



STATE OF
COLORADO

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Riveras Excavation Gravel M2004053- April 2025 Inspection Report and Cost Estimate

1 message

Girardi - DNR, Chris <chris.girardi@state.co.us>
To: Shelli Rivera <mountaingirl14@outlook.com>
Cc: Jared Ebert - DNR <jared.ebert@state.co.us>

Tue, May 13, 2025 at 12:40 PM

Hello Shelli,

Attached to this email is a pdf of the Inspection Report for the inspection conducted in April for the Riveras Excavation Gravel Pit permit.

In addition, attached is a pdf of the Reclamation Cost Estimate based on current conditions and updated reclamation costs. Please provide any comments or feedback within 2 weeks, otherwise the Division will issue a Surety Increase.

Hard copies will not be delivered unless requested. Please let me know if you have any questions.

Thanks,

Chris Girardi

Environmental Protection Specialist Intern



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

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2 attachments



April2025_InspectionReport_RiverasExcavationGravelPit_M2004053.pdf
2979K



RiverasExcavation_M2004053_2025CostEstimate.pdf
249K

COST SUMMARY WORK

Task description: Reclamation

Riveras Excavation Gravel
Site: Pit

Permit Action: 2025 Update

Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 000
Date: 4/29/2025
User: CMG

State: Colorado
County: Costilla

Abbreviation: None
Filename: M053-000

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	General grading & ripping, prepare for topsoil replacement	DOZER	1	5.31	\$1,807
002	Topsoil replacement	DOZER	1	3.57	\$1,148
002a	Move asphalt and concrete stockpiles	DOZER	1	1.60	\$538
003	Revegetate affected lands	REVEGE	1	2.50	\$2,164
004	Haul reclamation equipment to and from job site	MOBILIZE	1	4.00	\$3,340
<u>SUBTOTALS:</u>				16.98	\$8,997

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$182
Performance bond:	1.05	Total =	\$94
Job superintendent:	8.49	Total =	\$673
Profit:	10.00	Total =	\$900
		TOTAL O & P =	\$1,849
		CONTRACT AMOUNT (direct + O & P) =	\$10,846

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$461
Reclamation management and/or administration:	5.00		\$542

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$2,852

TOTAL BOND AMOUNT (direct + indirect) = \$11,849

BULLDOZER WORK

Task description: General grading & ripping, prepare for topsoil replacement

Site: Rivera's Excavation Gravel Pit Permit Action: 2025 Update Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 4/29/2025 County: Costilla Filename: 000
User: CMG

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>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$14.53</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$3.98</u>	<u>50</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$340.12</u>	
Total Fleet Cost/Hour:	<u>\$340.12</u>	

MATERIAL QUANTITIES

Initial Volume: 3,227
Swell factor: 1.000
Loose volume: 3,227 LCY

Source of estimated volume: (2ac)(43560sf/ac)(1'D) / 27 = 3226.67 cy
Source of estimated swell factor: NA

HOURLY PRODUCTION

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

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %
Average site altitude: 7,550 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

<u>Job Condition</u>	<u>Correction Factor</u>	<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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4338

Adjusted unit
production: 607.32 LCY/hr

Adjusted fleet
production: **607.32** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.560/LCY

Total job time: **5.31** Hours
Total job cost: **\$1,807**

BULLDOZER WORK

Task description: Topsoil replacement

Site: Rivera's Excavation Gravel Pit Permit Action: 2025 Update Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 4/29/2025 County: Costilla Filename: 000
User: CMG

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:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$321.62</u>	
Total Fleet Cost/Hour:	<u>\$321.62</u>	

MATERIAL QUANTITIES

Initial Volume: 1,613
Swell factor: 1.000
Loose volume: 1,613 LCY

Source of estimated volume: (2ac)(43560sf/ac)(0.5'D) / 27 = 1,613 cy
Source of estimated swell factor: NA

HOURLY PRODUCTION

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

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -5 %
Average site altitude: 7,550 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5302

Adjusted unit
production: 452.05 LCY/hr

Adjusted fleet
production: **452.05** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.711/LCY

Total job time: **3.57** Hours
Total job cost: **\$1,148**

BULLDOZER WORK

Task description: Move asphalt and concrete stockpiles

Site: Riveras Excavation Gravel Pit Permit Action: 2025 Update Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 002A State: Colorado Abbreviation: None
Date: 5/9/2025 County: Costilla Filename: M053-002a
User: CMG

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>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$14.53</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$336.15</u>	
Total Fleet Cost/Hour:	<u>\$336.15</u>	

MATERIAL QUANTITIES

Initial Volume: 260
Swell factor: 1.000
Loose volume: 260 LCY

Source of estimated volume: DRMS- Dimensions of Asphalt and Concrete Stockpiles
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 280 feet
Unadjusted hourly production: 319.3 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %

Average site altitude: 7,550 feet

Material weight: 2,700 lbs/LCY

Weight description: Stone - crushed

<u>Job Condition</u>	<u>Correction Factor</u>	<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5092

Adjusted unit
production: 162.59 LCY/hr
Adjusted fleet
production: **162.59** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$2.067/LCY

Total job time: **1.60** Hours
Total job cost: **\$538**

REVEGETATION WORK

Task description: Revegetate affected lands

Site: Rivera's Excavation Gravel Pit

Permit Action: 2025 Update

Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 003
Date: 4/29/2025
User: CMG

State: Colorado
County: Costilla

Abbreviation: None
Filename: M053-003

Agency or organization name: DRMS

FERTILIZING

Materials

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

Application

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

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$102.41
Total Tilling Cost/Acre	\$102.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	1.00	119.38	\$13.01
Crested Wheatgrass - Fairway	6.00	27.55	\$34.96
Crested Wheatgrass - Standard	10.00	45.91	\$53.86
Pubescent Wheatgrass - VNS	14.00	28.93	\$79.02
Streambank Wheatgrass - Sodar	11.00	35.86	\$91.33
Totals Seed Mix	42.00	257.62	\$272.18

Application

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Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$236.64
Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS

Materials

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

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	2.5	Cost /Acre:	\$611.23
Estimated Failure Rate:	50%	Cost /Acre*:	\$508.82
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,528.08
Reseeding Job Cost:	\$636.03
Total Job Cost:	\$2,164
Job Hours:	2.50

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Haul reclamation equipment to and from job site

Site: Rivera's Excavation Gravel Pit Permit Action: 2025 Update Permit/Job#: M2004053

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 4/29/2025 County: Costilla Filename: 000
User: CMG

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

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

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	47.71	\$173.32	\$122.78	1	\$296.10	\$122.78	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	2	\$200.92	\$118.88	\$500.00

Subtotals:

\$497.02	\$241.66	\$750.00
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ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 2-4 cy, 4x2	\$66.20	1	\$66.20	\$66.20
Lube Truck, 4x2, 190 HP	\$41.41	1	\$41.41	\$41.41

Subtotals:

\$107.61	\$107.61
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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>ANTONITO</u>	
Total one-way travel distance:	<u>25.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph
 Total Non-Roadable Mob/Demob Cost *	 <u>\$3,232.72</u>	
* two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	<u>\$107.61</u>	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.50</u>	<u>0.50</u>
Return Time (Hours):	<u>0.50</u>	<u>0.50</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>2.00</u>	<u>1.00</u>

JOB TIME AND COST

Total job time:	<u>4.00</u>	Hours
Total job cost:	<u>\$3,340</u>	