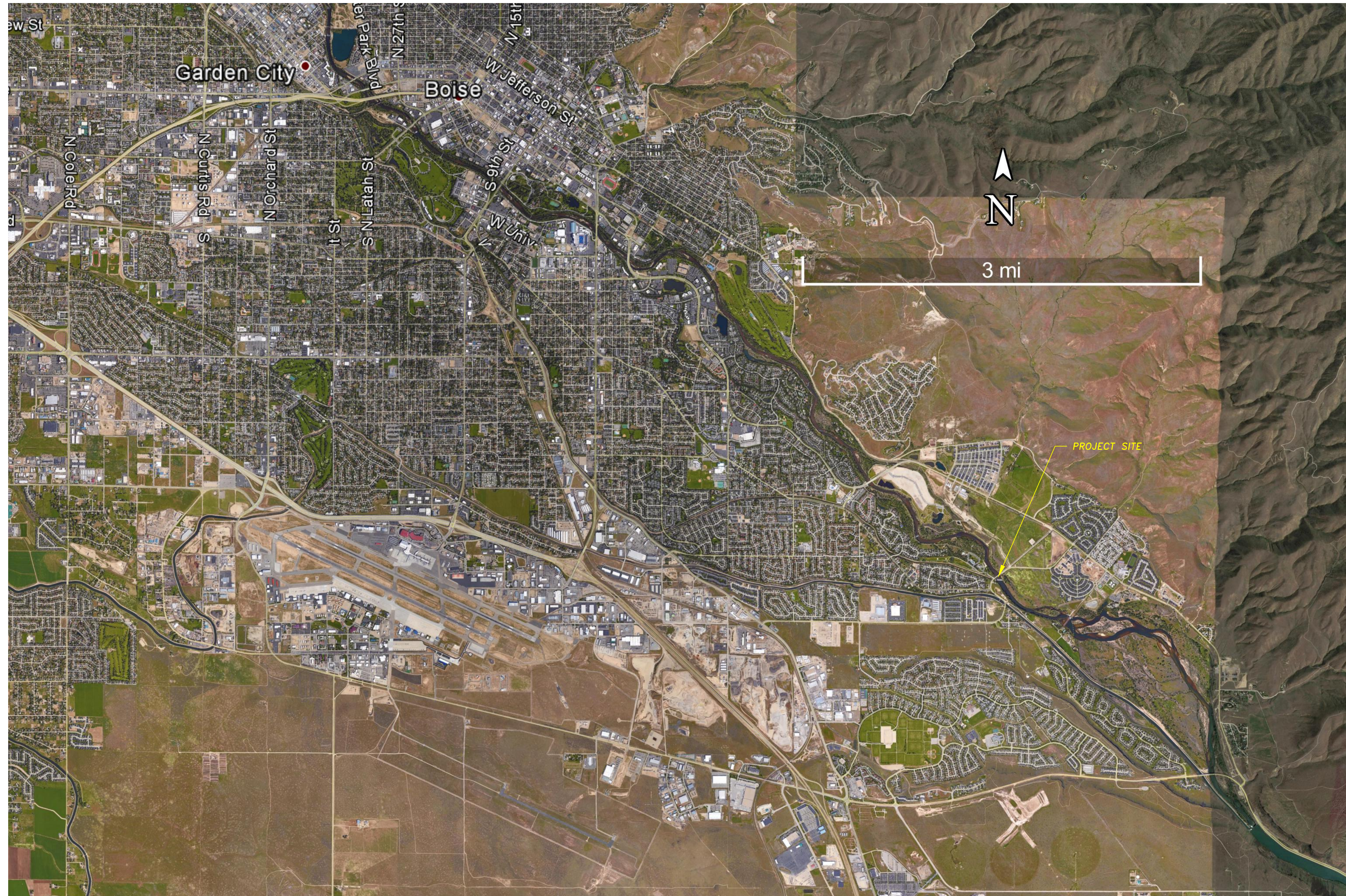


# IDAHO DEPARTMENT OF FISH AND GAME BOISE RIVER BARBER PARK PROJECT ADA COUNTY, IDAHO

PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION

AERIAL MAP



**DATUM**

1. HORIZONTAL – NAD83 IDAHO STATE PLANE WEST ZONE GRID
2. VERTICAL – NAVD88 WITH GEOID 12B MODELING

**APPROXIMATE GPS SITE COORDINATES**

LATITUDE: 43°33'56.23" N      LONGITUDE: 116°07'56.02" W

**NOTES**

1. SITE SURVEY: SEP 25 AND DEC 4, 2015
2. AERIAL PHOTOGRAPHY IS BING MAPS

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
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4	EXISTING CROSS SECTIONS
5	PROPOSED PLAN AND PROFILE VIEW
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7	DETAILS 2

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 HABITAT ENHANCEMENT	
DRAWN	RZ		
CHECKED	LS	BOISE RIVER-BARBER PARK	
DATE:	01/06/2016		
SCALE:	#####		
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 1 OF 7	

DRAWING IS REDUCED TO  
50% OF FULL SCALE  
0  1"  
BAR IS 1 INCH ON ORIGINAL DRAWING.  
IF NOT 1 INCH ON THIS SHEET,  
ADJUST SCALES ACCORDINGLY.

USER: JMCALLUM@IDFGW    LOCATION: FISHERY/ENGINEERING/PROJECTS/2015/523-BOISE\_RIVER\_INSTREAM\_HABITAT\_CAD/DWG/BARBER.JM.DWG

GENERAL NOTES

1. THE "OWNER" OF THE PROJECT, AS REFERRED IN THESE SPECIFICATION, IS THE PROPERTY OWNER - THE "OWNER'S REPRESENTATIVE" IS IDAHO FISH AND GAME.
2. ALL DISTURBED AREAS MUST BE REVEGETATED PER SEEDING PLAN INCLUDED IN THE REVEGETATION SPECIFICATIONS. ANY LEFTOVER WOODY DEBRIS SHOULD BE SCATTERED ON THE FLOODPLAIN BY HAND UNDER DIRECTION OF ENGINEER AFTER SEEDING TO PROVIDE ROUGHNESS.
3. UPON COMPLETION OF THE PROJECT, ALL AREAS USED BY CONTRACTOR SHALL BE PROPERLY CLEARED OF ALL TEMPORARY STRUCTURES, RUBBISH, AND WASTE MATERIALS AND PROPERLY GRADED TO DRAIN AND BLEND IN WITH THE SURROUNDING TERRAIN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY ITEMS DAMAGED DURING CONSTRUCTION, INCLUDING FENCING, BRIDGES, ROADS, ETC.
5. THE OWNER OR OWNER'S REPRESENTATIVE RESERVE THE RIGHT TO MAKE ADJUSTMENTS IN THE FIELD TO DIMENSIONS, STRUCTURE LOCATIONS, STRUCTURE DETAILS, AND ALL OTHER RELEVANT PRACTICES AS NEEDED TO PRESERVE DESIGN INTENT, HABITAT IN THE CREEK AND FLOODPLAIN, AND TO FIT SITE CONDITIONS.
6. THE CONTRACTOR SHALL ONLY REMOVE TREES AND SHRUBS THAT ARE ABSOLUTELY NECESSARY FOR THE EXECUTION OF THE WORK AND SHALL MAKE ALL EFFORTS TO MINIMIZE TREE REMOVAL. IN THE EVENT THAT A TREE OR SHRUB OUTSIDE THE IMMEDIATE WORK AREAS MUST BE REMOVED OR DAMAGED, THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE OWNER.
7. ANY ORGANIC MATERIAL RESULTING FROM TREE OR BRUSH REMOVAL CANNOT BE USED FOR BACKFILL MATERIAL.
8. MINOR MODIFICATIONS ARE EXPECTED TO SUIT JOB SITE DIMENSIONS OR CONDITIONS. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. THE OWNER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES WILL BE NOTIFIED OF AN OWNER-AUTHORIZED CHANGE RESULTING IN MORE THAN A 10% DESIGN CHANGE OF PROPOSED FOOTPRINT OR SIGNIFICANTLY AFFECTING THE INTENDED BENEFIT OR FUNCTION OF A PROJECT ELEMENT.
9. THE LOCATION OF ALL FEATURES SHOWN IS APPROXIMATE.
10. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND SPECIFICATIONS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE SUBMITTAL OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION; THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS; AVAILABILITY OF LABOR, WATER, ELECTRICITY, AND ROADS; THE UNCERTAINTIES OF WEATHER; THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, AND GROUNDWATER; THE EQUIPMENT AND FACILITIES NEEDED FOR AND DURING THE PERFORMANCE OF THE WORK; AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT THEMSELVES WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE THE CONTRACTOR AND SUBCONTRACTOR(S) FROM RESPONSIBILITY FOR THE PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE CONTRACT DOCUMENTS AND FOR ALL SUBMITTALS REQUIRED TO THE OWNER FOR REVIEW AND ACCEPTANCE.

PERMIT NOTES

1. EVERY REASONABLE EFFORT SHALL BE MADE TO CONDUCT THE ACTIVITIES SHOWN IN THESE PLANS, IN A MANNER THAT MINIMIZES THE ADVERSE IMPACT ON WATER QUALITY, FISH AND WILDLIFE, AND THE NATURAL ENVIRONMENT.
2. ALL WORK WILL BE IN COMPLIANCE WITH PERMIT CONDITIONS ISSUED BY VARIOUS REGULATORY AGENCIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE COPIES OF ALL PERMITS ON THE JOB SITE, UNDERSTAND AND COMPLY WITH ALL PERMIT CONDITIONS.
3. ALL ACTIVITIES THAT INVOLVE WORK ADJACENT TO OR WITHIN THE WETTED CHANNEL SHALL, AT ALL TIMES, REMAIN CONSISTENT WITH ALL APPLICABLE WATER QUALITY STANDARDS, EFFLUENT LIMITATION AND STANDARDS OF PERFORMANCE, PROHIBITIONS, PRETREATMENT STANDARDS, AND MANAGEMENT PRACTICES ESTABLISHED PURSUANT TO THE CLEAN WATER ACT OR PURSUANT TO APPLICABLE STATE AND LOCAL LAW.
4. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, FISH ARE OBSERVED IN DISTRESS, A FISH KILL OCCURS, OR WATER QUALITY PROBLEMS DEVELOP (INCLUDING EQUIPMENT LEAKS OR SPILLS), OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY.

SURVEY NOTES

1. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO OWNER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.

3. ELEVATIONS SHOWN ON THE PLANS FOR PIPE INVERTS, TOPS OF BANKS, THALWEG, GRADE CONTROLS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE OWNER OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. THE OWNER SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT THE PROPER ADJUSTMENTS CAN BE MADE BY ENGINEER PRIOR TO THE INSTALLATION OF THE FACILITIES, AS SET FORTH IN THE SPECIAL PROVISIONS.

EROSION, SEDIMENT CONTROL, AND WATER MANAGEMENT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.
2. A SEDIMENT AND EROSION CONTROL PLAN WILL BE DEVELOPED AND SUBMITTED FOR APPROVAL BY OWNER AND/OR THE ENGINEER BEFORE ANY CONSTRUCTION MAY BEGIN. THE SEDIMENT AND EROSION CONTROL PLAN WILL IDENTIFY BEST MANAGEMENT PRACTICES TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
3. ACTIVITIES SHALL BE DESIGNED AND CONSTRUCTED TO AVOID AND MINIMIZE ADVERSE IMPACTS TO WATERS OF THE UNITED STATES TO THE MAXIMUM EXTENT PRACTICAL THROUGH THE USE OF PRACTICAL ALTERNATIVES. ALTERNATIVES THAT SHALL BE CONSIDERED INCLUDE THOSE THAT MINIMIZE THE NUMBER AND EXTENT OF IN-WATER WORK AND EQUIPMENT CROSSINGS OF WETTED CHANNELS.
4. AT NO TIME SHALL SEDIMENT-LADEN WATER BE DISCHARGED OR PUMPED DIRECTLY INTO THE SUBJECT RIVER, STREAM, OR WETLAND. WATER SHALL BE DISCHARGED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE PROJECT PERMITS AND/OR SPECIFICATIONS.
5. IF HIGH WATER LEVEL CONDITIONS THAT CAUSE SILTATION OR EROSION ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL STOP UNTIL THE WATER LEVEL SUBSIDES.
6. PERMIT CONDITIONS CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF EROSION AND TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED CONCENTRATIONS AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.
7. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO CONSTRUCTION AREAS DEFINED ON SITE PLAN OR IDENTIFIED AS ACCEPTABLE BY THE ENGINEER OR OWNER.
8. ALL EXTERNAL GREASE AND OIL SHALL BE PRESSURE-WASHED OFF THE EQUIPMENT PRIOR TO TRANSPORT TO THE SITE.
9. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, SEDIMENTS, SEDIMENT-LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE SUBJECT RIVER, STREAM, OR WETLAND.
10. THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL KIT ONSITE AT ALL TIMES.
11. FOLLOWING CONSTRUCTION, SITE RESTORATION MAY INCLUDE ESTABLISHING LONG-TERM EROSION PROTECTION MEASURES. THESE MEASURES MAY INCLUDE PLANTINGS, EROSION CONTROL FABRIC, SEED, AND MULCH. EQUIPMENT AND EXCESS SUPPLIES WILL BE REMOVED AND THE WORK AREA WILL BE CLEANED. MAINTENANCE ACTIVITIES FOR THE NEWLY CONSTRUCTED RESTORATION PROJECTS ARE ANTICIPATED TO OCCUR PERIODICALLY.
12. UPON COMPLETION OF EARTHWORK, CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES TO ESTABLISH STABLE CONDITIONS THAT CAN PERSIST THROUGH REVEGETATION.

CONSTRUCTION NOTES

1. CONTRACT DOCUMENTS REFER TO THESE PLANS.
2. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE ALL WORK AS INDICATED IN THE CONTRACT DOCUMENTS.
3. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:30 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER.
4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE BY THE OWNER OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
6. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.
7. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, ROADWAYS, DRAINAGE WAYS, PRIVATE BRIDGES, CULVERTS, AND VEGETATION UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.

8. THE CONTRACTOR SHALL KEEP THE JOB SITE CLEAN AND HAZARD FREE. CONTRACTOR SHALL DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH FOR THE DURATION OF THE WORK. UPON COMPLETION OF WORK, CONTRACTOR SHALL REMOVE ALL MATERIAL AND EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY.
9. NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES HEREIN.
10. DIMENSION CALLOUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE PLANS.
11. THE PLANS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF ALL CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURES, WORKS, AND THE PUBLIC DURING CONSTRUCTION.
12. MATERIAL SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS, UNLESS WITH WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
13. CONSTRUCTION STAGING AND REFUELING AREAS TO BE A MINIMUM OF 150 FT AWAY FROM SURFACE WATERS.
14. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL FENCE IN PROJECT AREA DURING CONSTRUCTION AND REPLACING IT IN SAME LOCATION. NOT ALL EXISTING FENCE IS SHOWN; CONTRACTOR SHALL VERIFY IN FIELD.
15. CONTRACTOR SHALL STAKE OUT ALL PROPOSED ELEMENTS FOR REVIEW AND APPROVAL BY ENGINEER AND/OR IDFG-APPOINTED CONSTRUCTION MANAGER.

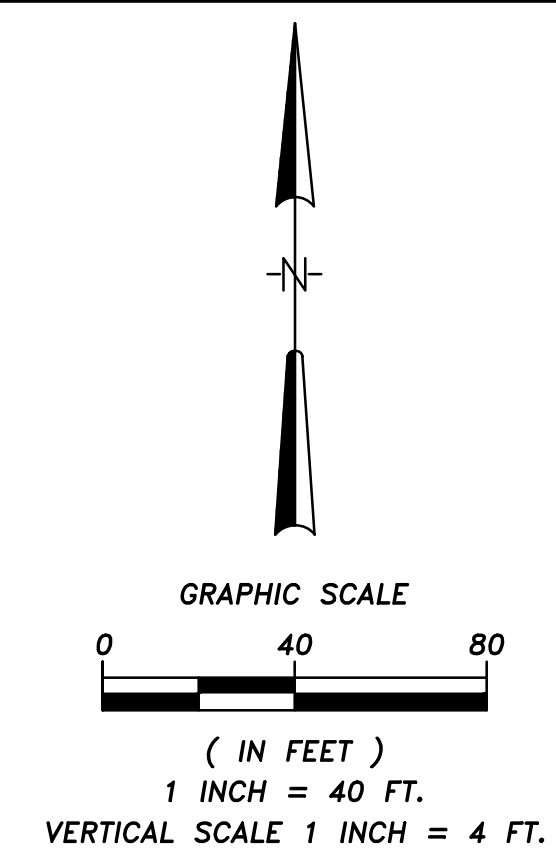
USER: JMCALLAGHAN LOCATION: FISHERY ENGINEERING PROJECT: 201515-023-BOISE RIVER INSTREAM HABITAT CALD IDFG BARBER.JM.DWG

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT	
DRAWN	RZ/JM		
CHECKED	LS		
DATE:	01/06/2016	GENERAL NOTES	
SCALE:	NTS		
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 2 OF 7	

PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION

PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION



**LEGEND**

- CONTROL POINT
- ≡ WATER SURFACE ELEVATION
- ➔ FLOW ARROW

**DATUM**

1. HORIZONTAL - NAD83 IDAHO STATE PLANE WEST ZONE GRID
2. VERTICAL - NAVD88 WITH GEOID 12B MODELING

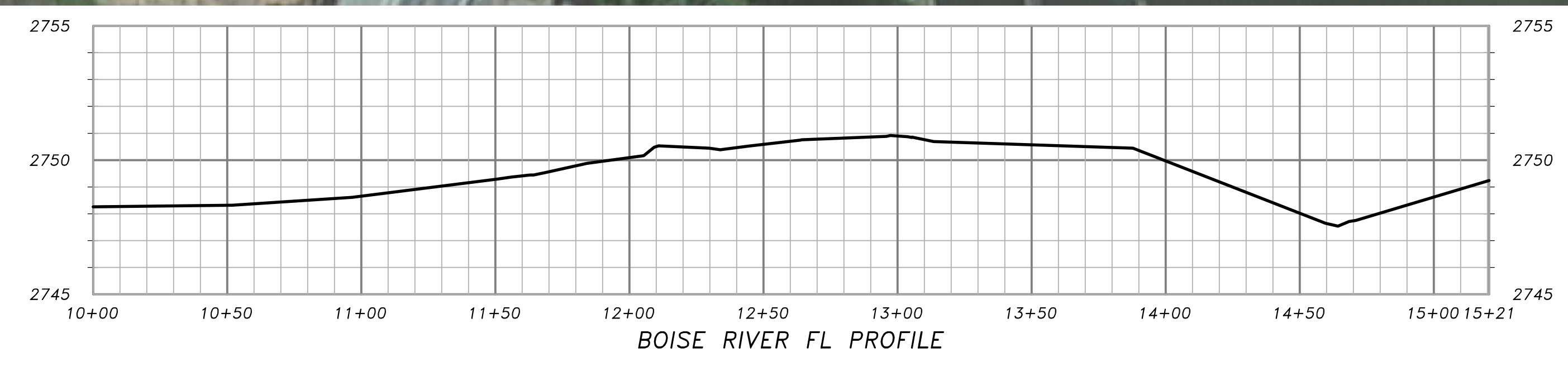
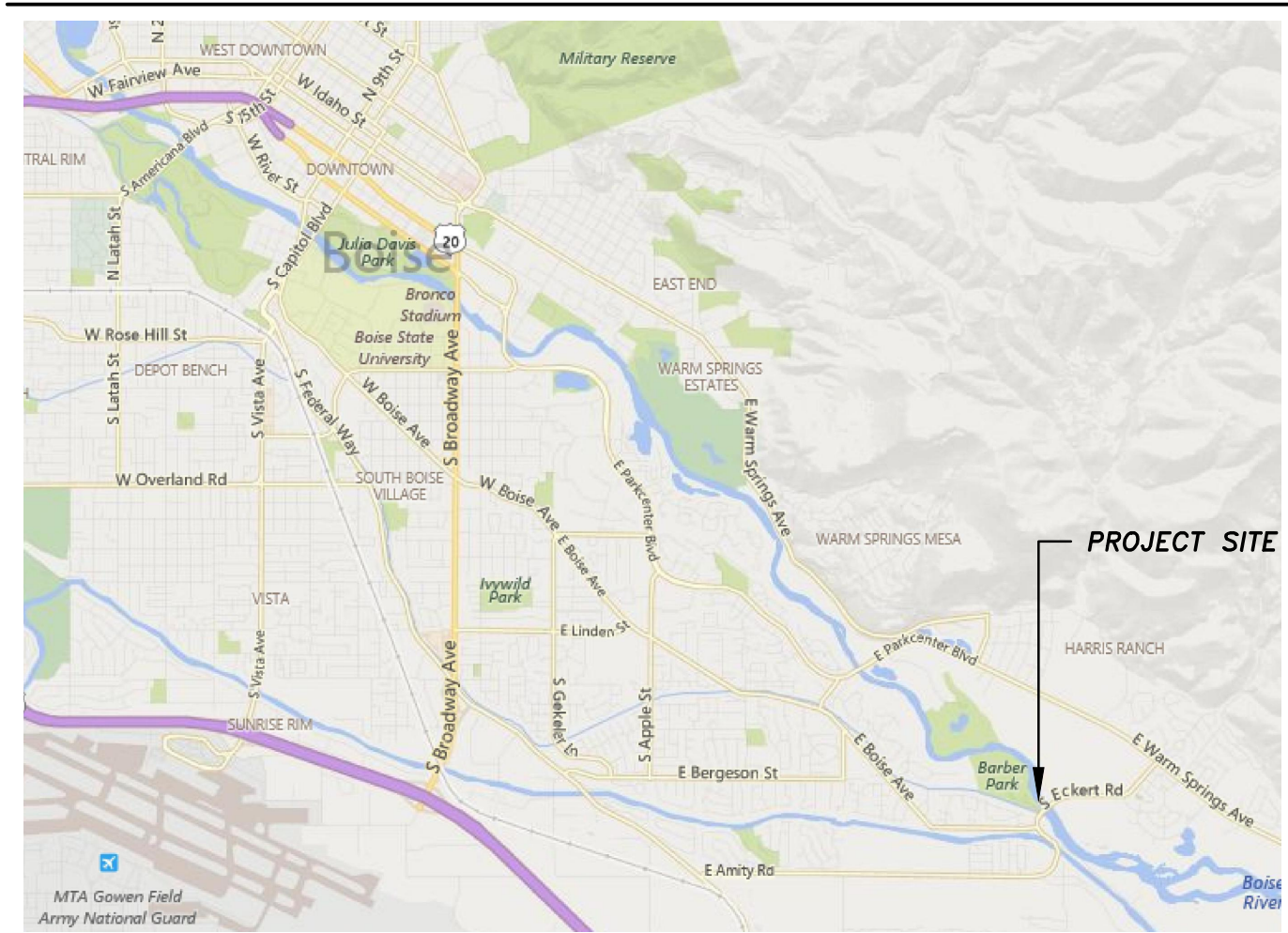
**APPROXIMATE GPS SITE COORDINATES**

LATITUDE: 43°33'56.23" N LONGITUDE: 116°07'56.02" W

**NOTES**

1. SITE SURVEY: SEP 25 AND DEC 4, 2015
2. AERIAL PHOTOGRAPHY IS BING MAPS

**VICINITY MAP**



CONTROL TABLE		
POINT #	COORDINATES	ELEV.
#500	N 8.91 E 23.23	68.96
#1000	N 8.73 E 24.03	68.95

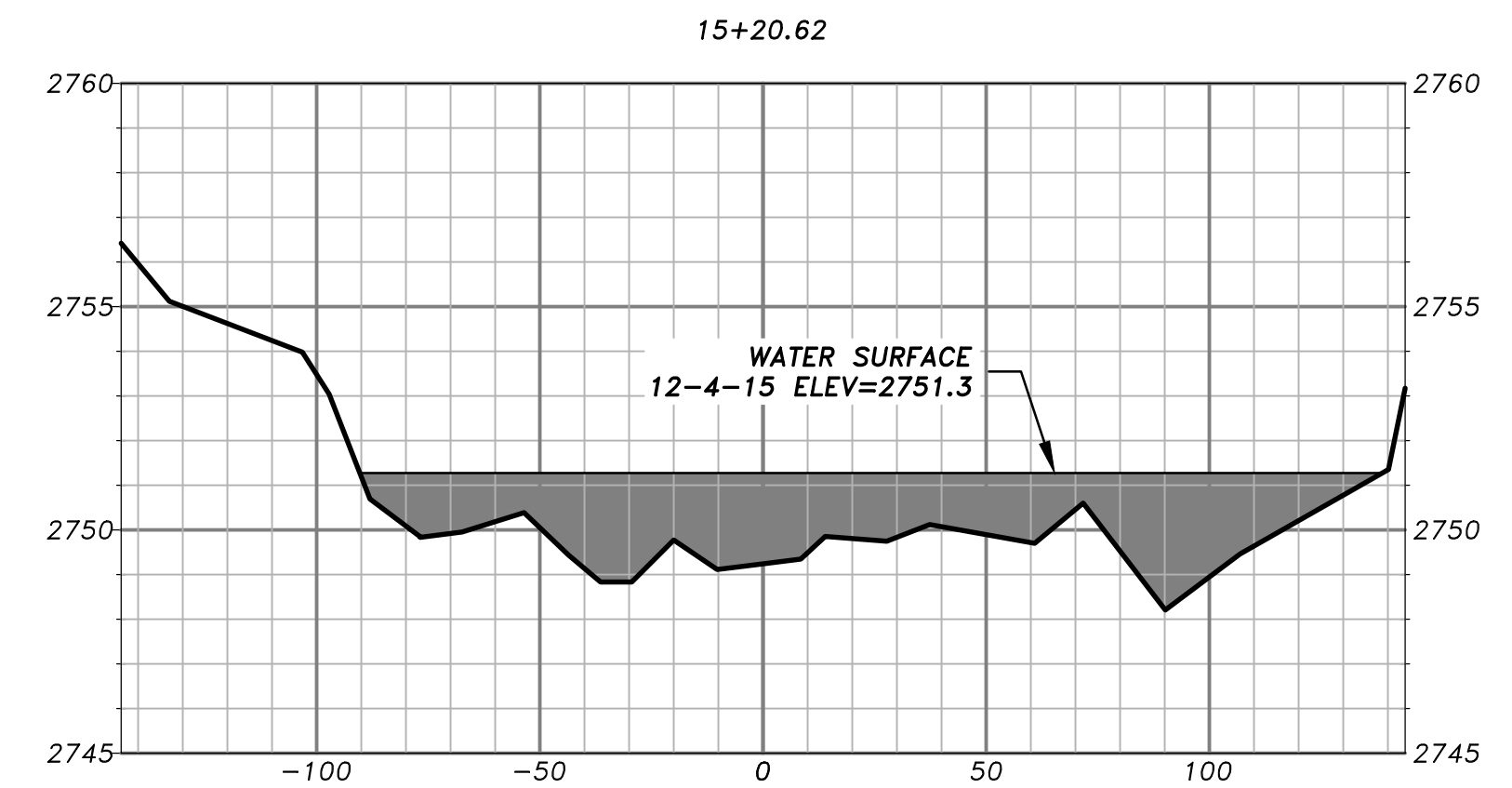
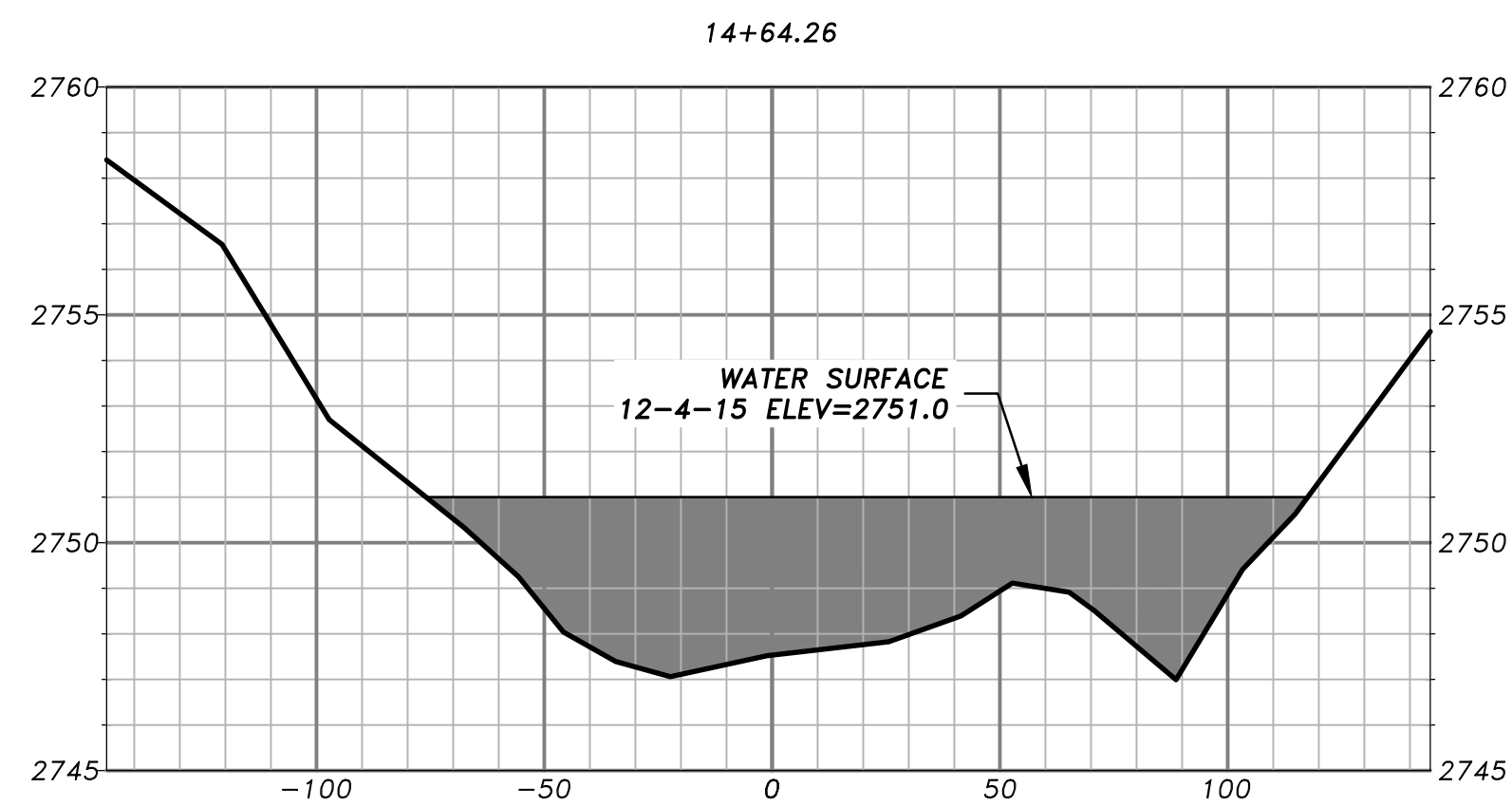
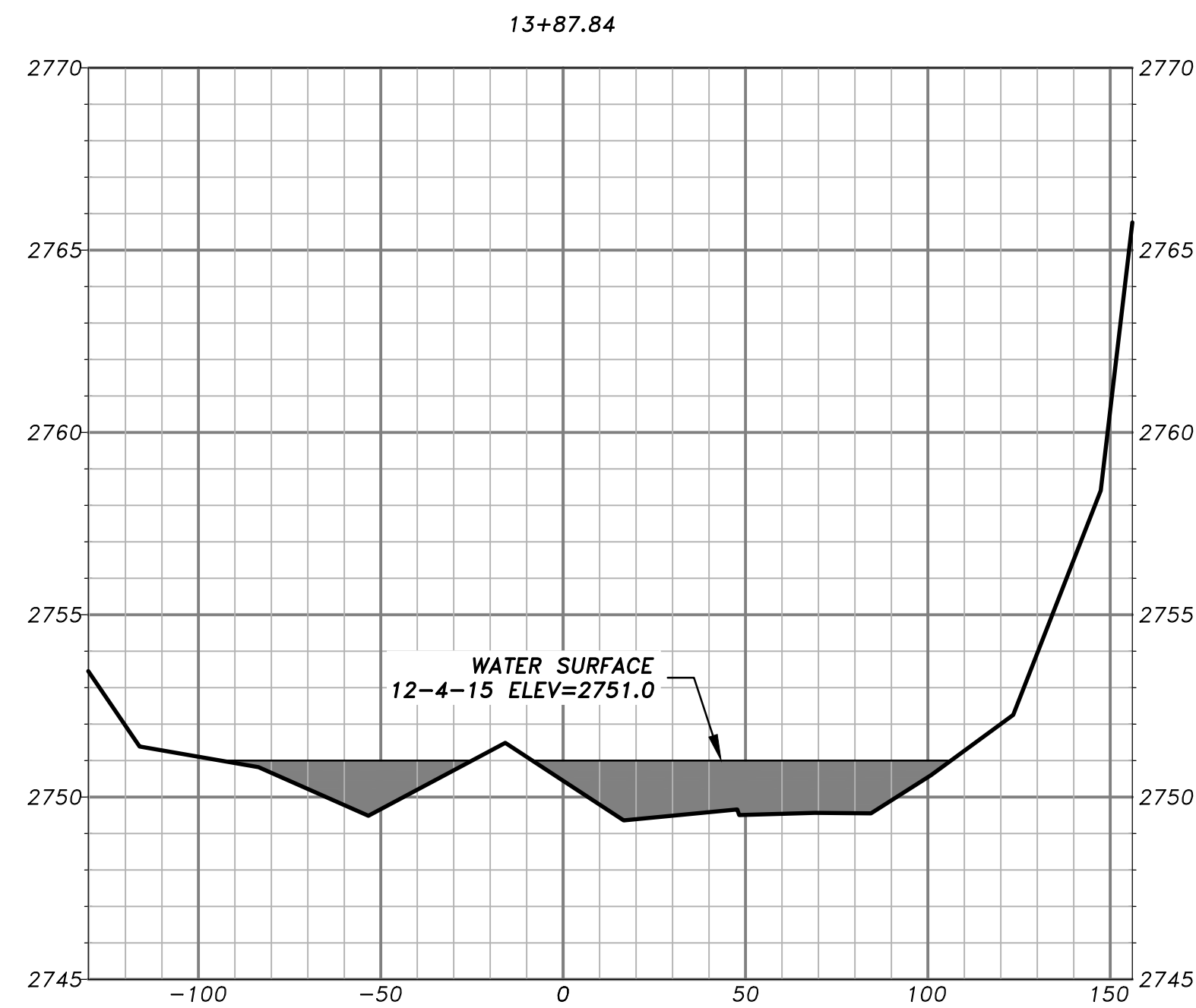
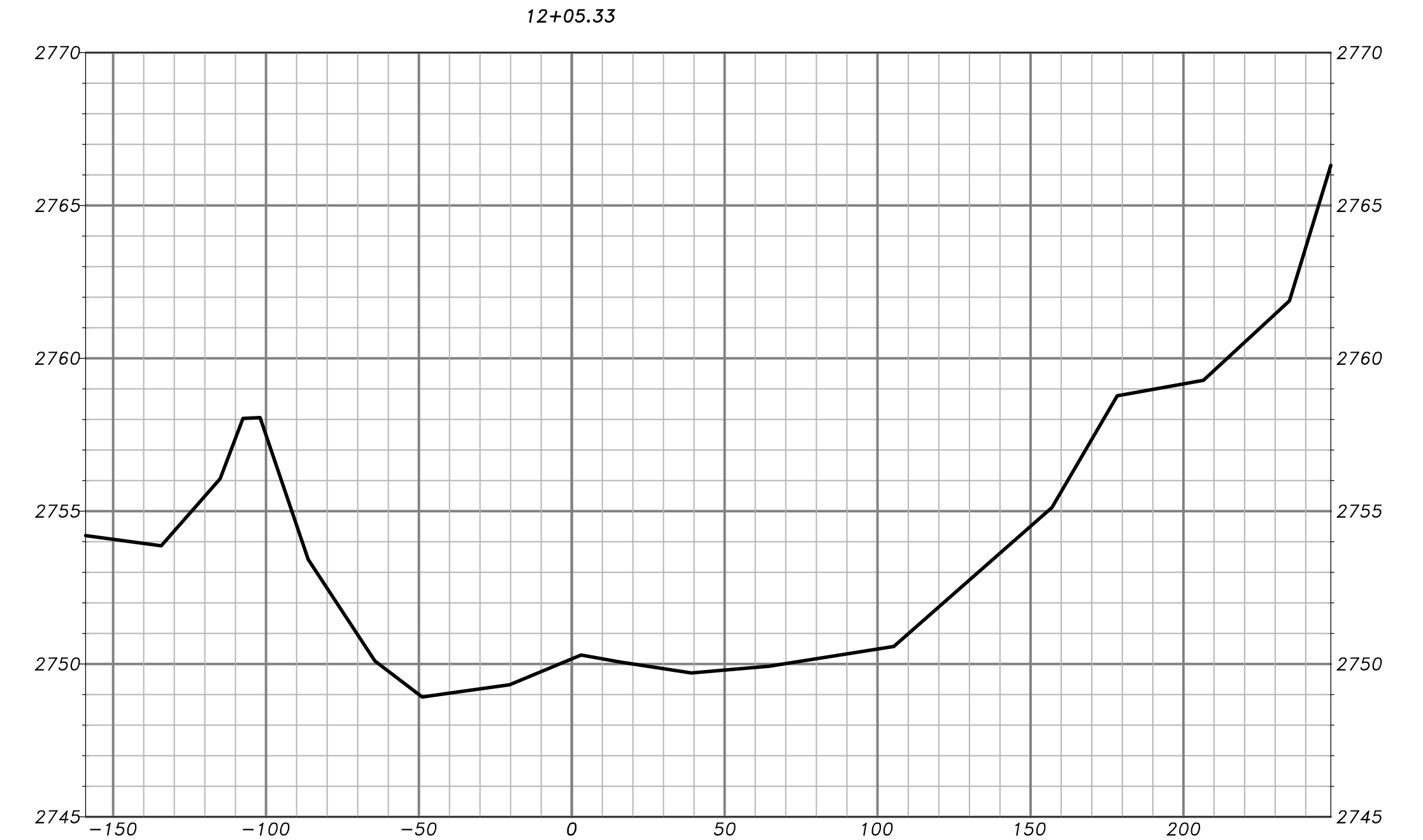
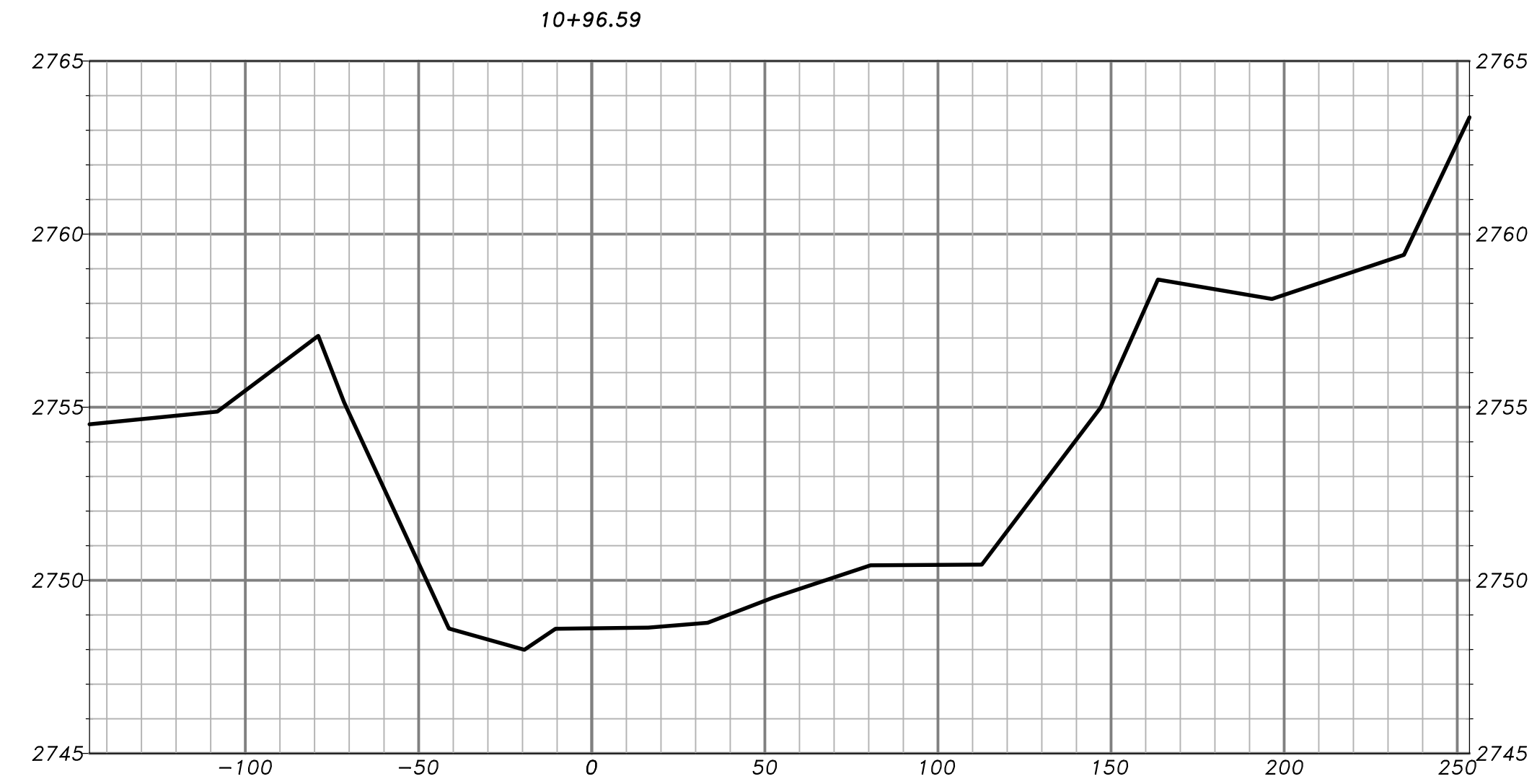
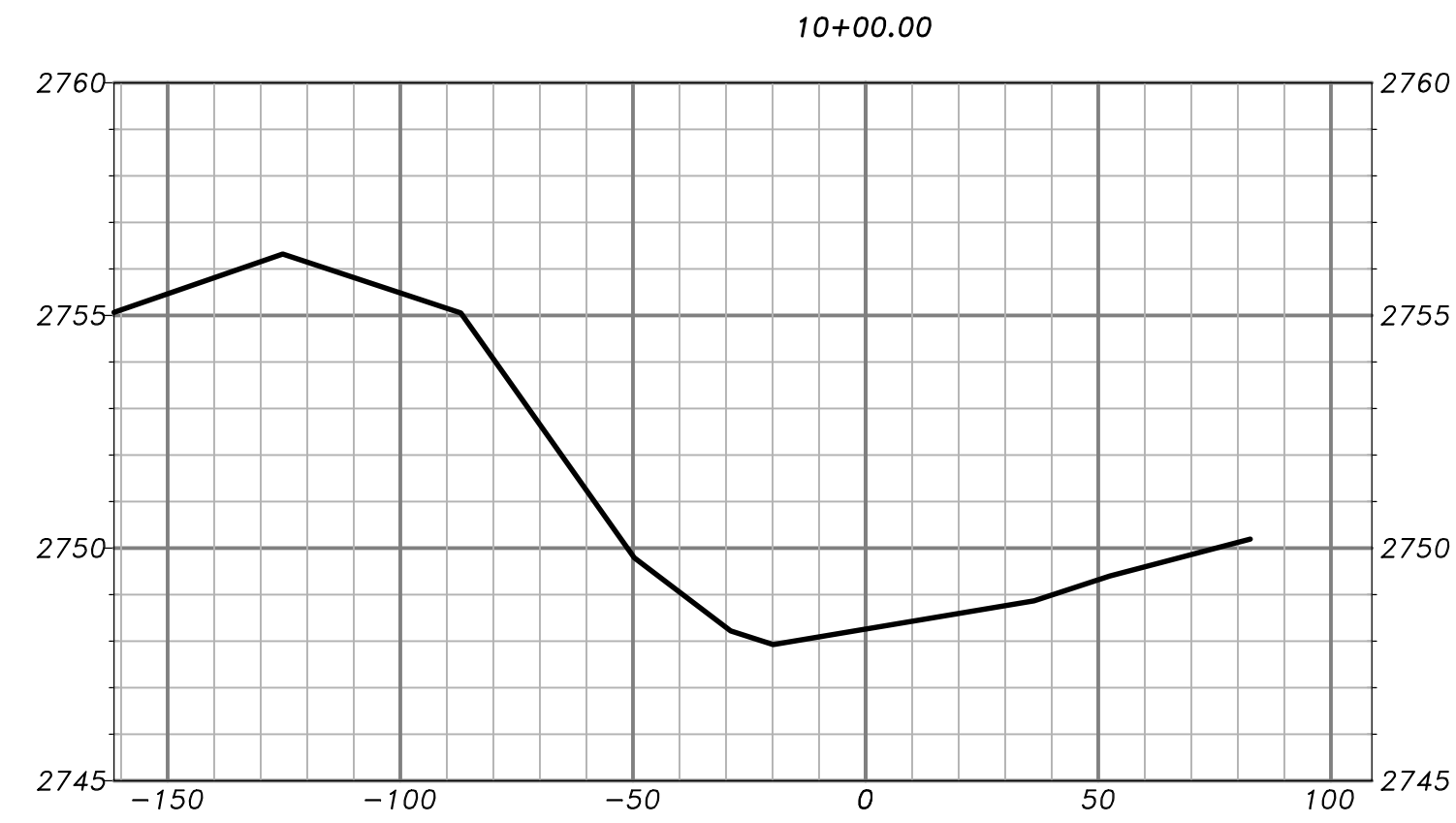
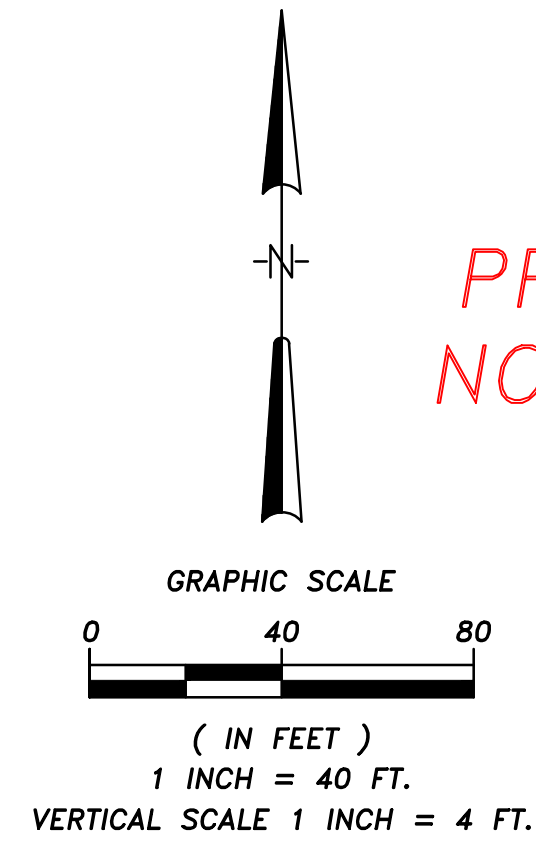
REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT	
DRAWN	RZ/JM		
CHECKED	LS		
DATE:	01/06/2016	EXISTING PLAN AND PROFILE	
SCALE:	1" = 40'		
APPROVED			APPROVED
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 3 OF 6	

DRAWING IS REDUCED TO  
50% OF FULL SCALE  
0 1" BAR IS 1 INCH ON ORIGINAL DRAWING.  
IF NOT 1 INCH ON THIS SHEET,  
ADJUST SCALES ACCORDINGLY.

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

USER: JMC/LEANNIE LOCATION: FISHERY/ENGINEERING/PROJECTS/2015/15-523\_BOISE\_RIVER\_INSTREAM\_HABITAT\_CAD/IDFG\_BARBER.JM.DWG

PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION

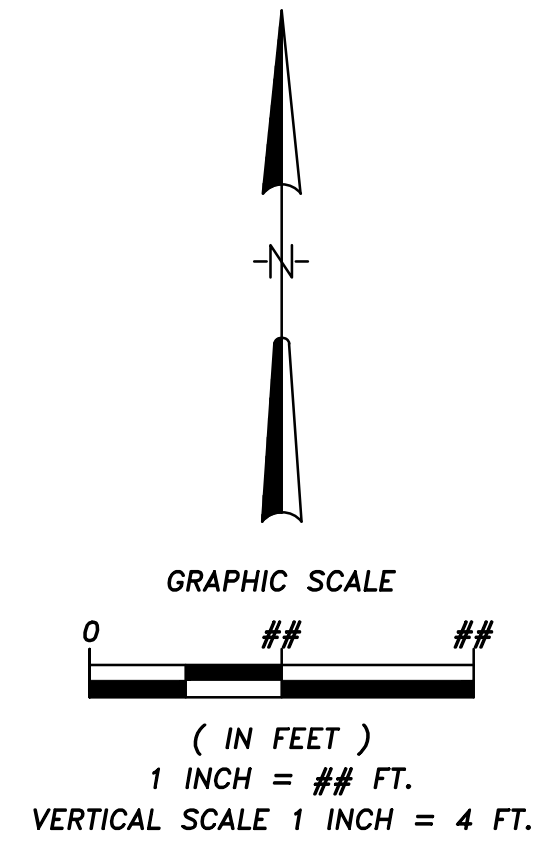


USER:RMCALL,LEANNE LOCATION:HA FISHERY ENGINEERING PROJECTS 2015-2023 Boise River Instream Habitat CAD/DFG BARBER.JM.DWG

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

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REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT EXISTING CROSS SECTIONS	
DRAWN	RZ/JM		
CHECKED	LS		
DATE:	01/06/2016		
SCALE:	1" = 40'		
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 4 OF 7	



**LEGEND**

- CONTROL POINT
- ▽ WATER SURFACE ELEVATION
- ➔ FLOW ARROW

**DATUM**

1. HORIZONTAL - NAD83 IDAHO STATE PLANE WEST ZONE GRID
2. VERTICAL - NAVD88 WITH GEOID 12B MODELING

**APPROXIMATE GPS SITE COORDINATES**

LATITUDE: 43°33'56.23" N LONGITUDE: 116°07'56.02" W

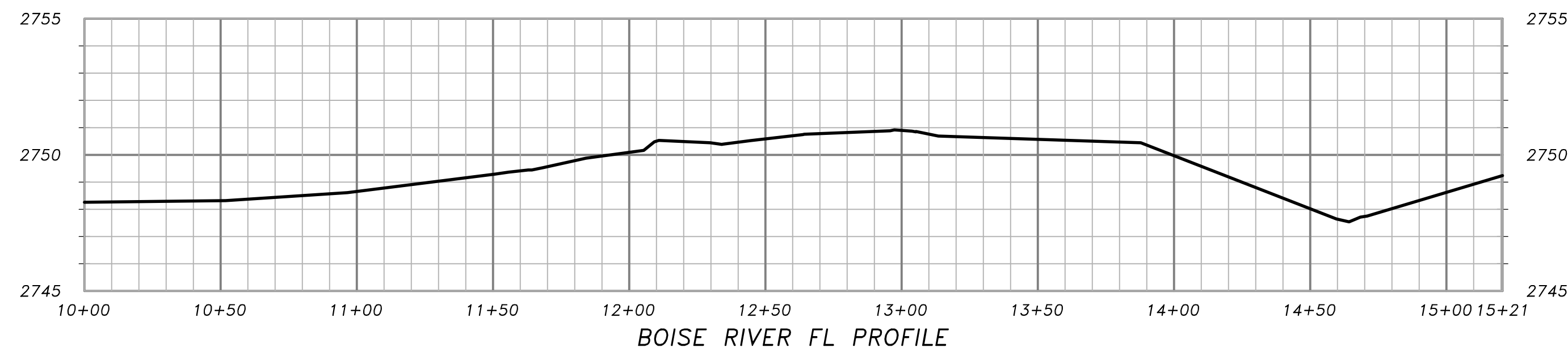
**NOTES**

1. SITE SURVEY: SEP 25 AND DEC 4, 2015
2. AERIAL PHOTOGRAPHY IS BING MAPS



PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION

CONTROL TABLE		
POINT #	COORDINATES	ELEV.
#	N E	
#	N E	



BOISE RIVER FL PROFILE

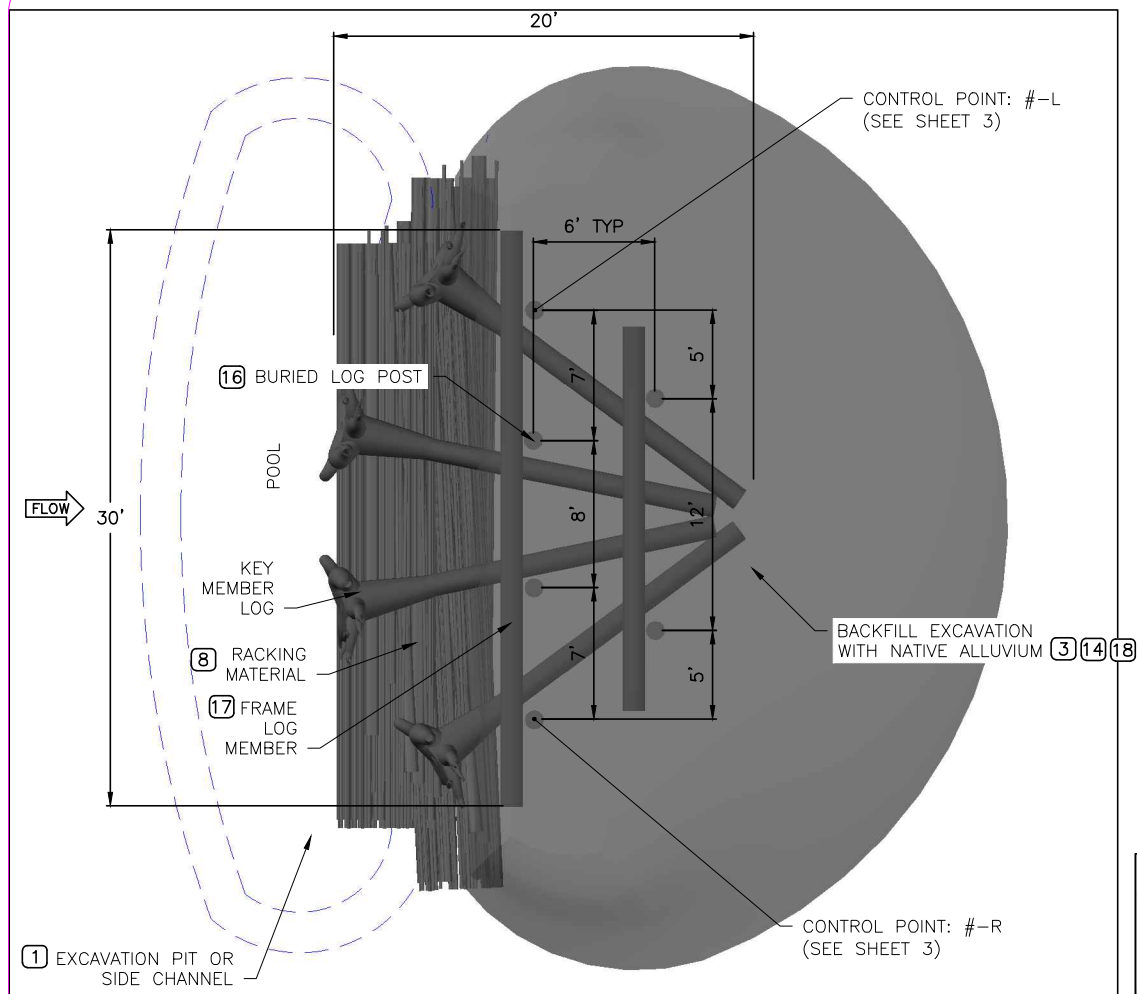
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REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT PROPOSED PLAN AND PROFILE	
DRAWN	RZ/JM		
CHECKED	LS		
DATE:	01/06/2016		
SCALE:	#####		
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 5 OF 7	

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

USER: JMCALL/LEAHNE LOCATION: FISHERY/ENGINEERING/PROJECTS/2015-2023-BOISE RIVER INSTREAM HABITAT CAD/DFG BARBER.JM.DWG



**ELJ 1 STRUCTURE PLAN** (1/6)  
SCALE: 1"=5'

**TYPE 1 STRUCTURE SCHEDULE**

STRUCTURE LABEL	1-2-1	1-2-2	1-2-3	1-2-4	1-2-5
STRUCTURE WIDTH, (FT)	30	30	30	30	30
STRUCTURE LENGTH, (FT)	20	20	20	20	20
MINIMUM LOG DIAMETER, (IN)	14	14	14	14	14
TIMBER POST DIAMETER, (IN)	12	12	12	12	12
AVERAGE OCTOBER WATER SURFACE ELEVATION (ft-NAVD 88)					
STRUCTURE BASE ELEVATION (FT-NAVD 88)					
SCOUR HOLE ELEVATION (ft-NAVD 88)					
TOP OF TOE LOG ELEVATION (ft-NAVD 88)*					
MINIMUM PILE TIP ELEVATION (ft-NAVD 88)					

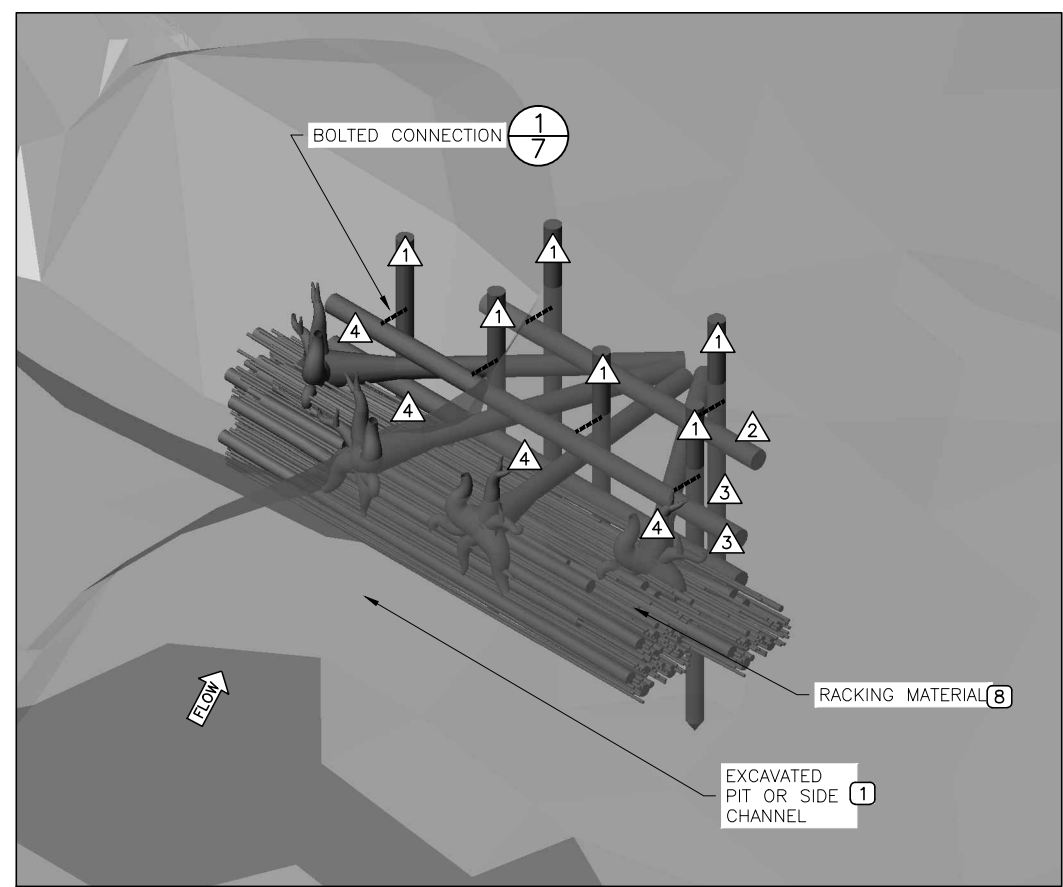
\*TOP OF TOE LOG ELEVATION IS EQUAL TO ADJACENT CHANNEL THALWEG

**TYPE 1 ELJ - LOG SCHEDULE**

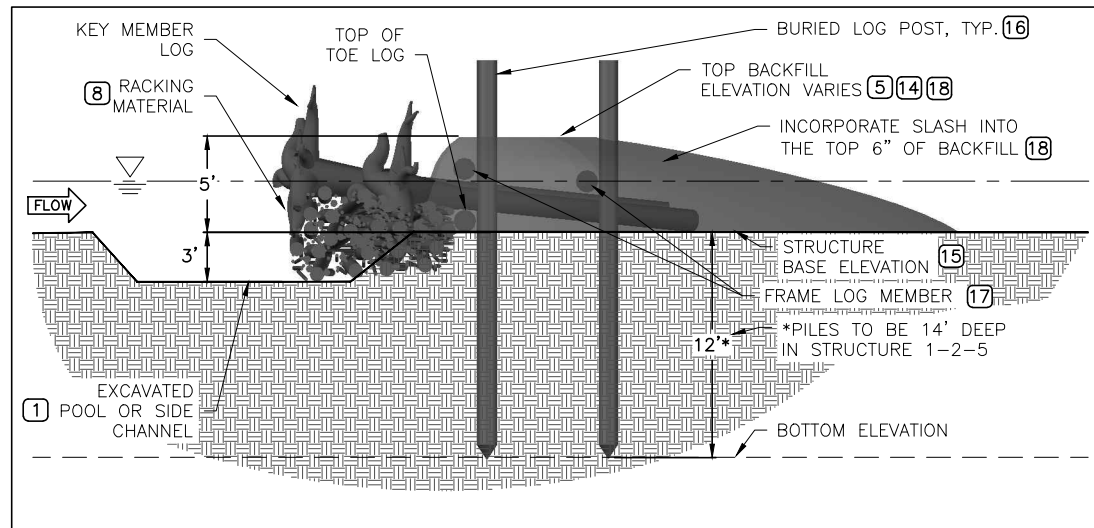
LOG ID	DIA* (IN)	LENGTH** (FT)	ROOTWAD (Y/N)	QUANTITY PER STRUCTURE
1	12	20	N	6
2	14	20	N	1
3	14	30	N	2
4	14	20	Y	4

\* MINIMUM DIAMETER AT BREAST HEIGHT (2" MAXIMUM TAPER) (6)  
\*\* TOTAL LENGTH INCLUDING ROOTWAD

- TYPE 1 ELJ STRUCTURE NOTES**
- EXCAVATE IN FRONT OF LOGJAM FOR PLACEMENT OF RACKING MATERIAL. EXCAVATION AREA SHALL NOT BE BACKFILLED WITH ALLUVIUM, BUT LEFT AS A SCOUR HOLE OR PROPOSED SIDE CHANNEL PER GRADING PLANS. ADDITIONAL EXCAVATION WITHIN POOL MAY BE PERFORMED AS DIRECTED BY DESIGNER OR OWNER'S REPRESENTATIVE TO INSTALL RACKING MATERIAL.
  - EXCAVATION SPOILS SHALL BE STAGED ACCORDING TO THE SWPPP. SPOILS SHALL ALSO BE STOCKPILED TO ALLOW LOG LAYER PLACEMENT AND CONSTRUCTION ACCESS.
  - BACKFILL EXTENTS MAY VARY AND TO BE CONSTRUCTED WITH NATIVE ALLUVIUM FROM EXCAVATION SPOILS.
  - BACKFILL EACH STRUCTURE LAYER WITH NATIVE ALLUVIUM FLUSH WITH THE CURRENT LAYER PRIOR TO PLACEMENT OF THE SUBSEQUENT LAYER.
  - FINAL ELJ HEIGHT TO BE ACHIEVED AS SPECIFIED REGARDLESS OF ACTUAL LOG DIAMETERS USED OR STACKING ARRANGEMENT.
  - ALL LARGE WOOD DIMENSIONS DO NOT INCLUDE BARK THICKNESS.
  - COVER TOP OF BACKFILL AREA AND BASE OF STRUCTURES 6-12 INCHES WITH LOOSE WOOD DEBRIS AND CHIPS.
  - RACKING MATERIAL SHALL CONSIST OF APPROXIMATELY 30 CU. YDS PER STRUCTURE WITH 6" - 12" DIA DBH AND A MINIMUM OF 15-FOOT LENGTH. RACKING PLACEMENT SHALL OCCUR WITH EACH LAYER PLACEMENT TO ENSURE RACKING MATERIAL EXTENDS THROUGH STRUCTURE AND PINNED IN PLACE BY SUBSEQUENT LAYERS.
  - THE CONTRACTOR SHALL FIELD VERIFY WITH THE DESIGNER OR OWNER'S REPRESENTATIVE ALL STRUCTURE LOCATIONS, PILE LOCATIONS, LENGTHS, WIDTHS AND ELEVATIONS PRIOR TO EXCAVATION, ASSEMBLY AND INSTALLATION OF EACH STRUCTURE.
  - LOCATIONS FOR ALL STRUCTURE PLACEMENTS WILL BE STAKED IN FIELD BY THE DESIGNER OR OWNER'S REPRESENTATIVE PRIOR TO START OF CONSTRUCTION.
  - EXCAVATION LIMITS SHALL BE FIELD VERIFIED BY THE DESIGNER OR OWNER'S REPRESENTATIVE PRIOR TO EXCAVATION COMMENCING AND PLACEMENT OF ANY LARGE WOOD.
  - LOG TYPE IDENTIFICATION SHALL BE PAINTED ON ALL LOGS BY THE CONTRACTOR IN A PLACE VISIBLE FOR FIELD VERIFICATION PRIOR TO PLACEMENT WITH LEAD-FREE, BLAZE-ORANGE SURVEY MARKING PAINT.
  - THE WOOD LAYER PLACEMENT IN EACH LOGJAM LAYER SHALL BE FIELD VERIFIED BY THE DESIGNER OR OWNER'S REPRESENTATIVE PRIOR TO BACKFILLING.
  - BACKFILL TO BE 1' OVER TOP LOG TO COVER ALL BOLTS BACKFILL WILL BE APPROXIMATELY 5' ABOVE CHANNEL BED UNLESS SPECIFIED BY THE DESIGNER OR OWNER'S REPRESENTATIVE TO BE LOWER IN ORDER TO PRESERVE APPEARANCE OF FLOODPLAIN. EXCESS BACKFILL TO BE PLACED DOWNSTREAM OF FINISHED ELJ. WHERE EXISTING GRADE IS HIGHER THAN SPECIFIED BACKFILL HEIGHT, BACKFILL SHALL MATCH EXISTING GRADE.
  - EXCAVATION WILL BE REQUIRED TO ACHIEVE STRUCTURE BASE ELEVATION.
  - LOG POSTS MAY BE INSTALLED AT AN ANGLE (UP TO 20 DEGREES) AND TOPS MAY BE CUT TO DIFFERENT HEIGHTS OR MODIFIED AT DIRECTION OF THE DESIGNER OR OWNER'S REPRESENTATIVE TO APPEAR IRREGULAR.
  - THE TWO TOP FRAME LOG MEMBERS SHALL BE BOLTED TO LOG POSTS. THERE SHALL BE A TOTAL OF 6 BOLTED CONNECTIONS ON EACH STRUCTURE.
  - SLASH SHALL BE INCORPORATED INTO TOP 6" OF BACKFILL AND PLACED ON TOP OF STRUCTURE AS DIRECTED BY THE DESIGNER OR OWNER'S REPRESENTATIVE.



**ELJ 1 STRUCTURE PERSPECTIVE** (3/6)  
NOT TO SCALE

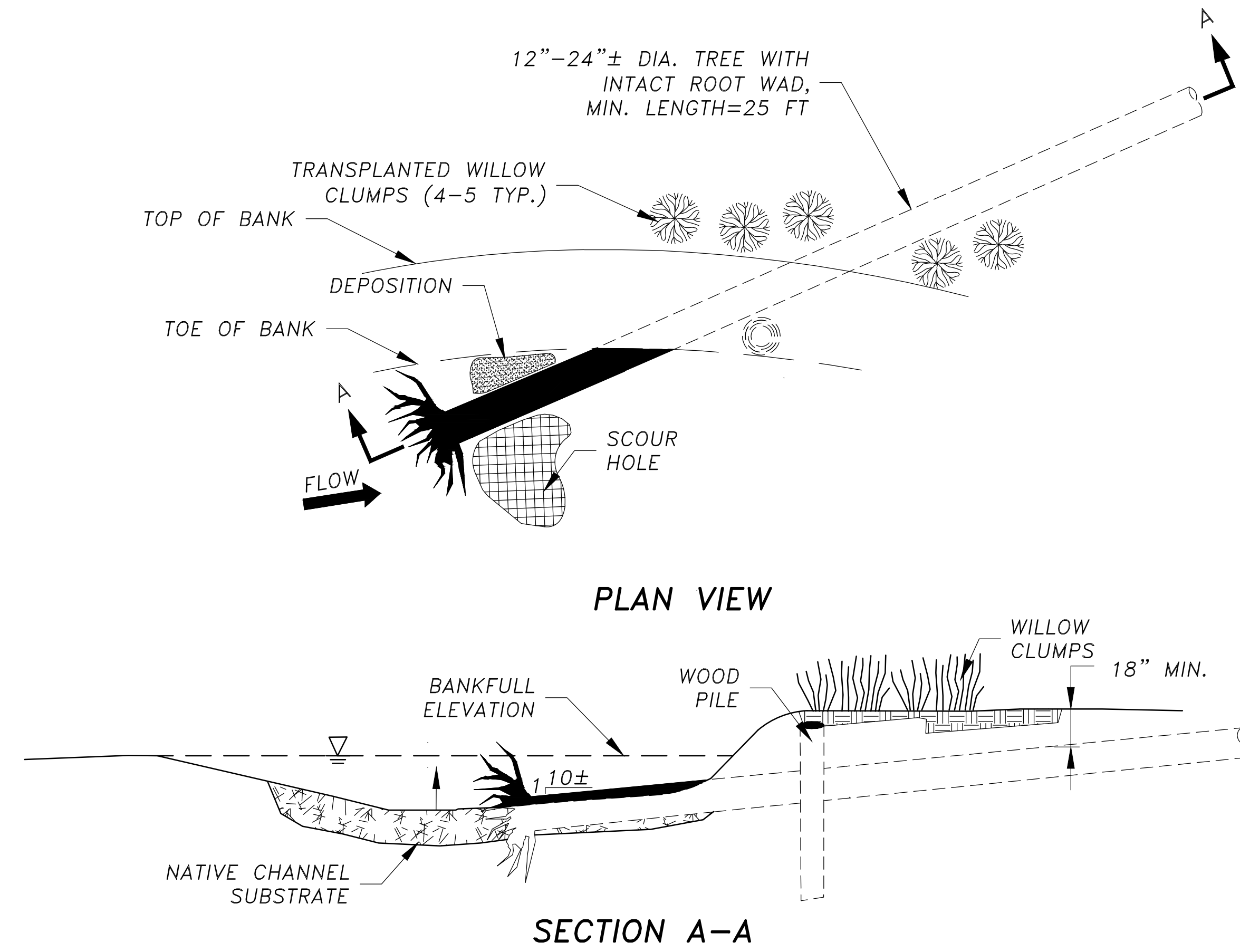


**ELJ 1 STRUCTURE SIDE PROFILE** (2/6)  
SCALE: 1"=5'

**PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION  
BASED ON DESIGN FROM NATURAL  
SYSTEMS DESIGN. INC.**

REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT	
DRAWN	RZ/JM		
CHECKED	LS		
DATE	01/06/2016		
SCALE	NTS	<b>DETAILS 1</b>	
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG: ELJ-TYPE1_NSD.DWG		SHEET 6 OF 6	

PRELIMINARY DRAWINGS  
NOT FOR CONSTRUCTION



BOULDER CLUSTER  
NTS

1
6

ROOTWAD VARIATION TREE BARB  
NTS

2
6

USER: JMC/FALL/JEANNE LOCATION: FISHERY/ENGINEERING/PROJECTS/2015/2015-523\_BOISE\_RIVER\_INSTREAM\_HABITAT\_CAD/DFG\_BARBER.JM.DWG

SECTION 29, TOWNSHIP 3 N, RANGE 3 E, B.M.  
BOISE SOUTH, IDAHO 7.5' USGS QUADRANGLE

REV.	DATE	DESCRIPTION	BY
STATE OF IDAHO DEPARTMENT OF FISH AND GAME BOISE, IDAHO			
DESIGNED	JM	DFG 2015-523 BOISE RIVER HABITAT ENHANCEMENT	
DRAWN	RZ/JM		
CHECKED	LS		
DATE:	01/06/2016	DETAILS 1	
SCALE:	NTS		
APPROVED		APPROVED	
CHIEF, BUREAU OF ENGINEERING		DIRECTOR	
DWG.: IDFG BARBER.JM.DWG		SHEET 6 OF 7	