



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

December 28, 2020

Ms. Diana Furman  
GCC Rio Grande, Inc.  
3372 Lime Road  
Pueblo, CO 81004

**RE: Division's Financial Warranty Cost Estimate for the  
Pueblo Cement Plant and Limestone Quarry (M2002-004)**

Dear Ms. Furman,

On November 10, 2020 the Division performed an inspection as part of the Division's Routine Monitoring Program of the Pueblo Cement Plant and Limestone Quarry. As part of the inspection the financial warranty for the permit was calculated. The Division used observations made during the inspection, correspondence with the operator, and details provided in various technical revisions and Amendment 1 during the cost estimate calculations.

A copy of the permit's estimate is attached for your review. The Division will allow 14 days to review and comment on the bond estimate prior to issuing a surety increase notice for the Pueblo Cement Plant and Limestone Quarry. Once the surety increase is issued by the Division, the Operator will have 60 days to provide the additional financial warranty.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8114**, or by email at [patrick.lennberg@state.co.us](mailto:patrick.lennberg@state.co.us).

Sincerely,

Patrick Lennberg  
Environmental Protection Specialist

cc: Jared Ebert, DRMS

ec: Diana Furman, GCC, Inc., [dfurman@gcc.com](mailto:dfurman@gcc.com)



## COST SUMMARY WORK

Task description: Cost Summary

Site: Pueblo Cement Plant and  
Limestone Quarry

Permit Action: 2020 Inspection

Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None  
Date: 12/10/2020 County: Pueblo Filename: M004-000  
User: JPL

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         | \$281,318          |
| 002                      | Grade Highwall to 4:1                             | DOZER     | 2          | 204.55         | \$142,383          |
| 003                      | Arroyo Restoration                                | SCRAPER1  | 3          | 372.88         | \$1,069,702        |
| 004                      | Arroyo Topsoil Placement                          | SCRAPER1  | 3          | 18.38          | \$52,728           |
| 005                      | Rip Haul Roads and Conveyor Area                  | RIPPER    | 2          | 40.05          | \$28,089           |
| 005a                     | Haul Road Conveyor Area Topsoil Placement         | SCRAPER1  | 3          | 33.99          | \$97,509           |
| 006                      | Pit Area Overburden/Topsoil Placement             | SCRAPER1  | 3          | 21.58          | \$61,918           |
| 007                      | Weed Management                                   | REVEGE    | 1          | 24.00          | \$37,016           |
| 008                      | Revegetation Arroyo 27 ac and Affected Area 71 ac | REVEGE    | 1          | 200.00         | \$152,745          |
| 009                      | Mobilization/Demobilization                       | MOBILIZE  | 1          | 9.12           | \$32,968           |
| 010                      | Lube Truck  | MISCTRUK  | 1          | 100.00         | \$8,561            |
| 011                      | Fuel Truck  | MISCTRUK  | 1          | 100.00         | \$8,419            |
| 012                      | Construction Management Truck                     | MISCTRUK  | 1          | 100.00         | \$8,603            |
| <b><u>SUBTOTALS:</u></b> |   |           |            | <b>1424.55</b> | <b>\$1,981,959</b> |

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

|                      |        |                                    |             |
|----------------------|--------|------------------------------------|-------------|
| Liability insurance: | 2.02   | Total =                            | \$40,036    |
| Performance bond:    | 1.05   | Total =                            | \$20,811    |
| Job superintendent:  | 666.07 | Total =                            | \$46,325    |
| Profit:              | 10.00  | Total =                            | \$198,196   |
|                      |        | TOTAL O & P =                      | \$305,367   |
|                      |        | CONTRACT AMOUNT (direct + O & P) = | \$2,287,326 |

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

|  |       |         |           |
|--|-------|---------|-----------|
| Financial warranty processing (legal/related costs): | \$500 | Total = | \$500     |
| Engineering work and/or contract/bid preparation:    | 6.00  | Total = | \$137,240 |
| Reclamation management and/or administration:        | 5.00  |         | \$114,366 |

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$557,473

**TOTAL BOND AMOUNT (direct + indirect) = \$2,539,432**



## DEMOLITION WORK

Task description: Conveyor Belt Demo

Site: Pueblo Cement Plant and  
Limestone Quarry

Permit Action: 2020 Inspection

Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 001  
Date: 12/10/2020  
User: JPL

State: Colorado  
County: Pueblo

Abbreviation: None  
Filename: M004-001

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   | \$0.30    | \$319,680.00 |

Job Hours: 200.00

Subtotal  
(unadjusted): \$319,680.00

Total Cost  
(adjusted for location): \$281,318.40

**BULLDOZER WORK**Task description: **Grade Highwall to 4:1**Site: **Pueblo Cement Plant and  
Limestone Quarry**Permit Action: **2020 Inspection**Permit/Job#: **M2002004****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **12/10/2020**County: **Pueblo**Filename: **M004-002**User: **JPL**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:      | \$156.88        | NA                   |
| Operating Cost/Hour:      | \$127.87        | 100                  |
| Ripper own.<br>Cost/Hour: | \$15.59         | NA                   |
| Ripper op. Cost/Hour:     | \$7.67          | 75                   |
| Operator Cost/Hour:       | \$40.04         | NA                   |
| Total unit Cost/Hour:     | \$348.04        |                      |
| Total Fleet Cost/Hour:    | <b>\$696.08</b> |                      |

**MATERIAL QUANTITIES**Initial Volume: **179,059**Swell factor: **1.430**Loose volume: **256,054 LCY**Source of estimated volume: **HW 14,670' long 29' height**Source of estimated swell  
factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **115 feet**Unadjusted hourly  
production: **1,130.6 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 FactorSource

|                       |       |               |
|-----------------------|-------|---------------|
| Operator Skill:       | 0.750 | (AVG.)        |
| Material consistency: | 0.800 | (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:        | 1.329 | (CAT HB)      |
| Altitude:             | 1.000 | (CAT HB)      |
| Material Weight:      | 0.697 | (CAT HB)      |
| Blade type:           | 1.000 | (PAT)         |

Net correction: 0.5536

Adjusted unit  
production: 625.90 LCY/hr

Adjusted fleet  
production: **1251.8 LCY/hr**

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.556/LCY

Total job time: **204.55 Hours**

Total job cost: **\$142,383**

**SCRAPER TEAM WORK**Task description: Arroyo RestorationSite: Pueblo Cement Plant and  
Limestone QuarryPermit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**

Task #: 003 State: Colorado Abbreviation: None  
 Date: 12/10/2020 County: Pueblo Filename: M004-003  
 User: JPL

Agency 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:   | \$181.30          | NA         | NA                | NA        | \$65.89               | \$73.77     |
| Operating cost/hour:   | \$203.87          | NA         | NA                | NA        | \$29.48               | \$54.50     |
| %Utilization-ripper:   | NA                | NA         | NA                | NA        | 0                     | NA          |
| Ripper own. cost/hour: | NA                | NA         | NA                | NA        | \$4.83                | \$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:        | \$432.24          | NA         | NA                | NA        | \$147.07              | \$128.26    |
| Number of Units:       | 6                 | 0          | 0                 | 0         | 1                     | 1           |
| Group Subtotals:       | Work:             | \$2,593.44 | Support:          | \$0.00    | Maint:                | \$275.33    |

Total work team cost/hour: \$2,868.77**MATERIAL QUANTITIES**

Initial volume: 883,710 CCY Swell factor: 1.125  
 Loose volume: 994,174 LCY

Source 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 Struck Volume: 24.00 LCY  
 Material description: Decomposed rock - 25% Rock, 75% Earth Heaped Volume: 34.00 LCY  
 Rated Payload: 81,600 pounds Average Volume: 29.00 LCY

Payload Capacity: 30.79 LCYAdjusted Capacity: 29.00 LCYCycle Time:

Scraper Loading Time: 1.00 Minutes  
 Maneuver and Spread Time: 0.60 Minutes

Job 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/HourOptimal Number of Scrapers per push dozer:           **JOB TIME AND COST**Fleet size: 3 Team(s)Total job time: 372.88 HoursUnit cost: \$1.076 /LCYTotal job cost: \$1,069,702



**SCRAPER TEAM WORK**Task description: Arroyo Topsoil PlacementSite: Pueblo Cement Plant and  
Limestone QuarryPermit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**

Task #: 004 State: Colorado Abbreviation: None  
 Date: 12/11/2020 County: Pueblo Filename: M004-004  
 User: JPL

Agency 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:   | \$181.30          | NA         | NA                | NA        | \$65.89               | \$73.77     |
| Operating cost/hour:   | \$203.87          | NA         | NA                | NA        | \$29.48               | \$54.50     |
| %Utilization-ripper:   | NA                | NA         | NA                | NA        | 0                     | NA          |
| Ripper own. cost/hour: | NA                | NA         | NA                | NA        | \$4.83                | \$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:        | \$432.24          | NA         | NA                | NA        | \$147.07              | \$128.26    |
| Number of Units:       | 6                 | 0          | 0                 | 0         | 1                     | 1           |
| Group Subtotals:       | Work:             | \$2,593.44 | Support:          | \$0.00    | Maint:                | \$275.33    |

Total work team cost/hour: \$2,868.77**MATERIAL QUANTITIES**

Initial volume: 43,560 CCY Swell factor: 1.125  
 Loose volume: 49,005 LCY

Source 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 Struck Volume: 24.00 LCY  
 Material description: Decomposed rock - 25% Rock, Heaped Volume: 34.00 LCY  
75% Earth  
 Rated Payload: 81,600 pounds Average Volume: 29.00 LCY

Payload Capacity: 30.79 LCYAdjusted Capacity: 29.00 LCYCycle Time:Scraper Loading Time: 1.00 Minutes  
Maneuver 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/HourOptimal Number of Scrapers per push dozer:           **JOB TIME AND COST**Fleet size: 3 Team(s)Total job time: 18.38 HoursUnit cost: \$1.076 /LCYTotal job cost: \$52,728

**SCRAPER TEAM WORK**Task description: **Haul Road Conveyor Area Topsoil Placement**Site: **Pueblo Cement Plant and  
Limestone Quarry**Permit Action: **2020 Inspection**Permit/Job#: **M2002004****PROJECT IDENTIFICATION**Task #: **005A**  
Date: **12/11/2020**  
User: **JPL**State: **Colorado**  
County: **Pueblo**Abbreviation: **None**  
Filename: **M004-005a**Agency 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:   | \$181.30          | NA         | NA                | NA        | \$65.89               | \$73.77     |
| Operating cost/hour:   | \$203.87          | NA         | NA                | NA        | \$29.48               | \$54.50     |
| %Utilization-ripper:   | NA                | NA         | NA                | NA        | 0                     | NA          |
| Ripper own. cost/hour: | NA                | NA         | NA                | NA        | \$4.83                | \$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:        | \$432.24          | NA         | NA                | NA        | \$147.07              | \$128.26    |
| Number of Units:       | 6                 | 0          | 0                 | 0         | 1                     | 1           |
| Group Subtotals:       | Work:             | \$2,593.44 | Support:          | \$0.00    | Maint:                | \$275.33    |

Total work team cost/hour: **\$2,868.77****MATERIAL QUANTITIES**Initial volume: **94,514** CCY      Swell factor: **1.125**  
Loose volume: **106,328** LCYSource of estimated volume: **Inspection Map, topsoil 1'**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 pounds**Struck 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 Minutes  
Maneuver 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 COST**Fleet size: 3 Team(s)Total job time: 33.99 HoursUnit cost: \$0.917 /LCYTotal job cost: \$97,509

## BULLDOZER RIPPING WORK

Task description: Rip Haul Roads and Conveyor Area

Site: Pueblo Cement Plant and Limestone Quarry

Permit Action: 2020 Inspection

Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 005  
Date: 12/11/2020  
User: JPL

State: Colorado  
County: Pueblo

Abbreviation: None  
Filename: M004-005

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU  
Ripper Attachment: 3-Shank Ripper

Horsepower: 405  
Shift Basis: 1 per day  
Data Source: (CRG)

#### Cost Breakdown:

|                             |                 | Utilization % |
|-----------------------------|-----------------|---------------|
| Ownership Cost/Hour:        | \$156.88        | NA            |
| Operating Cost/Hour:        | \$127.87        | 100           |
| Ripper Ownership Cost/Hour: | \$15.59         | NA            |
| Ripper Operating Cost/Hour: | \$10.23         | 100           |
| Operator Cost/Hour:         | \$40.04         | NA            |
| Total Unit Cost/Hour:       | \$350.60        |               |
| Total Fleet Cost/Hour:      | <b>\$701.20</b> |               |

### 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:     \$479.341     Per acre

Total job cost:     **\$28,089**

**SCRAPER TEAM WORK**Task description: **Pit Area Overburden/Topsoil Placement**Site: **Pueblo Cement Plant and  
Limestone Quarry**Permit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**

Task #: 006 State: Colorado Abbreviation: None  
 Date: 12/11/2020 County: Pueblo Filename: M004-006  
 User: JPL

Agency 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:   | \$181.30          | NA         | NA                | NA        | \$65.89               | \$73.77     |
| Operating cost/hour:   | \$203.87          | NA         | NA                | NA        | \$29.48               | \$54.50     |
| %Utilization-ripper:   | NA                | NA         | NA                | NA        | 0                     | NA          |
| Ripper own. cost/hour: | NA                | NA         | NA                | NA        | \$4.83                | \$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:        | \$432.24          | NA         | NA                | NA        | \$147.07              | \$128.26    |
| Number of Units:       | 6                 | 0          | 0                 | 0         | 1                     | 1           |
| Group Subtotals:       | Work:             | \$2,593.44 | Support:          | \$0.00    | Maint:                | \$275.33    |

Total work team cost/hour: **\$2,868.77****MATERIAL QUANTITIES**

Initial volume: 60,016 CCY Swell factor: 1.125  
 Loose volume: 67,518 LCY

Source 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 Struck Volume: 24.00 LCY  
 Material description: Decomposed rock - 25% Rock, 75% Earth Heaped Volume: 34.00 LCY  
 Rated Payload: 81,600 pounds 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/HourOptimal Number of Scrapers per push dozer: **JOB TIME AND COST**Fleet size: 3 Team(s)Total job time: 21.58 HoursUnit cost: \$0.917 /LCYTotal job cost: \$61,918



**REVEGETATION WORK**Task description: Weed ManagementSite: Pueblo Cement Plant and  
Limestone QuarryPermit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 007  
Date: 12/11/2020  
User: JPLState: Colorado  
County: PuebloAbbreviation: None  
Filename: M004-007Agency or organization name: DRMS**FERTILIZING****Materials**

| Description | Units /<br>Acre | Unit | Cost / Unit   | Cost /Acre    |
|-------------|-----------------|------|---|---------------|
|             |                 |      | \$  | \$            |
|             |                 |      | <b>Total Fertilizer<br/>Materials<br/>Cost/Acre</b> | <b>\$0.00</b> |

**Application**

| Description                                   | Cost /Acre    |
|---|---------------|
|   | \$            |
| <b>Total Fertilizer Application Cost/Acre</b> | <b>\$0.00</b> |

**TILLING**

| Description                                    | Cost /Acre      |
|--|-----------------|
| Weed control spraying (MEANS 31 31 16.13 3100) | \$193.60        |
| <b>Total Tilling Cost/Acre</b>                 | <b>\$193.60</b> |

**SEEDING**

| Seed Mix               | Rate –<br>PLS<br>LBS /<br>Acre | Seeds<br>per SQ.<br>FT | Cost /Acre    |
|------------------------|--------------------------------|------------------------|---------------|
|                        |                                |                        | \$            |
| <b>Totals Seed Mix</b> | 0.00                           | 0.00                   | <b>\$0.00</b> |

**Application**

| Description | Cost /Acre |
|-------------|------------|
|             |            |

|   |               |
|---|---------------|
|   | \$            |
| <b>Total Seed Application Cost/Acre</b> | <b>\$0.00</b> |

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

| Description                            | Units /<br>Acre | Unit | Cost / Unit | Cost /Acre    |
|--|-----------------|------|-------------|---------------|
|  |                 |      | \$          | \$            |
| <b>Total Mulch Materials Cost/Acre</b> |                 |      |             | <b>\$0.00</b> |

**Application**

| Description                              | Cost /Acre    |
|--|---------------|
|  | \$            |
| <b>Total Mulch Application Cost/Acre</b> | <b>\$0.00</b> |

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

|                                  |                    |              |          |
|----------------------------------|--------------------|--------------|----------|
| No. of Acres:                    | 191.2              | Cost /Acre:  | \$193.60 |
| Estimated Failure Rate:          | 0%                 | Cost /Acre*: | \$0.00   |
| *Selected Replanting Work Items: | NONE               |              |          |
| Initial Job Cost:                | <b>\$37,016.32</b> |              |          |
| Reseeding Job Cost:              | <b>\$0.00</b>      |              |          |
| Total Job Cost:                  | <b>\$37,016</b>    |              |          |
| Job Hours:                       | <b>24.00</b>       |              |          |

**REVEGETATION WORK**Task description: Revegetation Arroyo 27 ac and Affected Area 71 acSite: Pueblo Cement Plant and  
Limestone QuarryPermit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**Task #: 008State: ColoradoAbbreviation: NoneDate: 12/11/2020County: PuebloFilename: M004-008User: JPLAgency or organization name: DRMS**FERTILIZING****Materials**

| Description               | Units /<br>Acre | Unit  | Cost / Unit   | Cost /Acre     |
|---------------------------|-----------------|-------|---|----------------|
| 5-10-10, 5-10-15, 6-12-12 | 100.00          | pound | \$0.21  | \$20.50        |
|                           |                 |       | <b>Total Fertilizer<br/>Materials<br/>Cost/Acre</b> | <b>\$20.50</b> |

**Application**

| Description                                     | Cost /Acre     |
|---|----------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | \$37.03        |
| <b>Total Fertilizer Application Cost/Acre</b>   | <b>\$37.03</b> |

**TILLING**

| Description                                      | Cost /Acre      |
|--|-----------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$107.16        |
| Weed control spraying (MEANS 31 31 16.13 3100)   | \$193.60        |
| <b>Total Tilling Cost/Acre</b>                   | <b>\$300.76</b> |

**SEEDING**

| Seed Mix                     | Rate –<br>PLS<br>LBS /<br>Acre | Seeds<br>per SQ.<br>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     |
|                              |                                |                        |            |

|                        |       |       |                 |
|------------------------|-------|-------|-----------------|
| <b>Totals Seed Mix</b> | 10.50 | 91.18 | <b>\$108.99</b> |
|------------------------|-------|-------|-----------------|

**Application**

| <b>Description</b>                      | <b>Cost /Acre</b> |
|---|-------------------|
| Drill Seeding (DRMS Survey Cost)        | \$232.00          |
| <b>Total Seed Application Cost/Acre</b> | <b>\$232.00</b>   |

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

| <b>Description</b>                      | <b>Units /<br/>Acre</b> | <b>Unit</b> | <b>Cost / Unit</b> | <b>Cost /Acre</b> |
|---|-------------------------|-------------|--------------------|-------------------|
| Hay, delivered {MEANS 31 25 14.16 1200} | 2.00                    | TON         | \$301.00           | \$602.00          |
| <b>Total Mulch Materials Cost/Acre</b>  |                         |             |                    | <b>\$602.00</b>   |

**Application**

| <b>Description</b>                       | <b>Cost /Acre</b> |
|--|-------------------|
| Crimping, with tractor {DMG survey data} | \$70.17           |
| Power mulcher (MEANS 32 91 13.16 0350)   | \$101.93          |
| <b>Total Mulch Application Cost/Acre</b> | <b>\$172.10</b>   |

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

|                                  |         |              |            |
|----------------------------------|---------|--------------|------------|
| No. of Acres:                    | 98      | Cost /Acre:  | \$1,473.38 |
| Estimated Failure Rate:          | 25%     | Cost /Acre*: | \$340.99   |
| *Selected Replanting Work Items: | SEEDING |              |            |

|                     |                     |
|---------------------|---------------------|
| Initial Job Cost:   | <b>\$144,391.24</b> |
| Reseeding Job Cost: | <b>\$8,354.26</b>   |
| Total Job Cost:     | <b>\$152,745</b>    |
| Job Hours:          | <b>200.00</b>       |

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: Mobilization/DemobilizationSite: Pueblo Cement Plant and  
Limestone QuarryPermit Action: 2020 InspectionPermit/Job#: M2002004**PROJECT IDENTIFICATION**

Task #: 009 State: Colorado Abbreviation: None  
 Date: 12/11/2020 County: Pueblo Filename: M004-009  
 User: JPL

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:**

| <b>Available Rig Capacities</b> | <b>0-25 Tons</b> | <b>26-50 Tons</b> | <b>51+ Tons</b> |
|---------------------------------|------------------|-------------------|-----------------|
| 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/<br>Unit<br>(TONS) | Owner ship<br>Cost/hr/ unit | Haul Rig<br>Cost/hr/unit | Fleet<br>Size | Haul Trip<br>Cost/hr/<br>fleet | Return Trip<br>Cost/hr/ fleet | DOT Permit<br>Cost/ fleet |
|-------------------------------------|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Cat D9T - 9SU                       | 66.13                     | \$172.47                    | \$141.54                 | 2             | \$628.02                       | \$283.08                      | \$500.00                  |
| CAT 14M                             | 23.57                     | \$70.72                     | \$67.39                  | 1             | \$138.11                       | \$67.39                       | \$250.00                  |
| Cat 637G w/push-pull                | 59.59                     | \$181.30                    | \$141.54                 | 6             | \$1,937.04                     | \$849.24                      | \$1,000.00                |
| Water Tanker, 10,000 Gal.           | 41.10                     | \$73.77                     | \$123.81                 | 1             | \$197.58                       | \$123.81                      | \$250.00                  |
| Drill/Broadcast Seeder with Tractor | 25.00                     | \$6.72                      | \$67.39                  | 2             | \$148.22                       | \$134.78                      | \$250.00                  |
| Power Mulcher (Bowie LD-90)         | 6.00                      | \$11.19                     | \$67.39                  | 1             | \$78.58                        | \$67.39                       | \$250.00                  |

Subtotals: **\$3,127.55** **\$1,525.69** **\$2,500.00****ROADABLE EQUIPMENT:**

| Machine Description            | Total Cost/hr/<br>unit | Fleet Size | Haul Trip<br>Cost/hr/ fleet | Return Trip<br>Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 3/4 T. | \$13.23                | 1          | \$13.23                     | \$13.23                       |

Subtotals: **\$13.23** **\$13.23**



**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>\$32,963.51</u> |
|-------------------------------------|--------------------|

\* two round trips with haul rig:

|                                  |               |
|----------------------------------|---------------|
| Total Roadable Mob/Demob Cost ** | <u>\$4.81</u> |
|----------------------------------|---------------|

\*\* one round trip, no haul rig:

**Transportation Cycle Time:**

|                         | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours):      | 0.18                   | 0.18               |
| Return Time (Hours):    | 0.18                   | 0.18               |
| Loading Time (Hours):   | 2.10                   | NA                 |
| Unloading Time (Hours): | 2.10                   | NA                 |
| Subtotals:              | 4.56                   | 0.36               |

**JOB TIME AND COST**

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

|                 |                 |
|-----------------|-----------------|
| Total job cost: | <u>\$32,968</u> |
|-----------------|-----------------|

## MISCELLANEOUS TRUCK WORK

Task description: Lube Truck

Site: Pueblo Cement Plant and Limestone Quarry Permit Action: 2020 Inspection Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 010 State: Colorado Abbreviation: None  
Date: 12/11/2020 County: Pueblo Filename: M004-010  
User: JPL

Agency or organization name: DRMS

### HOURLY EQUIPMENT COST

Make and Model: Lube Truck, 6x4, 250 HP Horsepower: 250  
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>\$15.76</u> | <u>NA</u>     |
| Operating Cost/Hour:   | <u>\$30.95</u> | <u>100</u>    |
| Operator Cost/Hour:    | <u>\$38.91</u> | <u>NA</u>     |
| Total Unit Cost/Hour:  | <u>\$85.61</u> |               |
| Total Fleet Cost/Hour: | <u>\$85.61</u> |               |

### JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 100.00 Hours  
Unit cost: \$85.61 /Hour Total job cost: \$8,561



## MISCELLANEOUS TRUCK WORK

Task description: Fuel Truck

Site: Pueblo Cement Plant and Limestone Quarry Permit Action: 2020 Inspection Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 011 State: Colorado Abbreviation: None  
Date: 12/11/2020 County: Pueblo Filename: M004-011  
User: JPL

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>\$14.71</u> | <u>NA</u>     |
| Operating Cost/Hour:   | <u>\$30.58</u> | <u>100</u>    |
| Operator Cost/Hour:    | <u>\$38.91</u> | <u>NA</u>     |
| Total Unit Cost/Hour:  | <u>\$84.19</u> |               |
| Total Fleet Cost/Hour: | <u>\$84.19</u> |               |

### JOB TIME AND COST

Fleet size: 1 Truck(s) Total job time: 100.00 Hours  
Unit cost: \$84.19 /Hour Total job cost: \$8,419

## MISCELLANEOUS TRUCK WORK

Task description: Construction Management Truck

Site: Pueblo Cement Plant and  
Limestone Quarry

Permit Action: 2020 Inspection

Permit/Job#: M2002004

### PROJECT IDENTIFICATION

Task #: 012  
Date: 12/16/2020  
User: JPL

State: Colorado  
County: Pueblo

Abbreviation: None  
Filename: M004-012

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>\$4.84</u>  | <u>NA</u>     |
| Operating Cost/Hour:   | <u>\$8.39</u>  | <u>100</u>    |
| Operator Cost/Hour:    | <u>\$72.80</u> | <u>NA</u>     |
| Total Unit Cost/Hour:  | <u>\$86.03</u> |               |
| Total Fleet Cost/Hour: | <u>\$86.03</u> |               |

### JOB TIME AND COST

Fleet size: 1 Truck(s)

Total job time: 100.00 Hours

Unit cost: \$86.03 /Hour

Total job cost: \$8,603