

COST SUMMARY WORK

Task description: _____

Site: Midwestern Farms

Permit Action: SR-1 2017

Permit/Job#: M1993059

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 11/7/2017

County: Prowers

Filename: M059-000

User: AME

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade E pond shoreline to 3H:1V	EXCAVATE	1	10.27	\$1,197.00
002	Erosion repair along pond shorelines	DOZER	1	4.91	\$804.00
003	Install 6' w riprap blanket along 2000' shoreline 6" nominal	NA	1	40.00	\$20,000.00
004	Seed 255.1 acres + weed control	REVEGE	1	255.00	\$296,627.00
005	Mobilization/Demobilization	MOBILIZE	1	3.74	\$3,049.00
<u>SUBTOTALS:</u>				313.92	\$321,677

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$6,497.88

Performance bond: 1.05

Total = \$3,377.61

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$32,167.70

TOTAL O & P = \$42,043.19

CONTRACT AMOUNT (direct + O & P) = \$363,720.19

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$18,186.01

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$60,729.20

TOTAL BOND AMOUNT (direct + indirect) = \$382,406.20

HYDRAULIC EXCAVATOR WORK

Task description: Grade E pond shoreline to 3H:1V

Site: Midwestern Farms

Permit Action: SR-1 2017

Permit/Job#: M1993059

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 11/7/2017

County: Prowers

Filename: M059-001

User: AME

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 324D L 9'-8" Stick

Attachment 1: ROPS Cab

Horsepower: 194

Weight (MT): 24.85

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$38.54</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$40.22</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.79</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$116.55</u>	
Total Fleet Cost/Hour:	<u>\$116.55</u>	

MATERIAL QUANTITIES

Initial volume: 4,000

CCY

Swell factor: 1.270

Loose volume: 5,080

LCY

Source of estimated volume: 2,000 ft L shoreline x 6 ft H

Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: ABOVE AVERAGE

Secondary Job Condition within Basic Description: AVERAGE

Cycle Time Value: 0.239 minutes

Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 2.26 LCY (heaped)

Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% - 110%) 1.050

Adjusted Capacity: 2.37 LCY

Job Condition Correction Factors

Site Altitude: 3400 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: 595.73 LCY/Hour

Adjusted Hourly Unit Production: 494.46 LCY/Hour

Adjusted Hourly Fleet Production: 494.46 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: 10.27 Hours

Unit cost: \$0.236 /LCY Total job cost: \$1,197

BULLDOZER WORKTask description: Erosion repair along pond shorelinesSite: Midwestern FarmsPermit Action: SR-1 2017Permit/Job#: M1993059**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 11/7/2017County: ProwersFilename: M059-002User: AMEAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D7R DS Series II LGPHorsepower: 240Blade Type: StraightAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$60.88	NA
Operating Cost/Hour:	\$61.14	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.85	NA

Total unit Cost/Hour: \$163.87Total Fleet Cost/Hour: **\$163.87****MATERIAL QUANTITIES**Initial Volume: 1,333Swell factor: 1.124Loose volume: **1,498 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 800.0 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -5 %Average site altitude: 3,400 feetMaterial weight: 2,900 lbs/LCYWeight description: Sand and gravel - Dry**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3814

Adjusted unit production: 305.12 LCY/hr

Adjusted fleet production: **305.12** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.537/LCY

Total job time: **4.91** Hours

Total job cost: **\$804**

REVEGETATION WORKTask description: Seed 255.1 acres + weed controlSite: Midwestern FarmsPermit Action: SR-1 2017Permit/Job#: M1993059**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 11/8/2017County: ProwersFilename: M059-004User: AMEAgency 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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Altai Wildrye - Prairieland	0.75	1.00	\$4.49
Sand Lovegrass - Bend	0.20	6.89	\$4.00
Blue Grama - Native	0.24	3.92	\$3.48
Sand Dropseed	0.05	5.97	\$0.54
Sideoats Grama - Vaughn	1.38	4.53	\$13.80
Western Wheatgrass - Native	0.80	2.02	\$5.60
Totals Seed Mix	3.42	24.32	\$31.91

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
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$2.74	\$274.00
Total Mulch Materials Cost/Acre				\$274.00

Application

Description	Cost /Acre
Weed spray, hand, aquatic area, nox. [DMG]	\$170.90
Total Mulch Application Cost/Acre	\$170.90

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:	255.1	Cost /Acre:	\$708.81
Estimated Failure Rate:	25%	Cost /Acre*:	\$263.91
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$180,817.43		
Reseeding Job Cost:	\$16,830.86		
Total Job Cost:	\$197,648		
Job Hours:	255.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilization/DemobilizationSite: Midwestern FarmsPermit Action: SR-1 2017Permit/Job#: M1993059**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 11/8/2017County: ProwersFilename: M059-005User: AMEAgency 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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

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 324D L 9'-8" Stick	27.33	\$38.54	\$117.55	1	\$156.09	\$117.55	\$250.00
Cat D7R DS Series II LGP	38.49	\$66.21	\$117.55	1	\$183.76	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$12.22	\$88.67	1	\$100.89	\$88.67	\$250.00

Subtotals: **\$440.74** **\$323.77** **\$750.00****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>LAMAR</u>	
Total one-way travel distance:	<u>24.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$3,048.69</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>0.44</u>	<u>0.44</u>
Return Time (Hours):	<u>0.44</u>	<u>0.44</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.87</u>	<u>0.87</u>

JOB TIME AND COST

Total job time:	<u>3.75</u>	Hours
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Total job cost:	<u>\$3,049</u>
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