



November 20, 2023

Jim Doody  
Grand Junction Pipe & Supply Co.  
556 Struthers Ave  
Grand Junction, CO 81501

***RE: Soaring Eagle Gravel Pit, Permit No. M-1999-025, Proposed Surety Increase SI-1***

Dear Mr. Doody:

This reclamation cost update was in response to the site inspection conducted on November 7, 2023. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2018. Below is a table summarizing input values that have been updated. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	Form Used	Description
	-	Scale is mobile, no demo required
01a	Pumping	Dewater Pit for Grading Pit is approx. 55 ac @ 10ft Prev. 35 ac @ 11ft
02a	Dozer	Excavate Outlet structure - No changes
02b	Dozer	Excavate Inlet Structure - No changes
03a	-	Riprap for structures - No changes
03b	Excavator	Place riprap on Outlet Structure - No changes



03c	Excavator	Place riprap on Inlet Structure - No changes
04a	Dozer	Highwall reduction grade to 3H: 1V = 17,167 BCY 20'H x 3000LF @ Vert cut/fill = 16,667 CCY + 500 CY of pond bottom berm grading Prev. 64,000 CCY with scraper backfilled
04b	Dozer	Create wetland bench. Flatten out areas adjacent to pond approx. 12 ac with 48" of grading. = 77,440 CY Prev. 14,444 CCY with scraper
05a	Ripper	Rip compacted areas 24 ac Prev. 31 ac
06a	Truck	Haul Topsoil Pit slopes and wetland areas 22 ac @ 7" = 20,704 CCY, Avg 2,000 LF haul Prev. 1943 CY (2 ac) w scraper
06b	Dozer	Spread Topsoil Pit slopes and wetland areas 22 ac @ 7" = 25,155 LCY 50 ft push 0%
06c	Truck	Haul Topsoil facilities and road areas 24 ac @ 7" = 22,587 CCY, Avg 1200 LF Prev. 27,929 (29 ac) w scraper
06d	Dozer	Spread Topsoil facilities and road areas 24 ac @ 7" = 27,443 LCY 50 ft push 0%
07a	Reveg	Reveg 42 acres Prev. 32 ac
08a	Site Maintenance	Install Wetlands Exclusion Fencing
10a	Mob	Update equipment used
10b	Mob	Update equipment used

Per policy I wanted to send this out for review prior to issuance. Please look it over and let me know if there are errors or concerns. If no response is received by **Monday, January**

**22, 2024** then I'll issue SI-1 as is. SI-1 will result in a total required bond amount of **\$583,211**, which is an increase of \$340,723 over the \$242,488 currently held.

Sincerely,



**Amy Yeldell**  
Environmental Protection Specialist

Ec:  
Travis Marshall, Senior EPS, Grand Junction DRMS

## COST SUMMARY WORK

Task description: Post Inspection Update 11-7-2023

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025

User: ACY

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Dewater 55 ac pit	PUMPING	1	1,037.03	\$23,043
02a	Excavate outlets structure	DOZER	2	2.22	\$2,042
02b	Excavate inlet structure	DOZER	2	2.22	\$2,042
03a	Provide 3,080 CY of 2 ft D50 Riprap	NA	5	16.00	\$0
03b	Place riprap on outlet structure	EXCAVATE	1	17.40	\$2,919
03c	Place riprap on inlet structure	EXCAVATE	1	17.40	\$2,919
04a	Reduce highwalls to 3H: 1V	DOZER	2	14.49	\$13,337
04b	Create wetlands bench	DOZER	2	158.00	\$145,453
05a	Rip compacted areas prior to topsoil replacement	RIPPER	1	34.52	\$16,170
06a	Haul topsoil to slopes	TRUCK1	1	45.82	\$49,280
06b	Spread topsoil on pit slopes	DOZER	2	9.25	\$8,157
06c	Haul topsoil to facilities areas	TRUCK1	1	47.41	\$50,994
06d	Spread topsoil on facilities areas	DOZER	2	10.09	\$8,899
07a	Reveg disturbed areas	REVEGE	1	60.00	\$112,833
08a	Install wetlands exclusion fencing	SITEMAINTENANCE	1	80.00	\$8,800
10a	Initial mobilization	MOBILIZE	1	2.57	\$8,706
10b	Secondary mobilization	MOBILIZE	1	2.57	\$1,565
<b><u>SUBTOTALS:</u></b>				<b>1556.99</b>	<b>\$457,159</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Performance bond: 1.05

Job superintendent: 260.00

Profit: 10.00

Total = \$9,235

Total = \$4,800

Total = \$16,921

Total = \$45,716

TOTAL O & P = \$76,671

CONTRACT AMOUNT (direct + O & P) = \$533,830

## LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$0</u>	Total =	<u>\$0</u>
Engineering work and/or contract/bid preparation:	<u>4.25</u>	Total =	<u>\$22,688</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$26,692</u>

CONTINGENCY:	0.00	Total =	<u>\$0</u>
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TOTAL INDIRECT COST =	<u>\$126,051</u>
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<b>TOTAL BOND AMOUNT (direct + indirect) =</b>	<b><u>\$583,210</u></b>
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## PUMPING WORK

Task description: Dewater 55 ac pit

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025-01a

User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Submersible pump - 460v, 8 in.	1
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	2
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	4
Labor Unit 1:	Pump operator	0

Horsepower: 95

Shift Basis: 1 per day

Weight: 0.70

(US Tons)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$18.10	NA
Operating Cost/Hour:	\$4.12	100
Operator Cost/Hour:	\$0.00	NA
Total Unit Cost/Hour:	\$22.22	

Total Fleet Cost/Hour: \$22.22

### PUMPING QUANTITIES

Initial Pond Volume:	<u>550.00</u>		Conversion factor:	<u>325850.5800</u>
Final Pond Volume:	<u>179,217,819.00</u>	gallons		
Total Pond Inflow Surface Area:	<u>28,000</u>	Sq. ft.	Unit inflow rate in gph/sq. ft.:	<u>0.1758</u>
Total Pond Inflow Volume per Hour:	<u>4,922.40</u>	gallons		

Source of estimated volume: Assume 2800'L x 10'H river side pit slope

### PUMPING TIME

Maximum Pump Capacity:	<u>170,000</u>	gph/pump
Estimated Suction Head:	<u>15</u>	feet
Estimated Discharge Head:	<u>20</u>	feet
Total Head:	<u>35</u>	feet
CPB Pump Capacity:	<u>163,200</u>	gph/pump
Site Altitude:	<u>4,490</u>	feet
Adjusted Pumping Capacity:	<u>163,200</u>	gph
Initial Unadjusted Pumping Time:	<u>1,098.15</u>	hours
Inflow during Initial Pumping:	<u>5,405,526</u>	gallons
Net Unadjusted Pumping Time:	<u>1,131.27</u>	Hours
Altitude Adjustment Factor:	<u>1.0000</u>	(3% rule)
Pump Efficiency Factor:	<u>0.9167</u>	(55 min./hr.)
Total Adjusted Pumping Time:	<u>1,037.04</u>	hours

### JOB TIME AND COST

Total job time: 1,037.04 Hours

Unit cost: \$0.000125 /Gallon

Total job cost: \$23,043

**BULLDOZER WORK**Task description: Excavate outlets structureSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-02aUser: 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:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$18.32	NA
Ripper op. Cost/Hour:	\$0.90	10
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$460.30Total Fleet Cost/Hour: **\$920.61****MATERIAL QUANTITIES**Initial Volume: 2,555Swell factor: 1.180Loose volume: **3,015 LCY**Source of estimated volume: Outlet details in permit (TR-2 estimate)Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 4,490 feetMaterial weight: 2,400 lbs/LCYWeight description: Clay and gravel - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3220

Adjusted unit production: 679.58 LCY/hr

Adjusted fleet production: **1359.16** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.677/LCY

Total job time: **2.22** Hours

Total job cost: **\$2,042**



**BULLDOZER WORK**Task description: **Excavate inlet structure**Site: **Soaring Eagle Gravel Pit**Permit Action: **2023**Permit/Job#: **M1999025****PROJECT IDENTIFICATION**Task #: **02B**State: **Colorado**Abbreviation: **None**Date: **11/20/2023**County: **Mesa**Filename: **M025-02b**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:**

		<b><u>Utilization %</u></b>
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$18.32	NA
Ripper op. Cost/Hour:	\$0.90	10
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: **\$460.30**Total Fleet Cost/Hour: **\$920.61****MATERIAL QUANTITIES**Initial Volume: **2,555**Swell factor: **1.180**Loose volume: **3,015 LCY**Source of estimated volume: **Outlet details in permit (TR-2 estimate)**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: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **4,490 feet**Material weight: **2,400 lbs/LCY**Weight description: **Clay and gravel - Dry****Job Condition Correction Factor**

		<b><u>Source</u></b>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3220

Adjusted unit production: 679.58 LCY/hr

Adjusted fleet production: **1359.16** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.677/LCY

Total job time: **2.22** Hours

Total job cost: **\$2,042**

## HYDRAULIC EXCAVATOR WORK

Task description: Place riprap on outlet structure

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: 03B

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025-03b

User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 320D L 9'-6" Stick

Attachment 1: ROPS Cab

Horsepower: 148

Weight (MT): 21.55

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$70.85</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$50.01</u>	<u>100</u>
Operator Cost/Hour:	<u>\$46.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$167.73</u>	
Total Fleet Cost/Hour:	<u>\$167.73</u>	

### MATERIAL QUANTITIES

Initial volume: 1,540

CCY

Swell factor: 1.000

Loose volume: 1,540

LCY

Source of estimated volume: Outlet structure design (TR-2 estimate)

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 1.54 LCY (heaped)

Bucket Fill Factor: 0.450 Rock - Poorly blasted (40% - 50%) 0.450

Adjusted Capacity: 0.69 LCY

#### Job Condition Correction Factors

Site Altitude: 4490 feet

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

Unadjusted Hourly Unit Production: 106.62 LCY/Hour

Adjusted Hourly Unit Production: 88.49 LCY/Hour

Adjusted Hourly Fleet Production: 88.49 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 17.40 Hours

Unit cost: \$1.895 /LCY Total job cost: \$2,919

## HYDRAULIC EXCAVATOR WORK

Task description: Place riprap on inlet structure

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: 03C

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025-03c

User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat 320D L 9'-6" Stick

Attachment 1: ROPS Cab

Horsepower: 148

Weight (MT): 21.55

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$70.85</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$50.01</u>	<u>100</u>
Operator Cost/Hour:	<u>\$46.87</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$167.73</u>	
Total Fleet Cost/Hour:	<u>\$167.73</u>	

### MATERIAL QUANTITIES

Initial volume: 1,540

CCY

Swell factor: 1.000

Loose volume: 1,540

LCY

Source of estimated volume: Outlet structure design (TR-2 estimate)

Source of estimated swell factor: Cat Handbook

### HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE

Secondary Job Condition within Basic Description: SEVERE

Cycle Time Value: 0.390 minutes

#### Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 1.54 LCY (heaped)

Bucket Fill Factor: 0.450 Rock - Poorly blasted (40% - 50%) 0.450

Adjusted Capacity: 0.69 LCY

#### Job Condition Correction Factors

Site Altitude: 4490 feet

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

Unadjusted Hourly Unit Production: 106.62 LCY/Hour

Adjusted Hourly Unit Production: 88.49 LCY/Hour

Adjusted Hourly Fleet Production: 88.49 LCY/Hour

### JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 17.40 Hours

Unit cost: \$1.895 /LCY Total job cost: \$2,919

**BULLDOZER WORK**Task description: **Reduce highwalls to 3H: 1V**Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025**PROJECT IDENTIFICATION**

Task #: 04A State: Colorado Abbreviation: None  
 Date: 11/20/2023 County: Mesa Filename: M025-04a  
 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:	<u>\$238.76</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$162.29</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$18.32</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.90</u>	<u>10</u>
Operator Cost/Hour:	<u>\$40.04</u>	<u>NA</u>

Total unit Cost/Hour: \$460.30  
 Total Fleet Cost/Hour: **\$920.61**

**MATERIAL QUANTITIES**

Initial Volume: 17,167  
 Swell factor: 1.180  
 Loose volume: **20,257 LCY**

Source of estimated volume: Staff estimates  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 70 feet  
 Unadjusted hourly production: 1,633.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -15 %  
 Average site altitude: 4,490 feet

Material weight: 2,400 lbs/LCYWeight description: Clay and gravel - Dry

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill: <u>0.750</u>	<u>(AVG.)</u>
Material consistency: <u>0.900</u>	<u>(CAT HB))</u>
Dozing method: <u>1.000</u>	<u>(GEN.)</u>
Visibility: <u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4280

Adjusted unit production: 699.14 LCY/hr

Adjusted fleet production: **1398.28** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.658/LCY

Total job time: **14.49** Hours

Total job cost: **\$13,337**

**BULLDOZER WORK**Task description: Create wetlands benchSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 04BState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-04bUser: 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:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$18.32	NA
Ripper op. Cost/Hour:	\$0.90	10
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$460.30Total Fleet Cost/Hour: **\$920.61****MATERIAL QUANTITIES**Initial Volume: 77,440Swell factor: 1.180Loose volume: **91,379 LCY**Source of estimated volume: 12 ac @ 48"Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 175 feetUnadjusted hourly production: 805.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -5 %Average site altitude: 4,490 feetMaterial weight: 2,400 lbs/LCYWeight description: Clay and gravel - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3591

Adjusted unit production: 289.18 LCY/hr

Adjusted fleet production: **578.36** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$1.592/LCY

Total job time: **158.00** Hours

Total job cost: **\$145,453**



## BULLDOZER RIPPING WORK

Task description: Rip compacted areas prior to topsoil replacement

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: 05A

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025-05a

User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 405  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper Ownership Cost/Hour:	\$18.32	NA
Ripper Operating Cost/Hour:	\$8.98	100
Operator Cost/Hour:	\$40.04	NA
Total Unit Cost/Hour:	\$468.39	
Total Fleet Cost/Hour:	<b>\$468.39</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 24.00 acres Rip Depth (ft): 2.00 Volume: 77,440 BCY or CCY

Source of estimated quantity: Staff estimates

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.00 feet/pass  
Average Ripping Width: 7.67 feet/pass  
Average Ripping Length: 200.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.838 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr  
Site Altitude: 4,490 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr  
Adjusted Hourly Fleet Production: **0.70** Acres/hr

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **34.52** Hours

Unit cost: \$673.769 Per acre Total job cost: **\$16,170**

**TRUCK/LOADER TEAM WORK**Task description: Haul topsoil to slopesSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-06aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 972H
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	20	NA	NA	NA
Ownership cost/hour:	\$108.06	\$57.78	\$238.76	NA	NA	NA
Operating cost/hour:	\$71.88	\$56.23	\$32.46	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$24.82	\$35.97	\$40.04	NA	NA	NA
Unit Subtotals:	\$204.76	\$149.98	\$311.25	NA	NA	NA
Number of Units:	3	1	1	0	0	0
Group Subtotals:	Work: \$764.26		Support: \$311.25		Maint: \$0.00	

Total work team cost/hour: \$1,075.51**MATERIAL QUANTITIES**Initial volume: 20,704

CCY

Swell factor: 1.215Loose volume: 25,155

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 62,000

Pounds

Payload Capacity: 38.75

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **18.48** LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>6.160</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 4490 feet

	<b>Truck</b>	<b>Loader</b>	<b>Source</b>
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: 3 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): 0.525 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 and up 0.00	0.000	(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:		-0.080	minutes
Adjusted Loader Cycle Time:		<b>0.445</b>	minutes
Net Load Time per Truck:		<b>0.990</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.990	Minutes	Adjusted for site altitude:	0.990	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time:  
penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	5.00	5.00	1427	1.524

Haul Time: **1.524** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	5.00	5.00	2646	0.915

Return Time: **0.915** minutesTotal Truck Cycle Time: **5.029** minutes

## Loading Tool unit

Production 697.36 LCY/Hour      Adjusted for job efficiency: 578.81 LCY/Hour  
Truck Unit Production 220.48 LCY/Hour      Adjusted for job efficiency: 183.00 LCY/Hour

Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 549.00 LCY/Hour  
Adjusted single truck/loader team production: 549.00 LCY/Hour  
Adjusted multiple truck/loader team production: **549.00** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **45.82** HoursUnit cost: \$1.959 /LCY      Total job cost: **\$49,280**

**BULLDOZER WORK**Task description: Spread topsoil on pit slopesSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 06BState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-06bUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	10
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$441.09Total Fleet Cost/Hour: \$882.17**MATERIAL QUANTITIES**Initial Volume: 25,155Swell factor: 1.000Loose volume: 25,155 LCYSource of estimated volume: Transported volumeSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 4,490 feetMaterial weight: 1,600 lbs/LCYWeight 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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 1,360.22 LCY/hr

Adjusted fleet production: **2720.44** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.324/LCY

Total job time: **9.25** Hours

Total job cost: **\$8,157**

**TRUCK/LOADER TEAM WORK**Task description: Haul topsoil to facilities areasSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 06CState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-06cUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Shift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 972H
Support Equipment -Load Area:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

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

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	20	NA	NA	NA
Ownership cost/hour:	\$108.06	\$57.78	\$238.76	NA	NA	NA
Operating cost/hour:	\$71.88	\$56.23	\$32.46	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$0.00	NA	NA	NA
Operator cost/hour:	\$24.82	\$35.97	\$40.04	NA	NA	NA
Unit Subtotals:	\$204.76	\$149.98	\$311.25	NA	NA	NA
Number of Units:	3	1	1	0	0	0
Group Subtotals:	Work: \$764.26		Support: \$311.25		Maint: \$0.00	

Total work team cost/hour: \$1,075.51**MATERIAL QUANTITIES**Initial volume: 22,587

CCY

Swell factor: 1.215Loose volume: 27,443

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 62,000

Pounds

Payload Capacity: 38.75

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **18.48** LCY

**Loading Tool Capacity**

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<b>6.160</b>	LCY

**Job Condition Corrections:**

Site Altitude (ft.): 4490 feet

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

**Loading Tool Cycle Time:** Number of Loading Tool Passes Required to Fill Truck: 3 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): 0.525 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 and up 0.00	0.000	(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:		-0.080	minutes
Adjusted Loader Cycle Time:		<b>0.445</b>	minutes
Net Load Time per Truck:		<b>0.990</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.990	Minutes	Adjusted for site altitude:	0.990	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

**Truck Travel (Haul & Return) Time:**  
penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire



## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	5.00	5.00	1427	0.963

Haul Time: **0.963** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	5.00	5.00	2646	0.613

Return Time: **0.613** minutesTotal Truck Cycle Time: **4.166** minutes

## Loading Tool unit

Production 697.36 LCY/Hour      Adjusted for job efficiency: 578.81 LCY/Hour  
Truck Unit Production 266.15 LCY/Hour      Adjusted for job efficiency: 220.91 LCY/Hour

Optimal No. of Trucks: 3 Truck(s)      Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 662.72 LCY/Hour  
Adjusted single truck/loader team production: 578.81 LCY/Hour  
Adjusted multiple truck/loader team production: **578.81** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **47.41** Hours

Unit cost: \$1.858 /LCY      Total job cost: **\$50,994**

**BULLDOZER WORK**Task description: Spread topsoil on facilities areasSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 06DState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-06dUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	10
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$441.09Total Fleet Cost/Hour: \$882.17**MATERIAL QUANTITIES**Initial Volume: 27,443Swell factor: 1.000Loose volume: 27,443 LCYSource of estimated volume: Transported volumeSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 4,490 feetMaterial weight: 1,600 lbs/LCYWeight 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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 1,360.22 LCY/hr

Adjusted fleet production: **2720.44** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.324/LCY

Total job time: **10.09** Hours

Total job cost: **\$8,899**

**REVEGETATION WORK**Task description: Reveg disturbed areasSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-07aUser: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	100.00	pound	\$0.68	\$68.00
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$68.00</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$41.82
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$41.82</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
<b>Total Tilling Cost/Acre</b>	<b>\$112.82</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.30	11.71	\$8.54
Canada Wildrye	5.50	14.52	\$59.62
Reed Canarygrass - VNS	1.66	19.28	\$8.22
Saltbush, Four Wing	4.00	5.51	\$50.00
Sumac, Skunkbrush	4.00	1.87	\$84.00
<b>Totals Seed Mix</b>	<b>15.46</b>	<b>52.89</b>	<b>\$210.38</b>

**Application**

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

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$35.09	\$35.09
<b>Total Mulch Materials Cost/Acre</b>				<b>\$894.66</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Power mulcher (MEANS 32 91 13.16 0350)	\$147.67
Weed spray, hand, aquatic area, nox. [DMG]	\$183.16
<b>Total Mulch Application Cost/Acre</b>	<b>\$405.29</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Willow, Sandbar	31	Tubling, 10 cu. in. container {(MEANS)}	\$2.14	\$0.00	\$66.34
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$66.34</b>

**JOB TIME AND COST**

No. of Acres: 42 Cost /Acre: \$2,066.53  
 Estimated Failure Rate: 30% Cost /Acre\*: \$2,066.53  
 \*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,NU  
RSERY,MULCHING

Initial Job Cost: \$86,794.26  
 Reseeding Job Cost: \$26,038.28  
 Total Job Cost: \$112,833  
 Job Hours: 60.00

## SITE MAINTENANCE

Task description: Install wetlands exclusion fencing

Site: Soaring Eagle Gravel Pit

Permit Action: 2023

Permit/Job#: M1999025

### PROJECT IDENTIFICATION

Task #: 08A

State: Colorado

Abbreviation: None

Date: 11/20/2023

County: Mesa

Filename: M025-08a

User: ACY

Agency or organization name: DRMS

### UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Install Wetlands Fencing	80.00	Fencing, barbed wire, - 3 strand	5,000.00	LF	\$1.76	\$8,800.00

Job Hours: 80.00

Total Cost: \$8,800.00

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Initial mobilization**Site: **Soaring Eagle Gravel Pit**Permit Action: **2023**Permit/Job#: **M1999025****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **11/20/2023**County: **Mesa**Filename: **M025-10a**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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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
Submersible pump - 460v, 8 in.	0.70	\$15.28	\$82.29	1	\$97.57	\$82.29	\$250.00
Cat D9T - 9SU	66.13	\$257.08	\$175.95	2	\$866.06	\$351.90	\$250.00
Cat 320D L 9'-6" Stick	23.70	\$70.85	\$82.29	1	\$153.14	\$82.29	\$250.00
CAT 972H	28.00	\$57.78	\$158.17	1	\$215.95	\$158.17	\$250.00
Cat 730	25.19	\$108.06	\$82.29	3	\$571.05	\$246.87	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00

Subtotals: **\$2,101.02    \$1,086.10    \$1,750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
Light Duty Pickup, 4x4, 3/4 T.	\$116.86	2	\$233.72	\$233.72

Subtotals:	<b>\$326.40</b>	<b>\$326.40</b>
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**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>\$8,612.65</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$93.26</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>\$8,706</u>
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**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Secondary mobilizationSite: Soaring Eagle Gravel PitPermit Action: 2023Permit/Job#: M1999025**PROJECT IDENTIFICATION**Task #: 10BState: ColoradoAbbreviation: NoneDate: 11/20/2023County: MesaFilename: M025-10bUser: 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00

Subtotals: **\$197.25** **\$164.58** **\$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.	\$116.86	2	\$233.72	\$233.72

Subtotals: **\$233.72** **\$233.72**

**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 \* \$1,497.88  
 \*\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$66.78  
 \*\* 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: \$1,565