

COST SUMMARY WORK

Task description: Reclamation Cost Summary Sheet

Site: Simla Highway Pit

Permit Action: TR-2 Update

Permit/Job#: M1995095

PROJECT IDENTIFICATION

Task #: T200

State: Colorado

Abbreviation: None

Date: 12/15/2021

County: El Paso

Filename: M095-T200

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
T21a	Misc Grading (6' high working face, 150' long)	DOZER	1	0.65	\$152
T220	Topsoil Placement (6" depth over 1.65 ac)	SCRAPER1	1	4.04	\$1,672
T230	Revege 4 acres (assuming 25% failure Rate)	REVEGE	1	3.00	\$1,279
T231	Revege 1.65 acre active area	REVEGE	1	6.00	\$4,233
T240	Mob/Demob	MOBILIZE	1	2.96	\$3,841
<u>SUBTOTALS:</u>				16.65	\$11,177

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$226

Performance bond: 1.05

Total = \$117

Job superintendent: 8.32

Total = \$599

Profit: 10.00

Total = \$1,118

TOTAL O & P = \$2,060

CONTRACT AMOUNT (direct + O & P) = \$13,237

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 4.25

Total = \$563

Reclamation management and/or administration: 5.00

\$662

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$3,285

TOTAL BOND AMOUNT (direct + indirect) = \$14,462

BULLDOZER WORKTask description: Misc Grading (6' high working face, 150' long)Site: Simla Highway PitPermit Action: TR-2 UpdatePermit/Job#: M1995095**PROJECT IDENTIFICATION**Task #: T21AState: ColoradoAbbreviation: NoneDate: 12/15/2021County: El PasoFilename: M095-T21aUser: TC1Agency 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:	\$97.46	NA
Operating Cost/Hour:	\$97.63	100
Ripper own.		
Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$40.04	NA

Total unit Cost/Hour: \$235.13Total Fleet Cost/Hour: \$235.13**MATERIAL QUANTITIES**Initial Volume: 400Swell factor: 1.000Loose volume: 400 LCYSource of estimated volume: DRMS estimateSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 852.6 LCY/hrMaterials consistency description: Consolidated stockpile 1.0Average push gradient: -25 %Average site altitude: 6,380 feetMaterial weight: 2,700 lbs/LCYWeight description: Sand and clay - Loose

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7236

Adjusted unit
production: 616.94 LCY/hr
Adjusted fleet
production: **616.94** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.381/LCY

Total job time: **0.65** Hours
Total job cost: **\$152**

SCRAPER TEAM WORKTask description: Topsoil Placement (6" depth over 1.65 ac)Site: Simla Highway PitPermit Action: TR-2 UpdatePermit/Job#: M1995095**PROJECT IDENTIFICATION**Task #: T220State: ColoradoAbbreviation: NoneDate: 12/15/2021County: El PasoFilename: M095-T220User: TC1Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 623G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	\$207.90	NA	NA	NA	NA	NA
Operating cost/hour:	\$158.74	NA	NA	NA	NA	NA
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$47.07	NA	NA	NA	NA	NA
Unit Subtotals:	\$413.71	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work: \$413.71		Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: **\$413.71****MATERIAL QUANTITIES**Initial volume: 1,331

CCY

Swell factor: 1.115Loose volume: **1,484**

LCY

Source of estimated volume: 6' over 0.92-Ac SR-1 area + 0.73-Ac area = 1,331 CYSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,100 lbs/LCY</u>	Struck Volume:	<u>18.00</u>	LCY
Material description:	<u>Earth - Loam</u>	Heaped Volume:	<u>23.00</u>	LCY
Rated Payload:	<u>55,200 pounds</u>	Average Volume:	<u>20.50</u>	LCY
Payload Capacity:	<u>26.29 LCY</u>	Adjusted Capacity:	<u>20.50</u>	LCY

Cycle Time:

Scraper Loading Time: 0.90 Minutes
 Maneuver and Spread Time: 0.70 Minutes

Job Condition Correction:

Site Altitude: 6380 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	-1.30	4.00	2.70	2189	0.59

Haul Time: 0.59 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	1.30	4.00	5.30	2359	0.59

Return Time: 0.59 minutesTotal Scraper team cycle time: 2.78 minutesAdjusted for job conditions: 367.23 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 367.23 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 367.23 LCY/HourUnadjusted unit production/hour: 442.45 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 4.04 HoursUnit cost: \$1.127 /LCYTotal job cost: \$1,672

REVEGETATION WORKTask description: Revege 4 acres (assuming 25% failure Rate)Site: Simla Highway PitPermit Action: TR-2 UpdatePermit/Job#: M1995095**PROJECT IDENTIFICATION**Task #: T230State: ColoradoAbbreviation: NoneDate: 12/15/2021County: El PasoFilename: M095-T230User: TC1Agency 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
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$290.40

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	4.50	40.19	\$51.75
Indiangrass - Holt	10.00	30.49	\$114.00
Sideoats Grama - Vaughn	9.00	29.55	\$75.38
Sand Bluestem - Woodward	16.00	41.51	\$338.67
Prairie Sandreed - Goshen	6.50	40.74	\$67.28
Totals Seed Mix	46.00	182.46	\$647.07

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
			\$	\$
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:	1	Cost /Acre:	\$1,169.47
Estimated Failure Rate:	12.5%	Cost /Acre*:	\$879.07
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$1,169.47
Reseeding Job Cost:	\$109.88
Total Job Cost:	\$1,279
Job Hours:	3.00

REVEGETATION WORKTask description: Revege 1.65 acre active areaSite: Simla Highway PitPermit Action: TR-2 UpdatePermit/Job#: M1995095**PROJECT IDENTIFICATION**Task #: T231State: ColoradoAbbreviation: NoneDate: 12/15/2021County: El PasoFilename: M095-T231User: TC1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	40.00	pound	\$0.36	\$14.40
Triple superphosphate, 0-46-0	40.00	pound	\$0.46	\$18.40
			Total Fertilizer Materials Cost/Acre	\$32.80

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$38.77
Total Fertilizer Application Cost/Acre	\$38.77

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$114.56
Weed control spraying (MEANS 31 31 16.13 3100)	\$290.40
Total Tilling Cost/Acre	\$404.96

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	4.50	40.19	\$51.75
Indiangrass - Holt	10.00	30.49	\$114.00
Sideoats Grama - Vaughn	9.00	29.55	\$75.38
Sand Bluestem - Woodward	16.00	41.51	\$338.67
Prairie Sandreed - Goshen	6.50	40.74	\$67.28
Totals Seed Mix	46.00	182.46	\$647.07

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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$307.02	\$614.04
Total Mulch Materials Cost/Acre				\$614.04

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$71.57
Power mulcher (MEANS 32 91 13.16 0350)	\$106.29
Total Mulch Application Cost/Acre	\$177.86

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: 1.65 Cost /Acre: \$2,147.50
 Estimated Failure Rate: 25% Cost /Acre*: \$1,670.97
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$3,543.38**
 Reseeding Job Cost: **\$689.28**
 Total Job Cost: **\$4,233**
 Job Hours: **6.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Simla Highway Pit**Permit Action: **TR-2 Update**Permit/Job#: **M1995095****PROJECT IDENTIFICATION**Task #: **T240**State: **Colorado**Abbreviation: **None**Date: **12/15/2021**County: **El Paso**Filename: **M095-T240**User: **TC1**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:	\$21.28	\$37.94	\$47.67
Operating Cost/Hour:	\$26.55	\$50.48	\$56.21
Operator Cost/Hour:	\$20.54	\$20.54	\$20.54
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$68.37	\$132.49	\$147.95

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 623G	41.35	\$207.90	\$132.49	1	\$340.39	\$132.49	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$7.98	\$68.37	1	\$76.35	\$68.37	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$14.98	\$68.37	1	\$83.35	\$68.37	\$250.00
Cat D8T - 8SU	47.71	\$97.46	\$132.49	1	\$229.95	\$132.49	\$250.00

Subtotals: **\$730.04** **\$401.72** **\$1,000.00****ROADABLE EQUIPMENT:**

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

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>LIMON</u>	
Total one-way travel distance:	<u>27.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$3,841.22</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.49</u>	<u>0.49</u>
Return Time (Hours):	<u>0.49</u>	<u>0.49</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>1.48</u>	<u>0.98</u>

JOB TIME AND COST

Total job time:	<u>2.96</u>	Hours
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Total job cost:	<u>\$3,841</u>
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Cazier - DNR, Tim <tim.cazier@state.co.us>

Re: M-1995-095 Simla Highway Pit TR-2 Cost Estimate

1 message

Hill Top Gravel LLC <hilltopgravel@gmail.com>
To: "Cazier - DNR, Tim" <tim.cazier@state.co.us>

Wed, Dec 15, 2021 at 2:28 PM

Tim ,

I am okay with that estimate. Where do I send my check and who do I address it to ?

Thank you,

Blake

On Wed, Dec 15, 2021 at 1:25 PM Cazier - DNR, Tim <tim.cazier@state.co.us> wrote:

Blake,

I just completed the update to the reclamation cost estimate (attached). The update includes disturbance of 1.65 acres (the existing 0.92 acres + 0.73 acres [per your new mining are kmz file]) and updating the unit costs from my 2018 update. The current bond is \$11,280 and the updated estimate is \$14,462 (a \$3,182 increase). The bond will be due within 60 days or prior to disturbing the new mining area (whichever is first)

I'm ready to approve the technical revision, but before I do I want to make sure we're on the same page for the bond. Please review the attached estimate and let me know if you have concerns or questions.

I've also attached an updated map, assuming approval of the TR.

Let me know if you have any questions.

Tim Cazier, P.E.
Environmental Protection Specialist III - Engineering

[I am working remotely - please call me at 303-328-5229]



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

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