCTION NOTES:

1. INSTALL BURIED LOG PILES (SECTION 02947) TO DEPTH SHOWN. CONTRACTOR RESPONSIBLE FOR EXCAVATION, SUPPORT AND PROTECTION. PLACE LOG PILE BUT END UPON BACKFILL AROUND BURIED LOG PILES TO EXISTING GRADE IN ACCORDANCE WITH SECTION 02318.

2. BACKFILL INTERIOR OF STRUCTURE WITH NATIVE SANDS AND GRAVELS FLUSH WITH THE TOP OF LAYER ONE. DO NOT COMPACT BACKFILL.

3. PLACE ROOTWAD LOGS AND LOG POLES FLUSH WITH EXISTING GRADE. ROOTWAD LOGS AND LOG POLES ON LAYER ONE SHALL BE IN CONTINUOUS CONTACT WITH THE GROUND SURFACE ON THE UNDERSIDE OF THE BOLE EXCEPT WHERE SHOWN AROUND THE ROOSTWAD.

4. BAGGATE NUTS MUST BE TIGHTENED AFTER INSTALLATION. USE 1/2" DIAM. MANILA ROPE AND APPROVED KNOTS PER SECTION 02948.

5. PLACE ROOTWAD LOGS TOGETHER AND TO THE BURIED LOG PILES FOR DETAILS 1, 2, AND 4 ON SHEET 22.

6. INSTALL BURIED LOG PILES (SECTION 02947) TO DEPTH SHOWN. CONTRACTOR RESPONSIBLE FOR EXCAVATION AND GRADING MAY VARY DEPENDING ON SITE CONDITIONS.

7. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITH THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

8. BACKFILL INTERIOR OF STRUCTURE WITH NATIVE SANDS AND GRAVELS FLUSH WITH THE TOP OF LAYER ONE. DO NOT COMPACT BACKFILL.

9. PLACE ROOTWAD LOGS AS SHOWN.

10. INSTALL ROCK ANCHORS AND EYE BOLTS, ONE EACH PER BOULDER.

11. PLACE BOLTERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.

12. PLACE BOULDERS AT LOCATIONS SHOWN WITH EYE BOLTS NEAR THE TOP OF THE BOULDER.

13. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITH THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

RE-VEGETATION NOTE:

13. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITH THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

TYP. SR LWD FEATURE LWM QUANTITIES

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TABLE NOTES:

1. MINIMUM LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. ROOTWAD LOG DIAMETERS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.

3. ROOTWAD LOG DIAMETER IS MEASURED AT BREAST HEIGHT.

4. LOG POLE DIAMETER IS MEASURED AT THE MID-POINT ALONG THE LENGTH OF THE LOG.

5. SEE SECTION 02104 FOR DIAMETER TOLERANCES AND TAPER RATES.

SR LWD FEATURE TYPICAL PLAN (WITH BOULDERS)
CONSTRUCTION NOTES:

1. INSTALL BURIED LOG PILES (SECTION 02947) TO DEPTH SHOWN. CONTRACTOR RESPONSIBLE FOR EXCAVATION SUPPORT AND PROTECTION. PLACE LOG PILES BIT ENDDOWN. BACKFILL AROUND BURIED LOG PILES TO EXISTING GRADE IN ACCORDANCE WITH SECTION 02318.

2. ALTERNATIVELY, ROOTWAD LOGS MAY BE SECURED TO EXISTING STANDING TREES WITH A MINIMUM 12 INCH DBH, AS APPROVED BY THE ENGINEER.

3. PLACE ROOTWAD LOG AND LOG POLES FLUSH WITH EXISTING GRADE. ROOTWAD LOGS ON LAYER ONE (1) AND TWO (2) SHALL BE IN LEATHERWOOD CONTACT WITH THE GROUND SURFACE ON THE UNDERSIDE OF THE LOG EXCEPT WHERE SHOWN AROUND THE ROOTWAD.

4. PLACE THE DIAGONAL ROOTWAD LOG AS SHOWN IN LAYER 3 WITH ROOTWAD FACING UPSTREAM.

5. SECURE ALL ROOTWAD LOGS TOGETHER AND TO THE BURIED LOG PILES PER DETAILS 1, 2, AND 4 ON SHEET 22.

5.1. USE 1/2" DIA. MANILA ROPE AND APPROVED KNOTS PER SECTION 02948.

RE-VEGETATION NOTE

6. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

TYP. BBp ELJ STRUCTURE LWM QUANTITIES

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TABLE NOTES:

1. MINIMUM LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. ROOTWAD LOG LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.

3. LOG POLE DIAMETER IS MEASURED AT BREAST HEIGHT.

4. LOG POLE DIAMETER IS MEASURED AT THE MID POINT ALONG THE LENGTH OF THE LOG.

5. SEE SECTION 02474 FOR DIAMETER TOLERANCES AND TAPER RATES.
CONSTRUCTION NOTES:

1. EXCAVATE TO DEPTH SUFFICIENT TO PLACE THE FOOTER LOG AND ROOTWAD LOGS IN LAYER ONE AT DEPTH SHOWN ON PLANS.

2. USE 3/8" DIA. GALVANIZED WIRE ROPE AND ASSOCIATED HARDWARE PER SECTION 02948 FOR ALL CONNECTIONS.

3. PLACE LOGS IN LAYER 10 AND SECURE TO LAYER 9 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

4. PLACE LOGS IN LAYER 9 AND SECURE TO LAYER 8 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

5. PLACE LOGS IN LAYER 8 AND SECURE TO LAYER 7 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

6. PLACE LOGS IN LAYER 7 AND SECURE TO LAYER 6 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

7. PLACE LOGS IN LAYER 6 AND SECURE TO LAYER 5 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

8. PLACE LOGS IN LAYER 5 AND SECURE TO LAYER 4 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

9. PLACE LOGS IN LAYER 4 AND SECURE TO LAYER 3 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

10. PLACE LOGS IN LAYER 3 AND SECURE TO LAYER 2 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

11. PLACE LOGS IN LAYER 2 AND SECURE TO LAYER 1 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

12. PLACE LOGS IN LAYER 1 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

13. PLACE LOGS IN LAYER 10 AND SECURE TO LAYER 9 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

14. PLACE LOGS IN LAYER 9 AND SECURE TO LAYER 8 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

15. PLACE LOGS IN LAYER 8 AND SECURE TO LAYER 7 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

16. PLACE LOGS IN LAYER 7 AND SECURE TO LAYER 6 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

17. PLACE LOGS IN LAYER 6 AND SECURE TO LAYER 5 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

18. PLACE LOGS IN LAYER 5 AND SECURE TO LAYER 4 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

19. PLACE LOGS IN LAYER 4 AND SECURE TO LAYER 3 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

20. PLACE LOGS IN LAYER 3 AND SECURE TO LAYER 2 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

21. PLACE LOGS IN LAYER 2 AND SECURE TO LAYER 1 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

RE-VEGETATION NOTE

14. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN AND AROUND THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

22. PLACE LOGS IN LAYER 10 AND SECURE TO LAYER 9 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

23. PLACE LOGS IN LAYER 9 AND SECURE TO LAYER 8 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

24. PLACE LOGS IN LAYER 8 AND SECURE TO LAYER 7 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

25. PLACE LOGS IN LAYER 7 AND SECURE TO LAYER 6 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

26. PLACE LOGS IN LAYER 6 AND SECURE TO LAYER 5 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

27. PLACE LOGS IN LAYER 5 AND SECURE TO LAYER 4 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

28. PLACE LOGS IN LAYER 4 AND SECURE TO LAYER 3 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

29. PLACE LOGS IN LAYER 3 AND SECURE TO LAYER 2 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

30. PLACE LOGS IN LAYER 2 AND SECURE TO LAYER 1 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

31. PLACE LOGS IN LAYER 1 AT INDICATED LOCATIONS, PER CONNECTION DETAIL 4 ON SHEET 22.

TABLE NOTES:

1. LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LVM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.

3. ROOTWAD LOG DIAMETER IS MEASURED AT BREAST HEIGHT.

4. LOG POLE DIAMETER IS MEASURED AT THE MIDPOINT ALONG THE LENGTH OF THE LOG.

5. SEE SHEET 0447 FOR DIAMETER TOLERANCES AND TAPER RATES.
**CONSTRUCTION NOTES:**

1. NOTCH BANK AND BED TO PLACE LAYER 1 ROOTWAD LOGS IN CONTINUOUS CONTACT WITH THE GROUND AND AT ROUGHLY THE SAME ELEVATION AS APPROVED BY THE ENGINEER.
2. PLACE ROOTWAD LOGS IN LAYERS 1 AND 2 AS SHOWN OR AS APPROVED BY THE ENGINEER.
3. PLACE NATIVE BACKFILL OR BOLDLANDS WITHIN THE STRUCTURE FLUSH WITH THE TOP OF LAYER 2 AS APPROVED BY THE ENGINEER. DO NOT BACKFILL AROUND ROOTWADS.
4. PLACE LOGS IN LAYERS 4 AND 5 AS SHOWN OR AS APPROVED BY THE ENGINEER.
5. PLACE LOGS IN LAYERS 3 AND 5 AS SHOWN OR AS APPROVED BY THE ENGINEER.

**RE-VeGETATION NOTE:**

10. CONTRACTOR SHALL COORDINATE WITH RE-VeGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED OTHERS WITHIN AND AROUND THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

**TABLE NOTES:**

1. LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ROOTWAD LOG LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.
3. ROOTWAD LOG DIAMETER IS MEASURED AT BREAST HEIGHT.
4. LOG POLE DIAMETER IS MEASURED AT THE MIDPOINT ALONG THE LENGTH OF THE LOG.
5. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.
CONSTRUCTION NOTES:
1. EXCAVATE TO DEPTH EQUAL TO TOTAL DEPTH BETWEEN LEVELS 1 AND 2. LAYER 2 IS TO BE EXCAVATED TO MINIMUM LEVEL OF INTENDED FLOW CHANNEL GRADE. POOL EXCAVATION SHOULD PROCEED TO MAXIMUM DEPTHS MEASURED FROM B.L. TO MATERIAL TO BE USED FOR BACKFILL.
2. EXCAVATION TO LEVEL 1 TO BE CONTINUOUS OR TO BE MADE IN DEPTH TO SUPPORT THE STRUCTURE. POOL EXCAVATIONS TO LEVEL 1 TO SUPPORT THE STRUCTURE LAYERS 2 AND 3.
3. BACKFILL A WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 1 TO 3.
4. BACKFILL B WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 4 TO 11.
5. BACKFILL C WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 11 TO 14.
6. BACKFILL D WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 14 TO 17.
7. BACKFILL E WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 17 TO 20.
8. BACKFILL F WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 20 TO 23.
9. BACKFILL G WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 23 TO 26.
10. BACKFILL H WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 26 TO 29.
11. BACKFILL I WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 29 TO 32.
12. BACKFILL J WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 32 TO 35.
13. BACKFILL K WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 35 TO 38.
14. BACKFILL L WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 38 TO 41.
15. BACKFILL M WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 41 TO 44.
16. BACKFILL N WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 44 TO 47.
17. BACKFILL O WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 47 TO 50.
18. BACKFILL P WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 50 TO 53.
19. BACKFILL Q WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 53 TO 56.
20. BACKFILL R WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 56 TO 59.
21. BACKFILL S WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 59 TO 62.
22. BACKFILL T WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 62 TO 65.
23. BACKFILL U WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 65 TO 68.
24. BACKFILL V WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 68 TO 71.
25. BACKFILL W WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 71 TO 74.
26. BACKFILL X WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 74 TO 77.
27. BACKFILL Y WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 77 TO 80.
28. BACKFILL Z WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 80 TO 83.
29. BACKFILL AA WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 83 TO 86.
30. BACKFILL AB WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 86 TO 89.
31. BACKFILL AC WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 89 TO 92.
32. BACKFILL AD WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 92 TO 95.
33. BACKFILL AE WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 95 TO 98.
34. BACKFILL AF WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 98 TO 101.
35. BACKFILL AG WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 101 TO 104.
36. BACKFILL AH WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 104 TO 107.
37. BACKFILL AI WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 107 TO 110.
38. BACKFILL AJ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 110 TO 113.
39. BACKFILL AK WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 113 TO 116.
40. BACKFILL AL WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 116 TO 119.
41. BACKFILL AM WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 119 TO 122.
42. BACKFILL AN WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 122 TO 125.
43. BACKFILL AO WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 125 TO 128.
44. BACKFILL AP WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 128 TO 131.
45. BACKFILL AQ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 131 TO 134.
46. BACKFILL AR WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 134 TO 137.
47. BACKFILL AS WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 137 TO 140.
48. BACKFILL AT WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 140 TO 143.
49. BACKFILL AU WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 143 TO 146.
50. BACKFILL AV WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 146 TO 149.
51. BACKFILL AW WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 149 TO 152.
52. BACKFILL AX WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 152 TO 155.
53. BACKFILL AY WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 155 TO 158.
54. BACKFILL AZ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 158 TO 161.
55. BACKFILL BA WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 161 TO 164.
56. BACKFILL BB WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 164 TO 167.
57. BACKFILL BC WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 167 TO 170.
58. BACKFILL BD WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 170 TO 173.
59. BACKFILL BE WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 173 TO 176.
60. BACKFILL BF WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 176 TO 179.
61. BACKFILL BG WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 179 TO 182.
62. BACKFILL BH WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 182 TO 185.
63. BACKFILL BI WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 185 TO 188.
64. BACKFILL BJ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 188 TO 191.
65. BACKFILL BK WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 191 TO 194.
66. BACKFILL BL WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 194 TO 197.
67. BACKFILL BM WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 197 TO 200.
68. BACKFILL BN WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 200 TO 203.
69. BACKFILL BO WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 203 TO 206.
70. BACKFILL BP WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 206 TO 209.
71. BACKFILL BQ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 209 TO 212.
72. BACKFILL BR WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 212 TO 215.
73. BACKFILL BS WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 215 TO 218.
74. BACKFILL BT WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 218 TO 221.
75. BACKFILL BU WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 221 TO 224.
76. BACKFILL BV WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 224 TO 227.
77. BACKFILL BW WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 227 TO 230.
78. BACKFILL BX WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 230 TO 233.
79. BACKFILL BY WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 233 TO 236.
80. BACKFILL BZ WITHIN STRUCTURE IS RECOMMENDED FOR STRUCTURE LAYERS 236 TO 239.
BAb ELJ Typical Section

Construction Notes:
1. Exposed to support in order to place the Layer 1 Rootwad Log Level at Elevation Shown on Plans. Contractor responsible for excavation support and protection.
2. See Connection Detail 3 on Sheet 32 for connections in this Structure.
3. See Table of Hardwood Species for Section 32948 for all connections in this structure.
4. Secure wire rope to rootwad log in layer 1 at locations shown.
5. Place rootwad logs in Layer 1 at desired elevation.
6. Secure wire rope to the log in Layers 2 at locations shown.
7. Thread wire rope through holes drilled in Layer 2 logs at locations shown. Place logs in Layers 2 as shown.
8. Place logs in Layers 3 and 4 as shown and continue threading wire rope up through holes drilled in logs.
9. Backfill within structure as shown up to the bottom of Layer 4.
10. Place logs in Layers 5 and 6 as shown and continue threading wire rope up through holes drilled in logs.
11. Backfill within structure as shown up to the top of the bottom layer.
12. Place logs in Layers 7 and 8 as shown and continue threading wire rope up through holes drilled in logs.
13. Connect wire rope leads to logs in Layers 8 at locations shown per detail 3 on Sheet 32.
14. Backfill within structure as shown up to the bottom of Layer 8.
15. Place logs in Layers 9 and 10 as shown and continue threading wire rope up through holes drilled in logs.
16. Place logs in Layers 9 and 10 as shown.
17. Backfill within structure as shown up to the bottom of Layer 9.
18. Place logs in Layer 11 as shown and finish wire rope connections in locations shown.
19. Backfill within structure as shown flush with the top of the last layer.
20. Excavate pool to finished grade as shown.
21. Place excess material from excavation behind structure as shown.
22. Place small woody debris and slash within void spaces along front interior, sides, and front of structure, or as approved by the engineer. Placement shall occur throughout the layer construction process. Provided it does not interfere with backfilling, log fitment, and wire rope connections.

Plants will be installed by others within and around the structure near the groundwater level. Care shall be taken not to damage plantings installed prior to completion of the structure.

Bar Apex Bank (BAb) ELJ Details

TYP. BAb ELJ Structure LWM Quantities

<table>
<thead>
<tr>
<th>Layer</th>
<th>Item</th>
<th>Log Dia (in)</th>
<th>Rootwad Dia (in)</th>
<th>Min Log Length (ft)</th>
<th>Quantity</th>
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<tr>
<td>13</td>
<td>Rootwad Log</td>
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<td>45</td>
<td>20</td>
<td>2</td>
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</table>

Note: Lengths are reported for material procurement purposes. All LWM shall be cut to fit in accordance with the plans and specifications.
1. Rootwad Log lengths do not include the length of the rootwad mass.
2. Rootwad Log diameter is measured at breast height.
3. Log pole diameter is measured at breast height.
4. Log pole diameter is measured at breast height.
5. See section 32948 for diameter tolerances and taper rates.

For Construction
Tucannon Project Area 14

C-17

Bar Apex Bank (BAb) ELJ Details
CONSTRUCTION NOTES:

1. EXCAVATE TO DEPTH SUFFICIENT TO PLACE LAYER 1 ROOTWAD LOGS LEVEL AT ELEVATION SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR EXCAVATION SUPPORT AND PROTECTION.

2. USE 1" X 2" GALVANIZED WIRE ROPE AND ASSOCIATED HARDWARE FOR EJECTION BAR FOR ALL ROOFWADS.

3. PLACE ROOFWAD LOGS IN LAYER 1 AT STEEPEST ELEVATION.

4. PLACE ROOFWAD LOGS IN LAYER 1 AT STEEPEST ELEVATION.

5. THREAD WIRE ROPE LOOPS THROUGH HOLES DRILLED IN LOGS UP TO 20 FEET TO ENSURE ROOFWADS DO NOT MOVE.

6. CIRCULATE WIRE ROPE THROUGH HOLES DRILLED IN ROOFWADS AT LOCATIONS SHOWN.

7. PLACE ROOFWAD LOGS IN LAYERS 2 AND 3 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

8. BACKFILL WITHIN STRUCTURE SHown UP TO THE BOTTOM OF LAYER 4.

9. PLACE ROOFWAD LOGS IN LAYERS 4 AND 5 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

10. PLACE ROOFWAD LOGS IN LAYERS 5 AND 6 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

11. PLACE HOLE IN LAYERS 7 AND 8 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

12. PLACE ROOFWAD LOGS IN LAYERS 7 AND 8 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

13. PLACE ROOFWAD LOGS IN LAYERS 7 AND 8 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

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15. PLACE ROOFWAD LOGS IN LAYERS 7 AND 8 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

16. PLACE ROOFWAD LOGS IN LAYERS 7 AND 8 AS SHOWN AND CONTINUE THREADING WIRE ROPE UP THROUGH HOLES DRILLED IN LOGS.

17. PLACE SMALL, WOODY LOGS AND SLASH WITHIN VOID SPACES ALONG FRONT INTERIOR SIDES AND TOP OF STRUCTURE, OR AS APPROVED BY THE ENGINEER PLACEMENT SHALL OCCUR THROUGHOUT THE LAYER CONSTRUCTION PROCESS. MATERIALS SHOWN NOT ATTACHED TO BACKFILL.

18. PLACE GRID MATERIALS FROM EXCAVATION TO SECOND STRUCTURE AS SHOWN.

19. PLACE SMALL, WOODY LOGS AND SLASH WITHIN VOID SPACES ALONG FRONT INTERIOR SIDES AND TOP OF STRUCTURE, OR AS APPROVED BY THE ENGINEER PLACEMENT SHALL OCCUR THROUGHOUT THE LAYER CONSTRUCTION PROCESS. MATERIALS SHOWN NOT ATTACHED TO BACKFILL.

20. PLACE GRID MATERIALS FROM EXCAVATION TO SECOND STRUCTURE AS SHOWN.

TYP. CG ELJ STRUCTURE LWM QUANTITIES

<table>
<thead>
<tr>
<th>LAYER</th>
<th>LOCATION</th>
<th>ITEM</th>
<th>LOG DIA. (IN)</th>
<th>ROOTWAD DIA. (IN)</th>
<th>MIN. LOG LENGTH (FT)</th>
<th>QUANTITY</th>
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<tbody>
<tr>
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<td>3.5 (-0.0 / +1.0)</td>
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GRADING NOTES:

1. SOIL MATERIALS ARE 1 FOOT.

2. POOL EXCAVATION AND BACKFILL GRADING MAY VARY DEPENDING ON SITE CONDITIONS.

3. MINIMUM LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHOWN BE OUT TO FIT IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS.

4. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.

TYP. CG ELJ STRUCTURE LWM QUANTITIES

<table>
<thead>
<tr>
<th>LAYER</th>
<th>LOCATION</th>
<th>ITEM</th>
<th>LOG DIA. (IN)</th>
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<td>3.5 (-0.0 / +1.0)</td>
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GRADING NOTES:

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4. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.

TYP. CG ELJ STRUCTURE LWM QUANTITIES

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<tr>
<th>LAYER</th>
<th>LOCATION</th>
<th>ITEM</th>
<th>LOG DIA. (IN)</th>
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<td>3.5 (-0.0 / +1.0)</td>
<td>3,500</td>
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CONSTRUCTION NOTES:
1. EXCAVATE FOR ROOTWADS IN LAYER 1 AS SHOWN.
2. INSTALL EYE BOLTS INTO BOULDERS.
3. PLACE BOULDERS ON THE BED IN LOCATIONS SHOWN.
4. PLACE ROOTWADS IN LAYER 1 AS SHOWN WITH THE BOLE FLUSH WITH THE BED OR SLIGHTLY BELOW THE BED TO PROVIDE CONTINUOUS CONTACT WITH THE GROUND. SURFACE ON THE UNDERSIDE OF THE BOLE EXCEPT WHERE SHOWN ON THE ROOTWAD.
5. CLEAR VEGETATION NECESSARY TO PLACE LOW FLOODPLAIN PORTION OF THE STRUCTURE LOCATION SHOWN ON THE PLAN, THE ANGLE, LENGTH AND SIDE OF THE STRUCTURE THE FLOODPLAIN PORTION IS PLACED ON MAY VARY FROM TYPICAL SHOWN, BED PLAN FOR Configuration.
6. ENGINEER’S APPROVAL IS REQUIRED FOR CLEANING OF ALL TREES LARGER THAN 6 INCHES IN DIAMETER. SEE CONSTRUCTION NOTES 1 & 2.
7. EXCAVATE FOR ROOTWADS IN LAYER 1 AS SHOWN.
8. PLACE SMALL WOODY DEBRIS AND SLASH WITHIN VOID SPACES ALONG FRONT AND INTERIOR OF THE STRUCTURE, OR AS SHOWN. THE ANGLE, LENGTH AND SIDE OF THE STRUCTURE THE FLOODPLAIN PORTION IS PLACED ON MAY VARY FROM TYPICAL SHOWN, SEE PLAN FOR CONFIGURATION.
9. INSTALL EYE BOLTS INTO BOULDERS.
10. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CREWS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

RE-VEGETATION NOTE
10. CONTRACTOR SHALL COORDINATE WITH RE-VEGETATION CORDS FOR INSTALLATION OF PLANTS. PLANTS WILL BE INSTALLED BY OTHERS WITHIN THE STRUCTURE NEAR THE GROUNDWATER LEVEL. CARE SHALL BE TAKEN NOT TO DAMAGE PLANTINGS INSTALLED PRIOR TO COMPLETION OF THE STRUCTURE.

TYP. CS ELJ STRUCTURE LWM QUANTITIES

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TYP. CS ELJ STRUCTURE ROCK QUANTITIES

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</tbody>
</table>

TABLE NOTES:
1. LENGTHS ARE REPORTED FOR MATERIAL PROCUREMENT PURPOSES. ALL LWM SHALL BE CUT TO FIT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ROOTWAD LOG LENGTHS DO NOT INCLUDE THE LENGTH OF THE ROOTWAD MASS.
3. MIN. DRY WEIGHT IS ESTABLISHED AT BREAST HEIGHT.
4. LOG POLE DIAMETER IS MEASURED AT THE MID POINT ALONG THE LENGTH OF THE LOG.
5. SEE SECTION 02947 FOR DIAMETER TOLERANCES AND TAPER RATES.
SECTION A-A’

1. All connections shall be approved by the engineer.
2. Wire rope is specified as wire rope lap connection (detail 8), unless otherwise noted. Where manila rope is specified, use a knot approved by the engineer. Acceptable knot types include but are not limited to: thimble, eye bolt, thimble and double fisherman’s knot.
3. Wire rope shall be galvanized steel.
5. Wire rope clips shall be forged galvanized steel, sized to accommodate two (2) strands of wire rope.
6. Wire rope clips shall be galvanized steel, sized to accommodate the specified rope diameter. See specifications.
7. Thimbles shall be galvanized steel, sized to accommodate the specified rope diameter. See specifications.
8. Eye bolts shall be galvanized steel for lifting. See specifications.
9. Provide sufficient length of rope to make connection, wrap loop, and finalize connection on log as shown.
10. Allow for tree growth per the direction of the engineer.
11. See specifications for further information.

For construction:
TUCSON PROJECT AREA 14

C-20

DESIGNED BY: JGL
CHECKED BY: JGL
DRAWN BY: JGL
APPROVED BY: JGL
SCALING/MEASUREMENT: 1/2" = 1'-0"
DATE: 1/18/13

CONNECTION DETAILS