

STATE OF
COLORADO

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

Fwd: Cost estimate for Pueblo Quarry

Bowles - DNR, Brock <brock.bowles@state.co.us>
To: Jocelyn Carter - DNR <jocelyn.carter@state.co.us>

Wed, Feb 21, 2024 at 8:57 AM

----- Forwarded message -----

From: **Bowles - DNR, Brock** <brock.bowles@state.co.us>
Date: Thu, Jan 11, 2024 at 1:53 PM
Subject: Cost estimate for Pueblo Quarry
To: Amy Rodrigues <aveek@gcc.com>

Amy,

Here is the updated cost estimate. It went up 20%, a significant amount. Please review it and we will set up a time to verify all the numbers.

Brock

--

Brock Bowles
Environmental Protection Specialist



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

P 720.774.0040 | O 303.866.3567
Physical: 1313 Sherman St., Room 215, Denver, CO 80203
Mailing: Room 215, 1001 E 62nd Ave, Denver, CO 80216
brock.bowles@state.co.us | <https://drms.colorado.gov>

--

Brock Bowles
Environmental Protection Specialist



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

P 720.774.0040 | O 303.866.3567
Physical: 1313 Sherman St., Room 215, Denver, CO 80203
Mailing: Room 215, 1001 E 62nd Ave, Denver, CO 80216
brock.bowles@state.co.us | <https://drms.colorado.gov>



2023 Summary.pdf
426K

COST SUMMARY WORK

Task description: _____

Site: Pueblo Cement Plant and Limestone Quarry

Permit Action: 2023 Inspection

Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 000
Date: 12/12/2023
User: BFB

State: Colorado
County: Pueblo

Abbreviation: None
Filename: M004-000

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Conveyor Belt Demo	DEMOLISH	1	200.00	\$356,337
001A	Demo and Plug Monitoring Wells	BOREHOLE	1	0.00	\$9,028
002	Grade Highwall to 4:1	DOZER	2	126.32	\$117,769
003	Arroyo Restoration	SCRAPER1	3	372.88	\$1,478,209
004	Arroyo Topsoil Placement	SCRAPER1	3	19.73	\$78,209
005	Rip Haul Roads and Conveyor Area	RIPPER	2	40.05	\$37,526
006	Pit Area Overburned/Topsoil Placement	SCRAPER1	3	21.58	\$85,564
007	Weed Management	REVEGE	1	24.00	\$37,016
008	Revegetation Arroyo 27 ac and Affected Area 71 ac	REVEGE	1	200.00	\$199,957
009	Mobilization/Demobilization	MOBILIZE	1	9.12	\$43,124
010	Lube Truck	MISCTRUK	1	100.00	\$9,316
011	Fuel Truck	MISCTRUK	1	100.00	\$9,316
012	Construction Management Truck	MISCTRUK	1	100.00	\$8,863
<u>SUBTOTALS:</u>				1313.68	\$2,470,234

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$49,899
Performance bond:	1.05	Total =	\$25,937
Job superintendent:	651.57	Total =	\$42,404
Profit:	10.00	Total =	\$247,023

TOTAL O & P = \$365,264

CONTRACT AMOUNT (direct + O & P) = \$2,835,498

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>5.23</u>	Total =	<u>\$148,297</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$141,775</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$655,835

TOTAL BOND AMOUNT (direct + indirect) = \$3,126,069

DEMOLITION WORK

Task description: Conveyor Belt Demo

Site: Pueblo Cement Plant and
Limestone Quarry

Permit Action: 2023 Inspection

Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 12/12/2023

County: Pueblo

Filename: 004-001

User: BFB

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 88.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Conveyor Belt	12x20x4440	Conveyor, demolition, on-site disposal, existing pit, 10,000 ft. haul	1,065,600.00	CF	\$0.38	\$404,928.00

Job Hours: 200.00

Subtotal
(unadjusted): \$404,928.00

Total Cost
(adjusted for location): \$356,336.64

BOREHOLE SEALING WORK

Task description: Demo and Plug Monitoring Wells

Site: Pueblo Cement Plant and
Limestone Quarry

Permit Action: 2023 Inspection

Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 001A
Date: 12/13/2023
User: BFB

State: Colorado
County: Pueblo

Abbreviation: None
Filename: M004-001A

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Monitoring Wells MW-5 thru 24	Portland cement grout - 2 in. (labor, equip, materials)	2	1565	1,565.00	LF	\$5.27	\$8,248.33
Borehole Markers	Borehole location/identification marker (EA, material cost only)	NA	NA	20.00	EA	\$39.00	\$780.00

Job Hours: 0.00

Total Cost: \$9,028.00

BULLDOZER WORKTask description: **Grade Highwall to 4:1**Site: **Pueblo Cement Plant and
Limestone Quarry**Permit Action: **2023 Inspection**Permit/Job#: **M2002004****PROJECT IDENTIFICATION**Task #: **002**
Date: **12/12/2023**
User: **BFB**State: **Colorado**
County: **Pueblo**Abbreviation: **None**
Filename: **004-002**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:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper own. Cost/Hour:	\$18.32	NA
Ripper op. Cost/Hour:	\$6.74	75
Operator Cost/Hour:	\$40.04	NA
Total unit Cost/Hour:	\$466.14	
Total Fleet Cost/Hour:	\$932.28	

MATERIAL QUANTITIESInitial Volume: **97,992**
Swell factor: **1.430**
Loose volume: **140,129 LCY**Source of estimated volume: **HW 7,500' long 30' height**
Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **120 feet**
Unadjusted hourly production: **1,093.1 LCY/hr**Materials consistency description: **Rock, well ripped or blasted 0.8**Average push gradient: **-15 %**
Average site altitude: **5,100 feet**Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(CAT HB)
Dozing method:	1.100	(50% SL)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5074

Adjusted unit production: 554.64 LCY/hr

Adjusted fleet production: **1109.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.840/LCY

Total job time: **126.32** Hours

Total job cost: **\$117,769**

SCRAPER TEAM WORKTask description: Arroyo RestorationSite: Pueblo Cement Plant and
Limestone QuarryPermit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 003
Date: 12/12/2023
User: BFBState: Colorado
County: PuebloAbbreviation: None
Filename: 004-003Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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	50	50
Ownership cost/hour:	\$255.23	NA	NA	NA	\$149.33	\$135.95
Operating cost/hour:	\$280.59	NA	NA	NA	\$46.40	\$82.60
%Utilization-ripper:	NA	NA	NA	NA	0	NA
Ripper own. cost/hour:	NA	NA	NA	NA	\$5.83	\$0.00
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$47.07	NA	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$582.89	NA	NA	NA	\$248.43	\$218.55
Number of Units:	6	0	0	0	1	1
Group Subtotals:	Work:	\$3,497.34	Support:	\$0.00	Maint:	\$466.98

Total work team cost/hour: \$3,964.32**MATERIAL QUANTITIES**Initial volume: 883,710 CCY Swell factor: 1.125
Loose volume: 994,174 LCYSource of estimated volume: Table L-1 AM-01
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock,
75% Earth
Rated Payload: 81,600 poundsStruck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY

Payload Capacity: 30.79 LCYAdjusted Capacity: 29.00 LCYCycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 5100 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: Hard, smooth, stabilized, surfaced, watered, maintained 2.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	4.00	2.00	6.00	1477	1.09

Haul Time: 1.09 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	-4.00	2.00	-2.00	2972	0.56

Return Time: 0.56 minutesTotal Scraper team cycle time: 3.25 minutesAdjusted for job conditions: 888.74 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 888.74 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,666.22 LCY/HourUnadjusted unit production/hour: 1,070.77 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 3 Team(s)Total job time: 372.88 HoursUnit cost: \$1.487 /LCYTotal job cost: \$1,478,209

SCRAPER TEAM WORKTask description: Arroyo Topsoil PlacementSite: Pueblo Cement Plant and
Limestone QuarryPermit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 004
Date: 12/12/2023
User: BFBState: Colorado
County: PuebloAbbreviation: None
Filename: 004-004Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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	50	50
Ownership cost/hour:	\$255.23	NA	NA	NA	\$149.33	\$135.95
Operating cost/hour:	\$280.59	NA	NA	NA	\$46.40	\$82.60
%Utilization-ripper:	NA	NA	NA	NA	0	NA
Ripper own. cost/hour:	NA	NA	NA	NA	\$5.83	\$0.00
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$47.07	NA	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$582.89	NA	NA	NA	\$248.43	\$218.55
Number of Units:	6	0	0	0	1	1
Group Subtotals:	Work:	\$3,497.34	Support:	\$0.00	Maint:	\$466.98

Total work team cost/hour: \$3,964.32**MATERIAL QUANTITIES**Initial volume: 43,560 CCY Swell factor: 1.215
Loose volume: 52,925 LCYSource of estimated volume: Table L-1 AM-01Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>51.00 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 5100 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: Hard, smooth, stabilized, surfaced, watered, maintained 2.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	4.00	2.00	6.00	1477	1.07

Haul Time: 1.07 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1500.00	-4.00	2.00	-2.00	2972	0.56

Return Time: 0.56 minutesTotal Scraper team cycle time: 3.23 minutesAdjusted for job conditions: 894.24 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 894.24 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,682.72 LCY/HourUnadjusted unit production/hour: 1,077.40 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 3 Team(s)Total job time: 19.73 HoursUnit cost: \$1.478 /LCYTotal job cost: \$78,209

BULLDOZER RIPPING WORK

Task description: Rip Haul Roads and Conveyor Area

Site: Pueblo Cement Plant and Limestone Quarry Permit Action: 2023 Inspection Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 12/12/2023 County: Pueblo Filename: 004-005
User: BFB

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$238.76	NA
Operating Cost/Hour:	\$162.29	100
Ripper Ownership Cost/Hour:	\$18.32	NA
Ripper Operating Cost/Hour:	\$8.98	100
Operator Cost/Hour:	\$40.04	NA
Total Unit Cost/Hour:	\$468.39	
Total Fleet Cost/Hour:	\$936.77	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 58.60 acres Rip Depth (ft): 1.00 Volume: 94,541 BCY or CCY

Source of estimated quantity: Operator Supplied Map from Inspection

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.63 feet/pass
Average Ripping Width: 7.67 feet/pass
Average Ripping Length: 400.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.881 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.881 Acres/hr
Site Altitude: 5,100 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.73 Acres/hr
Adjusted Hourly Fleet Production: 1.46 Acres/hr

JOB TIME AND COST

Fleet size: 2 Grader(s) Total job time: 40.06 Hours

Unit cost: \$640.384 Per acre Total job cost: \$37,526

SCRAPER TEAM WORKTask description: **Pit Area Overburned/Topsoil Placement**Site: **Pueblo Cement Plant and
Limestone Quarry**Permit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 006
Date: 12/12/2023
User: BFBState: Colorado
County: PuebloAbbreviation: None
Filename: 004-006Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 10,000 Gal.

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	50	50
Ownership cost/hour:	\$255.23	NA	NA	NA	\$149.33	\$135.95
Operating cost/hour:	\$280.59	NA	NA	NA	\$46.40	\$82.60
%Utilization-ripper:	NA	NA	NA	NA	0	NA
Ripper own. cost/hour:	NA	NA	NA	NA	\$5.83	\$0.00
Ripper op. cost/hour:	NA	NA	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$47.07	NA	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$582.89	NA	NA	NA	\$248.43	\$218.55
Number of Units:	6	0	0	0	1	1
Group Subtotals:	Work: \$3,497.34		Support:	\$0.00	Maint:	\$466.98

Total work team cost/hour: **\$3,964.32****MATERIAL QUANTITIES**Initial volume: 60,016 CCY Swell factor: 1.125
Loose volume: 67,518 LCYSource of estimated volume: Table L-1 AM-01, Inspection Map, 2'OB+1'TS
Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock,
75% Earth
Rated Payload: 81,600 poundsStruck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY

Payload Capacity: 30.79 LCYAdjusted Capacity: 29.00 LCYCycle Time:Scraper Loading Time: 1.00 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 5100 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: Hard, smooth, stabilized, surfaced, watered, maintained 2.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	4.00	2.00	6.00	1477	0.76

Haul Time: 0.76 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-4.00	2.00	-2.00	2972	0.41

Return Time: 0.41 minutesTotal Scraper team cycle time: 2.77 minutesAdjusted for job conditions: 1,042.74 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,042.74 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 3,128.23 LCY/HourUnadjusted unit production/hour: 1,256.32 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 3 Team(s)Total job time: 21.58 HoursUnit cost: \$1.267 /LCYTotal job cost: \$85,564

REVEGETATION WORKTask description: **Weed Management**Site: **Pueblo Cement Plant and
Limestone Quarry**Permit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 007
Date: 12/12/2023
User: BFBState: Colorado
County: PuebloAbbreviation: None
Filename: M004-007Agency 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)	\$338.80
Total Tilling Cost/Acre	\$338.80

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre

	\$
Total Seed Application Cost/Acre	\$0.00

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: 191.2 Cost /Acre: \$338.80
 Estimated Failure Rate: 0% Cost /Acre*: \$0.00
 *Selected Replanting Work Items: NONE

Initial Job Cost: **\$64,778.56**
 Reseeding Job Cost: **\$0.00**
 Total Job Cost: **\$64,779**
 Job Hours: **24.00**

REVEGETATION WORKTask description: Revegetation Arroyo 27 ac and Affected Area 71 acSite: Pueblo Cement Plant and
Limestone QuarryPermit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 008State: ColoradoAbbreviation: NoneDate: 12/12/2023County: PuebloFilename: 004-008User: BFBAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
5-10-10, 5-10-15, 6-12-12	100.00	pound	\$0.39	\$39.00
			Total Fertilizer Materials Cost/Acre	\$39.00

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$41.82
Total Fertilizer Application Cost/Acre	\$41.82

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$451.62

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	1.00	8.93	\$11.50
Blue Grama - Native	1.00	16.32	\$13.73
Buffalograss - Native/Plains	2.00	1.93	\$24.13
Sand Dropseed	0.25	29.84	\$2.44
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	3.00	9.85	\$25.13
Western Wheatgrass - Native	2.00	5.05	\$12.00
Prairie Junegrass	0.25	13.29	\$6.50

Totals Seed Mix	10.50	91.18	\$108.99
------------------------	-------	-------	-----------------

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	\$429.79	\$859.57
Total Mulch Materials Cost/Acre				\$859.57

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$74.46
Power mulcher (MEANS 32 91 13.16 0350)	\$147.67
Total Mulch Application Cost/Acre	\$222.13

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:	98	Cost /Acre:	\$1,955.13
Estimated Failure Rate:	25%	Cost /Acre*:	\$340.99
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$191,602.74
Reseeding Job Cost:	\$8,354.26
Total Job Cost:	\$199,957
Job Hours:	200.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mobilization/DemobilizationSite: Pueblo Cement Plant and
Limestone QuarryPermit Action: 2023 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**

Task #: 009 State: Colorado Abbreviation: None
 Date: 12/12/2023 County: Pueblo Filename: 004-009
 User: BFB

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:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

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 D9T - 9SU	66.13	\$257.08	\$175.95	2	\$866.06	\$351.90	\$500.00
CAT 14M	23.57	\$155.16	\$82.29	1	\$237.45	\$82.29	\$250.00
Cat 637G w/push-pull	59.59	\$255.23	\$175.95	6	\$2,587.08	\$1,055.70	\$1,000.00
Water Tanker, 10,000 Gal.	41.10	\$135.95	\$158.17	1	\$294.12	\$158.17	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	2	\$178.04	\$164.58	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00

Subtotals: **\$4,270.98** **\$1,894.93** **\$2,500.00**

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.	\$15.83	1	\$15.83	\$15.83

Subtotals: **\$15.83** **\$15.83**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>PUEBLO</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>55.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$43,118.38</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$5.76</u>
'** one round trip, no haul rig:	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.18</u>	<u>0.18</u>
Return Time (Hours):	<u>0.18</u>	<u>0.18</u>
Loading Time (Hours):	<u>2.10</u>	<u>NA</u>
Unloading Time (Hours):	<u>2.10</u>	<u>NA</u>
Subtotals:	<u>4.56</u>	<u>0.36</u>

JOB TIME AND COST

Total job time:	<u>9.13</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$43,124</u>
-----------------	-----------------

MISCELLANEOUS TRUCK WORK

Task description: Lube Truck

Site: Pueblo Cement Plant and
Limestone Quarry

Permit Action: 2023 Inspection

Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 010
Date: 12/12/2023
User: BFB

State: Colorado
County: Pueblo

Abbreviation: None
Filename: 004-010

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Lube Truck, 6x4, 250 HP
Attachment 1: _____
Attachment 2: _____
Labor Unit 1: Fuel/Lube Truck Driver
Labor Unit 2: _____

Horsepower: 250
Shift Basis: 1 per day
Weight: _____
(US Tons)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$16.65</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$37.60</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.91</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$93.16</u>	
Total Fleet Cost/Hour:	<u>\$93.16</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s)

Total job time: 100.00 Hours

Unit cost: \$93.16 /Hour

Total job cost: \$9,316

MISCELLANEOUS TRUCK WORK

Task description: Fuel Truck

Site: Pueblo Cement Plant and Limestone Quarry Permit Action: 2023 Inspection Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 011 State: Colorado Abbreviation: None
Date: 12/12/2023 County: Pueblo Filename: 004-011
User: BFB

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Fuel Tanker, 6x4, 210 HP Horsepower: 210
Attachment 1: _____ Shift Basis: 1 per day
Attachment 2: _____ Weight: _____
Labor Unit 1: Fuel/Lube Truck Driver (US Tons)
Labor Unit 2: _____

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$16.65</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$37.60</u>	<u>100</u>
Operator Cost/Hour:	<u>\$38.91</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$93.16</u>	
Total Fleet Cost/Hour:	<u>\$93.16</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 100.00 Hours
Unit cost: \$93.16 /Hour Total job cost: \$9,316

MISCELLANEOUS TRUCK WORK

Task description: Construction Management Truck

Site: Pueblo Cement Plant and
Limestone Quarry

Permit Action: 2023 Inspection

Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #: 012
Date: 12/12/2023
User: BFB

State: Colorado
County: Pueblo

Abbreviation: None
Filename: 004-012

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Make and Model: Light Duty Pickup, 4x4, 3/4 T.
Attachment 1: _____
Attachment 2: _____
Labor Unit 1: Foreman
Labor Unit 2: _____

Horsepower: 160
Shift Basis: 1 per day
Weight: 2.25
(US Tons)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$5.01</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$10.82</u>	<u>100</u>
Operator Cost/Hour:	<u>\$72.80</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$88.63</u>	
Total Fleet Cost/Hour:	<u>\$88.63</u>	

JOB TIME AND COST

Fleet size: 1 Truck(s)

Total job time: 100.00 Hours

Unit cost: \$88.63 /Hour

Total job cost: \$8,863