

COST SUMMARY WORK

Task description: _____

Site: Mystic Soil

Permit Action: New Permit

Permit/Job#: M2020065

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 3/10/2021

County: Saguache

Filename: M065-001

User: SJM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
002	removal of Portable facilities	DEMOLISH	1	5.00	\$2,213
003	topsoil	GRADER	1	48.62	\$7,023
004	topsoil	LOADER	1	381.88	\$33,155
005	Seeding and Mulching	REVEGE	1	0.00	\$99,453
006	mob/demob	MOBILIZE	1	0.08	\$1,532
<u>SUBTOTALS:</u>				435.58	\$143,376

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$2,896

Performance bond: 1.05

Total = \$1,505

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$14,338

TOTAL O & P = \$18,739

CONTRACT AMOUNT (direct + O & P) = \$162,115

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$6,890

Reclamation management and/or administration: 0.00

\$0

CONTINGENCY: 3.00

Total = \$4,301

TOTAL INDIRECT COST = \$30,430

TOTAL BOND AMOUNT (direct + indirect) = \$173,806

COST SUMMARY WORK

Task description: _____

Site: Mystic Soil

Permit Action: New Permit

Permit/Job#: M2020065

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 3/10/2021

County: Saguache

Filename: M065-001

User: SJM

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
002	removal of Portable facilities	DEMOLISH	1	5.00	\$2,213
003	topsoil	GRADER	1	48.62	\$7,023
004	topsoil	LOADER	1	381.88	\$33,155
005	Seeding and Mulching	REVEGE	1	0.00	\$99,453
006	mob/demob	MOBILIZE	1	0.08	\$1,532
<u>SUBTOTALS:</u>				435.58	\$143,376

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$2,896

Performance bond: 1.05

Total = \$1,505

Job superintendent: 0.00

Total = \$0

Profit: 10.00

Total = \$14,338

TOTAL O & P = \$18,739

CONTRACT AMOUNT (direct + O & P) = \$162,115

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$6,890

Reclamation management and/or administration: 0.00

\$0

CONTINGENCY: 3.00

Total = \$4,301

TOTAL INDIRECT COST = \$30,430

TOTAL BOND AMOUNT (direct + indirect) = \$173,806

DEMOLITION WORK

Task description: Removal of Portable facilities

Site: Mystic Soil

Permit Action: New Permit

Permit/Job#: M2020065

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 3/10/2021

County: Saguache

Filename: M065-002

User: SJM

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 87.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
removal of fuel tanks etc	1x1	CAT 924H	29.00	EA	\$86.83	\$2,518.07

Job Hours: 5.00

Subtotal
(unadjusted): \$2,518.07

Total Cost
(adjusted for location): \$2,213.38

MOTOR GRADER WORK

Task description: Topsoil

Site: Mystic Soil

Permit Action: New Permit

Permit/Job#: M2020065

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 3/11/2021

County: Saguache

Filename: M065-003

User: SJM

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 16M

Horsepower: 297

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$55.79	NA
Operating Cost/Hour:	\$60.08	100
Ripper Ownership Cost/Hour:	\$0.00	NA
Ripper Operating Cost/Hour:	\$0.00	
Operator Cost/Hour:	\$28.56	NA
Total Unit Cost/Hour:	\$144.43	
Total Fleet Cost/Hour:	\$144.43	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 111.40 acres

Source of estimated acreage: Application

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	mph
Selected Application:	<u>Finish grading (0-2.5 mph) - 1.5</u>	
Selected Blade Angle:	<u>0</u>	degrees
Effective Blade Length:	<u>16.00</u>	feet
Width of blade overlap per pass:	<u>2.00</u>	feet
Net grading or ripping width per pass:	<u>14.00</u>	feet
Unadjusted Hourly Unit Production:	<u>2.5455</u>	acres/hour

Job Condition Correction Factors

Site Altitude: 4500 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.90</u>	(1sh/d, fav.)
Net Correction:	<u>0.9000</u>	multiplier

Adjusted Hourly Unit Production: 2.2909 acres/Hour

Adjusted Hourly Fleet Production: **2.2909** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **48.63** Hours

Unit cost: \$63.04 per acre Total job cost: **\$7,023**

WHEEL LOADER – LOAD AND CARRY WORKTask description: TopsoilSite: Mystic SoilPermit Action: New PermitPermit/Job#: M2020065**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 3/11/2021County: SaguacheFilename: M065-004User: SJMAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 924HAttachment 1: ROPS CabHorsepower: 128Shift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$20.95	NA
Operating Cost/Hour:	\$25.17	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$86.82	
Total Fleet Cost/Hour:	\$86.82	

MATERIAL QUANTITIESInitial volume: 103,737

CCY

Swell factor: 1.000Loose volume: 103,737

LCY

Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Loader Cycle Time:**Unadjusted Basic Cycle Time (load, dump,
maneuver):

0.475

minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high or less 0.01	0.010	(Cat HB)
Truck Ownership:	Independently owned trucks 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:		0.030	minutes
Adjusted Basic Cycle Time:		0.505	minutes

Rolling Resistance – Road ConditionsHaul: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Return: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
--	------------------	-------------------	---------------------	-------------------	--------------------------	--------

Haul Route:	35	0.00	3.00	3.00	0.0197	(Cat HB)
Return Route:	35	0.00	3.00	3.00	0.0197	(Cat HB)

Total Travel Time: 0.0395 minutesTotal Cycle Time: **0.5445** minutesLoad Bucket Capacity

Rated Capacity:	<u>2.70</u>	LCY (heaped)
Bucket Fill Factor:	<u>1.100</u>	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	<u>2.97</u>	LCY

Job Condition Correction FactorsSite Altitude: 4500 feet

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

Unadjusted Hourly Unit Production: 327.28 LCY/HourAdjusted Hourly Unit Production: 271.65 LCY/HourAdjusted Hourly Fleet Production: **271.65** LCY/Hour**JOB TIME AND COST**Fleet size: 1 Loader(s) Total job time: **381.88** HoursUnit cost: \$0.320 /LCY Total job cost: **\$33,155**

REVEGETATION WORKTask description: Seeding and MulchingSite: Mystic SoilPermit Action: New PermitPermit/Job#: M2020065**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 3/11/2021County: SaguacheFilename: M065-005User: SJMAgency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless (Creeping) Wildrye - Shoshone	6.00	20.66	\$140.52
Streambank Wheatgrass - Sodar	4.40	14.34	\$25.08
Saltgrass, Inland	0.30	4.16	\$12.84
Totals Seed Mix	10.70	39.16	\$178.44

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00

Total Seed Application Cost/Acre	\$232.00
---	-----------------

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$602.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$70.17
Total Mulch Application Cost/Acre	\$70.17

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:	64.3	Cost /Acre:	\$1,189.77
Estimated Failure Rate:	30%	Cost /Acre*:	\$1,189.77
*Selected Replanting Work Items:	TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$76,502.21		
Reseeding Job Cost:	\$22,950.66		
Total Job Cost:	\$99,453		
Job Hours:	0.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mob/demobSite: Mystic SoilPermit Action: New PermitPermit/Job#: M2020065**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 3/11/2021County: SaguacheFilename: M065-006User: SJMAgency 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:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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 924H	12.69	\$20.95	\$67.39	1	\$88.34	\$67.39	\$250.00
Cat D8T - 8SU	53.08	\$128.22	\$141.54	1	\$269.76	\$141.54	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00
Subtotals:					\$432.21	\$276.32	\$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$13.23	1	\$13.23	\$13.23
Subtotals:			\$13.23	\$13.23

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>HOOPER</u>	
Total one-way travel distance:	<u>1.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,531.49</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.59</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.02	0.02
Return Time (Hours):	0.02	0.02
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	0.04	0.04

JOB TIME AND COST

Total job time:	<u>0.09</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$1,532</u>
-----------------	----------------