



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

August 4, 2023

Ed MacArthur
Alpine Aggregates, LLC
1878 13th Street
Steamboat Springs, CO 80487

Re: Steamboat Sand and Gravel Pit - File No. M-2001-090
Alpine Aggregates, LLC
Surety Increase (SI-1)
Bond increase associated with TR2

Dear Ed MacArthur:

On August 4, 2023 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$651,031.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$229,031.00.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter (August 4, 2023).

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit after October 3, 2023, if the amount of any increased Financial Warranty has not been provided.

Bond Held:	\$422,000.00
Prior Liability:	\$422,000.00
Change in Liability:	\$229,031.00
Revised Liability:	\$651,031.00
Prior Permit Acreage:	109.97
Change in Permit Acreage:	0.00



Revised Permit Acreage:	109.97
Prior Affected Acreage:	105.41
Change in Affected Acreage:	0.00
Revised Affected Acreage:	105.41

If you have any questions, please contact me by telephone at (303) 866-3567 x 8176, or by email at Hunter.ridley@state.co.us.

Sincerely,



Hunter C. Ridley
Environmental Protection Specialist

COST SUMMARY WORK

Task description: Updated in response to TR2 submittal

Site: Steamboat Sand and Gravel Pit

Permit Action: TR2

Permit/Job#: M2001090

PROJECT IDENTIFICATION

Task #: HCR
Date: 7/7/2023
User: HR1

State: Colorado
County: Routt

Abbreviation: None
Filename: M090-HCR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01b	Remove scale and scalehouse	DEMOLISH	1	20.00	\$5,219
02b	Dewater Phase 1A Pit	PUMPING	1	232.22	\$41,940
03b	Placement of backfill	LOADER	4	246.15	\$152,339
03c	Placement of backfill in Phase 2 & 3 ponds	LOADER	4	229.29	\$141,903
04b	Grade backfill material	DOZER	1	21.78	\$9,291
04c	Grade backfill material Phases 2 & 3	DOZER	1	19.41	\$8,282
05b	Placement of topsoil	DOZER	1	38.20	\$16,295
05c	Placement of topsoil, Phase 2 & 3 slopes	DOZER	1	3.55	\$1,514
06b	Reveg. shoreline	REVEGE	1	7.60	\$19,141
06c	Reveg. shoreline Phase 2 & 3	REVEGE	1	1.50	\$3,778
07b	Reveg. Hay Meadows	REVEGE	1	36.00	\$91,186
08b	Mobilize reclamation crew and equipment	MOBILIZE	1	3.14	\$6,962
09b	Secondary mobilize reclamation crew and equipment	MOBILIZE	1	0.57	\$57
<u>SUBTOTALS:</u>				859.41	\$497,907

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$10,058
Performance bond:	1.05	Total =	\$5,228
Job superintendent:	307.03	Total =	\$19,982
Profit:	10.00	Total =	\$49,791
		TOTAL O & P =	\$85,058
		CONTRACT AMOUNT (direct + O & P) =	\$582,965

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	6.59	Total =	\$38,417
Reclamation management and/or administration:	5.00		\$29,148

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$153,124

TOTAL BOND AMOUNT (direct + indirect) = \$651,031

DEMOLITION WORK

Task description: Remove scale and scalehouse

Site: River Valley Resource

Permit Action: TR2

Permit/Job#: M2001090

PROJECT IDENTIFICATION

Task #: 01B

State: Colorado

Abbreviation: None

Date: 8/2/2023 2:58:41

County: Routt

Filename: 01b

PM

User: HR1

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 91.30 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale house	60L x 12W x 10H (ft)	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	7,200.00	CF	\$0.38	\$2,746.08
Scale	60'L x 15'W (ft)	USER PROVIDED ITEM	1.00	EA	\$1,800.00	\$1,800.00
Scale house foundation	60L x 12W	Floor, concrete, demolition only, average reinforcing - 6 in. thick	720.00	SF	\$1.20	\$862.70
Line power	3000 LF	Utility Poles, Wood 35' - 45' high (each pole)	1.00	EA	\$307.50	\$307.50

Job Hours: 20.00

Subtotal
(unadjusted): \$5,716.28

Total Cost
(adjusted for location): \$5,218.96

PUMPING WORK

Task description: Dewater Phase 1A Pit

Site: River Valley Resource

Permit Action: TR2

Permit/Job#: M2001090

PROJECT IDENTIFICATION

Task #: 02B

State: Colorado

Abbreviation: None

Date: 8/2/2023

County: Routt

Filename: 02b

3:34:24 PM

User: HR1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Centrifugal pump - 200M, 10 in.	4
Attachment 1:		0
Attachment 2:		0
Labor Unit 1:	Pump operator	1
Horsepower:	<u>70</u>	
Shift Basis:	<u>1 per day</u>	
Weight:	<u>1.95</u>	
	(US Tons)	

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$66.36</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$86.56</u>	<u>100</u>
Operator Cost/Hour:	<u>\$27.68</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$180.60</u>	
Total Fleet Cost/Hour:	<u>\$180.60</u>	

PUMPING QUANTITIES

Initial Pond Volume:	<u>306.93</u>		Conversion factor:	<u>325850.5800</u>
Final Pond Volume:	<u>100,013,318.52</u>	gallons		
Total Pond Inflow Surface Area:	<u>75,000</u>	Sq. ft.	Unit inflow rate in gph/sq. ft.:	<u>0.1758</u>
Total Pond Inflow Volume per Hour:	<u>13,185.00</u>	gallons		

Source of estimated volume: Mine map

PUMPING TIME

Maximum Pump Capacity:	<u>200,000</u>	gph/pump
Estimated Suction Head:	<u>25</u>	feet
Estimated Discharge Head:	<u>0</u>	feet
Total Head:	<u>25</u>	feet
CPB Pump Capacity:	<u>93,000</u>	gph/pump
Site Altitude:	<u>7,850</u>	feet
Adjusted Pumping Capacity:	<u>372,000</u>	gph
Initial Unadjusted Pumping Time:	<u>268.85</u>	hours
Inflow during Initial Pumping:	<u>3,544,827</u>	gallons
Net Unadjusted Pumping Time:	<u>278.38</u>	Hours
Altitude Adjustment Factor:	<u>0.9100</u>	(3% rule)
Pump Efficiency Factor:	<u>0.9167</u>	(55 min./hr.)
Total Adjusted Pumping Time:	<u>232.23</u>	hours

JOB TIME AND COST

Total job time: 232.23 Hours

Unit cost: \$0.000405 /Gallon

Total job cost: \$41,940

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Placement of backfill**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **03B** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **03b**
 3:02:18 PM
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **CAT 972H** Horsepower: **287**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$57.78	NA
Operating Cost/Hour:	\$56.23	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$154.72	
Total Fleet Cost/Hour:	\$618.86	

MATERIAL QUANTITIES

Initial volume: **190,953** CCY Swell factor: **1.000**
 Loose volume: **190,953** LCY

Source of estimated volume: **Ex. L**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.525** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Basic Cycle Time:		0.525	minutes

Rolling Resistance – Road Conditions

Haul: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**
 Return: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	500	0.00	5.00	5.00	0.4611	(Cat HB)
Return Route:	500	0.00	5.00	5.00	0.4160	(Cat HB)

Total Travel Time: 0.8771 minutes
 Total Cycle Time: 1.4021 minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
 Bucket Fill Factor: 0.975 Loose material - mixed moist aggregates (95-100%) 0.975
 Adjusted Capacity: 5.46 LCY

Job Condition Correction Factors

Site Altitude: 7850 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 233.65 LCY/Hour
 Adjusted Hourly Unit Production: 193.93 LCY/Hour
 Adjusted Hourly Fleet Production: 775.73 LCY/Hour

JOB TIME AND COST

Fleet size: 4 Loader(s) Total job time: 246.16 Hours
 Unit cost: \$0.798 /LCY Total job cost: \$152,339

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Placement of backfill in Phase 2 & 3 ponds**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **03C** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **M090-03c**
 3:02:42 PM
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **CAT 972H** Horsepower: **287**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$57.78	NA
Operating Cost/Hour:	\$56.23	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$154.72	
Total Fleet Cost/Hour:	\$618.86	

MATERIAL QUANTITIES

Initial volume: **177,872** CCY Swell factor: **1.000**
 Loose volume: **177,872** LCY

Source of estimated volume: **TR2, Table E-1**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.525** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Basic Cycle Time:		0.525	minutes

Rolling Resistance – Road ConditionsHaul: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**Return: **Rutted dirt, little maintenance, no water, 2" tire penetration 5.0****Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	500	0.00	5.00	5.00	0.4611	(Cat HB)
Return Route:	500	0.00	5.00	5.00	0.4160	(Cat HB)

Total Travel Time: 0.8771 minutes
 Total Cycle Time: 1.4021 minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
 Bucket Fill Factor: 0.975 Loose material - mixed moist aggregates (95-100%) 0.975
 Adjusted Capacity: 5.46 LCY

Job Condition Correction Factors

Site Altitude: 7850 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 233.65 LCY/Hour
 Adjusted Hourly Unit Production: 193.93 LCY/Hour
 Adjusted Hourly Fleet Production: 775.73 LCY/Hour

JOB TIME AND COST

Fleet size: 4 Loader(s) Total job time: 229.30 Hours
 Unit cost: \$0.798 /LCY Total job cost: \$141,903

BULLDOZER WORKTask description: **Grade backfill material**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **04B** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **04b**
 2:59:29 PM
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$426.60**
 Total Fleet Cost/Hour: **\$426.60**

MATERIAL QUANTITIES

Initial Volume: **19,953**
 Swell factor: **1.000**
 Loose volume: **19,953 LCY**

Source of estimated volume: **10% of total backfill material placed by loader**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,850 feet**

Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 916.16 LCY/hr

Adjusted fleet production: **916.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.466/LCY

Total job time: **21.78** Hours

Total job cost: **\$9,291**

BULLDOZER WORKTask description: **Grade backfill material Phases 2 &3**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **04C** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **M090-04c**
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$426.60**
 Total Fleet Cost/Hour: **\$426.60**

MATERIAL QUANTITIES

Initial Volume: **17,787**
 Swell factor: **1.000**
 Loose volume: **17,787 LCY**

Source of estimated volume: **10% of total backfill material placed by loader**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,850 feet**

Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6544

Adjusted unit production: 916.16 LCY/hr

Adjusted fleet production: **916.16** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.466/LCY

Total job time: **19.41** Hours

Total job cost: **\$8,282**

BULLDOZER WORKTask description: **Placement of topsoil**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **05B** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **05b**
 3:01:17 PM
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$426.60**
 Total Fleet Cost/Hour: **\$426.60**

MATERIAL QUANTITIES

Initial Volume: **27,985**
 Swell factor: **1.000**
 Loose volume: **27,985 LCY**

Source of estimated volume: **Ex. L**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **852.6 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,850 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 732.64 LCY/hr

Adjusted fleet production: **732.64** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.582/LCY

Total job time: **38.20** Hours

Total job cost: **\$16,295**

BULLDOZER WORKTask description: **Placement of topsoil, Phase 2 & 3 slopes**Site: **River Valley Resource** Permit Action: **TR2** Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **05C** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **M090-05c**
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$426.60**
 Total Fleet Cost/Hour: **\$426.60**

MATERIAL QUANTITIES

Initial Volume: **2,600**
 Swell factor: **1.000**
 Loose volume: **2,600 LCY**

Source of estimated volume: **Ex. L and TR2 @ 12 in**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **852.6 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,850 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 732.64 LCY/hr

Adjusted fleet production: **732.64** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.582/LCY

Total job time: **3.55** Hours

Total job cost: **\$1,514**

REVEGETATION WORKTask description: Reveg. shorelineSite: River Valley ResourcePermit Action: TR2Permit/Job#: M2001090**PROJECT IDENTIFICATION**Task #: 06BState: ColoradoAbbreviation: NoneDate: 8/2/2023County: RouttFilename: 06b3:26:42 PMUser: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$100.40
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$439.20

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$28.48
Meadow Sedge	1.00	41.69	\$99.25
Slender Wheatgrass - Native	3.00	10.95	\$13.88
Red Top	1.00	114.55	\$7.88
Reedgrass, Canadian (or Blue Joint)	0.50	51.42	\$101.63
Reedgrass, Northern - Native	0.50	51.42	\$68.33
Saltgrass, Inland	1.00	13.86	\$42.80
Timothy, Alpine - Native	1.00	29.84	\$24.25

Basin Wildrye - Trailhead	1.50	6.10	\$23.12
Totals Seed Mix	10.50	358.87	\$409.59

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$859.57

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Total Mulch Application Cost/Acre	\$74.46

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 7.6 Cost /Acre: \$2,014.82
 Estimated Failure Rate: 25% Cost /Acre*: \$2,014.82
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$15,312.63**
 Reseeding Job Cost: **\$3,828.16**
 Total Job Cost: **\$19,141**
 Job Hours: **7.60**

REVEGETATION WORKTask description: Reveg. shoreline Phase 2 &3Site: River Valley ResourcePermit Action: TR2Permit/Job#: M2001090**PROJECT IDENTIFICATION**Task #: 06CState: ColoradoAbbreviation: NoneDate: 8/2/2023County: RouttFilename: M090-06cUser: HR1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$100.40
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$439.20

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$28.48
Meadow Sedge	1.00	41.69	\$99.25
Slender Wheatgrass - Native	3.00	10.95	\$13.88
Red Top	1.00	114.55	\$7.88
Reedgrass, Canadian (or Blue Joint)	0.50	51.42	\$101.63
Reedgrass, Northern - Native	0.50	51.42	\$68.33
Saltgrass, Inland	1.00	13.86	\$42.80
Timothy, Alpine - Native	1.00	29.84	\$24.25
Basin Wildrye - Trailhead	1.50	6.10	\$23.12

Totals Seed Mix	10.50	358.87	\$409.59
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Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$859.57

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Total Mulch Application Cost/Acre	\$74.46

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 1.5 Cost /Acre: \$2,014.82
 Estimated Failure Rate: 25% Cost /Acre*: \$2,014.82
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$3,022.23**
 Reseeding Job Cost: **\$755.56**
 Total Job Cost: **\$3,778**
 Job Hours: **1.50**

REVEGETATION WORKTask description: Reveg. Hay MeadowsSite: River Valley ResourcePermit Action: TR2Permit/Job#: M2001090PROJECT IDENTIFICATIONTask #: 07BState: ColoradoAbbreviation: NoneDate: 8/2/2023County: RouttFilename: 07b3:33:52 PMUser: HR1Agency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$100.40
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$439.20

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Orchardgrass - Paiute	3.50	43.39	\$14.26
Smooth Brome - Lincoln	2.50	8.32	\$8.31
Timothy, Alpine - Native	4.00	119.38	\$97.00
Totals Seed Mix	10.00	171.09	\$119.58

Application

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Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$859.57

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Total Mulch Application Cost/Acre	\$74.46

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Narrowleaf	8.7	Container, 1 gallon (MEANS)	\$16.13	\$2.40	\$140.33
Willow, Sandbar	8.7	Container, 1 gallon (MEANS)	\$18.53	\$2.40	\$161.21
Totals Nursery Stock Cost / Acre					\$301.54

JOB TIME AND COST

No. of Acres: 36 Cost /Acre: \$2,026.35
 Estimated Failure Rate: 25% Cost /Acre*: \$2,026.35
 *Selected Replanting Work Items: TILLING,SEEDING,NURSERY,MULC
HING

Initial Job Cost: \$72,948.60
 Reseeding Job Cost: \$18,237.15
 Total Job Cost: \$91,186
 Job Hours: 36.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation crew and equipment**Site: **River Valley Resource**Permit Action: **TR2**Permit/Job#: **M2001090****PROJECT IDENTIFICATION**

Task #: **08B** State: **Colorado** Abbreviation: **None**
 Date: **8/2/2023** County: **Routt** Filename: **08b**
 3:20:38 PM
 User: **HR1**

Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**

Shift basis: **1 per day**
 Cost Data Source: **CRG Data**

Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)****Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	47.71	\$241.38	\$158.17	1	\$399.55	\$158.17	\$250.00
CAT 972H	28.00	\$57.78	\$158.17	4	\$863.80	\$632.68	\$500.00
Centrifugal pump - 200M, 10 in.	1.95	\$16.59	\$82.29	4	\$395.52	\$329.16	\$250.00

Subtotals: **\$1,658.87** **\$1,120.01** **\$1,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$27.44	1	\$27.44	\$27.44
Drill/Broadcast Seeder with Tractor	\$14.81	1	\$14.81	\$14.81
Power Mulcher (Bowie LD-90)	\$57.02	1	\$57.02	\$57.02

Subtotals: **\$99.27** **\$99.27**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

STEAMBOAT
SPRINGSTotal one-way travel distance: 10.00 milesAverage Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost *

\$6,905.67

** two round trips with haul rig:

Total Roadable Mob/Demob Cost **

\$56.73

** one round trip, no haul rig:

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.29	0.29
Return Time (Hours):	0.29	0.29
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.57	0.57

JOB TIME AND COSTTotal job time: 3.14 HoursTotal job cost: \$6,962

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary mobilize reclamation crew and equipmentSite: River Valley ResourcePermit Action: TR2Permit/Job#: M2001090**PROJECT IDENTIFICATION**

Task #: 09B State: Colorado Abbreviation: None
 Date: 8/2/2023 County: Routt Filename: 09b
3:26:11 PM
 User: HR1

Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**

Shift basis: 1 per day
 Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Subtotals:					\$0.00	\$0.00	\$0.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$27.44	1	\$27.44	\$27.44
Drill/Broadcast Seeder with Tractor	\$14.81	1	\$14.81	\$14.81
Power Mulcher (Bowie LD-90)	\$57.02	1	\$57.02	\$57.02
Subtotals:			\$99.27	\$99.27

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

STEAMBOAT
SPRINGSTotal one-way travel distance: 10.00 milesAverage Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost *

\$0.00

** two round trips with haul rig:

Total Roadable Mob/Demob Cost **

\$56.73

** one round trip, no haul rig:

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.29	0.29
Return Time (Hours):	0.29	0.29
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.57	0.57

JOB TIME AND COSTTotal job time: 0.57 HoursTotal job cost: \$57