



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

August 22, 2025

Bryan K. Jorgensen  
Kilgore Companies LLC dba Elam Construction  
7057 West 2100 South  
Salt Lake City, UT 84128

**Re: C Road Pit - File No. M-2016-050**  
**Kilgore Companies LLC dba Elam Construction**  
**Surety Increase (SI-1)**  
**Post Inspection Surety Increase**

Dear Bryan K. Jorgensen:

On August 22, 2025 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$582,938.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$231,938.00.

Post Inspection Surety Increase. Includes inflationary increase from 2020-2025 and changes on site.

Please see the July 16, 2025 inspection report for details regarding why this surety increase is required.

On August 22, 2025, the Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase, within 60 days.

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, or by email at [Sara.stevenson-benn@state.co.us](mailto: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 if the amount of any increased Financial Warranty has not been provided by October 21, 2025.

Bond Held:	\$351,000.00
Prior Liability:	\$351,000.00
Change in Liability:	\$231,938.00



Revised Liability:	\$582,938.00
Prior Permit Acreage:	84.90
Change in Permit Acreage:	0.00
Revised Permit Acreage:	84.90
Prior Affected Acreage:	40.00
Change in Affected Acreage:	0.00
Revised Affected Acreage:	40.00

If you have any questions, please contact me by telephone at (970) 210-1272, or by email at Amy.yeldell@state.co.us.

Sincerely,



Amy C. Yeldell  
Environmental Protection Specialist



August 6, 2025

Bryan Jorgensen  
Kilgore Companies LLC dba Elan Construction  
7057 West 2100 South  
Salt Lake City, UT 84128

***RE: C Road Pit, Permit No. M-2016-050, Proposed Surety Increase (SI-1)***

Dear Mr. Jorgensen:

This reclamation cost update was in response to the site inspection conducted on July 16, 2025. 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 increased under TR-1 in 2020. Below is a table summarizing input values. Values that have been updated are noted in **Red**. 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.

Assumptions:

- Pit slopes will be regarded to 3H: 1V, topsoiled with 3" and broadcast seeded with dryland mix
- Pit floor will have 18" of overburden placed, and 3" of topsoil placed to be "crop-ready"
- No structures are to remain

Task	Form Used	Description
01a	Demo	Remove scale house
02a	<b>Dozer</b>	Phase 1 - Regrade pit slopes to 3H: 1V- backfill 1H: 1V at <b>30'</b> , <b>800 LF = 26,667 CY</b> <b>Push up with dozer</b>



02b	Dozer	<del>Cut/fill grading to 3H: 1V stockpile area</del> <del>500 LF vert @ 40'H = 10,741 CY</del>
02c	Scraper	<del>Place topsoil above slopes</del> <del>1800 LF x 120' = 4.96 ac @ 3" = 2,000 CY</del> <del>900LF move w/ scraper</del>
02b	Dozer	Phase 1 - Apply topsoil to pit slopes, with remaining visual berms 800 LF x 120' = 2.2 ac 2.2 ac @ 3" = 887 CY
02c	Reveg	Phase 1 - Reveg pit slopes w/ dryland mix 4.96 ac (Exhibit L) Updated failure rate to 50% (standard for GJ area)
03a	<del>Scraper</del> Truck	Phase 1 - Apply overburden to pit floor 15 ac @ 18" = 36,300 CY 500LF move w/ <del>truck &amp; loader</del> then spread w/ <del>dozer</del>
03b	Ripper	Phase 1- Decompact pit floor 15 ac
03c	<del>Scraper</del> Truck	Phase 1- Apply topsoil to pit floor 15 ac @ 3" = 6,050 CY 500LF move w/ <del>truck &amp; loader</del> then spread w/ <del>dozer</del>
04a	Truck	Phase - 2 Transport and place backfill material for North highwall 1000 LF near vert @ 30'H to a 3H: 1V = 49,833 CY 1000LF haul
04b	Dozer	Phase 2 - Cut/fill grade south and west highwalls 1800 LF near vert @ 30'H to a 3H: 1V = 22,425 CY
04c	Truck	Phase 2 - Transport and apply topsoil for highwall slopes 2800 LF x 120' = 7.71 ac @ 3" = 3110 500LF haul
04d	Reveg	Phase 2 - Reveg pit slopes w/ dryland mix 7.71 ac Updated failure rate to 50% (standard for GJ area)

05a	<del>Scraper</del> Truck	Phase 2 - Apply overburden to pit floor 18.29 ac @18" = 44,261 CY 600LF move w/ truck & loader then spread w/ dozer
05b	Ripper	Phase 2 - Decompact pit floor 18.29 ac
05c	<del>Scraper</del> Truck	Phase 2- Apply topsoil to pit floor 18.29 ac @ 3" = 7,377 CY 600LF move w/ truck & loader then spread w/ dozer
10a	Mob	Initial Mobilization Remove scrapper, add 3x 730 Truck and 972 Loader
10b	Mob	Secondary Mobilization
Indirect		Engineering and bid prep required on all projects

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 **Friday, August 29, 2025** then I'll issue SI-1 the following Monday. SI-1 will result in a total required bond amount of **\$582,938**, which is an increase of \$231,938 over the \$351,000 currently held.

Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, Rm 215, 1001 E 62<sup>nd</sup> Ave, Denver CO 80216. Direct contact can be made by phone at 970-210-1272 or via email at amy.yeldell@ state.co.us

Sincerely,



**Amy Yeldell**  
Environmental Protection Specialist

Ec:  
Travis Marshall, Senior EPS, Grand Junction DRMS

## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: C Road Pit

Permit Action: 2025

Permit/Job#: M2016050

### PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 8/6/2025

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
01a	Removal of structures	DEMOLISH	1	4.00	\$116
02a	Phase 1 - Regrade pit slopes to 3H: 1V- backfill	DOZER	2	151.08	\$99,562
02b	Phase 1 - Apply topsoil to pit slopes, with remaining visual	DOZER	1	1.25	\$434
02c	Phase 1 - Reveg pit slopes w/ dryland mix	REVEGE	1	8.00	\$3,869
03a	Phase 1 - Apply overburden to pit floor	TRUCK1	1	72.88	\$68,756
03b	Phase 1- Decompect pit floor	RIPPER	2	12.07	\$8,547
03c	Phase 1 - Apply topsoil to pit floor	TRUCK1	1	13.92	\$13,135
04a	Phase – 2 Transport and place backfill for North highwall	TRUCK1	1	93.56	\$108,144
04b	Phase 2 – Cut/fill grade south and west highwalls	DOZER	2	23.66	\$16,529
04c	Phase 2 – Transport and apply topsoil for highwall slopes	TRUCK1	1	7.16	\$6,732
04d	Phase 2 - Reveg pit slopes w/ dryland mix	REVEGE	1	12.00	\$6,013
05a	Phase 2 - Apply overburden to pit floor	TRUCK1	1	92.07	\$86,613
05b	Phase 2 - Decompect pit floor	RIPPER	2	14.72	\$10,421
05c	Phase 2 - Apply topsoil to pit floor	TRUCK1	1	17.59	\$16,595
10a	Initial Mobilization	MOBILIZE	1	3.00	\$7,532
10b	Secondary Mobilization	MOBILIZE	1	3.00	\$894
<b><u>SUBTOTALS:</u></b>				<b>529.96</b>	<b>\$453,892</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$9,169

Performance bond: 1.05

Total = \$4,766

Job superintendent: 264.98

Total = \$19,908

Profit: 10.00

Total = \$45,389

TOTAL O & P = \$79,232

CONTRACT AMOUNT (direct + O & P) = \$533,124

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$22,658

Reclamation management and/or administration: 5.00

\$26,656

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$129,046

**TOTAL BOND AMOUNT (direct + indirect) = \$582,938**

## DEMOLITION WORK

Task description: Removal of structures

Site: C Road Pit

Permit Action: 2025

Permit/Job#: M2016050

### PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 8/6/2025

County: Mesa

Filename: M050-01a

User: ACY

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 90.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale house	8' x 8' x 8'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 10,000 ft. haul	512.00	CF	\$0.25	\$128.31

Job Hours: 4.00

Subtotal  
(unadjusted): \$128.31

Total Cost  
(adjusted for location): \$116.38

**BULLDOZER WORK**Task description: **Phase 1 - Regrade pit slopes to 3H: 1V- backfill**Site: **C Road Pit** Permit Action: **2025** Permit/Job#: **M2016050****PROJECT IDENTIFICATION**

Task #: **02A** State: **Colorado** Abbreviation: **None**  
 Date: **8/6/2025** County: **Mesa** Filename: **M050-02a**  
 User: **ACY**

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:	\$179.60	NA
Operating Cost/Hour:	\$110.45	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$39.46	NA

Total unit Cost/Hour: **\$329.51**  
 Total Fleet Cost/Hour: **\$659.02**

**MATERIAL QUANTITIES**

Initial Volume: **26,667**  
 Swell factor: **1.090**  
 Loose volume: **29,067 LCY**

Source of estimated volume: **1H: 1V at 30', 800 LF**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION**

Average push distance: **120 feet**  
 Unadjusted hourly production: **751.6 LCY/hr**

Materials consistency description: **Compacted fill or embankment 0.9**

Average push gradient: **30 %**  
 Average site altitude: **4,700 feet**

Material weight: **2,400 lbs/LCY**Weight 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:	0.800	(FND-RF)
Push gradient:	0.298	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.1280

Adjusted unit production: 96.20 LCY/hr

Adjusted fleet production: **192.4** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$3.425/LCY

Total job time: **151.08** Hours

Total job cost: **\$99,562**

**BULLDOZER WORK**Task description: **Phase 1 - Apply topsoil to pit slopes, with remaining visual**Site: **C Road Pit** Permit Action: **2025** Permit/Job#: **M2016050****PROJECT IDENTIFICATION**

Task #: 02B State: Colorado Abbreviation: None  
 Date: 8/6/2025 County: Mesa Filename: M050-02b  
 User: ACY

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

Basic Machine: Cat D8T - 8SU  
 Horsepower: 310  
 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>\$179.60</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$110.45</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$15.28</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$2.74</u>	<u>30</u>
Operator Cost/Hour:	<u>\$39.46</u>	<u>NA</u>

Total unit Cost/Hour: \$347.53  
 Total Fleet Cost/Hour: **\$347.53**

**MATERIAL QUANTITIES**

Initial Volume: 887  
 Swell factor: 1.000  
 Loose volume: **887 LCY**

Source of estimated volume: 800 LF x 120' = 2.2 ac @ 3" = 887 CY  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 120 feet  
 Unadjusted hourly production: 751.6 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -30 %  
 Average site altitude: 4,700 feet

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

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</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:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.9459

Adjusted unit production: 710.94 LCY/hr

Adjusted fleet production: **710.94** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.489/LCY

Total job time: **1.25** Hours

Total job cost: **\$434**

REVEGETATION WORKTask description: Phase 1 - Reveg pit slopes w/ dryland mixSite: C Road PitPermit Action: 2025Permit/Job#: M2016050PROJECT IDENTIFICATIONTask #: 02CState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-02cUser: ACYAgency or organization name: DRMSFERTILIZING**Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
<b>Total Tilling Cost/Acre</b>	<b>\$114.13</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.13	3.66	\$23.76
Sand Dropseed	0.13	15.52	\$1.73
Crested Wheatgrass - Standard	1.25	5.74	\$6.89
Galleta	1.50	5.48	\$85.14
Western Wheatgrass - Native	1.00	2.53	\$9.22
<b>Totals Seed Mix</b>	<b>5.01</b>	<b>32.92</b>	<b>\$126.75</b>

**Application**

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Description	Cost /Acre
Broadcast seeding [DMG]	\$279.08
<b>Total Seed Application Cost/Acre</b>	<b>\$279.08</b>

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</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: 4.96  
 Estimated Failure Rate: 50%  
 \*Selected Replanting Work Items: TILLING,SEEDING

Cost /Acre: \$519.96  
 Cost /Acre\*: \$519.96

Initial Job Cost: **\$2,579.00**  
 Reseeding Job Cost: **\$1,289.50**  
 Total Job Cost: **\$3,869**  
 Job Hours: **8.00**

TRUCK/LOADER TEAM WORKTask description: Phase 1 - Apply overburden to pit floorSite: C Road PitPermit Action: 2025Permit/Job#: M2016050PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-03aUser: ACYAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

Equipment Description	
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 972H
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	30	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$2.74	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$332.25	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$611.23		Support: \$332.25		Maint: \$0.00	

Total work team cost/hour: \$943.48MATERIAL QUANTITIESInitial volume: 36,300

CCY

Swell factor: 1.060Loose volume: 38,478

LCY

Source of estimated volume: 15 ac @18" = 36,300 CYSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,900

Pounds/LCY

Description: Sand and gravel - DryRated Payload: 62,000

Pounds

Payload Capacity: 21.38

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	21.38	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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	500.00	1.00	5.00	6.00	1122	0.514

Haul Time: **0.514** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-1.00	5.00	4.00	2855	0.342

Return Time: **0.342** minutesTotal Truck Cycle Time: **3.486** minutes

## Loading Tool unit

Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
Truck Unit Production 318.07 LCY/Hour      Adjusted for job efficiency: 264.00 LCY/Hour

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

Adjusted hourly truck team production: 528.00 LCY/Hour  
Adjusted single truck/loader team production: 528.00 LCY/Hour  
Adjusted multiple truck/loader team production: **528.00** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **72.88** HoursUnit cost: \$1.787 /LCY      Total job cost: **\$68,756**



## BULLDOZER RIPPING WORK

Task description: Phase 1- Decompact pit floor

Site: C Road Pit Permit Action: 2025 Permit/Job#: M2016050

### PROJECT IDENTIFICATION

Task #: 03B State: Colorado Abbreviation: None  
Date: 8/6/2025 County: Mesa Filename: M050-03b  
User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$179.60	NA
Operating Cost/Hour:	\$110.45	100
Ripper Ownership Cost/Hour:	\$15.28	NA
Ripper Operating Cost/Hour:	\$9.14	100
Operator Cost/Hour:	\$39.46	NA
Total Unit Cost/Hour:	\$353.93	
Total Fleet Cost/Hour:	<b>\$707.86</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 15.00 acres Rip Depth (ft): 2.00 Volume: 48,400 BCY or CCY

Source of estimated quantity: Staff estimates

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.56 feet/pass  
Average Ripping Width: 7.08 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: 0.748 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.748 Acres/hr  
Site Altitude: 4,700 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.62 Acres/hr  
Adjusted Hourly Fleet Production: 1.24 Acres/hr

### JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 12.07 Hours

Unit cost: \$569.767 Per acre Total job cost: \$8,547

**TRUCK/LOADER TEAM WORK**Task description: **Phase 1 - Apply topsoil to pit floor**Site: **C Road Pit**Permit Action: **2025**Permit/Job#: **M2016050****PROJECT IDENTIFICATION**Task #: **03C**State: **Colorado**Abbreviation: **None**Date: **8/6/2025**County: **Mesa**Filename: **M050-03c**User: **ACY**Agency 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:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	30	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$2.74	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$332.25	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$611.23		Support: \$332.25		Maint: \$0.00	

Total work team cost/hour: **\$943.48****MATERIAL QUANTITIES**Initial volume: **6,050**

CCY

Swell factor: **1.215**Loose volume: **7,351**

LCY

Source of estimated volume: **15 ac @3" = 6,050 CY**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: **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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	500.00	1.00	5.00	6.00	1122	0.514

Haul Time: **0.514** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-1.00	5.00	4.00	2855	0.342

Return Time: **0.342** minutesTotal Truck Cycle Time: **3.486** minutes

## Loading Tool unit

Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
Truck Unit Production 318.07 LCY/Hour      Adjusted for job efficiency: 264.00 LCY/Hour

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

Adjusted hourly truck team production: 528.00 LCY/Hour  
Adjusted single truck/loader team production: 528.00 LCY/Hour  
Adjusted multiple truck/loader team production: **528.00** LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Team(s)      Total job time: **13.92** Hours

Unit cost: \$1.787 /LCY      Total job cost: **\$13,135**

**TRUCK/LOADER TEAM WORK**Task description: **Phase – 2 Transport and place backfill for North highwall**Site: **C Road Pit**Permit Action: 2025Permit/Job#: M2016050**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-04aUser: 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:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	30	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$2.74	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$332.25	NA	NA
Number of Units:	3	1	0	1	0	0
Group Subtotals:	Work: \$823.66		Support: \$332.25		Maint: \$0.00	

Total work team cost/hour: **\$1,155.91****MATERIAL QUANTITIES**Initial volume: 49,833

CCY

Swell factor: 1.060Loose volume: **52,823**

LCY

Source of estimated volume: 1000 LF near vert @ 30'H to a 3H: 1V = 49,833 CYSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 2,900

Pounds/LCY

Description: Sand and gravel - DryRated Payload: 62,000

Pounds

Payload Capacity: 21.38

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	21.38	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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	1000.00	1.00	5.00	6.00	1122	0.960

Haul Time: **0.960** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-1.00	5.00	4.00	2855	0.518

Return Time: **0.518** minutesTotal Truck Cycle Time: **4.108** minutes

Loading Tool unit  
 Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
 Truck Unit Production  
269.91 LCY/Hour      Adjusted for job efficiency: 224.03 LCY/Hour

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

Adjusted hourly truck team production: 672.08 LCY/Hour  
 Adjusted single truck/loader team production: 564.60 LCY/Hour  
 Adjusted multiple truck/loader team production: **564.60** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **93.56** HoursUnit cost: \$2.047 /LCY      Total job cost: **\$108,144**

**BULLDOZER WORK**Task description: **Phase 2 – Cut/fill grade south and west highwalls**Site: **C Road Pit** Permit Action: **2025** Permit/Job#: **M2016050****PROJECT IDENTIFICATION**

Task #: **04B** State: **Colorado** Abbreviation: **None**  
 Date: **8/6/2025** County: **Mesa** Filename: **M050-04b**  
 User: **ACY**

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

Basic Machine: **Cat D8T - 8SU**  
 Horsepower: **310**  
 Blade Type: **Semi-Universal**  
 Attachment: **3-shank ripper**  
 Shift Basis: **1 per day**  
 Data Source: **(CRG)**

**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$179.60	NA
Operating Cost/Hour:	\$110.45	100
Ripper own. Cost/Hour:	\$15.28	NA
Ripper op. Cost/Hour:	\$4.57	50
Operator Cost/Hour:	\$39.46	NA

Total unit Cost/Hour: **\$349.36**  
 Total Fleet Cost/Hour: **\$698.72**

**MATERIAL QUANTITIES**

Initial Volume: **22,425**  
 Swell factor: **1.090**  
 Loose volume: **24,443 LCY**

Source of estimated volume: **1800 LF near vert @ 30'H to a 3H: 1V = 22,425 CY**  
 Source of estimated swell factor: **Cat Handbook**

**HOURLY PRODUCTION**

Average push distance: **120 feet**  
 Unadjusted hourly production: **751.6 LCY/hr**

Materials consistency description: **Compacted fill or embankment 0.9**

Average push gradient: **-30 %**  
 Average site altitude: **4,700 feet**

Material weight: **2,400 lbs/LCY**Weight 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:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6874

Adjusted unit production: 516.65 LCY/hr

Adjusted fleet production: **1033.3** LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.676/LCY

Total job time: **23.66** Hours

Total job cost: **\$16,529**

**TRUCK/LOADER TEAM WORK**Task description: **Phase 2 – Transport and apply topsoil for highwall slopes**Site: **C Road Pit**Permit Action: 2025Permit/Job#: M2016050**PROJECT IDENTIFICATION**Task #: 04CState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-04cUser: 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:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$329.51	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$611.23		Support: \$329.51		Maint: \$0.00	

Total work team cost/hour: **\$940.74****MATERIAL QUANTITIES**Initial volume: 3,110

CCY

Swell factor: 1.215Loose volume: **3,779**

LCY

Source of estimated volume: 2800 LF x 120' = 7.71 ac @ 3" = 3110Source 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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	500.00	1.00	5.00	6.00	1122	0.514

Haul Time: **0.514** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	500.00	-1.00	5.00	4.00	2855	0.342

Return Time: **0.342** minutesTotal Truck Cycle Time: **3.486** minutes

Loading Tool unit  
 Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
 Truck Unit Production  
318.07 LCY/Hour      Adjusted for job efficiency: 264.00 LCY/Hour  
 Optimal No. of Trucks: 2 Truck(s)      Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 528.00 LCY/Hour  
 Adjusted single truck/loader team production: 528.00 LCY/Hour  
 Adjusted multiple truck/loader team production: **528.00** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **7.16** HoursUnit cost: \$1.782 /LCY      Total job cost: **\$6,732**

REVEGETATION WORKTask description: Phase 2 - Reveg pit slopes w/ dryland mixSite: C Road PitPermit Action: 2025Permit/Job#: M2016050PROJECT IDENTIFICATIONTask #: 04DState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-04dUser: ACYAgency or organization name: DRMSFERTILIZING**Materials**

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

**Application**

Description	Cost /Acre
	\$
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$0.00</b>

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.13
<b>Total Tilling Cost/Acre</b>	<b>\$114.13</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Paloma	1.13	3.66	\$23.76
Sand Dropseed	0.13	15.52	\$1.73
Crested Wheatgrass - Standard	1.25	5.74	\$6.89
Galleta	1.50	5.48	\$85.14
Western Wheatgrass - Native	1.00	2.53	\$9.22
<b>Totals Seed Mix</b>	<b>5.01</b>	<b>32.92</b>	<b>\$126.75</b>

**Application**

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Description	Cost /Acre
Broadcast seeding [DMG]	\$279.08
<b>Total Seed Application Cost/Acre</b>	<b>\$279.08</b>

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
<b>Total Mulch Materials Cost/Acre</b>				<b>\$0.00</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Mulch Application Cost/Acre</b>	<b>\$0.00</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: 7.71  
 Estimated Failure Rate: 50%  
 \*Selected Replanting Work Items: TILLING,SEEDING

Cost /Acre: \$519.96  
 Cost /Acre\*: \$519.96

Initial Job Cost: **\$4,008.89**  
 Reseeding Job Cost: **\$2,004.45**  
 Total Job Cost: **\$6,013**  
 Job Hours: **12.00**

**TRUCK/LOADER TEAM WORK**Task description: **Phase 2 - Apply overburden to pit floor**Site: **C Road Pit**Permit Action: 2025Permit/Job#: M2016050**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-05aUser: 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:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	0	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$329.51	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$611.23		Support: \$329.51		Maint: \$0.00	

Total work team cost/hour: **\$940.74****MATERIAL QUANTITIES**Initial volume: 44,261

CCY

Swell factor: 1.060Loose volume: **46,917**

LCY

Source of estimated volume: 8.29 ac @18" = 44,261 CYSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00**HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: 2,900

Pounds/LCY

Description: Sand and gravel - DryRated Payload: 62,000

Pounds

Payload Capacity: 21.38

LCY

**Truck Bed (volume) Basis:**

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	21.38	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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	600.00	1.00	5.00	6.00	1122	0.604

Haul Time: **0.604** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-1.00	5.00	4.00	2855	0.378

Return Time: **0.378** minutesTotal Truck Cycle Time: **3.612** minutes

## Loading Tool unit

Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
Truck Unit Production 306.98 LCY/Hour      Adjusted for job efficiency: 254.79 LCY/Hour

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

Adjusted hourly truck team production: 509.58 LCY/Hour  
Adjusted single truck/loader team production: 509.58 LCY/Hour  
Adjusted multiple truck/loader team production: **509.58** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **92.07** HoursUnit cost: \$1.846 /LCY      Total job cost: **\$86,613**

## BULLDOZER RIPPING WORK

Task description: Phase 2 - Decompact pit floor

Site: C Road Pit Permit Action: 2025 Permit/Job#: M2016050

### PROJECT IDENTIFICATION

Task #: 05B State: Colorado Abbreviation: None  
Date: 8/6/2025 County: Mesa Filename: M050-05b  
User: ACY

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310  
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$179.60	NA
Operating Cost/Hour:	\$110.45	100
Ripper Ownership Cost/Hour:	\$15.28	NA
Ripper Operating Cost/Hour:	\$9.14	100
Operator Cost/Hour:	\$39.46	NA
Total Unit Cost/Hour:	\$353.93	
Total Fleet Cost/Hour:	<b>\$707.86</b>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 18.29 acres Rip Depth (ft): 2.00 Volume: 59,016 BCY or CCY

Source of estimated quantity: Staff estimates

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth: 2.56 feet/pass  
Average Ripping Width: 7.08 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: 0.748 acres/hour

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.748 Acres/hr  
Site Altitude: 4,700 feet  
Altitude Adj: 1.00 (CAT HB)  
Job Efficiency: 0.83 (1 shift/day)  
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.62 Acres/hr  
Adjusted Hourly Fleet Production: 1.24 Acres/hr

### JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 14.72 Hours

Unit cost: \$569.767 Per acre Total job cost: \$10,421

**TRUCK/LOADER TEAM WORK**Task description: **Phase 2 - Apply topsoil to pit floor**Site: **C Road Pit**Permit Action: **2025**Permit/Job#: **M2016050****PROJECT IDENTIFICATION**Task #: **05C**State: **Colorado**Abbreviation: **None**Date: **8/6/2025**County: **Mesa**Filename: **M050-05c**User: **ACY**Agency 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:	NA
-Dump Area:	Cat D8T - 8SU
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	100	NA	NA
Ownership cost/hour:	\$118.61	\$65.96	NA	\$179.60	NA	NA
Operating cost/hour:	\$69.32	\$60.89	NA	\$110.45	NA	NA
%Utilization-riper:	NA	0	NA	30	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$15.28	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$2.74	NA	NA
Operator cost/hour:	\$24.50	\$59.52	NA	\$39.46	NA	NA
Unit Subtotals:	\$212.43	\$186.37	NA	\$332.25	NA	NA
Number of Units:	2	1	0	1	0	0
Group Subtotals:	Work: \$611.23		Support: \$332.25		Maint: \$0.00	

Total work team cost/hour: **\$943.48****MATERIAL QUANTITIES**Initial volume: **7,377**

CCY

Swell factor: **1.215**Loose volume: **8,963**

LCY

Source of estimated volume: **18.29 ac @3" = 6,050 CY**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: **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.): 4700 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:	Mixed material 0.02	0.020	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		<b>0.465</b>	minutes
Net Load Time per Truck:		<b>1.030</b>	minutes

**Truck Cycle Time:**

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	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	600.00	1.00	5.00	6.00	1122	0.604

Haul Time: **0.604** minutes

## Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	-1.00	5.00	4.00	2855	0.378

Return Time: **0.378** minutesTotal Truck Cycle Time: **3.612** minutes

Loading Tool unit  
 Production 680.25 LCY/Hour      Adjusted for job efficiency: 564.60 LCY/Hour  
 Truck Unit Production  
306.98 LCY/Hour      Adjusted for job efficiency: 254.79 LCY/Hour  
 Optimal No. of Trucks: 2 Truck(s)      Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 509.58 LCY/Hour  
 Adjusted single truck/loader team production: 509.58 LCY/Hour  
 Adjusted multiple truck/loader team production: **509.58** LCY/Hour

**JOB TIME AND COST**Fleet size: 1 Team(s)      Total job time: **17.59** HoursUnit cost: \$1.851 /LCY      Total job cost: **\$16,595**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Initial Mobilization**Site: **C Road Pit**Permit Action: **2025**Permit/Job#: **M2016050****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **8/6/2025**County: **Mesa**Filename: **M050-10a**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:	\$21.47	\$38.32	\$48.96
Operating Cost/Hour:	\$31.47	\$60.11	\$65.86
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$22.25	\$22.25
Total Unit Cost/Hour:	\$75.46	\$143.20	\$159.59

**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	53.08	\$194.88	\$159.59	2	\$708.94	\$319.18	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$5.99	\$75.46	1	\$81.45	\$75.46	\$250.00
CAT 972H	28.00	\$65.96	\$143.20	1	\$209.16	\$143.20	\$250.00
Cat 730	25.19	\$118.61	\$75.46	3	\$582.21	\$226.38	\$750.00

Subtotals: **\$1,581.76** **\$764.22** **\$1,500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$141.71	1	\$141.71	\$141.71
Light Duty Pickup, 4x4, 1 T. Crew	\$86.86	2	\$173.72	\$173.72
Flatbed Truck, 4x2, 30K GVW	\$76.39	1	\$76.39	\$76.39

Subtotals: **\$391.82** **\$391.82**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph
Total Non-Roadable Mob/Demob Cost *	\$7,336.51	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	<u>\$195.91</u>	
** one round trip, no haul rig:		

**Transportation Cycle Time:**

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.25</u>	<u>0.25</u>
Return Time (Hours):	<u>0.25</u>	<u>0.25</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.50</u>	<u>0.50</u>

**JOB TIME AND COST**

Total job time: 3.00 Hours

Total job cost: \$7,532

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Secondary MobilizationSite: C Road PitPermit Action: 2025Permit/Job#: M2016050**PROJECT IDENTIFICATION**Task #: 10BState: ColoradoAbbreviation: NoneDate: 8/6/2025County: MesaFilename: M050-10bUser: 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:	\$21.47	\$38.32	\$48.96
Operating Cost/Hour:	\$31.47	\$60.11	\$65.86
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$22.25	\$22.25
Total Unit Cost/Hour:	\$75.46	\$143.20	\$159.59

**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	\$5.99	\$75.46	1	\$81.45	\$75.46	\$250.00

Subtotals: **\$81.45** **\$75.46** **\$250.00****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	\$141.71	1	\$141.71	\$141.71
Light Duty Pickup, 4x4, 1 T. Crew	\$86.86	1	\$86.86	\$86.86
Flatbed Truck, 4x2, 30K GVW	\$76.39	1	\$76.39	\$76.39

Subtotals: **\$304.96** **\$304.96**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	10.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$741.36	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$152.48	
** one round trip, no haul rig:		

**Transportation Cycle Time:**

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.25	0.25
Return Time (Hours):	0.25	0.25
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.50	0.50

**JOB TIME AND COST**

Total job time:	3.00	Hours
Total job cost:	\$894	