

# STATE OF COLORADO

**DIVISION OF RECLAMATION, MINING AND SAFETY**  
Department of Natural Resources

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John W. Hickenlooper  
Governor

Mike King  
Executive Director

Loretta E. Pineda  
Director

April 7, 2014

Mr. Thomas G. Mathias  
Mr. Marshall Mathias  
Mathias Concrete Inc  
P.O. Box 266  
Monte Vista, CO 81144

**Re: North Farm Rd Pit No. 1, Permit No. M-1977-140, Financial Warranty Reduction Approval,  
Revision No. SR-1**

Dear Mssrs. Mathias and Mathias,

On April 7, 2014 the Division of Reclamation, Mining and Safety approved your request for a Financial Warranty Reduction. The revised required bond amount is \$27,958.88. This is a reduction of \$8,396.12. This decision reduces the amount of the financial warranty required, and does not approve any release of reclamation responsibility for the tasks associated with this request. There was no release of any permitted areas.

Please review the enclosed cost estimate and notify me promptly if you see any errors or omissions.

The current Financial Warranty is a corporate surety. Please provide a rider to the current Financial Warranty, or submit a new Financial Warranty reflecting this reduction. If you wish to submit a different type of Financial Warranty or have other questions about bond documents, please contact Ms. Barbara Coria at the Division's Denver office (see letterhead above). All mailed document materials should be sent to our Denver office.

If you have any questions about the figures in the enclosed cost estimate packet, please contact me at 970-247-5193, or email [bob.oswald@state.co.us](mailto:bob.oswald@state.co.us).

Sincerely,

A handwritten signature in black ink that reads "Bob Oswald".

Bob Oswald  
Environmental Protection Specialist

Encl: Updated reclamation cost estimate (4/7/14)

Cc(w/o encl): Russ Means, DRMS Grand Junction  
Barbara Coria, DRMS Denver

(c:\14-04 docs\N Farm Road #1 SR-01 Appr/rco)

## COST SUMMARY WORK

Task description: Cost summary

Site: N Farm Rd Pit No 1

Permit Action: SR-01

Permit/Job#: M1977140

### PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/7/2014

County: Rio Grande

Filename: M140-000

User: RCO

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Demolish and dispose of concrete and steel structures	DEMOLISH	1	15.00	\$3,181.63
002	Grade processing area after debris burial	DOZER	1	7.48	\$1,530.24
003	Rip compaction in processing area	RIPPER	1	8.88	\$1,875.00
004	Carry topsoil to be spread	LOADER	1	33.20	\$3,447.00
005	Spread topsoil on areas to be revegetated	DOZER	1	10.97	\$2,243.69
006	Revegetate disturbed areas	REVEGE	1	16.00	\$9,252.30
007	Haul reclamation equipment to and from site	MOBILIZE	1	2.57	\$1,598.57
<b><u>SUBTOTALS:</u></b>				<b>94.1</b>	<b>\$23,128.43</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02%  
Performance bond: 1.05%  
Job superintendent: 0.00 hrs  
Profit: 10.00%

Total = \$467.19

Total = \$242.85

Total = \$0.00

Total = \$2,312.84

TOTAL O & P = \$3,022.88

CONTRACT AMOUNT (direct + O & P) = \$26,151.31

#### 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%

\$1,307.57

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$4,830.45

TOTAL BOND AMOUNT (direct + indirect) = \$27,958.88

## DEMOLITION WORK

Task description: Demolish and dispose of concrete and steel structures

Site: N Farm Rd Pit No 1

Permit Action: SR-01

Permit/Job#: M1977140

### PROJECT IDENTIFICATION

Task #: 001  
Date: 4/4/2014  
User: RCO

State: Colorado  
County: Rio Grande

Abbreviation: None  
Filename: M140-001

Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 91.60 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Concrete tunnel with foundation	10 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	10.00	CY	\$0.47	\$4.68
Batch plant conveyor leg fdns.	7 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	7.00	CY	\$0.47	\$3.28
Slab under batch plant tail pulleys	8 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	8.00	CY	\$0.47	\$3.74
East retaining wall - batch plant	4 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	4.00	CY	\$0.47	\$1.87
West retaining wall - batch plant	17 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	17.00	CY	\$0.47	\$7.96
Brick sand bin - walls	11 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	11.00	CY	\$0.47	\$5.15
Brick sand bin - slab	9 cy	Push demolished materials/rubble/debris into pit - Max. 100 ft. push	9.00	CY	\$0.47	\$4.21
2 conveyors - demolish and load	50 LF	Conveyor, overland, including supports - 5 ft. W x 6 ft. H housing	50.00	LF	\$17.07	\$853.50
Excavate pit for concrete disposal	66 cy	Excavate disposal pit with dozer (includes completed pit backfilling/grading)	66.00	CY	\$1.56	\$102.96
2 conveyors - haul to dump	50 miles	Hauling only, per mile, 12-18 CY truck - 50 mph average speed	50.00	MI	\$0.52	\$26.05
2 conveyors - dump fee	30 cy	Dump fees - Building construction materials.	30.00	CY	\$82.00	\$2,460.00

Job Hours: 15.00

Subtotal  
(unadjusted): \$3,473.40

Total Cost  
(adjusted for location): \$3,181.63

**BULLDOZER WORK**Task description: Grade processing area after debris burialSite: N Farm Rd Pit No 1Permit Action: SR-01Permit/Job#: M1977140**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 4/7/2014County: Rio GrandeFilename: M140-002User: RCOAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$63.00	NA
Operating Cost/Hour:	\$104.03	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$204.45Total Fleet Cost/Hour: \$204.45**MATERIAL QUANTITIES**Initial Volume: 3,227Swell factor: 1.125Loose volume: 3,630 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feetUnadjusted hourly production: 1,246.9 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 7,600 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3890

Adjusted unit production: 485.04 LCY/hr

Adjusted fleet production: 485.04 LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)

Unit cost: \$0.422/LCY

Total job time: 7.48 Hours

Total job cost: \$1,530.24

## BULLDOZER RIPPING WORK

Task description: Rip compaction in processing area

Site: N Farm Rd Pit No 1

Permit Action: SR-01

Permit/Job#: M1977140

### PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 4/7/2014

County: Rio Grande

Filename: M140-003

User: RCO

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 310

Shift Basis: 1 per day

Data Source: (CRG)

#### Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$63.00</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$104.03</u>	<u>100</u>
Ripper Operating Cost/Hour:	<u>\$6.53</u>	<u>100</u>
Operator Cost/Hour:	<u>\$37.41</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$210.98</u>	
Total Fleet Cost/Hour:	<u>\$210.98</u>	

### MATERIAL QUANTITIES

Selected estimating method: Area

#### Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA  
Area: 6.00 acres Rip Depth (ft): 1.00 Volume: 9,680 BCY or CCY

Source of estimated quantity: Permit plan

### HOURLY PRODUCTION

#### Seismic:

Seismic Velocity: NA feet/second

#### Area:

Average Ripping Depth:	<u>1.00</u>	<u>mph</u>
Average Ripping Width:	<u>7.08</u>	<u>degrees</u>
Average Ripping Length:	<u>400.00</u>	<u>feet</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet</u>
Average Maneuver Time:	<u>0.25</u>	<u>feet</u>
Production per unit area:	<u>0.813</u>	<u>acres/hour</u>

#### Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.813</u>	<u>Acres/hr</u>
Site Altitude:	<u>7,600</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production:	<u>0.68</u>	<u>Acres/hr</u>
Adjusted Hourly Fleet Production:	<u>0.68</u>	<u>Acres/hr</u>

### JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 8.89 Hours

Unit cost: \$312.490 Per acre Total job cost: \$1,875.00

**WHEEL LOADER – LOAD AND CARRY WORK**Task description: Carry topsoil to be spreadSite: N Farm Rd Pit No 1Permit Action: SR-01Permit/Job#: M1977140**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 4/7/2014County: Rio GrandeFilename: M140-004User: RCOAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: CAT 950HHorsepower: 197Attachment 1: ROPS CabShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		Utilization %
Ownership Cost/Hour:	\$24.98	NA
Operating Cost/Hour:	\$43.03	100
Operator Cost/Hour:	\$35.82	NA
Total Unit Cost/Hour:	\$103.83	
Total Fleet Cost/Hour:	\$103.83	

**MATERIAL QUANTITIES**Initial volume: 4,840

CCY

Swell factor: 1.000Loose volume: 4,840

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): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.040	minutes
Adjusted Basic Cycle Time:		0.460	minutes

**Rolling Resistance – Road Conditions**Haul: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Return: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0**Haul and Return Time**

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	600	0.00	5.00	5.00	0.5739	(Cat HB)
Return Route:	600	0.00	5.00	5.00	0.5086	(Cat HB)

Total Travel Time: 1.0825 minutes  
Total Cycle Time: 1.5425 minutes

**Load Bucket Capacity**

Rated Capacity: 4.30 LCY (heaped)  
Bucket Fill Factor: 1.050 Other - moist loam (100-110%) 1.050  
Adjusted Capacity: 4.52 LCY

**Job Condition Correction Factors**Site Altitude: 7600 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: 175.63 LCY/Hour  
Adjusted Hourly Unit Production: 145.77 LCY/Hour  
Adjusted Hourly Fleet Production: 145.77 LCY/Hour

**JOB TIME AND COST**

Fleet size: 1 Loader(s) Total job time: 33.20 Hours  
Unit cost: \$0.712 /LCY Total job cost: \$3,447.00

**BULLDOZER WORK**Task description: Spread topsoil on areas to be revegetatedSite: N Farm Rd Pit No 1Permit Action: SR-01Permit/Job#: M1977140**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 4/7/2014County: Rio GrandeFilename: M140-005User: RCOAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$63.00	NA
Operating Cost/Hour:	\$104.03	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$37.41	NA

Total unit Cost/Hour: \$204.45Total Fleet Cost/Hour: \$204.45**MATERIAL QUANTITIES**Initial Volume: 4,840Swell factor: 1.000Loose volume: 4,840 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feetUnadjusted hourly production: 1,246.9 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 7,600 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3537

Adjusted unit production: 441.03 LCY/hr

Adjusted fleet production: **441.03 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
 Unit cost: \$0.464/LCY

Total job time: **10.97 Hours**

Total job cost: **\$2,243.69**

REVEGETATION WORKTask description: Revegetate disturbed areasSite: N Farm Rd Pit No 1Permit Action: SR-01Permit/Job#: M1977140PROJECT IDENTIFICATIONTask #: 006State: ColoradoAbbreviation: NoneDate: 4/7/2014County: Rio GrandeFilename: M140-006User: RCOAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	150.00	pound	\$0.36	\$53.85
Triple superphosphate, 0-46-0	100.00	pound	\$0.50	\$49.60
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$103.45</b>

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$52.71</b>

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
<b>Total Tilling Cost/Acre</b>	<b>\$88.58</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.15	5.85	\$3.42
Indian Ricegrass - Nespar	2.00	6.47	\$14.16
Crested Wheatgrass - Ephraim	1.50	6.89	\$3.35
Russian Wildrye - Bozoisky	1.30	5.22	\$8.11
Streambank Wheatgrass - Sodar	1.50	4.89	\$6.32
Western Wheatgrass - Arriba	2.00	5.05	\$7.36
Saltbush, Four Wing	4.00	5.51	\$42.92
<b>Totals Seed Mix</b>	<b>12.45</b>	<b>39.89</b>	<b>\$85.63</b>

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
<b>Total Seed Application Cost/Acre</b>	<b>\$88.20</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.50	TON	\$265.00	\$662.50
<b>Total Mulch Materials Cost/Acre</b>				<b>\$662.50</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Power mulcher (MEANS 32 91 13.16 0250)	\$86.68
<b>Total Mulch Application Cost/Acre</b>	<b>\$152.57</b>

**NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
<b>Totals Nursery Stock Cost / Acre</b>					<b>\$0.00</b>

**JOB TIME AND COST**

No. of Acres:	6	Cost /Acre:	\$1,233.64
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,233.64
*Selected Replanting Work Items:	FERTILIZING, TILLING, SEEDING, MULCHING		
Initial Job Cost:	\$7,401.84		
Reseeding Job Cost:	\$1,850.46		
Total Job Cost:	\$9,252.30		
Job Hours:	16.00		

**EQUIPMENT MOBILIZATION/DEMobilIZATION**Task description: Haul reclamation equipment to and from siteSite: N Farm Rd Pit No 1Permit Action: SR-01Permit/Job#: M1977140**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 4/7/2014County: Rio GrandeFilename: M140-007User: RCOAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per day  
Cost 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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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 320D L 9'-6" Stick	23.70	\$24.63	\$88.67	1	\$113.30	\$88.67	\$0.00
Cat D8T - 8SU	53.08	\$63.00	\$125.45	1	\$188.45	\$125.45	\$0.00
CAT 950H	20.13	\$24.98	\$88.67	1	\$113.65	\$88.67	\$0.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$0.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$0.00

Subtotals: **\$639.36** **\$480.13** **\$0.00****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:	MONTE VISTA	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$1,598.57
** 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):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

**JOB TIME AND COST**

Total job time:	2.57	Hours
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Total job cost:	\$1,598.57
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