

COST SUMMARY WORKTask description: Cost Summary

Robinson Sons Gravel Pit No. Permit Action:
 Site: 1 July 2019 Inspection Permit/Job#: M2008076

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
 Date: 8/7/2019 County: Las Animas Filename: M076-000
 User: JLE

Agency or organization name: DRMS**TASK LIST (DIRECT COSTS)**

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill southern highwall – Area 1	LOADER	1	74.08	\$11,473
002	Cut/Fill/Grade West and North Highwall - Area 1	DOZER	1	2.48	\$705
003	Grade Overburden Stockpile Area - Area 1	DOZER	1	0.16	\$45
004	Spread topsoil over Area 1	SCRAPER1	1	14.37	\$13,978
005	Backfill/Grade - Area 2	DOZERGRADER	1	8.00	\$2,271
006	Spread topsoil over Area 2	SCRAPER1	1	4.43	\$4,314
007	Backfill and Grade basins in creek reclamation area.	DOZER	1	4.53	\$1,286
008	Revegetate Affected Land	REVEGE	1	27.00	\$30,905
009	Mobilization	MOBILIZE	1	7.22	\$15,377
010	Demolition of scale and scale house	DEMOLISH	1	10.00	\$3,337
<u>SUBTOTALS:</u>				152.27	\$83,691

INDIRECT COSTS**OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$1,691
Performance bond:	1.05	Total =	\$879
Job superintendent:	76.14	Total =	\$5,283
Profit:	10.00	Total =	\$8,369
		TOTAL O & P =	\$16,221
		CONTRACT AMOUNT (direct + O & P) =	\$99,912

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$4,246
Reclamation management and/or administration:	5.00		\$4,996
CONTINGENCY: 0.00		Total =	\$0

TOTAL INDIRECT COST = \$25,963TOTAL BOND AMOUNT (direct + indirect) = \$109,654

WHEEL LOADER – LOAD AND CARRY WORKTask description: **Backfill southern highwall – Area 1**

Robinson Sons Gravel Pit No. Permit Action: Site: **1** July 2019 Inspection Permit/Job#: **M2008076**

PROJECT IDENTIFICATION

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **8/7/2019** County: **Las Animas** Filename: **M076-001**
 User: **JLE**

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

Basic Machine: **CAT 980H** Horsepower: **315**
 Attachment 1: **ROPS Cab** Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$52.71	NA
Operating Cost/Hour:	\$61.51	100
Operator Cost/Hour:	\$40.65	NA
Total Unit Cost/Hour:	\$154.87	
Total Fleet Cost/Hour:	\$154.87	

MATERIAL QUANTITIES

Initial volume: **20,667** CCY Swell factor: **1.000**
 Loose volume: **20,667** LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Loader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): **0.550** 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 Basic Cycle Time:		0.490	minutes

Rolling Resistance – Road Conditions

Haul: **Loose sand or gravel 10**
 Return: **Loose sand or gravel 10**

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	300	0.00	10.00	10.00	0.3763	(Cat HB)
Return Route:	300	0.00	10.00	10.00	0.3387	(Cat HB)

Total Travel Time: 0.7149 minutes
Total Cycle Time: 1.2049 minutes

Load Bucket Capacity

Rated Capacity: 7.50 LCY (heaped)
Bucket Fill Factor: 0.900 Other - soil, boulders, roots (80 -100%) 0.900
Adjusted Capacity: 6.75 LCY

Job Condition Correction Factors

Site Altitude: 7000 feet

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

Unadjusted Hourly Unit Production: 336.12 LCY/Hour
Adjusted Hourly Unit Production: 278.98 LCY/Hour
Adjusted Hourly Fleet Production: 278.98 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 74.08 Hours
Unit cost: \$0.555 /LCY Total job cost: \$11,473

BULLDOZER WORKTask description: Cut/Fill/Grade West and North Highwall - Area 1Robinson Sons Gravel Pit No.
Site: 1Permit Action:
July 2019 InspectionPermit/Job#: M2008076**PROJECT IDENTIFICATION**Task #: 002
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-002Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$1.34	15
Operator Cost/Hour:	\$41.24	NA
Total unit Cost/Hour:	\$283.85	
Total Fleet Cost/Hour:	\$283.85	

MATERIAL QUANTITIESInitial Volume: 1,880
Swell factor: 1.060
Loose volume: **1,993 LCY**Source of estimated volume: 1,231 feet of pit wall, about 20 feet deep, Angle of Repose
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feet
Unadjusted hourly production: 1,872.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 15 %
Average site altitude: 7,000 feet

Material weight: 2,400 lbs/LCY

Weight description: Sand - Dry, loose

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4289

Adjusted unit
production: 802.90 LCY/hr

Adjusted fleet
production: **802.9** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.354/LCY

Total job time: **2.48** Hours

Total job cost: **\$705**

BULLDOZER WORKTask description: Grade Overburden Stockpile Area - Area 1Robinson Sons Gravel Pit No.
Site: 1Permit Action:
July 2019 InspectionPermit/Job#: M2008076**PROJECT IDENTIFICATION**Task #: 003
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-003Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$1.34	15
Operator Cost/Hour:	\$41.24	NA
Total unit Cost/Hour:	\$283.85	
Total Fleet Cost/Hour:	\$283.85	

MATERIAL QUANTITIESInitial Volume: 134
Swell factor: 1.060
Loose volume: **142 LCY**Source of estimated volume: 350 feet of pit wall, about 10 feet deep, Angle of
ReposeSource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feet
Unadjusted hourly
production: 2,110.5 LCY/hrMaterials consistency
description: Compacted fill or embankment 0.9Average push
gradient: 15 %
Average site altitude: 7,000 feet

Material weight: 2,400 lbs/LCY

Weight description: Sand - Dry, loose

Job Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4289

Adjusted unit
production: 905.19 LCY/hr

Adjusted fleet
production: **905.19** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.314/LCY

Total job time: **0.16** Hours
Total job cost: **\$45**

SCRAPER TEAM WORKTask description: Spread topsoil over Area 1Robinson Sons Gravel Pit No.
Site: 1Permit Action:
July 2019 InspectionPermit/Job#: M2008076**PROJECT IDENTIFICATION**Task #: 004
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-004Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G w/push-pull
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	NA	25	25
Ownership cost/hour:	\$126.52	\$121.49	NA	NA	\$33.62	\$27.40
Operating cost/hour:	\$149.69	\$52.92	NA	NA	\$8.55	\$10.00
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$13.94	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.86	\$41.24	NA	NA	\$28.52	\$21.09
Unit Subtotals:	\$307.07	\$229.58	NA	NA	\$70.69	\$58.49
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$843.72	Support:	\$0.00	Maint:	\$129.18

Total work team cost/hour: **\$972.90****MATERIAL QUANTITIES**Initial volume: 11,831 CCY Swell factor: 1.000
Loose volume: 11,831 LCYSource of estimated volume: 8" over 11 acres
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>15.70</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>22.00</u>	LCY
Rated Payload:	<u>52,800 pounds</u>	Average Volume:	<u>18.85</u>	LCY
Payload Capacity:	<u>33.00 LCY</u>	Adjusted Capacity:	<u>18.85</u>	LCY

Cycle Time:Scraper Loading Time: 0.90 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 7000 feet

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

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	0.00	3.00	3.00	2824	0.42

Haul Time: 0.42 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	0.00	3.00	3.00	2874	0.36

Return Time: 0.36 minutesTotal Scraper team cycle time: 2.28 minutesAdjusted for job conditions: 823.45 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 823.45 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 823.45 LCY/HourUnadjusted unit production/hour: 992.11 LCY/HourOptimal Number of Scrapers per push
dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 14.37 HoursUnit cost: \$1.181 /LCYTotal job cost: \$13,978

DOZERGRADER WORKTask description: Backfill/Grade - Area 2Robinson Sons Gravel Pit No.
Site: 1Permit Action:
July 2019 InspectionPermit/Job#: M2008076PROJECT IDENTIFICATIONTask #: 005
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-005Agency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D9T - 9SU
Horsepower: _____
Blade Type: _____
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: _____Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$1.34	15
Operator Cost/Hour:	\$41.24	NA
Total unit Cost/Hour:	\$283.85	
Total Fleet Cost/Hour:	\$283.85	

JOB TIME AND COSTFleet size: 1 Dozer(s)
Unit cost: \$283.85/LCYTotal job time: 8.00 Hours
Total job cost: \$2,271

SCRAPER TEAM WORKTask description: Spread topsoil over Area 2Robinson Sons Gravel Pit No.
Site: 1Permit Action:
July 2019 InspectionPermit/Job#: M2008076**PROJECT IDENTIFICATION**Task #: 006
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-006Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G w/push-pull
-Dozer:	Cat D9T - 9SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	NA	25	25
Ownership cost/hour:	\$126.52	\$121.49	NA	NA	\$33.62	\$27.40
Operating cost/hour:	\$149.69	\$52.92	NA	NA	\$8.55	\$10.00
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$13.94	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$30.86	\$41.24	NA	NA	\$28.52	\$21.09
Unit Subtotals:	\$307.07	\$229.58	NA	NA	\$70.69	\$58.49
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$843.72	Support:	\$0.00	Maint:	\$129.18

Total work team cost/hour: **\$972.90****MATERIAL QUANTITIES**Initial volume: 2,151 CCY Swell factor: 1.000
Loose volume: 2,151 LCYSource of estimated volume: 8" over 2 acresSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>15.70</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>22.00</u>	LCY
Rated Payload:	<u>52,800 pounds</u>	Average Volume:	<u>18.85</u>	LCY
Payload Capacity:	<u>33.00 LCY</u>	Adjusted Capacity:	<u>18.85</u>	LCY

Cycle Time:Scraper Loading Time: 0.90 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 7000 feet

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

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	6.00	3.00	9.00	1249	1.64

Haul Time: 1.64 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-6.00	3.00	-3.00	2938	0.73

Return Time: 0.73 minutesTotal Scraper team cycle time: 3.87 minutesAdjusted for job conditions: 485.13 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 485.13 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 485.13 LCY/HourUnadjusted unit production/hour: 584.50 LCY/HourOptimal Number of Scrapers per push
dozer: _____**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 4.43 HoursUnit cost: \$2.005 /LCYTotal job cost: \$4,314

BULLDOZER WORKTask description: **Backfill and Grade basins in creek reclamation area.**

Robinson Sons Gravel Pit No. Permit Action: Site: **1** July 2019 Inspection Permit/Job#: M2008076

PROJECT IDENTIFICATION

Task #: 007 State: Colorado Abbreviation: None
 Date: 8/7/2019 County: Las Animas Filename: M076-007
 User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
 Horsepower: 405
 Blade Type: Semi-Universal
 Attachment: 3-shank ripper
 Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$121.49	NA
Operating Cost/Hour:	\$105.84	100
Ripper own. Cost/Hour:	\$13.94	NA
Ripper op. Cost/Hour:	\$1.34	15
Operator Cost/Hour:	\$41.24	NA
Total unit Cost/Hour:	\$283.85	
Total Fleet Cost/Hour:	\$283.85	

MATERIAL QUANTITIES

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

Source of estimated volume: .5 Acre basins, cut and fill 4 feet
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 100 feet
 Unadjusted hourly production: 1,243.2 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
 Average site altitude: 7,000 feet

Material weight: 2,700 lbs/LCY

Weight description: Earth - Wet excavatedJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5728Adjusted unit
production: 712.10 LCY/hrAdjusted fleet
production: **712.1** LCY/hr**JOB TIME AND COST**Fleet size: 1 Dozer(s)
Unit cost: \$0.399/LCYTotal job time: **4.53** Hours
Total job cost: **\$1,286**

REVEGETATION WORKTask description: **Revegetate Affected Land**Site: **Robinson Sons Gravel Pit No. 1**Permit Action: July 2019 InspectionPermit/Job#: M2008076**PROJECT IDENTIFICATION**Task #: 008
Date: 8/7/2019
User: JLEState: Colorado
County: Las AnimasAbbreviation: None
Filename: M076-008Agency 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)	\$101.93
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$295.53

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Native	5.50	16.41	\$64.99
Blue Grama - Native	1.50	24.48	\$20.59
Sideoats Grama - Vaughn	4.50	14.77	\$37.69
Western Wheatgrass - Native	8.00	20.20	\$48.00
Totals Seed Mix	19.50	75.87	\$171.27

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}	1.00	TON	\$295.00	\$295.00
Total Mulch Materials Cost/Acre				\$295.00

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:	27	Cost /Acre:	\$1,063.97
Estimated Failure Rate:	20%	Cost /Acre*:	\$403.27
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$28,727.19
Reseeding Job Cost:	\$2,177.66
Total Job Cost:	\$30,905
Job Hours:	27.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization**Robinson Sons Gravel Pit No.
Site: **1**Permit Action:
July 2019 InspectionPermit/Job#: **M2008076****PROJECT IDENTIFICATION**Task #: **009**
Date: **8/7/2019**
User: **JLE**State: **Colorado**
County: **Las Animas**Abbreviation: **None**
Filename: **M076-009**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:	\$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 980H	33.12	\$52.71	\$123.81	1	\$176.52	\$123.81	\$250.00
Cat D9T - 9SU	66.13	\$135.43	\$141.54	2	\$553.94	\$283.08	\$500.00
Cat 627G	41.80	\$112.52	\$123.81	2	\$472.66	\$247.62	\$500.00
CAT 12M	16.01	\$33.62	\$67.39	1	\$101.01	\$67.39	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	2	\$171.08	\$134.78	\$500.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00

Subtotals: **\$1,552.34** **\$924.07** **\$2,250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 5,000 Gal.	\$88.48	1	\$88.48	\$88.48
Light Duty Pickup, 4x4, 3/4 T.	\$111.44	1	\$111.44	\$111.44
Fuel Tanker, 6x4, 210 HP	\$63.55	2	\$127.10	\$127.10

Subtotals: **\$327.02** **\$327.02**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>TRINIDAD</u>	
Total one-way travel distance:	<u>25.00</u>	miles
Average Travel Speed:	<u>45.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$15,013.27</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$363.36</u>
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.56</u>	<u>0.56</u>
Return Time (Hours):	<u>0.56</u>	<u>0.56</u>
Loading Time (Hours):	<u>1.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>1.25</u>	<u>NA</u>
Subtotals:	<u>3.61</u>	<u>1.11</u>

JOB TIME AND COST

Total job time:	<u>7.22</u>	Hours
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Total job cost:	<u>\$15,377</u>
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DEMOLITION WORKTask description: **Demolition of scale and scale house**Robinson Sons Gravel Pit No.
Site: **1**Permit Action:
July 2019 InspectionPermit/Job#: **M2008076****PROJECT IDENTIFICATION**Task #: **010**
Date: **8/7/2019**
User: **JLE**State: **Colorado**
County: **Las Animas**Abbreviation: **None**
Filename: **M076-010**Agency or organization name: **DRMS****UNIT COSTS****Location adjustment: 91.50 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Truck Scale Demo	1,100 SF	Floor, concrete, demolition only, average reinforcing - 12 in. thick	1,100.00	SF	\$1.70	\$1,871.76
Scale House Demo	160 SF x 8 F	Demo. only, small or single buildings (single story) - Wood structures	1,280.00	CF	\$0.18	\$229.12
Loading and Off-site Disposal	40.7 CY + 47.4 CY	Loading and 2 mile haul, no salvage - Machine loading	88.10	CY	\$17.55	\$1,546.16

Job Hours: **10.00**
Subtotal (unadjusted): **\$3,647.04**
Total Cost (adjusted for location): **\$3,337.04**