AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
J	1 | 6

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0002	15-Jun-2004	W68SBV-4100-4504	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
WALLA WALLA DISTRICT, COE-G4P CONTRACTING DIVISION 201 N THIRD AVENUE WALLA WALLA WA 99362-1876	W912EF	**See Item 6**	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. W912EF-04-B-0014
	X	9B. DATED (SEE ITEM 11) 14-May-2004
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [ ] is extended, [X] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Subj: JACKSON HOLE STREAM RESTORATION SITE 9

A. See the following pages for all changes. The BID OPENING DATE AND TIME OF JUNE 23, 2004, AT 2:00 P.M. REMAINS UNCHANGED.

B. Amemdments 0001 and 0002 are applicable to this solicitation and must be acknowledged on the submitted bid.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 15-Jun-2004

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES – The following are included in this amendment.

a. Changes made to Amendment 2 (2 pages).
b. Modified clause 52.212-5001 in Section 0800
c. Revised BID SCHEDULE (To be submitted with BID Package)

The Revised Sections 01270 and 02300 are attachments to this amendment.

Note: Under "Changes made to Amendment 2", numbers 3, 4 and 5 have the changes shown right on this changes sheet. The revisions to numbers 1, 2 and 6 are covered under b, c and the revised section 01270 attachment.
(End of Summary of Changes)

a.

Changes made to Amendment 2

1. Modified Section 0800 paragraph 52.212-5001 "VARIATIONS IN ESTIMATED QUANTITIES - SUBDIVIDED ITEMS" (MAR 1995)

Added the new optional split bid items to this paragraph – See revised clause below.

2. Section 01270 (an attachment to this amendment)

Changed paragraph Rock Placement quanities Bid item 0003

Added Paragraph 1.15, 1.15.1, 1.15.2, 1.16, .16.1, 1.16.2, 1.16.3

3. Section 02300- paragraph 3.3.2 has been changed as follows.

As of **June 2004**, the fences were in the following conditions:

Fence Label	Damaged Piles to be Removed	New Piles to Install HP 12X84	New Piles to Install 12-inch Pipe	Pile Spacing	Pile Length
A	0	1	0	5 ft	40 ft
B	0	4	2	5 ft	40 ft
B	**1**	**0**	**4**	**5 ft**	**20 ft**
C	0	4	2	5 ft	40 ft
C	**1**	**0**	**2**	**5 ft**	**20 ft**
D	0	4	2	5 ft	40 ft
D	**2**	0	**6**	5 ft	20 ft
E	**0**	4	2	5 ft	40 ft
E	**1**	**0**	**2**	**5 ft**	**20 ft**

4. Section 02300- paragraph 3.4 changed as shown.

…Material excavated for placement of the rock grade control structure shall be placed on the island side of the raised portion of the structure (Section E) or hauled to and stockpiled offsite, as directed by the Contracting Officer. If placed on the island side of the raised portion of the structure, the excavated material shall not be placed at an elevation higher than the rock grade control structure. If hauled off site, the excavated material shall be dumped at a location directed by the Contracting Officer. The site will be within one mile, roundtrip, of the construction area.

5. Modified Sheet 4, File Number SN-952-7/4, CADD filename jher04.dgn

Replace the (Notes:) on this sheet 4 with the following:

1. Rock grade control shall be built to the approximate elevation of the existing ground along the overflow path, as directed by the COR.
2. All materials shall be placed within 6 inches of the dimensions shown or as directed by the COR.

6. Added the following bid items to the Optional items in the Bid Schedule (See BID SCHEDULE below)

a. Item 0017 Excavated Material Hauled Offsite

Split item – Item 0017A First 5,000 CY 5000 CY
Item 0017B Over 5,000 CY 3500 CY

B Item 0018 Add height to rock grade control structure

Split item - Item 0018A First 2,000 TN 2000 TN
Item 0018B Over 2,000 TN 1500 TN

C Changed Bid Item 2

From 6000 TN to 4000 TN

D Change Bid Item 3

A. From 6000 TN to 4000 TN
B. From 4500 TN to 3000 TN

b.
Section 0800

52.212-5001 “VARIATIONS IN ESTIMATED QUANTITIES – SUBDIVIDED ITEMS (MAR 1995) follows and is modified to include the new optional split items 0017 and 0018:

16, 52.212-5001 VARIATIONS IN ESTIMATED QUANTITIES - SUBDIVIDED ITEMS (MAR 1995)

This variation in estimated quantities clause is applicable only to Items Nos. 0003, 0017 and 0018.

(a) Variation from the estimated quantity in the actual work performed under any second or subsequent sub-item or elimination of all work under such a second or subsequent sub-item will not be the basis for an adjustment in contract unit price.

(b) Where the actual quantity of work performed for Item No’s. 0003, 0017 and 0018 is less than 85% of the quantity of the first sub-item listed under such item, the Contractor will be paid at the contract unit price for that sub-item for the actual quantity of work performed and, in addition, an equitable adjustment shall be made in accordance with the clause FAR 52.211-18, Variation in Estimated Quantities.

(c) If the actual quantity of work performed under Item No’s. 0003, 0017 and 0018 exceeds 115% or is less than 85% of the total estimated quantity of the sub-items under that item and/or if the quantity of the work performed under the second sub-item or any subsequent sub-item under Item No’s. 0003, 0017 and 0018 exceeds 115% or is less than 85% of the estimated quantity of any such sub-item, and if such variation causes an increase or a decrease in the time required for performance of this contract the contract completion time will be adjusted in accordance with the clause FAR 52.211-18 Variation in Estimated Quantities.

(End of Clause)

c. Estimated Cost Range of this Project is between $ 500,000 and $ 1,000,000

BID SCHEDULE - SUPPLIES OR SERVICES AND PRICES/COSTS

ITEM	DESCRIPTION	ESTIMATED QUANTITY	U/M	U/P	AMOUNT
0001	Mobilization and Demobilization	1	LS	XXXXX	$_____
0002	Rock Quarried and Stockpiled	4,000	TN	_____	$_____
0003	Rock Placement				
0003A	a. First 4,000 Tons	4,000	TN	_____	$_____
0003B	b. Over 4,000 Tons	3,000	TN	_____	$_____
0004	Rock Grade Control Excavated	60	HR	_____	$_____
0005	Rock Grade Control Survey	1	LS	XXXXX	$_____
	Optional Items				
0006	Mobilization and Demobilization (Optional)	1	LS	XXXXX	$_____
	Modification of Existing Eco-Fences				
0007	Eco Fence A (Optional)	1	LS	XXXXX	$_____
0008	Eco Fence B (Optional)	1	LS	XXXXX	$_____
0009	Eco Fence C (Optional)	1	LS	XXXXX	$_____
0010	Eco Fence D (Optional)	1	LS	XXXXX	$_____
0011	Eco Fence E (Optional)	1	LS	XXXXX	$_____
0012	Install Eco Fence F (Optional)	1	LS	XXXXX	$_____
0013	Install Eco Fence G (Optional)	1	LS	XXXXX	$_____
0014	Fish Barb Type A (Optional)	1	LS	XXXXX	$_____
0015	Fish Barbs Type B (Optional)	2	EA	_____	$_____
0016	Fish Barbs Type C (Optional)	3	EA	_____	$_____
0017	Excavated Material Hauled Offsite (Optional)				
0017A	a. First 5,000 Cubic Yards (Optional)	5,000	CY	_____	$_____
0017B	b. Over 5,000 Cubic Yards (Optional)	3,500	CY	_____	$_____
0018	Add Height to Rock Grade Control Structure (Optional)				
0018A	a. First 2,000 Tons (Optional)	2,000	TN	_____	$_____
0018B	b. Over 2,000 Cubic Yards (Optional)	1,500	TN	_____	$_____

SCHEDULE TOTAL $_____

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 General

In each instance, the contract price for an item shall constitute full compensation for furnishing all plant, labor, equipment, and materials, and for performing all operations required to complete the work included in the item as herein specified, or as otherwise approved.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

certified weight certificates; G,CD

1.3 MOBILIZATION AND DEMOBILIZATION

Measurement and payment for mobilization and demobilization will be in accordance with CLAUSE: PAYMENT FOR MOBILIZATION AND DEMOBILIZATION of Section 00800. This item will be measured for payment as a complete pay item (LS) under Bid Item No. 0001, "Mobilization and demobilization," which price and payment will be full compensation for mobilizing and demobilizing all plant and equipment required for performance of the work, as specified and approved.

1.4 ROCK QUARRIED AND STOCKPILED

Rock quarried and stockpiled will be measured for payment as the number of tons (TN) stockpiled . Payment will be made at the unit price for Item No. 0002 "Rock Quarried and Stockpiled," which price and payment shall be full compensation for all work required for quarrying, grading and stockpiling, complete, as specified and approved. Preliminary quantities for payment purposes will be made based on a conversion of the number of cubic yards contained in the stockpile to tons (TN) using a conversion factor of 1.167 CD per TN. Preliminary payments shall not exceed 80% of the estimated quantity of 4,000 tons. A final payment adjustment will be made based on the weighed quantity of specified and approved rock delivered. If the stockpiled volume generates more than 4,000 TN of specified rock, the contractor will receive payment for the excess amount under Item No. 0003B if the excess rock is necessary to construct the rock grade control. If the excess rock is not needed to construct the rock grade control, no further payment will be made.

1.5 ROCK PLACEMENT

1.5.1 First 4000 Tons

First 4000 tons of rock placed will be measured for payment as the number of tons (TN) placed up to 4000 tons. Payment will be made at the unit price for Item No. 0003 A, "First 4000 Tons," which price and payment shall be full compensation for all work required to place and transport up to 6000 tons of rock from the stockpile, complete, as specified and approved.

1.5.2 Over 4000 Tons

Over 4000 tons of rock placed will be measured for payment as the number of tons (TN) placed over "First 4000 Tons" Item No. 0003 A. Payment will be made at the unit price for Item No. 0003 B, "Over 4000 Tons," which price and payment shall be full compensation for all work required for quarrying, grading, transporting and placing the rock over the first 4000 tons, complete, as specified and approved.

1.5.2.1 Measurement

Rock will be measured for payment by the ton (2,000 pounds) by weighing each truckload to the nearest 0.1 ton, and the final quantity of the whole sum will be rounded to the nearest whole ton. The rock will be measured for payment by being weighed on approved scales before being placed in the work. Quarry weights will not be accepted. Scales shall be of sufficient length to permit simultaneous weighing all axle loads and shall be inspected, tested and sealed as directed to assure accuracy with 0.5 percent throughout the range of the scales. The scales, located at the site of the work, shall be certified as to accuracy by an acceptable scales company representative prior to weighing any riprap. Scales will be checked and certified before rock hauling and rechecked and recertified whenever a variance is suspected. The Contractor shall furnish the scales. If commercial scales are readily available in close proximity 10 miles of site of work, the Contracting Officer may approve the use of the scales. The rock shall be weighed in the presence of the Government representative. The Contracting Officer may elect to accept certified weight certificates furnished by a public weighmaster in lieu of scale weights at the jobsite.

1.6 ROCK GRADE CONTROL EXCAVATION

Rock Grade Control Excavation will be measured for payment as the number of Hours (HR)performed to excavate the rock grade control. Payment will be made at the unit price for Item No. 0004, "ROCK GRADE CONTROL EXCAVATION," which price and payment shall be full compensation for furnishing and operating the backhoe, including operator, fuel, lubricants and all appurtent items, and all work required for excavation of the rock grade control, complete, as specified and approved.

1.6.1 Measurement

Rock grade control excavation will be measured for payment as the actual number of hours and fractions thereof which the specified backhoe and operator is satisfactory operated, as directed by the Contracting Officer. Time required for purposes other than actual excavating such as mobilizing, refueling, lubricating, maintenance, and idle time will not be included in the measurement. Fractions of an hour will be measured to the nearest quarter hour. Measurement of work time shall begin when the backhoe and

operator begins excavation of the rock grade control and end when backhoe is not excavating.

1.7 ROCK GRADE CONTROL SURVEY

Survey of the Rock Grade Control will be measured for payment as a complete pay item (LS). Payment will be made at the lump sum price for Item No. 0005, "ROCK GRADE CONTROL SURVEY," which price and payment shall be full compensation for all work required for surveying the site after construction is completed, or when directed in writing by the Contracting Officer. This work at a minimum shall cover the following: all documentations of survey, drawings of topo in approved electronic format see section 01330 and section 02300 for details, complete, as specified and approved.

1.8 MOBILIZATION AND DEMOBILIZATION (OPTIONAL)

Measurement and payment for mobilization and demobilization will be in accordance with CLAUSE: PAYMENT FOR MOBILIZATION AND DEMOBILIZATION of Section 00800. This item will be measured for payment as a complete pay item (LS) under Bid Item No. 0006, "Mobilization and demobilization (optional)," which price and payment will be full compensation for mobilizing and demobilizing all plant and equipment required for performance of the authorized optional work. This bid item will be paid only if one or more of the optional items are exercised in the second year of the contract, as specified and approved.

1.9 MODIFICATION OF EXISTING ECO-FENCES (OPTIONAL)

Repair of existing eco fences bid items 0007 thry 0011. Only the eco fences directed in writing by the Contracting Officer shall be repaired. Payment will be made at the lump sum price for each item "MODIFICATION OF EXISTING ECO-FENCES (OPTIONAL)," which price and payment shall be full compensation for all work required for repairing each existing eco fences at the site, complete, as specified and approved.

1.9.1 Eco Fence A (Optional)

Eco Fence A (Optional) Item No. 0007 will be measured for payment as a complete pay item (LS).

1.9.2 Eco Fence B (Optional)

Eco Fence B (Optional) Item No. 0008 will be measured for payment as a complete pay item (LS).

1.9.3 Eco Fence C (Optional)

Eco Fence C (Optional) Item No. 0009 will be measured for payment as a complete pay item (LS).

1.9.4 Eco Fence D (Optional)

Eco Fence D (Optional) Item No. 0010 will be measured for payment as a complete pay item (LS).

1.9.5 Eco Fence E (Optional)

Eco Fence E (Optional) Item No. 00011 will be measured for payment as a

complete pay item (LS).

1.10 ECO FENCE F (OPTIONAL)

Eco Fence F will be measured for payment as a complete pay item (LS). Payment will be made at the lump sum price for Item No. 0012, "ECO FENCE F (OPTIONAL)," which price and payment shall be full compensation for all work, equipment, and materials required for building the fence, complete, as specified and approved.

1.11 ECO FENCE G (OPTIONAL)

Eco Fence G will be measured for payment as a complete pay item (LS). Payment will be made at the lump sum price for Item No. 0013, "ECO FENCE G (OPTIONAL)," which price and payment shall be full compensation for all work, equipment, and materials required for building the fence, complete, as specified and approved.

1.12 FISH BARB TYPE A (OPTIONAL)

Fish barb type A will be measured for payment as a complete pay item (LS). Payment will be made at the lump sum price for Item No. 0014, "FISH BARB TYPE A (OPTIONAL)," which price and payment shall be full compensation for all work, equipment, and materials required for building the fish barb, complete, as specified and approved.

1.13 FISH BARBS TYPE B (OPTIONAL)

Fish barbs type B will be measured for payment as the number (EA) of type B fish barbs constructed. Payment will be made at the unit price for Item No. 0015, "FISH BARBS TYPE B (OPTIONAL)," which price and payment shall be full compensation for all work, equipment, and materials required for building each type B fish barb, complete, as specified and approved.

1.14 FISH BARBS TYPE C (OPTIONAL)

Fish barbs type C will be measured for payment as the number (EA) of type C fish barbs constructed. Payment will be made at the unit price for Item No. 0016, "FISH BARBS TYPE C (OPTIONAL)," which price and payment shall be full compensation for all work, equipment, and materials required for building each type C fish barb, complete, as specified and approved.

1.15 EXACAVATED MATERIAL HAULED OFFSITE (Optional)

1.15.1 First 5000 Cubic Yards (Optional)

First 5000 cubic yards of excavated material hauled offsite will be measured for payment as the number of cubic yards (CY) hauled up to 5000 cubic yards. Each truck load shall be measured for the total cubic yards of exacavated material in the truck. Each load shall be recorded by the Contractor and initialed by the Contracting Officer or Representative. Payment will be made at the unit price for Item No. 0017 A, "First 5000 Cubic Yards," which price and payment shall be full compensation for all work required to haul and dump offsite up to 5000 cubic yards of material excavated from the site, complete, as specified and approved.

1.15.2 Over 5000 Cubic Yards (Optional)

Over 5000 cubic yards (CY) of material hauled offsite will be measured for

payment as the number of cubic yards (CY) hauled over "First 5000 cubic yards" Item No. 0017 A. Each truck load shall be measured for the total cubic yards of exacavated material in the truck. Each load shall be recorded by the Contractor and initialed by the Contracting Officer or Representative. Payment will be made at the unit price for Item No. 0017 B, "Over 5000 Cubic Yards," which price and payment shall be full compensation for all work required to haul and dump offsite the material excavated from the site over the first 5000 cubic yards, complete, as specified and approved.

1.16 ADD HEIGHT TO ROCK GRADE CONTROL STRUCTURE (Optional)

1.16.1 First 2000 Tons

First 2000 tons of rock placed will be measured for payment as the number of tons (TN) placed up to 2000 tons. Payment will be made at the unit price for Item No. 0018 A, "First 2000 Tons," which price and payment shall be full compensation for all work required for quarrying, grading, transporting and placing the rock up to the first 2000 tons, complete, as specified and approved.

1.16.2 Over 2000 Tons

Over 2000 tons of rock placed will be measured for payment as the number of tons (TN) placed over "First 2000 Tons" Item No. 0018 A. Payment will be made at the unit price for Item No. 0018 B, "Over 2000 Tons," which price and payment shall be full compensation for all work required for quarrying, grading, transporting and placing the rock over the first 2000 tons, complete, as specified and approved.

1.16.3 Measurement

Rock will be measured the same way as specified in Rock Placement Bid Item 0003 above.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE CONSTRUCTION

SECTION 02300

EARTHWORK

-- End of Section Table of Contents --

SECTION 02300

EARTHWORK

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 127	(2001) Specific Gravity and Absorption of Coarse Aggregate
ASTM C 535	(2001) Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 2488	(1993e1) Description and Identification of Soils (Visual-Manual Procedure)
ASTM D 5312	(1992; R 1997) Evaluation of Durability of Rock for Erosion Control Under Freezing and Thawing Conditions
ASTM D 5313	(1992; R 1997) Evaluation of Durability of Rock for Erosion Control Under Wetting and Drying Conditions

1.2 DEFINITIONS

1.2.1 Satisfactory Materials

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP.

1.2.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; and material classified as satisfactory which contains root and other organic matter or frozen material. The Contracting Officer shall be notified of any contaminated materials.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Quarry Source; G, SPE.

DIVERSION AND ACCESS; G, EDC.

Rock; G, CD

Test Results

Eco-Fence; G, EDC.

Data showing materials, piles, pile caps, wire rope, fabrics, and wire rope clips meet specifications.

Survey; G, EDC.

1.4 DIVERSION AND ACCESS

The Contractor shall submit a plan detailing the method of diverting flow in the construction area in accordance with SECTION 01355 and a plan to provide access to install the piles and fence materials.

1.5 SURVEY MONUMENTS

Following are survey monuments in the vicinity of the construction work. Horizontal positions are referenced to the Wyoming West state place coordinate system (NAD27). Vertical positions are referenced to the National Geodetic Vertical Datum adjustment of 1929 (NGVD29). All markers or pipe and washer or brass cap.

Northing	Easting	Elevation	Designation
1032650.64	298023.25	6151.97	R 9RC
1031994.65	299739.99	6155.37	R 9LC
1035588.77	298937.53	6167.25	R11RB
1034376.00	301194.28	6166.77	R11LB
1037423.82	299487.60	6176.11	R12RB
1036374.05	301678.99	6173.42	R12LB

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Quarry Source

Contractor shall submit information on the proposed source of quarry material for the rock, random fill, and river cobbles. Information shall include quarry owner, location and the following. As much as possible, materials for construction of brush fences, root wads, and kicker/spur dikes should be obtained on-site or from a source certified as disease

free. If a secondary source of these items is required, this source should be approved by the Wyoming Game and Fish Department, Fisheries Section.

2.1.1.1 Rock Source

The Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish rock. It is the Contractor's responsibility to determine that the rock source or combination of sources selected is capable of providing the quality, quantities, and gradation needed to meet the requirements of these specifications. The Contractor shall make arrangements concerning availability of all sources. The payment of royalties, disposal of wastes, and restoration of the borrow areas or quarry upon completion of the work shall be the Contractor's responsibility. The Corps of Engineers occasionally obtains and uses special mineral permits from the Bridger-Teton National Forest. The permit allows the Corps to obtain riprap rock located on land permitted to the Jackson Hole Ski Corporation. The Contractor may not use, in conjunction with this contract, any rock that is already available to the Corps from the Bridger-Teton National Forest.

2.1.2 Rock

2.1.2.1 Requirements

Rock for end pile protection, rock grade control, and fish barbs shall consist of angular rock. Rounded boulders or subrounded rock fragments as defined by ASTM D 2488 will not be acceptable. Rock shall be reasonably well graded. Neither the breadth nor the thickness of any piece of rock shall be less than one-third of its length. Rock shall be 33 inch minus material with not more than 30 percent less than 16 inches and no materials less than 6 inches. A maximum 5 percent waste(rock less than 6 inches in diameter) by weight will be allowed at the delivery site. Rock shall meet the following test requirements for quality:

TEST	REQUIREMENT
Specific Gravity (ASTM C 127)	minimum 2.5
Absorption (ASTM C 127)	maximum 2.5 percent
Freeze Thaw (ASTM D 5312)	5 percent maximum
(Sample thickness shall be 2 +/- inches and the surface area of one side of the sample shall be between 144 square inches and 2304 square inches.)	
Wetting and Drying (ASTM D 5313)	1 percent maximum loss
(Surface area of one side of the sample shall be between 144 square inches and 2304 square inches.)	
LA Wear (ASTM C 535)	30 percent maximum.

2.1.2.2 Acceptance

After testing requirements have been satisfied and after or while material is being stockpiled the Contracting Officer will perform a visual inspection at the stockpile. If the Contracting Officer, during the inspection, finds that the rock quality or gradation of rock being furnished are not as specified or are questionable, re-sampling and retesting shall be required.

2.1.2.3 Stockpile

See specification section 01010 for stockpiling and surveying information for the rock.

2.1.3 Random Fill

Random fill material used for the fish barbs shall be 12 inch minus with not more than 30 percent less than 3 inches. The average size shall be 6 inches. Material excavated to construct the toe trench for the dike shown in Sections A and B on sheet 5 shall remain on site and used as random fill material.

2.1.4 River Cobbles

River cobbles shall be 6 inches minus with not more than 30 percent less than 1 inch. River cobbles excavated from the river may be used provided not more than 30 percent is less than 1 inch in diameter.

2.2 ECO-FENCE

2.2.1 Piles

Pipe piles shall be 12-inch nominal diameter extra strong steel pipes. The yield strength shall be 50 kips per square inch (ksi). The HPiles shall be HP 12X84. The yield strength shall be 50 ksi. The yield strength shall be in accordance with ASTM A 572, High-Strength Low-Alloy Columbium-Vanadium Structural Steel

2.2.2 Pile Caps

Pile caps shall be 0.25 inch thick steel plates, cut to fit the piles. Caps shall be welded to the top of the piles.

2.2.3 Wire Rope

Wire rope shall be 3/8" diameter 6 X 19Class, extra improved plow steel with independent wire rope core (iwrc).

2.2.4 Fabrics

2.2.4.1 Welded Wire Fabric

Welded wire fabric (cattle panels) shall be 1/4" wire with openings 6" X 8".

2.2.4.2 Small Opening Mesh

Small opening mesh fabric shall be wire, minimum 16 gauge, with openings no greater than 2 inches.

2.2.5 Wire Rope Clips

Wire rope clips shall be 3/8" steel with galvanized clips to resist rust and corrosion and forged steel saddles.

PART 3 EXECUTION

3.1 GENERAL

Areas shall be cleared of all vegetation and debris before placement of rock. All random fill and river cobbles shall be compacted by tamping with the bucket of the backhoe immediately after placement of materials.

3.2 ECO-FENCE

Eco-fences shall be built in the approximate locations and to the dimensions shown on the drawings. Exact locations will be as directed by the COR. Water may be flowing through the construction area. A berm or other means of diverting the flow may be required. Some of the piles may need to be placed in areas where a significant amount of erosion has occurred and standing water may remain, even after diversion of flow. In order to obtain equipment access in these locations, some materials may need to be moved to create a work platform. Materials shall not be hauled in from off-site. Materials may be moved around the fences. Any materials moved to create the work platform shall be moved to construct the fences and graded level, after fence construction, to create a smooth surface. Woody debris in the construction area shall be set aside and repositioned on the upstream side of the fences after the fences have been constructed. The welded wire fabric, small opening mesh, and wire rope, shall be placed as stated in the plans and specifications. This may require removal of some fill material after the piles have been driven.

3.2.1 Excavation

Excavation limits shall be as indicated on the drawings. Excavated material may be reserved for fill over the wire fabrics.

3.2.2 Piles

The 12 piles closest to the island shall be 12-inch steel pipes. The first 10 piles shall be 20 feet long. The remaining 2 piles shall be 40 feet long. The 4 piles located farthest in the river shall be HP 12X84. The H-piles shall be 40 feet long and shall be placed so the flange is upstream/downstream and the wire rope is connected through the web. All piles shall be capped. Caps shall have smooth welds without rough edges.

3.2.3 Wire Rope

The wire rope shall be placed at 1-foot intervals beginning 1 foot below the top of the piles and continuing to the full depth of the draped mesh. Wire rope shall wrap around the end piles and be connected to each pile as indicated on the drawings. Wire rope shall be placed on the downstream and underside of the welded wire fabric. Wire rope shall be placed a minimum of 3 feet below grade and shall lay on the excavated surface, as shown on the drawings. The wire rope and top of the piles shall be to the nearest tenth of a foot. The elevations for the wire ropes shall be as indicated below.

Fence Label	Elevation of Top Cable
A	6164.6
B	6164.8
C	6165.7
D	6166.5

Fence Label	Elevation of Top Cable
E	6167.2
F	6167.8
G	6168.4

3.2.4 Fabrics

3.2.4.1 Welded Wire Fabric

Prior to placement of the welded wire fabric (cattle panels) material shall be excavated on the upstream side of the fence to a minimum depth of 3 feet and the width required to drape the fabric as indicated on the drawings . Placement of the cattle panels shall begin 1 foot from the top of the piles. The cattle panels shall extend down and lay horizontal on the excavated surface and wire rope, as shown on the drawings.

3.2.4.2 Small Opening Mesh

Small opening mesh shall begin at the existing groundline and extend a minimum of 3 feet below grade. The mesh shall lay horizontal on top of the welded wire fabric.

3.2.4.3 Placement

The welded wire fabric and small opening mesh fabric shall be connected to the wire rope with wire rope clips as indicated on the drawings. The fabrics shall be backfilled with a minimum of 3 feet of river cobbles. The fabrics shall be placed on the full length of the fence as indicated on the drawings. The fabrics draped below the groundline shall extend into the river 5 feet from the end pile.

3.2.5 Weights

Rock weights shall be attached to the fabrics as indicated on the drawings. After the fabrics have been placed, weights shall be placed on top. A piece of welded wire fabric shall be cut, placed over the weights, and attached to the fabrics with a minimum of 5 wire rope clips. Weights shall be a minimum 30 inch diameter and shall be placed 10 feet on center. The first weight shall be placed at the riverward end of the fence.

3.2.6 Connections

Connections shall be as indicated on the drawings and shall be placed on every pile. The wire rope clips shall be installed and tightened according to the manufacturer's specifications. The wire rope clips shall be placed tight against the pile and spot welded to prevent removal by vandals.

3.2.7 End Pile Protection

Rock shall be placed around the pile that is farthest in the river channel. Rock shall surround the pile and shall be placed as shown on the drawings. Rocks shall be placed individually, not dumped.

3.3 MODIFICATION OF EXISTING ECO-FENCE

3.3.1 General

Fence A shall be extended to 105 feet, Fences B, C, and E to 100 feet and

Fence D to 130 feet. Materials shall be added to the end of the fences, as required, to bring the existing fences up to the standard of new fences as shown on the contract drawings. Any piles that are no longer vertical shall be removed. All fabric and wire between the damaged piles shall be removed. The damaged piles shall be replaced with new piles, fabric and wire. All materials removed from the area shall be disposed of offsite and in a legal manner by the Contractor. Welded wire fabric (cattle panel) and small opening mesh shall be placed on the undamaged portion of all 5 fences. The ground shall be excavated and the materials shall be placed as shown in "SECTION C - ECO-FENCE" on sheet 3 of the contract drawings.

3.3.2 Existing Conditions

As of June 2004, the fences were in the following conditions:

Fence Label	Damaged Piles to be Removed	New Piles to Install HP 12X84	New Piles to Install 12-inch Pipe	Pile Spacing	Pile Length
A	0	1	0	5 ft	40 ft
B	0	4	2	5 ft	40 ft
B	1	0	4	5 ft	20 ft
C	0	4	2	5 ft	40 ft
C	1	0	2	5 ft	20 ft
D	0	4	2	5 ft	40 ft
D	2	0	6	5 ft	20 ft
E	0	4	2	5 ft	40 ft
E	1	0	2	5 ft	20 ft

3.4 ROCK GRADE CONTROL

The rock grade control structure shall be built in the approximate location and to the dimensions shown on the drawings. Exact location will be as directed by the COR. Rocks shall be placed individually, not dumped. Material excavated for placement of the rock grade control structure shall be placed on the island side of the raised portion of the structure (Section E)or hauled to and stockpiled offsite, as directed by the Contracting Officer. The excavated material shall not be placed at an elevation higher than the rock grade control structure. If hauled off site, the excavated material shall be dumped at a location directed by the Contracting Officer. The site will be within one mile, roundtrip, of the construction area.

3.4.1 Excavation Equipment

Contractor shall use a backhoe for excavation that is capable of moving a minimum of 130 cubic yards per hour.

3.5 SURVEY AS-CONSTRUCTED ROCK GRADE CONTROL

The Contractor shall perform a post construction survey of the rock grade control structure. Horizontal positions shall be referenced to the Wyoming West state plane coordinate System (NAD27). Vertical positions shall be referenced to the National Geodetic Vertical Datum adjustment of 1929 (NGVD29). The unit of measure shall be US Survey feet. Horizontal and vertical positions shall be shown to the nearest one-tenth foot.

3.5.1 Cross-Sections

Data shall be collected at the beginning of the structure and continue at 100-foot cross-section intervals. The last cross-section shall be at the end of the structure, even if the interval is less than 100 feet. Cross-section data shall extend 50 feet from the toe of each side of the structure.

3.5.2 Profile

Centerline profile data shall be collected with spot elevations. Profile data shall be collected at the beginning of the structure and continue at 10-foot intervals. The last data point shall be at the end of the structure, even if the interval is less than 10 feet.

3.5.3 Survey Submittal

The Contractor shall provide all data collected, including field notes and ASCII files, and one digital design file (compatible with Bentley Microstation - .dgn) showing all cross-sections, the profile, and a plan view. The plan view shall show the control monuments and centerline, edge of crest, and left and right toe of the structure. All horizontal and vertical control monuments utilized, their location (Northing, Easting, and elevation), designation, and description shall be clearly defined. The notes shall contain cross-section and profile data. The design file shall contain but not be limited to the following information: survey completion date, project name, north arrow, bar scale, contract number, surveyor, and Contractor's designated approval authority.

3.6 FISH BARBS

Fish barbs shall be constructed to the lines and grades shown on the drawings. Exact locations will be as directed by the COR. Rocks shall be placed individually, not dumped.

-- End of Section --