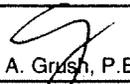


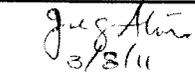
FEATURE: REVISION #1 Klamath River Dams Removal Yreka water supply Dam A modifications Most Probable	PROJECT: Klamath River Northern California/Southern Oregon
	WOID: AF652 ESTIMATE LEVEL: Appraisal REGION: MP UNIT PRICE LEVEL: July-2010
	FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - REV1 - 4-2011.xlsx\Dam A

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		CIVIL					
	1	Remove & dispose steel frame with slide gates/weirs 14 ft wide x 9 ft tall, weight unknown assume contains heavy metals	86-68140	1	ea	\$6,500.00	\$6,500.00
	2	Remove & dispose by steel bulkhead panel 3'-2" ft wide x 5'-6" tall assume contains heavy metals	86-68140	1	ea	\$1,000.00	\$1,000.00
	3	Remove & dispose fish screen panels 3 ft wide x 5'-6" tall each assume contains heavy metals	86-68140	6	ea	\$1,000.00	\$6,000.00
	4	Cut, remove concrete deck 3 ft x 1'-7" x 6 in	86-68140	2.4	cf	\$150.00	\$360.00
	5	Remove & dipose wood frame building 16 ft x 12 ft with roll up door	86-68140	1	ea	\$25,000.00	\$25,000.00
	6	Furnish, install wood frame building 16 ft x 12 ft with two roll up doors 9 ft x 7 ft door, 12 ft x 7 ft door	86-68140	1	ea	\$50,000.00	\$50,000.00
	7	Furnish & install steel slide gate with pedestal lift 30" wide x 42", 500 lb ea.	86-68140	2	ea	\$4,000.00	\$8,000.00
	7a	Furnish and place concrete walls 3 @ 5-6 h x 5 w x 1 ft thick reinf. - 115 lb ea 27 #5 dowels, drill and grout		0	cy	\$1,300.00	
	7b	Extend 220v power to the site distance is about 350 ft, lots of clearing		0	lf	\$150.00	
	7c	Diversion & care assume 10 cfs for 40 days		0	ls	\$100,000.00	
		Note: All work on this sheet takes place on existing diversion dam with water flowing. Workers will be above flowing water on diversion structure.					
		SUBTOTAL THIS SHEET					\$96,860.00

QUANTITIES		PRICES	
BY Sayer	CHECKED	BY  Craig A. Grish, P.E.	CHECKED  05-23-11
DATE PREPARED 01/15/11	PEER REVIEW / DATE Dave Edwards 1/24/11	DATE PREPARED 05/23/11	PEER REVIEW / DATE ACD 5/24/11

FEATURE: <p style="text-align: center;">Klamath River Dams Removal Yreka water supply Dam A modifications</p> <p style="text-align: center;">Most Probable</p>	PROJECT: <p style="text-align: center;">Klamath River Northern California/Southern Oregon</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">WOID: AF652</td> <td style="width:50%;">ESTIMATE LEVEL: Appraisal</td> </tr> <tr> <td>REGION: MP</td> <td>UNIT PRICE LEVEL: July-2010</td> </tr> </table> <p>FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - 2-2011.xlsx\Summary</p>	WOID: AF652	ESTIMATE LEVEL: Appraisal	REGION: MP	UNIT PRICE LEVEL: July-2010
WOID: AF652	ESTIMATE LEVEL: Appraisal				
REGION: MP	UNIT PRICE LEVEL: July-2010				

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		MECHANICAL					
	8	Furnish and install cylindrical tee fish screen (Q= 15 cfs) Assumes approach velocity = 0.33 ft/s Screen diameter = 30 inches Overall unit length = 128" Inclined track length = 10 ft All stainless steel 304 or 316 Assume: ISI screen model T30-42 with internal propellar drives and 12 volt DC winch	86-68410	1	ea	\$100,000.00	\$100,000.00
		Furnish and install three bulkheads, welded structural steel construction, protective coating.	86-68410				
	9a	- 3 Bulkheads, 500 lbs. ea.		1,500	lbs	\$7.50	\$11,250.00
	9b	-30 - 1/2" dia. x 9" epoxy anchors		30	ea	\$25.00	\$750.00
		DAM A MODIFICATIONS SUBTOTAL					\$208,860.00

QUANTITIES		PRICES	
BY R. Stephen	CHECKED R. Christensen	BY  Craig A. Grush, P.E.	CHECKED  3/8/11
DATE PREPARED 01/20/11	PEER REVIEW / DATE T. Hummel P.E. 1/21/11	DATE PREPARED 03/08/11	PEER REVIEW / DATE  3/9/11

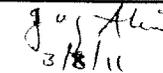
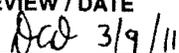
FEATURE: REVISION #1 Klamath River Dams Removal Yreka water supply Dam B modifications Most Probable	PROJECT: Klamath River Northern California/Southern Oregon
	WOID: AF652 ESTIMATE LEVEL: Appraisal REGION: MP UNIT PRICE LEVEL: July-2010
	FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - REV1 - 4-2011.xlsx\Dam B

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		CIVIL					
	10	Excavation for structure	86-68140	40	cy	\$80.00	\$3,200.00
	11	Compacted backfill for structure	86-68140	30	cy	\$60.00	\$1,800.00
	12	Concrete removal, 2'x2' cut opening	86-68140	4	cf	\$150.00	\$600.00
	13	Furnish & place concrete in structure	86-68140	8	cy	\$1,300.00	\$10,400.00
	14	Remove & dipose existing trashrack 5 ft x 9 ft assume contains heavy metals	86-68140	1	ea	\$2,500.00	\$2,500.00
	15	Furnish & install grating	86-68140	25	sf	\$200.00	\$5,000.00
	15a	Furnish and place concrete wall size, 9.5 ft tall, 5 ft w, 1 ft thick 11 #5 dowels, drill and grout reinf - 200 lb		0	cy	\$2,200.00	
	15b	Extend 220v power to the site distance is about 280 ft, lots of clearing		0	lf	\$150.00	
	16	Diversion & care assume 10 cfs for 10 days	86-68140	1	ls		\$50,000.00
	17	Create access to dam	86-68140	1	ls		\$30,000.00
		SUBTOTAL THIS SHEET					\$103,500.00

QUANTITIES		PRICES	
BY Sayer	CHECKED	BY <i>[Signature]</i> Craig A. Grush, P.E.	CHECKED <i>[Signature]</i> 05-23-11
DATE PREPARED 01/15/11	PEER REVIEW / DATE Dave Edwards 1/24/11	DATE PREPARED 05/23/11	PEER REVIEW / DATE <i>[Signature]</i> 5/24/11

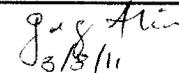
FEATURE: Klamath River Dams Removal Yreka water supply Dam B modifications Most Probable	PROJECT: Klamath River Northern California/Southern Oregon <hr/> WOID: AF652 ESTIMATE LEVEL: Appraisal REGION: MP UNIT PRICE LEVEL: July-2010 <hr/> FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - 2-2011.xlsx\Summary
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PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		MECHANICAL					
	18	Furnish and install cylindrical tee fish screen (Q= 15 cfs) Assumes approach velocity = 0.33 ft/s Screen diameter = 30 inches Overall unit length = 128" Vertical track length = 12 ft All stainless steel 304 or 316 Assume: ISI screen model T30-42 with internal propellar drives and 12 volt DC winch	86-68410	1	ea	\$100,000.00	\$100,000.00
		Furnish and install bulkhead to replace trashrack, welded structural steel construction, protective coating.	86-68410				
	19a	- 1 Bulkhead, 1,200 lbs.		1,200	lbs	\$7.50	\$9,000.00
	19b	-18 - 1/2" dia. x 9" epoxy anchors		18	ea	\$25.00	\$450.00
		DAM B MODIFICATIONS SUBTOTAL					\$212,950.00

QUANTITIES		PRICES	
BY R. Stephen	CHECKED R. Christensen	BY  Craig A. Grush, P.E.	CHECKED  3/8/11
DATE PREPARED 01/20/11	PEER REVIEW / DATE T. Hummel P.E. 1/21/11	DATE PREPARED 03/08/11	PEER REVIEW / DATE  3/9/11

FEATURE: Klamath River Dams Removal Yreka water supply Yreka pipe crossing Iron Gate Reservoir Most Probable	PROJECT: Klamath River Northern California/Southern Oregon <hr/> WOID: AF652 ESTIMATE LEVEL: Appraisal REGION: MP UNIT PRICE LEVEL: July-2010 <hr/> FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - 2-2011.xlsx\Summary
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PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		CIVIL					
	20	Three span, pre-engineered pipe support access bridge, with 7.5' box truss Span lengths are 100', 200', 100'. Support one 24" Dia. Welded steel pipe. Steel pipe and supports, Wt.=150 lbs/linear ft Water, Wt.=200 lbs/linear ft	86-68140	1	ea	\$700,000.00	\$700,000.00
		Finish & place reinforced concrete caps for abutment 1 and pier 1 (4' diameter column)					
	21	Concrete	86-68140	25	cy	\$2,500.00	\$62,500.00
	22	Reinforcement, epoxy coated	86-68140	10,000	lb	\$2.00	\$20,000.00
		Drilled shafts					
	23	5'-0" Diameter @ pier 1 (Pier drilled shaft requires 12 CY of concrete and 5,000 lbs of reinforcement)	86-68140	16	lf	\$6,000.00	\$96,000.00
	24	3'-0" Diameter @ abutment 1 (Abutment drilled shafts require 14 CY of concrete and 8,000 lbs of reinforcement)	86-68140	52	lf	\$1,500.00	\$78,000.00
SUBTOTAL THIS SHEET							\$956,500.00

QUANTITIES		PRICES	
BY Sayer	CHECKED Clough 1/11/11	BY  Craig A. Grush, P.E.	CHECKED  3/8/11
DATE PREPARED 01/10/11	PEER REVIEW / DATE Jesus Romero, PE 1/12/11	DATE PREPARED 03/08/11	PEER REVIEW / DATE  3/9/11

FEATURE: Klamath River Dams Removal Yreka water supply Yreka pipe crossing Iron Gate Reservoir Most Probable	PROJECT: Klamath River Northern California/Southern Oregon	
	WOID: AF652	ESTIMATE LEVEL: Appraisal
	REGION: MP	UNIT PRICE LEVEL: July-2010
	FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - 2-2011.xls\Summary	

PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		CIVIL					
		Furnish & place reinforced concrete caps for abutment 2 and pier 2 (4' diameter column)					
	25	Concrete	86-68140	25	cy	\$2,500.00	\$62,500.00
	26	Reinforcement, epoxy coated	86-68140	10,000	lb	\$2.00	\$20,000.00
		Drilled shafts					
	27	5'-0" Diameter @ pier 2 (Pier drilled shaft requires 12 CY of concrete and 5,000 lbs of reinforcement)	86-68140	16	lf	\$6,000.00	\$96,000.00
	28	3'-0" Diameter @ abutment 2 (Abutment drilled shafts require 14 CY of concrete and 8,000 lbs of reinforcement)	86-68140	52	lf	\$1,500.00	\$78,000.00
	29	Remove & dispose existing steel pipe, 1/4 inch wall, 24" dia. assume contains heavy metals	86-68140	20	lf	\$50.00	\$1,000.00
	30	Welded steel pipe, 1/4 inch wall, 24 inch dia. epoxy primer, polyurethane top coat, exterior coal-tar epoxy lined	86-68140	490	lf	\$200.00	\$98,000.00
	31	Install/Remove 2 access ramps for piers, dumped compacted gravel in river	86-68140	270	cy	\$100.00	\$27,000.00
	32	Excavation for pipe trench	86-68140	70	cy	\$15.00	\$1,050.00
	33	CLSM pipe bedding	86-68140	8	cy	\$300.00	\$2,400.00
	34	Backfill in pipe trench	86-68140	55	cy	\$30.00	\$1,650.00
		PIPE CROSSING SUBTOTAL					\$1,344,100.00

QUANTITIES		PRICES	
BY Sayer	CHECKED	BY Craig A. Grush, P.E.	CHECKED J. G. Alin 3/9/11
DATE PREPARED 01/10/11	PEER REVIEW / DATE	DATE PREPARED 03/08/11	PEER REVIEW / DATE [Signature] 3/9/11

FEATURE: Klamath River Dams Removal Yreka water supply Most Probable SUMMARY	PROJECT: Klamath River Northern California/Southern Oregon <hr/> WOID: AF484 ESTIMATE LEVEL: Appraisal REGION: MP UNIT PRICE LEVEL: July-2010 <hr/> FILE: C:\Estimating\Klamath\Klamath River Dams\Yreka Supply Line\MPL, MP, MPH\Klamath Dams Removal - Yreka Water Supply Line - MP - Appraisal Est - 4-2011.xls\Summary
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PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
		Dam A Modifications					\$208,860.00
		Dam B Modifications					\$212,950.00
		Pipe Crossing					\$1,344,100.00
		Subtotal					\$1,765,910.00
		Mobilization	5%	+/-			\$88,000.00
		Subtotal 1 with Mobilization					\$1,853,910.00
		Escalation to Notice to Proceed (NTP), from July 2010 to July 2020 (assumes 3%/yr compounding over 10 years)					\$637,590.00
		Subtotal 2 = Subtotal 1 with Mobilization + Escalation to NTP					\$2,491,500.00
		Design Contingencies	15%	+/-			\$408,500.00
		Allowance for Procurement Strategies (APS)	0%	+/-			
		Type of solicitation assumed is: Competitive RFP					
		CONTRACT COST					\$2,900,000.00
		Construction Contingencies	25%	+/-			\$700,000.00
		FIELD COST					\$3,600,000.00
		Non-Contract Costs: (Environmental & Cultural Resources Mitigation ~ 35%, Design Data Collection ~ 1%, Engineering Design ~ 4%, Permitting ~ 3%, Procurement ~ 1%, Construction Management ~ 10%, and Closeout ~ 1%)	55%	+/-			\$2,000,000.00
		CONSTRUCTION COST					\$5,600,000.00
		Ref.: For appropriate use and terminology, see Reclamation Manual, Directives and Standards FAC; 09-01, 09-02 and 09-03.					

QUANTITIES		PRICES	
BY Refer to Previous Sheets	CHECKED Refer to Previous Sheets	BY <i>[Signature]</i> Craig A. Grush, P.E.	CHECKED <i>[Signature]</i> 09-19-11
DATE PREPARED	PEER REVIEW / DATE Refer to Previous Sheets	DATE PREPARED 04/19/11	PEER REVIEW / DATE <i>[Signature]</i> 4/19/11