

COST SUMMARY WORK

Task description: 2022 AM1 Bond Estimate

Site: Pickering Family Pit Permit Action: 2022 AM1 Bond Estimate Permit/Job#: M2009086

PROJECT IDENTIFICATION

Task #: 020 State: Colorado Abbreviation: None
Date: 8/10/2022 County: Grand Filename: M086-020
User: PSH

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
021	Backfill all slopes from 2H:1V to 3H:1V	DOZER	1	236.97	\$62,509
022	Scarify Pit Only - 17.25 Acres	RIPPER	1	25.54	\$7,261
023	Topsoil Replacement	DOZER	1	14.78	\$3,899
024	Revegetate, Fertilizer and Mulch - 17.5 Acres	REVEGE	1	40.00	\$44,052
025	Mob / Demob	MOBILIZE	1	4.57	\$1,717
<u>SUBTOTALS:</u>				321.86	\$119,438

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$2,413
Performance bond:	1.05	Total =	\$1,254
Job superintendent:	143.21	Total =	\$10,759
Profit:	10.00	Total =	\$11,944
		TOTAL O & P =	\$26,370
		CONTRACT AMOUNT (direct + O & P) =	\$145,808

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$6,197
Reclamation management and/or administration:	5.00		\$7,290

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$40,357

TOTAL BOND AMOUNT (direct + indirect) = \$160,000 (Rounded)

BULLDOZER WORKTask description: **Backfill all slopes from 2H:1V to 3H:1V**Site: **Pickering Family Pit**Permit Action: 2022 AM1 Bond
EstimatePermit/Job#: M2009086**PROJECT IDENTIFICATION**Task #: 021State: ColoradoAbbreviation: NoneDate: 8/10/2022County: GrandFilename: M086-021User: PSHAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift 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:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIESInitial Volume: 75,260Swell factor: 1.000Loose volume: **75,260 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly
production: 852.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push
gradient: 10 %Average site altitude: 8,150 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - DryJob Condition Correction FactorSource

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:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3725

Adjusted unit
production: 317.59 LCY/hr
Adjusted fleet
production: **317.59** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.831/LCY

Total job time: **236.97** Hours
Total job cost: **\$62,509**

BULLDOZER RIPPING WORK

Task description: Scarify Pit Only - 17.25 Acres

Site: Pickering Family Pit Permit Action: 2022 AM1 Bond Estimate Permit/Job#: M2009086

PROJECT IDENTIFICATION

Task #: 022 State: Colorado Abbreviation: None
Date: 8/10/2022 County: Grand Filename: M086-022
User: PSH

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:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper Ownership Cost/Hour:	\$13.10	NA
Ripper Operating Cost/Hour:	\$7.30	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$284.18	
Total Fleet Cost/Hour:	\$284.18	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 17.25 acres Rip Depth (ft): 0.50 Volume: 13,915 BCY or CCY

Source of estimated quantity: Permit Application

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: 400.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.813 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.813 Acres/hr
Site Altitude: 8,150 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.68 Acres/hr
Adjusted Hourly Fleet Production: 0.68 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 25.55 Hours

Unit cost: \$420.909 Per acre

Total job cost: \$7,261

BULLDOZER WORKTask description: **Topsoil Replacement**Site: **Pickering Family Pit**Permit Action: 2022 AM1 Bond
Estimate

Permit/Job#: M2009086

PROJECT IDENTIFICATION

Task #: 023

State: Colorado

Abbreviation: None

Date: 8/10/2022

County: Grand

Filename: M086-023

User: PSH

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:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA
Total unit Cost/Hour:	\$263.78	
Total Fleet Cost/Hour:	\$263.78	

MATERIAL QUANTITIES

Initial Volume: 9,184

Swell factor: 1.000

Loose volume: **9,184 LCY**

Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**

Average push distance: 200 feet

Unadjusted hourly
production: 491.9 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push
gradient: -10 %

Average site altitude: 8,150 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction FactorSource

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:	0.800	(FND-RF)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.2632

Adjusted unit
production: 621.37 LCY/hr
Adjusted fleet
production: **621.37** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.425/LCY

Total job time: **14.78** Hours
Total job cost: **\$3,899**

REVEGETATION WORKTask description: Revegetate, Fertilizer and Mulch - 17.5 AcresSite: Pickering Family Pit Permit Action: 2022 AM1 Bond EstimatePermit/Job#: M2009086**PROJECT IDENTIFICATION**

Task #: 024 State: Colorado Abbreviation: None
 Date: 8/10/2022 County: Grand Filename: M086-024
 User: PSH

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost / Acre
6-24-24, 10-20-10, 15-15-15	2.00	pound	\$0.29	\$0.58
			Total Fertilizer Materials Cost/Acre	\$0.58

Application

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

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost / Acre
Smooth Brome - Manchar	7.00	23.30	\$23.28
Pubescent Wheatgrass - Luna	7.00	14.46	\$23.80
Totals Seed Mix	14.00	37.76	\$47.08

Application

Description	Cost / Acre
Drill seeding (MEANS 32 92 19.13 0020)	\$484.00

	Total Seed Application Cost/Acre	\$484.00
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MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$3.04	\$3.04
Total Mulch Materials Cost/Acre				\$845.76

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Weed spray, truck, non-aquatic areas, ann. [DMG]	\$22.81
Total Mulch Application Cost/Acre	\$158.53

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:	17.25	Cost /Acre:	\$1,964.42
Estimated Failure Rate:	30%	Cost /Acre*:	\$1,964.42
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MU LCHING		
Initial Job Cost:	\$33,886.25		
Reseeding Job Cost:	\$10,165.87		
Total Job Cost:	\$44,052		
Job Hours:	40.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob / Demob**Site: **Pickering Family Pit**Permit Action: **2022 Bond Estimate**Permit/Job#: **M2009086****PROJECT IDENTIFICATION**Task #: **025**State: **Colorado**Abbreviation: **None**Date: **8/9/2022**County: **Grand**Filename: **M086-025**User: **PSH**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:	\$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 D8T - 8SU	53.08	\$137.95	\$136.92	1	\$274.87	\$136.92	\$250.00
Subtotals:					\$274.87	\$136.92	\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: GRANBY, CO
 Total one-way travel distance: 5.00 miles
 Average Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost * \$1,717.13
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$0.00
 ** 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):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	2.29	0.29

JOB TIME AND COST

Total job time: 4.57 Hours

Total job cost: \$1,717