

June 29, 2016

Sean Mello
Silt Sand & Gravel, LLC
P.O. Box 1319
Carbondale, CO 81623



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

1313 Sherman Street, Room 215
Denver, CO 80203

RE: Grand River Park Project, Permit No. M-2006-046, Technical Revision (TR-1) Approval

Dear Mr. Mello:

On June 29, 2016 the Division of Reclamation, Mining and Safety (Division) approved the Technical Revision request (TR-1) submitted on June 24, 2016, addressing the following:

Revise the mining plan, reclamation plan, and bond calculations to reflect a phased approach

The terms of the TR-1 approved by the Division are hereby incorporated into Permit No. M-2006-046. All other conditions and requirements of the permit remain in full force and effect.

The estimated liability amount of \$192,808 exceeds the \$ 162,454 Financial Warranty currently held for this site. If you have not already done so, please submit additional bond in the amount of \$ **30,354**. The revision will not be final until the bond is approved by the Division. ***Pursuant to Section 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.*** The additional amount needs to be accepted prior to **Monday, August 29, 2016**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Attached is a table summarizing input values that have been updated from the 2007 calculation. It is noted that no surety increases have occurred since the permit issuance in 2007. Values were taken directly TR-1. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation permit.

Please make arrangements with Barbara Coria at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Barbara Coria.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@state.co.us



Sincerely,



Amy Yeldell

Environmental Protection Specialist
Department of Natural Resources
Division of Reclamation, Mining and Safety
Phone: (970) 254-8511
Fax: (970) 241-1516

Cc:

Russ Means, Senior EPS / Field Office Supervisor, Grand Junction DRMS

Table summarizing changes to input values

| Task | Form Used | Change | Justification |
|----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 001 | Demo | + | No demo originally accounted for. As indicated by Mr. Mello no structures related to mining will remain upon release. |
| 002 | Pumping | + | Additional discharge hose. Different pump with higher capacity. 3 pumps used. Less total job time. Values taken from GLA calculations lakes total ~30 ac surface, 20 ft deep, plus inflow for total of ~880ac-ft to be pumped. |
| 003 | Scraper | - | Switch from truck and loader team to scraper. Less total job time and slightly cheaper. * not included on GLA calculation in TR-1 |
| 004 | Dozer | + | Never estimate using excellent operator always average, slightly less efficient. Increases hours and cost due to less production. |
| 005 | Scraper | - | Larger scraper more efficient. Less hours but relatively same cost. Originally 42,753 cy, per TR-1 17,809 cy of topsoil. |
| 006 | Reveg | 1 | Added minimal tamarisk treatment. Added power mulcher for application before crimping. Ponderosa pine is not offered in 10 gallon pots so staff selected 2.25 in Diameter instead. Fremont Cottonwood is no longer available so staff selected Sandbar Willow as an alternative species. More total job hours for extra tasks. Originally 53 ac, per TR-1 22 ac |
| 007 | Mobilize | + | Larger scraper. No loader and truck team, used a scraper instead, less equipment. Update reveg equipment with actual pieces rather than general function, which required a power mulcher and drill seeder. Different pump, now 3 pumps instead of 2. Added support crew truck. |
| 008 | Mobilize | + | No secondary mobilization for reseeding failure areas accounted for. Requires reveg equipment and crew. |
| Indirect costs | | - | Less total job hours due to more efficient equipment use. Pumping not factored in for hours needing superintendent. |

COST SUMMARY WORK

Task description: TR-1 Update

Site: Grand River Park Project

Permit Action: 2016-06

Permit/Job#: M2006046

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 5/26/2016

County: Garfield

Filename: M046-000

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|--------------------------|------------------------------------------------------|-----------|------------|---------------|------------------|
| 001 | Demo of structures | DEMOLISH | 1 | 10.00 | \$1,782.82 |
| 002 | Dewater Pit for Grading | PUMPING | 1 | 709.59 | \$51,559.00 |
| 003 | Backfill Regulating Pond | SCRAPER1 | 2 | 7.69 | \$5,154.00 |
| 004 | Regrade 1000' of Highwall | DOZER | 1 | 75.42 | \$15,939.00 |
| 005 | Replace 6" topsoil over disturbed areas | SCRAPER1 | 2 | 21.28 | \$11,433.00 |
| 006 | Reveg 22 acres | REVEGE | 1 | 35.00 | \$51,558.00 |
| 007 | Initial Mobilization of Reclamation crew/equipment | MOBILIZE | 1 | 6.53 | \$10,407.00 |
| 008 | Secondary Mobilization of Reclamation crew/equipment | MOBILIZE | 1 | 2.53 | \$1,566.00 |
| <u>SUBTOTALS:</u> | | | | 868.04 | \$149,399 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$3,017.86

Performance bond: 1.05

Total = \$1,568.69

Job superintendent: 79.22

Total = \$5,900.31

Profit: 10.00

Total = \$14,939.90

TOTAL O & P = \$25,426.76

CONTRACT AMOUNT (direct + O & P) = \$174,825.76

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 5.00

Total = \$8,741.29

Reclamation management and/or administration: 5.00

\$8,741.29

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$43,409.34

TOTAL BOND AMOUNT (direct + indirect) = \$192,808.34

DEMOLITION WORK

Task description: Demo of structures

Site: Grand River Park Project

Permit Action: 2016-06

Permit/Job#: M2006046

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 5/26/2016

County: Garfield

Filename: M046-001

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.50 %

| Structure or Item Description | Dimensions | Demolition Menu Selection | Quantity | Unit | Unit Cost | Total Cost |
|-------------------------------|-------------------|----------------------------------------------------------------------------|----------|------|-----------|------------|
| Cement Fuel Containment | 30'W x 30'L x 3'H | Sidewalk, concrete, demolition only, 4 in. thick - No reinforcing | 140.00 | SY | \$8.48 | \$1,187.20 |
| Scale Removal | 15'W x 70'L | Loading and 5 mile haul, salvage allowed - Steel frame structures | 19.00 | CY | \$10.57 | \$200.83 |
| Scale Cement Ramps | (2) 15'W x 15'L | Demo. and on-site disposal in existing pit, 6 in. thick - Max. 50 ft. push | 450.00 | SF | \$1.06 | \$478.80 |

Job Hours: 10.00

Subtotal
(unadjusted): \$1,866.83

Total Cost
(adjusted for location): \$1,782.82

PUMPING WORK

Task description: Dewater Pit for Grading

Site: Grand River Park Project

Permit Action: 2016-06

Permit/Job#: M2006046

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 5/26/2016

County: Garfield

Filename: M046-002

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

| | Description | Quantity |
|-----------------|------------------------------------|----------|
| Make and Model: | Submersible pump - 460v, 8 in. | 3 |
| Attachment 1: | Suction hose - 6 in. diam., 25 ft. | 3 |
| Attachment 2: | Discharge hose - 6 in. D., 25 ft. | 9 |
| Labor Unit 1: | Pump operator | 1 |

Horsepower: 95

Shift Basis: 1 per day

Weight: 0.70

(US Tons)

Cost Breakdown:

| | | Utilization % |
|-----------------------|---------|---------------|
| Ownership Cost/Hour: | \$17.40 | NA |
| Operating Cost/Hour: | \$35.88 | 100 |
| Operator Cost/Hour: | \$19.38 | NA |
| Total Unit Cost/Hour: | \$72.66 | |

Total Fleet Cost/Hour: \$72.66

PUMPING QUANTITIES

| | | | | |
|------------------------------------|-----------------------|---------|----------------------------------|--------------------|
| Initial Pond Volume: | <u>600.00</u> | | Conversion factor: | <u>325850.5800</u> |
| Final Pond Volume: | <u>195,510,348.00</u> | gallons | | |
| Total Pond Inflow Surface Area: | <u>1,306,800</u> | Sq. ft. | Unit inflow rate in gph/sq. ft.: | <u>0.3516</u> |
| Total Pond Inflow Volume per Hour: | <u>459,470.88</u> | gallons | | |

Source of estimated volume: Phase 1B and 2 lakes, 30 ac 20' deep

PUMPING TIME

| | | |
|----------------------------------|--------------------|---------------|
| Maximum Pump Capacity: | <u>170,000</u> | gph/pump |
| Estimated Suction Head: | <u>15</u> | feet |
| Estimated Discharge Head: | <u>20</u> | feet |
| Total Head: | <u>35</u> | feet |
| CPB Pump Capacity: | <u>163,200</u> | gph/pump |
| Site Altitude: | <u>5,400</u> | feet |
| Adjusted Pumping Capacity: | <u>489,600</u> | gph |
| Initial Unadjusted Pumping Time: | <u>399.33</u> | hours |
| Inflow during Initial Pumping: | <u>183,478,986</u> | gallons |
| Net Unadjusted Pumping Time: | <u>774.08</u> | Hours |
| Altitude Adjustment Factor: | <u>1.0000</u> | (3% rule) |
| Pump Efficiency Factor: | <u>0.9167</u> | (55 min./hr.) |
| Total Adjusted Pumping Time: | <u>709.60</u> | hours |

JOB TIME AND COST

Total job time: 709.60 Hours

Unit cost: \$0.000136 /Gallon

Total job cost: \$51,559

SCRAPER TEAM WORKTask description: **Backfill Regulating Pond**Site: **Grand River Park Project**Permit Action: 2016-06Permit/Job#: M2006046**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 5/26/2016County: GarfieldFilename: M046-003User: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

| Equipment Description | |
|---------------------------------|---------------|
| -Scraper: | Cat 631G |
| -Dozer: | NA |
| Support Equipment -Load Area: | NA |
| -Dump Area: | Cat D8T - 8SU |
| Road Maintenance -Motor Grader: | NA |
| -Water Truck: | NA |

Cost Breakdown:**Scraper Work Team****Support Equipment****Maintenance Equipment**

| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
|------------------------|----------------|-------|-------------------|-----------|--------------|-------------|
| %Utilization-machine: | 100 | NA | NA | 15 | NA | NA |
| Ownership cost/hour: | \$104.50 | NA | NA | \$82.01 | NA | NA |
| Operating cost/hour: | \$129.95 | NA | NA | \$11.88 | NA | NA |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | NA | NA | \$0.00 | NA | NA |
| Ripper op. cost/hour: | NA | NA | NA | \$0.00 | NA | NA |
| Operator cost/hour: | \$34.24 | NA | NA | \$38.89 | NA | NA |
| Unit Subtotals: | \$268.69 | NA | NA | \$132.78 | NA | NA |
| Number of Units: | 2 | 0 | 0 | 1 | 0 | 0 |
| Group Subtotals: | Work: \$537.38 | | Support: \$132.78 | | Maint: | \$0.00 |

Total work team cost/hour: **\$670.16****MATERIAL QUANTITIES**Initial volume: 4,444

CCY

Swell factor: 1.050Loose volume: **4,666**

LCY

Source of estimated volume: 200' x 300' 3' deepSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 3,400 lbs/LCY
 Material description: Sand and gravel - Wet
 Rated Payload: 81,600 pounds
 Payload Capacity: 24.00 LCY

Struck Volume: 24.00 LCY
 Heaped Volume: 34.00 LCY
 Average Volume: 29.00 LCY
 Adjusted Capacity: **24.00** LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5400 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: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1300.00 | -1.00 | 8.00 | 7.00 | 962 | 1.41 |

Haul Time: 1.41 minutesReturn Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 1300.00 | 1.00 | 8.00 | 9.00 | 1348 | 1.03 |

Return Time: 1.03 minutesTotal Scraper team cycle time: 3.94 minutesAdjusted for job conditions: 303.35 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 303.35 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 606.70 LCY/HourUnadjusted unit production/hour: 365.48 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 2 Team(s)Total job time: 7.69 HoursUnit cost: \$1.105 /LCYTotal job cost: \$5,154

BULLDOZER WORKTask description: **Regrade 1000' of Highwall**Site: **Grand River Park Project**Permit Action: **2016-06**Permit/Job#: **M2006046****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **5/26/2016**County: **Garfield**Filename: **M046-004**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

| | | <u>Utilization %</u> |
|------------------------|---------|----------------------|
| Ownership Cost/Hour: | \$82.01 | NA |
| Operating Cost/Hour: | \$79.23 | 100 |
| Ripper own. Cost/Hour: | \$8.40 | NA |
| Ripper op. Cost/Hour: | \$2.81 | 50 |
| Operator Cost/Hour: | \$38.89 | NA |

Total unit Cost/Hour: **\$211.34**Total Fleet Cost/Hour: **\$211.34****MATERIAL QUANTITIES**Initial Volume: **35,000**Swell factor: **1.099**Loose volume: **38,462 LCY**Source of estimated volume: **Application**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **60 feet**Unadjusted hourly production: **1,246.9 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **5,400 feet**Material weight: **3,400 lbs/LCY**Weight description: **Sand and gravel - Wet****Job Condition Correction Factor**

| | | <u>Source</u> |
|-----------------------|-------|---------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 0.900 | (CAT HB)) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |

| | | |
|------------------|-------|---------------|
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.900 | (SSD-FC) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.676 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.4090

Adjusted unit production: 509.98 LCY/hr

Adjusted fleet production: **509.98** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.414/LCY

Total job time: **75.42** Hours

Total job cost: **\$15,939**

SCRAPER TEAM WORKTask description: **Replace 6" topsoil over disturbed areas**Site: **Grand River Park Project**Permit Action: 2016-06Permit/Job#: M2006046**PROJECT IDENTIFICATION**Task #: 005
Date: 5/26/2016
User: ACYState: Colorado
County: GarfieldAbbreviation: None
Filename: M046-005Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

| Equipment Description | |
|---------------------------------|----------|
| -Scraper: | Cat 631G |
| -Dozer: | NA |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance -Motor Grader: | NA |
| -Water Truck: | NA |

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 | NA | NA |
| Ownership cost/hour: | \$104.50 | NA | NA | NA | NA | NA |
| Operating cost/hour: | \$129.95 | NA | NA | NA | NA | NA |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | NA | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | NA | NA | NA | NA | NA |
| Operator cost/hour: | \$34.24 | NA | NA | NA | NA | NA |
| Unit Subtotals: | \$268.69 | NA | NA | NA | NA | NA |
| Number of Units: | 2 | 0 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: \$537.38 | | Support: | \$0.00 | Maint: | \$0.00 |

Total work team cost/hour: **\$537.38****MATERIAL QUANTITIES**Initial volume: 17,809 CCY Swell factor: 1.215
Loose volume: 21,638 LCYSource of estimated volume: TR-1 table 2 (1,111 cy + 16,698 cy)
Source 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: 0.80 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5400 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: Soft, rutted dirt, no maintenance or water, 4" tire penetration 8.0Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 700.00 | -2.00 | 8.00 | 6.00 | 1069 | 0.70 |

Haul Time: 0.70 minutesReturn Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 700.00 | 2.00 | 8.00 | 10.00 | 1183 | 0.64 |

Return Time: 0.64 minutesTotal Scraper team cycle time: 2.84 minutesAdjusted for job conditions: 508.52 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 508.52 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,017.04 LCY/HourUnadjusted unit production/hour: 612.68 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 2 Team(s)Total job time: 21.28 HoursUnit cost: \$0.528 /LCYTotal job cost: \$11,433

REVEGETATION WORKTask description: Reveg 22 acresSite: Grand River Park ProjectPermit Action: 2016-06Permit/Job#: M2006046**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 5/26/2016County: GarfieldFilename: M046-006User: ACYAgency or organization name: DRMS**FERTILIZING****Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--------------------------|-----------------|-------|-----------------------------------------------------|----------------|
| 10-34-0, 18-46-0, 5-10-5 | 250.00 | pound | \$0.33 | \$82.50 |
| | | | Total Fertilizer Materials Cost/Acre | \$82.50 |

Application

| Description | Cost /Acre |
|-------------------------------------------------|----------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | \$21.34 |
| Total Fertilizer Application Cost/Acre | \$21.34 |

TILLING

| Description | Cost /Acre |
|--------------------------------------------------|-----------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$107.59 |
| Total Tilling Cost/Acre | \$107.59 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|------------------------------|--------------------------------|------------------------|----------------|
| Alkali Sacaton | 0.30 | 11.71 | \$6.86 |
| Bluebunch Wheatgrass - Secar | 2.40 | 7.71 | \$16.44 |
| Bottlebrush Squirreltail | 0.90 | 3.97 | \$22.42 |
| Muttongrass | 0.20 | 4.13 | \$7.37 |
| Western Wheatgrass - Arriba | 3.20 | 8.08 | \$11.81 |
| Saltgrass, Inland | 0.50 | 6.93 | \$23.54 |
| Totals Seed Mix | 7.50 | 42.53 | \$88.44 |

Application

| | |
|--|--|
| | |
|--|--|

| Description | Cost /Acre |
|-----------------------------------------|-----------------|
| Drill seeding (MEANS 32 92 19.13 0020) | \$434.00 |
| Total Seed Application Cost/Acre | \$434.00 |

MULCHING and MISCELLANEOUS**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------------------|-----------------|------|-------------|-----------------|
| Herbicide - Garlon @ 1.0 pt/ac | 0.50 | ACRE | \$5.31 | \$2.66 |
| Straw, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$246.00 | \$492.00 |
| Total Mulch Materials Cost/Acre | | | | \$494.66 |

Application

| Description | Cost /Acre |
|-------------------------------------------------|-----------------|
| Crimping, with tractor {DMG survey data} | \$66.02 |
| Power mulcher (MEANS 32 91 13.16 0350) | \$97.14 |
| Weed spray, truck, non-aquatic area, nox. [DMG] | \$62.72 |
| Total Mulch Application Cost/Acre | \$225.88 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-----------------------------------------|--------------|------------------------------------------|------------------|---------------------------|-----------------|
| Ash, Green | 1 | Small potted, 2.25 inch diameter (MEANS) | \$1.63 | \$2.40 | \$1.63 |
| Currant, Golden or Yellow | 7 | Container, 5 gallon (MEANS) | \$48.04 | \$2.40 | \$336.28 |
| Cottonwood, Narrowleaf | 2 | Small potted, 2.25 inch diameter (MEANS) | \$1.63 | \$2.40 | \$3.26 |
| Pine, Ponderosa | 1 | Small potted, 2.25 inch diameter (MEANS) | \$1.63 | \$2.40 | \$1.63 |
| Willow, Sandbar | 2 | Small potted, 2.25 inch diameter (MEANS) | \$1.63 | \$2.40 | \$3.26 |
| Sumac, Skunkbrush | 5 | Container, 5 gallon (MEANS) | \$50.44 | \$2.40 | \$252.20 |
| Totals Nursery Stock Cost / Acre | | | | | \$598.26 |

JOB TIME AND COST

| | | | |
|----------------------------------|--------------------------------------|--------------|------------|
| No. of Acres: | 22 | Cost /Acre: | \$2,052.67 |
| Estimated Failure Rate: | 20% | Cost /Acre*: | \$1,454.41 |
| *Selected Replanting Work Items: | FERTILIZING,TILLING,SEEDING,MULCHING | | |
| Initial Job Cost: | \$45,158.74 | | |
| Reseeding Job Cost: | \$6,399.40 | | |
| Total Job Cost: | \$51,558 | | |
| Job Hours: | 35.00 | | |

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization of Reclamation crew/equipment**Site: **Grand River Park Project**Permit Action: 2016-06Permit/Job#: M2006046**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 5/26/2016County: GarfieldFilename: M046-007User: ACYAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

| Available Rig Capacities | 0-25 Tons | 26-50 Tons | 51+ Tons |
|---------------------------------|------------------|-------------------|-----------------|
| Ownership Cost/Hour: | \$16.63 | \$18.37 | \$22.33 |
| Operating Cost/Hour: | \$44.38 | \$46.13 | \$50.07 |
| Operator Cost/Hour: | \$27.66 | \$27.66 | \$27.66 |
| Helper Cost/Hour: | \$0.00 | \$25.39 | \$25.39 |
| Total Unit Cost/Hour: | \$88.67 | \$117.55 | \$125.45 |

NON ROADABLE EQUIPMENT:

| Machine Description | Weight/ Unit (TONS) | Owner ship Cost/hr/ unit | Haul Rig Cost/hr/unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet | DOT Permit Cost/ fleet |
|-------------------------------------------|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Cat 631G | 52.50 | \$91.86 | \$125.45 | 2 | \$434.62 | \$250.90 | \$500.00 |
| Cat D8T - 8SU | 53.08 | \$73.32 | \$125.45 | 1 | \$198.77 | \$125.45 | \$250.00 |
| Drill/Broadcast Seeder with Tractor | 25.00 | \$39.59 | \$88.67 | 1 | \$128.26 | \$88.67 | \$250.00 |
| Power Mulcher (Reinco M90) | 6.00 | \$7.03 | \$88.67 | 1 | \$95.70 | \$88.67 | \$250.00 |
| Submersible pump - 460v, 8 in. | 0.70 | \$7.32 | \$88.67 | 3 | \$287.98 | \$266.01 | \$250.00 |

Subtotals: **\$1,145.33** **\$819.70** **\$1,500.00****ROADABLE EQUIPMENT:**

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 1 T. Crew | \$42.14 | 1 | \$42.14 | \$42.14 |

Subtotals: **\$42.14** **\$42.14**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: SILT, CO
 Total one-way travel distance: 6.00 miles
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost * \$10,395.99
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$11.24
 ** one round trip, no haul rig:

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours): | 0.13 | 0.13 |
| Return Time (Hours): | 0.13 | 0.13 |
| Loading Time (Hours): | 1.50 | NA |
| Unloading Time (Hours): | 1.50 | NA |
| Subtotals: | 3.27 | 0.27 |

JOB TIME AND COST

Total job time: 6.53 Hours

Total job cost: \$10,407

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary Mobilization of Reclamation crew/equipmentSite: Grand River Park ProjectPermit Action: 2016-06Permit/Job#: M2006046**PROJECT IDENTIFICATION**

Task #: 008 State: Colorado Abbreviation: None
 Date: 5/26/2016 County: Garfield Filename: M046-008
 User: ACY

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: | \$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 |
|-------------------------------------------|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Drill/Broadcast Seeder with Tractor | 25.00 | \$39.59 | \$88.67 | 1 | \$128.26 | \$88.67 | \$250.00 |
| Power Mulcher (Reinco M90) | 6.00 | \$7.03 | \$88.67 | 1 | \$95.70 | \$88.67 | \$250.00 |
| Subtotals: | | | | | \$223.96 | \$177.34 | \$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, 1 T. Crew | \$42.14 | 1 | \$42.14 | \$42.14 |
| Subtotals: | | | \$42.14 | \$42.14 |

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: SILT, CO
 Total one-way travel distance: 6.00 miles
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost * \$1,554.93
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$11.24
 ** one round trip, no haul rig:

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours): | 0.13 | 0.13 |
| Return Time (Hours): | 0.13 | 0.13 |
| Loading Time (Hours): | 0.50 | NA |
| Unloading Time (Hours): | 0.50 | NA |
| Subtotals: | 1.27 | 0.27 |

JOB TIME AND COST

Total job time: 2.53 Hours

Total job cost: \$1,566