



COLORADO

Division of Reclamation, Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

October 29, 2019

Jason Burkey
Oldcastle SW Group, Inc. dba United Companies of Mesa County
2273 River Road
Grand Junction, CO 81502

**RE: Otter Creek Pit, Permit No.M-2012-050, Construction Material Regular (112c) Amendment
Application (AM-1) Decision Letter – Financial Warranty Request**

Dear Mr. Burkey:

On October 29, 2019, the Division of Reclamation, Mining, and Safety (Division) approved the Amendment application (AM-1) submitted to the Division on August 1, 2019, addressing the following:

Add 5.8 acres to the northeast

The financial warranty set by the Division for this operation is an amount of \$125,282. This amount exceeds the \$ 124,375.61 of financial warranty currently held by the Division. If you have not already done so, please submit the additional bond in the amount of \$ 906.39. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted. The revision will not be final until the bond is approved by the Division.

Please make arrangements with Gabriel Benvenuti at the Division of Reclamation, Mining, and Safety Denver Office, phone no. 303-866-3567, Ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution, and/or submittal of financial and/or performance warranty forms should also be directed to Gabriel Benvenuti.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext. 8183 or via email at amy.yeldell@state.co.us

Sincerely,

Amy Yeldell
Environmental Protection Specialist



M-2012-050
October 29, 2019
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Ec:
Travis Marshall, Senior EPS, Grand Junction DRMS
Gabriel Benvenuti, DRMS
Ivan Geer, Consultant

COST SUMMARY WORK

Task description: AM-1

Site: Otter Creek Pit

Permit Action: AM-1

Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 10/11/2019

County: Mesa

Filename: M050-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01	Equipment Removal	DEMOLISH	1	16.00	\$4,000
02a	Backfill Highwall	LOADER	1	46.07	\$6,917
03a	Push Backfill Down 3H:1V Slope	DOZER	1	6.86	\$1,991
04a	Topsoil berm pushed to backfill	DOZER	1	53.02	\$15,387
05a	Move topsoil to 6 acre overburden storage area	TRUCK1	1	17.39	\$16,616
06a	Topsoil Compaction Relief	RIPPER	1	17.62	\$5,115
07a	Revegetate 12.5 acres + Trees	REVEGE	1	24.00	\$26,014
08a	Revegetate 1.2 Acres Wetland Area	REVEGE	1	8.00	\$7,982
09a	Initial Mobilization	MOBILIZE	1	2.57	\$7,313
09b	Secondary Mobilization	MOBILIZE	1	2.57	\$1,470
<u>SUBTOTALS:</u>				194.1	\$92,805

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,875

Performance bond: 1.05

Total = \$974

Job superintendent: 97.05

Total = \$6,734

Profit: 10.00

Total = \$9,280

TOTAL O & P = \$18,864

CONTRACT AMOUNT (direct + O & P) = \$111,669

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$4,746

Reclamation management and/or administration: 5.00

\$5,583

CONTINGENCY: 3.00

Total = \$2,784

TOTAL INDIRECT COST = \$32,477

TOTAL BOND AMOUNT (direct + indirect) = \$125,282

DEMOLITION WORK

Task description: Equipment Removal

Site: Otter Creek Pit

Permit Action: Am-1

Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: 01

State: Colorado

Abbreviation: None

Date: 10/11/2019

County: Mesa

Filename: M050-01

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 100.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Removal of Buried Truck Scale	15' x 60'	USER PROVIDED ITEM	1.00	1	\$3,500.00	\$3,500.00
Removal of 500 gallon tank	500 gal	USER PROVIDED ITEM	1.00	1	\$250.00	\$250.00
Removal of Pit Pump and Piping	n/a	USER PROVIDED ITEM	1.00	1	\$250.00	\$250.00

Job Hours: 16.00

Subtotal
(unadjusted): \$4,000.00

Total Cost
(adjusted for location): \$4,000.00

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill Highwall**Site: **Otter Creek Pit** Permit Action: **AM-1** Permit/Job#: **M2012050****PROJECT IDENTIFICATION**

Task #: **02A** State: **Colorado** Abbreviation: **None**
 Date: **10/11/2019** County: **Mesa** Filename: **M050-02a**
 User: **ACY**

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

Basic Machine: **CAT 980H high lift** Horsepower: **315**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$52.71	NA
Operating Cost/Hour:	\$61.51	100
Operator Cost/Hour:	\$35.93	NA
Total Unit Cost/Hour:	\$150.14	
Total Fleet Cost/Hour:	\$150.14	

MATERIAL QUANTITIES

Initial volume: **5,350** CCY Swell factor: **1.115**
 Loose volume: **5,965** LCY

Source of estimated volume: **500 LF A 17'H 1:1 to 3:1 backfill**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.550** minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 3/4" to 6" diameter 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(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:		-0.070	minutes
Adjusted Basic Cycle Time:		0.480	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:	1300	0.00	5.00	5.00	1.1492	(Cat HB)
Return Route:	1300	0.00	5.00	5.00	1.0392	(Cat HB)

Total Travel Time: 2.1884 minutes
 Total Cycle Time: 2.6684 minutes

Load Bucket Capacity

Rated Capacity: 7.50 LCY (heaped)
 Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925
 Adjusted Capacity: 6.94 LCY

Job Condition Correction Factors

Site Altitude: 4630 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: 155.99 LCY/Hour
 Adjusted Hourly Unit Production: 129.47 LCY/Hour
 Adjusted Hourly Fleet Production: 129.47 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 46.07 Hours
 Unit cost: \$1.160 /LCY Total job cost: \$6,917

BULLDOZER WORKTask description: **Push Backfill Down 3H:1V Slope**Site: **Otter Creek Pit**Permit Action: **AM-1**Permit/Job#: **M2012050****PROJECT IDENTIFICATION**Task #: **03A**State: **Colorado**Abbreviation: **None**Date: **10/11/2019**County: **Mesa**Filename: **M050-03a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D9T - 9SU**Horsepower: **405**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$8.96	100
Operator Cost/Hour:	\$39.98	NA

Total unit Cost/Hour: **\$290.20**Total Fleet Cost/Hour: **\$290.20****MATERIAL QUANTITIES**Initial Volume: **5,965**Swell factor: **1.000**Loose volume: **5,965 LCY**Source of estimated volume: **Transported Volume from 02a**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **2,110.5 LCY/hr**Materials consistency description: **Loose stockpile 1.2**Average push gradient: **15 %**Average site altitude: **4,630 feet**Material weight: **2,500 lbs/LCY**Weight description: **Clay - Dry****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:	0.900	(SSD-FC)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4119

Adjusted unit production: 869.31 LCY/hr

Adjusted fleet production: **869.31** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.334/LCY

Total job time: **6.86** Hours

Total job cost: **\$1,991**

BULLDOZER WORKTask description: Topsoil berm pushed to backfillSite: Otter Creek PitPermit Action: AM-1Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 10/11/2019County: MesaFilename: M050-04aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$8.96	100
Operator Cost/Hour:	\$39.98	NA

Total unit Cost/Hour: \$290.20Total Fleet Cost/Hour: \$290.20**MATERIAL QUANTITIES**Initial Volume: 18,518Swell factor: 1.115Loose volume: 20,648 LCYSource of estimated volume: L-2Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 90 feetUnadjusted hourly production: 1,351.7 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: 10 %Average site altitude: 4,630 feetMaterial weight: 2,500 lbs/LCYWeight description: Clay - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2881

Adjusted unit production: 389.42 LCY/hr

Adjusted fleet production: **389.42 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.745/LCY

Total job time: **53.02 Hours**

Total job cost: **\$15,387**

TRUCK/LOADER TEAM WORKTask description: Move topsoil to 6 acre overburden storage areaSite: Otter Creek PitPermit Action: AM-1Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 10/11/2019County: MesaFilename: M050-05aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 770D
-Loader:	CAT 980H high lift
Support Equipment -Load Area:	NA
-Dump Area:	Cat D9T - 9SU
Road Maintenance -Motor Grader:	CAT 140M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	NA	100	100	100
Ownership cost/hour:	\$80.59	\$52.71	NA	\$121.49	\$42.12	\$27.40
Operating cost/hour:	\$66.37	\$61.51	NA	\$105.84	\$39.67	\$39.99
% Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.79	\$35.93	NA	\$39.98	\$45.39	\$0.00
Unit Subtotals:	\$171.75	\$150.14	NA	\$267.31	\$127.18	\$67.39
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work: \$493.64		Support: \$267.31		Maint: \$194.57	

Total work team cost/hour: \$955.52**MATERIAL QUANTITIES**Initial volume: 9,680

CCY

Swell factor: 1.115Loose volume: 10,793

LCY

Source of estimated volume: 6ac @12" DSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**Truck Payload (weight) Basis:Material weight: 2,500

Pounds/LCY

Description: Clay - DryRated Payload: 82,000

Pounds

Payload Capacity: 32.80

LCY

Truck Bed (volume) Basis:

Struck Volume:	21.60	LCY
Heaped Volume:	31.70	LCY
Average Volume:	26.65	LCY
Adjusted Volume:	31.70	LCY

Final Truck Volume Based on Number of Loader Passes: 27.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	0.925	Loose material - 1/8" to 3/8" (90 - 95%) 0.925
Adjusted Capacity:	6.938	LCY

Job Condition Corrections:

Site Altitude (ft.): 4630 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -0.02	-0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(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:		-0.090	minutes
Adjusted Loader Cycle Time:		0.460	minutes
Net Load Time per Truck:		1.480	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.480	Minutes	Adjusted for site altitude:	1.480	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	2051	0.735

Haul Time: **0.735** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	3891	0.638

Return Time: **0.638** minutesTotal Truck Cycle Time: **4.453** minutes

Loading Tool unit

Production 800.48 LCY/Hour Adjusted for job efficiency: 664.40 LCY/Hour
Truck Unit Production 373.91 LCY/Hour Adjusted for job efficiency: 310.34 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 620.68 LCY/Hour
Adjusted single truck/loader team production: 620.68 LCY/Hour
Adjusted multiple truck/loader team production: **620.68** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **17.39** Hours

Unit cost: \$1.539 /LCY Total job cost: **\$16,616**

BULLDOZER RIPPING WORK

Task description: Topsoil Compaction Relief

Site: Otter Creek Pit Permit Action: AM-1 Permit/Job#: M2012050

PROJECT IDENTIFICATION

Task #: 06A State: Colorado Abbreviation: None
Date: 10/11/2019 County: Mesa Filename: M050-06a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper Ownership Cost/Hour:	\$13.94	NA
Ripper Operating Cost/Hour:	\$8.96	100
Operator Cost/Hour:	\$39.98	NA
Total Unit Cost/Hour:	\$290.20	
Total Fleet Cost/Hour:	\$290.20	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 12.50 acres Rip Depth (ft): 1.00 Volume: 20,167 BCY or CCY

Source of estimated quantity: Exhibit L

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 feet/pass
Average Ripping Width: 7.67 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.855 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.855 Acres/hr
Site Altitude: 4,630 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.71 Acres/hr
Adjusted Hourly Fleet Production: **0.71** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **17.62** Hours

Unit cost: \$409.173 Per acre Total job cost: **\$5,115**

REVEGETATION WORKTask description: Revegetate 12.5 acres + TreesSite: Otter Creek PitPermit Action: AM-1Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 10/11/2019County: MesaFilename: M050-07aUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
12/4/2008 12:00:00 AM	100.00	pound	\$0.43	\$42.50
			Total Fertilizer Materials Cost/Acre	\$42.50

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$36.15
Total Fertilizer Application Cost/Acre	\$36.15

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	1.90	226.81	\$18.53
Sandberg Bluegrass - VNS	1.50	31.85	\$12.60
Galleta	1.90	6.94	\$42.47
Rabbitbrush, Rubber	0.20	2.98	\$12.86
Winter Fat	1.13	2.87	\$23.06
Yarrow, Western	0.40	24.32	\$16.72
Kochia, Forage (Prostrate)	0.20	28.09	\$1.80
Globemallow, Munro	0.40	4.53	\$35.00
Totals Seed Mix	7.63	328.39	\$163.03

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$2.74	\$274.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$864.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$70.17
Power mulcher (MEANS 32 91 13.16 0350)	\$95.83
Weed spray, truck, aquatic area, nox. [DMG]	\$68.50
Total Mulch Application Cost/Acre	\$234.50

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Narrowleaf	9	Container, 1 gallon (MEANS)	\$14.93	\$0.00	\$134.37
Totals Nursery Stock Cost / Acre					\$134.37

JOB TIME AND COST

No. of Acres: 12.5 Cost /Acre: \$1,576.48
 Estimated Failure Rate: 40% Cost /Acre*: \$1,261.53
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$19,706.00**
 Reseeding Job Cost: **\$6,307.65**
 Total Job Cost: **\$26,014**
 Job Hours: **24.00**

REVEGETATION WORKTask description: Revegetate 1.2 Acres Wetland AreaSite: Otter Creek PitPermit Action: AM-1Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 08AState: ColoradoAbbreviation: NoneDate: 10/11/2019County: MesaFilename: M050-08aUser: ACYAgency 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	2.00	78.05	\$56.95
Aquatic Sedge	0.20	5.29	\$35.00
Orchardgrass - Paiute	2.00	24.79	\$8.15
Slender Wheatgrass - Native	6.00	21.90	\$27.75
Western Wheatgrass - Native	0.20	0.51	\$1.20
Red Top	2.00	229.11	\$15.75
Reedgrass, Canadian (or Blue Joint)	0.40	41.14	\$81.30
Reedgrass, Northern - Native	1.00	102.85	\$136.65
Saltgrass, Inland	2.00	27.72	\$85.60

Snowberry, Western	2.00	3.44	\$127.00
Sumac, Skunkbrush	0.80	0.37	\$16.80
Timothy - Climax	2.00	57.39	\$3.20
Basin Wildrye - Trailhead	3.00	12.19	\$46.23
Greasewood, Black	2.00	280.90	\$38.00
Totals Seed Mix	25.60	885.66	\$679.58

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$2.74	\$274.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$864.00

Application

Description	Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)	\$3,339.60
Weed spray, hand, aquatic area, nox. [DMG]	\$170.90
Total Mulch Application Cost/Acre	\$3,510.50

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:	1.2	Cost /Acre:	\$5,321.30
Estimated Failure Rate:	25%	Cost /Acre*:	\$5,321.30
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$6,385.56		
Reseeding Job Cost:	\$1,596.39		
Total Job Cost:	\$7,982		
Job Hours:	8.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Otter Creek Pit**Permit Action: **Am-1**Permit/Job#: **M2012050****PROJECT IDENTIFICATION**Task #: **09A**State: **Colorado**Abbreviation: **None**Date: **10/11/2019**County: **Mesa**Filename: **M050-09a**User: **ACY**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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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 D9T - 9SU	60.01	\$121.49	\$141.54	1	\$263.03	\$141.54	\$250.00
Cat D6T LGP	28.63	\$65.96	\$123.81	1	\$189.77	\$123.81	\$250.00
CAT 980H high lift	33.12	\$52.71	\$123.81	1	\$176.52	\$123.81	\$250.00
Cat 770D	37.54	\$80.59	\$123.81	2	\$408.80	\$247.62	\$500.00
CAT 140M	16.68	\$42.12	\$67.39	1	\$109.51	\$67.39	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00

Subtotals: **\$1,310.30** **\$838.95** **\$2,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 5,000 Gal.	\$67.39	1	\$67.39	\$67.39
Light Duty Pickup, 4x4, 3/4 T.	\$69.36	3	\$208.08	\$208.08

Subtotals: **\$275.47** **\$275.47**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost *	\$7,234.67	
'* two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$78.71	
'** one round trip, no haul rig:		

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time:	2.57	Hours
Total job cost:	\$7,313	

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary MobilizationSite: Otter Creek PitPermit Action: Am-1Permit/Job#: M2012050**PROJECT IDENTIFICATION**Task #: 09BState: ColoradoAbbreviation: NoneDate: 10/11/2019County: MesaFilename: M050-09bUser: ACYAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
Subtotals:					\$162.67	\$134.78	\$500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$69.36	3	\$208.08	\$208.08
Subtotals:			\$208.08	\$208.08

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>5.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,410.33</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$59.45</u>
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.14</u>	<u>0.14</u>
Return Time (Hours):	<u>0.14</u>	<u>0.14</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.29</u>	<u>0.29</u>

JOB TIME AND COST

Total job time:	<u>2.57</u>	Hours
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Total job cost:	<u>\$1,470</u>
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