



## Interoffice Memorandum

To: File for Delta Paving Gravel Pit (M-1998-105)

From: Rob Zuber *RZ*

Date: January 4, 2023

Subject: **Reclamation Cost Estimate for AM-01**

On January 4, 2023, the applicant (Jim Doody, Grand Junction Pipe & Supply Co. and Elam Construction) indicated via email that he accepts the enclosed reclamation cost estimate, which was created by Rob Zuber of the Division.



## COST SUMMARY WORK

Task description: Cost Summary

Site: Delta Paving Gravel Pit

Permit Action: AM-01

Permit/Job#: M1998105

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 11/15/2022

County: Delta

Filename: M105-000

User: RDZ

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01	Dewatering pit	PUMPING	1	437.70	\$27,794
04a	Phase 1 - haul material to pond slopes	TRUCK1	2	31.44	\$22,694
04b	Phase 1 - grade material on pond slopes	DOZER	2	12.30	\$7,106
05a	Haul topsoil	TRUCK1	2	17.23	\$12,440
05b	Grade topsoil	DOZER	2	4.93	\$2,847
06	Rip area for revegetation	RIPPER	2	22.54	\$13,023
07	Vegetate Phase 1 and stockpile area	REVEGE	1	27.00	\$49,283
10	Mobilization and Demobilization	MOBILIZE	1	0.44	\$1,776
<b><u>SUBTOTALS:</u></b>				<b>553.58</b>	<b>\$136,963</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$2,767

Performance bond: 1.05

Total = \$1,438

Job superintendent: 57.72

Total = \$4,337

Profit: 10.00

Total = \$13,696

TOTAL O & P = \$22,238

CONTRACT AMOUNT (direct + O & P) = \$159,201

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$7,960

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$30,698

**TOTAL BOND AMOUNT (direct + indirect) = \$167,661**

## PUMPING WORK

Task description: Dewatering pit

Site: Delta Paving Gravel Pit

Permit Action: AM-01

Permit/Job#: M1998105

### PROJECT IDENTIFICATION

Task #: 01

State: Colorado

Abbreviation: None

Date: 11/15/2022

County: Delta

Filename: M105-01

User: RDZ

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Centrifugal pump - 200M, 10 in.	1
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	1
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	1
Labor Unit 1:	Pump operator	1

Horsepower: 70

Shift Basis: 1 per day

Weight: 1.95

(US Tons)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$16.19	NA
Operating Cost/Hour:	\$19.63	100
Operator Cost/Hour:	\$27.68	NA
Total Unit Cost/Hour:	\$63.50	

Total Fleet Cost/Hour: \$63.50

### PUMPING QUANTITIES

Initial Pond Volume:	<u>294.00</u>		Conversion factor:	<u>325850.5800</u>
Final Pond Volume:	<u>95,800,070.52</u>	gallons		
Total Pond Inflow Surface Area:	<u>75,000</u>	Sq. ft.	Unit inflow rate in gph/sq. ft.:	<u>0.0879</u>
Total Pond Inflow Volume per Hour:	<u>6,592.50</u>	gallons		

Source of estimated volume: Applicant's Exhibit L

### PUMPING TIME

Maximum Pump Capacity:	<u>200,000</u>	gph/pump
Estimated Suction Head:	<u>10</u>	feet
Estimated Discharge Head:	<u>5</u>	feet
Total Head:	<u>15</u>	feet
CPB Pump Capacity:	<u>201,000</u>	gph/pump
Site Altitude:	<u>4,990</u>	feet
Adjusted Pumping Capacity:	<u>201,000</u>	gph
Initial Unadjusted Pumping Time:	<u>476.62</u>	hours
Inflow during Initial Pumping:	<u>3,142,099</u>	gallons
Net Unadjusted Pumping Time:	<u>492.25</u>	Hours
Altitude Adjustment Factor:	<u>0.9700</u>	(3% rule)
Pump Efficiency Factor:	<u>0.9167</u>	(55 min./hr.)
Total Adjusted Pumping Time:	<u>437.71</u>	hours

### JOB TIME AND COST

Total job time: 437.71 Hours

Unit cost: \$0.000281 /Gallon

Total job cost: \$27,794

**TRUCK/LOADER TEAM WORK**Task description: **Phase 1 - haul material to pond slopes**Site: **Delta Paving Gravel Pit**Permit Action: **AM-01**Permit/Job#: **M1998105****PROJECT IDENTIFICATION**Task #: **04A**State: **Colorado**Abbreviation: **None**Date: **11/15/2022**County: **Delta**Filename: **M105-04a**User: **RDZ**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	Generic 12-18 cy, 6x4
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	NA
-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	NA	NA	NA	NA
Ownership cost/hour:	\$24.21	\$49.15	NA	NA	NA	NA
Operating cost/hour:	\$57.28	\$43.04	NA	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$32.54	\$40.71	NA	NA	NA	NA
Unit Subtotals:	\$114.03	\$132.90	NA	NA	NA	NA
Number of Units:	4	2	0	0	0	0
Group Subtotals:	Work:	\$721.92	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: **\$721.92****MATERIAL QUANTITIES**Initial volume: **27,000**

CCY

Swell factor: **1.000**Loose volume: **27,000**

LCY

Source of estimated volume: **Applicant's Exhibit L**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: **2,900**

Pounds/LCY

Description: **Sand and gravel - Dry**Rated Payload: **50,300**

Pounds

Payload Capacity: **17.34**

LCY

Truck Bed (volume) Basis:

Struck Volume:	12.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	15.00	LCY
Adjusted Volume:	17.34	LCY

Final Truck Volume Based on Number of Loader Passes: 13.88 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	0.925	Loose material - 1/8" to 3/8" (90 - 95%) 0.925
Adjusted Capacity:	<b>4.625</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 4990 feet

	Truck	Loader	Source
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): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Loader Cycle Time:		<b>0.500</b>	minutes
Net Load Time per Truck:		<b>1.100</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	1.100	Minutes	Adjusted for site altitude:	1.100	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2895	0.409

Haul Time: **0.409** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2913	0.309

Return Time: **0.309** minutesTotal Truck Cycle Time: **3.218** minutes

## Loading Tool unit

Production 520.31 LCY/Hour Adjusted for job efficiency: 431.86 LCY/HourTruck Unit Production 258.70 LCY/Hour Adjusted for job efficiency: 214.72 LCY/HourOptimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 429.44 LCY/Hour  
Adjusted single truck/loader team production: 429.44 LCY/Hour  
Adjusted multiple truck/loader team production: **858.89** LCY/Hour

**JOB TIME AND COST**Fleet size: 2 Team(s) Total job time: **31.44** HoursUnit cost: \$0.841 /LCY Total job cost: **\$22,694**

**BULLDOZER WORK**Task description: **Phase 1 - grade material on pond slopes**Site: **Delta Paving Gravel Pit**Permit Action: **AM-01**Permit/Job#: **M1998105****PROJECT IDENTIFICATION**Task #: **04B**State: **Colorado**Abbreviation: **None**Date: **11/15/2022**County: **Delta**Filename: **M105-04b**User: **RDZ**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **1-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$16.38	NA
Ripper op. Cost/Hour:	\$8.60	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$288.76**Total Fleet Cost/Hour: **\$577.52****MATERIAL QUANTITIES**Initial Volume: **27,000**Swell factor: **1.000**Loose volume: **27,000 LCY**Source of estimated volume: **Applicant's Exhibit L**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: **-10 %**Average site altitude: **4,990 feet**Material weight: **2,900 lbs/LCY**Weight description: **Sand and gravel - Dry****Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7837

Adjusted unit production: 1,097.18 LCY/hr

Adjusted fleet production: **2194.36** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.263/LCY

Total job time: **12.30** Hours

Total job cost: **\$7,106**



**TRUCK/LOADER TEAM WORK**Task description: **Haul topsoil**Site: **Delta Paving Gravel Pit**Permit Action: **AM-01**Permit/Job#: **M1998105****PROJECT IDENTIFICATION**Task #: **05A**State: **Colorado**Abbreviation: **None**Date: **11/15/2022**County: **Delta**Filename: **M105-05a**User: **RDZ**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	Generic 12-18 cy, 6x4
-Loader:	CAT 966H high lift
Support Equipment -Load Area:	NA
-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	NA	NA	NA	NA
Ownership cost/hour:	\$24.21	\$49.15	NA	NA	NA	NA
Operating cost/hour:	\$57.28	\$43.04	NA	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$32.54	\$40.71	NA	NA	NA	NA
Unit Subtotals:	\$114.03	\$132.90	NA	NA	NA	NA
Number of Units:	4	2	0	0	0	0
Group Subtotals:	Work: \$721.92		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: **\$721.92****MATERIAL QUANTITIES**Initial volume: **14,800**

CCY

Swell factor: **1.000**Loose volume: **14,800**

LCY

Source of estimated volume: **Applicant's Exhibit L**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:**

Truck Payload (weight) Basis:

Material weight: **1,600**

Pounds/LCY

Description: **Top Soil**Rated Payload: **50,300**

Pounds

Payload Capacity: **31.44**

LCY

Truck Bed (volume) Basis:

Struck Volume:	12.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	15.00	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: 15.75 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.000	LCY (heaped)
Bucket Fill Factor:	1.050	Moist loam or sandy clay (100% - 110%) 1.050
Adjusted Capacity:	<b>5.250</b>	LCY

Job Condition Corrections:

Site Altitude (ft.): 4990 feet

	Truck	Loader	Source
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): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Loader Cycle Time:		<b>0.500</b>	minutes
Net Load Time per Truck:		<b>1.100</b>	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	1.100	Minutes	Adjusted for site altitude:	1.100	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes

Truck Travel (Haul & Return) Time:  
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

## Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2895	0.409

Haul Time: **0.409** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2913	0.309

Return Time: **0.309** minutesTotal Truck Cycle Time: **3.218** minutes

## Loading Tool unit

Production 590.63 LCY/Hour Adjusted for job efficiency: 490.22 LCY/HourTruck Unit Production 293.66 LCY/Hour Adjusted for job efficiency: 243.74 LCY/HourOptimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 487.48 LCY/Hour  
Adjusted single truck/loader team production: 487.48 LCY/Hour  
Adjusted multiple truck/loader team production: **974.95** LCY/Hour

**JOB TIME AND COST**Fleet size: 2 Team(s) Total job time: **15.18** HoursUnit cost: \$0.740 /LCY Total job cost: **\$10,959**

**BULLDOZER WORK**Task description: Grade topsoilSite: Delta Paving Gravel PitPermit Action: AM-01Permit/Job#: M1998105**PROJECT IDENTIFICATION**Task #: 05BState: ColoradoAbbreviation: NoneDate: 11/15/2022County: DeltaFilename: M105-05bUser: RDZAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 1-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$16.38	NA
Ripper op. Cost/Hour:	\$8.60	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$288.76Total Fleet Cost/Hour: \$577.52**MATERIAL QUANTITIES**Initial Volume: 14,800Swell factor: 1.215Loose volume: 17,982 LCYSource of estimated volume: Applicant's Exhibit LSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 1,400.0 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: -10 %Average site altitude: 4,990 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3027

Adjusted unit production: 1,823.78 LCY/hr

Adjusted fleet production: **3647.56** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.158/LCY

Total job time: **4.93** Hours

Total job cost: **\$2,847**

## BULLDOZER RIPPING WORK

Task description: Rip area for revegetation

Site: Delta Paving Gravel Pit Permit Action: AM-01 Permit/Job#: M1998105

### PROJECT IDENTIFICATION

Task #: 06 State: Colorado Abbreviation: None  
Date: 11/15/2022 County: Delta Filename: M105-06  
User: RDZ

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310  
Ripper Attachment: 1-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$16.38	NA
Ripper Operating Cost/Hour:	\$8.60	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$288.76	
Total Fleet Cost/Hour:	<b>\$577.52</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 22.00 acres Rip Depth (ft): 0.50 Volume: 17,747 BCY or CCY

Source of estimated quantity: Applicant's Exhibit L

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 3.71 feet/pass  
Average Ripping Width: 5.56 feet/pass  
Average Ripping Length: 150.00 feet/pass  
Average Dozer Speed: 88.00 feet/minute  
Average Maneuver Time: 0.25 minutes/pass  
Production per unit area: 0.588 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.588 Acres/hr  
Site Altitude: 4,990 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.49 Acres/hr  
Adjusted Hourly Fleet Production: **0.98** Acres/hr

### JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: **22.55** Hours

Unit cost: \$591.937 Per acre Total job cost: **\$13,023**

REVEGETATION WORKTask description: Vegetate Phase 1 and stockpile areaSite: Delta Paving Gravel PitPermit Action: AM-01Permit/Job#: M1998105PROJECT IDENTIFICATIONTask #: 07State: ColoradoAbbreviation: NoneDate: 11/15/2022County: DeltaFilename: M105-07User: RDZAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5	200.00	pound	\$0.38	\$76.00
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$76.00</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$39.64
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$39.64</b>

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$98.43
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
<b>Total Tilling Cost/Acre</b>	<b>\$388.83</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Indian Ricegrass - Native	1.60	5.18	\$10.40
Sand Dropseed	0.10	11.94	\$0.98
Galleta	2.00	7.30	\$44.70
Sainfoin - Remont	2.00	0.87	\$6.32
<b>Totals Seed Mix</b>	<b>6.20</b>	<b>33.45</b>	<b>\$69.26</b>

**Application**

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

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$7.94	\$7.94
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
<b>Total Mulch Materials Cost/Acre</b>				<b>\$850.66</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
<b>Total Mulch Application Cost/Acre</b>	<b>\$135.72</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 22 Cost /Acre: \$1,792.11  
 Estimated Failure Rate: 25% Cost /Acre\*: \$1,792.11  
 \*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MU  
LCHING

Initial Job Cost: \$39,426.42  
 Reseeding Job Cost: \$9,856.61  
 Total Job Cost: \$49,283  
 Job Hours: 27.00



**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mobilization and Demobilization**Site: **Delta Paving Gravel Pit**Permit Action: **AM-01**Permit/Job#: **M1998105****PROJECT IDENTIFICATION**

Task #: **10** State: **Colorado** Abbreviation: **None**  
 Date: **11/16/2022** County: **Delta** Filename: **M105-10**  
 User: **RDZ**

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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

**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 966H high lift	25.80	\$49.15	\$68.22	1	\$117.37	\$68.22	\$250.00
Cat D8T - 8SU	52.21	\$141.23	\$136.92	2	\$556.30	\$273.84	\$500.00
Subtotals:					<b>\$673.67</b>	<b>\$342.06</b>	<b>\$750.00</b>

**ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 12-18 cy, 6x4	\$113.40	2	\$226.80	\$226.80
Subtotals:			<b>\$226.80</b>	<b>\$226.80</b>

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: DELTA  
 Total one-way travel distance: 5.00 miles  
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost \* \$1,725.72  
 \*\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$50.40  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.11	0.11
Return Time (Hours):	0.11	0.11
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	0.22	0.22

**JOB TIME AND COST**

Total job time: 0.44 Hours

Total job cost: \$1,776