

## COST SUMMARY WORK

Task description: Bond Summary

Site: Platte Valley Operation

Permit Action: SO4 Bond Estimate

Permit/Job#: M1989120

### PROJECT IDENTIFICATION

Task #: 401

State: Colorado

Abbreviation: None

Date: 2/19/2023

County: Weld

Filename: M120-401

User: PSH

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
402	Phases 2 and 4, 39.2 Ac, 30' Depth	SITEMAINT ENANCE	1	0.00	\$5,982,240
403	Phases 1,3,5, 20.8 Ac, 10' Depth	SITEMAINT ENANCE	1	0.00	\$1,342,292
404	Topsoil 190 Ac @ 6" Depth	SCRAPER1	1	62.61	\$194,163
405	Vegetate 190 Ac	REVEGE	1	120.00	\$343,854
406	Mob / Demob	MOBILIZE	1	4.66	\$12,379
<b><u>SUBTOTALS:</u></b>				<b>187.27</b>	<b>\$7,874,928</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$159,074

Performance bond: 1.05

Total = \$82,687

Job superintendent: 93.63

Total = \$7,034

Profit: 10.00

Total = \$787,493

TOTAL O & P = \$1,036,288

CONTRACT AMOUNT (direct + O & P) = \$8,911,216

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 0.00

\$0

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$1,036,788

**TOTAL BOND AMOUNT (direct + indirect) = \$8,911,716**  
**(\$8,900,000.00**  
**Rounded)**

## SITE MAINTENANCE

Task description: Phases 2 and 4, 39.2 Ac, 30' Depth

Site: Platte Valley Operation

Permit Action: SO4 Bond Estimate

Permit/Job#: M1989120

### PROJECT IDENTIFICATION

Task #: 402

State: Colorado

Abbreviation: None

Date: 2/19/2023

County: Weld

Filename: M120-402

User: PSH

Agency or organization name: DRMS

### UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Import Backfill Material	3000.00	USER PROVIDED ITEM	1,495,560.00	1	\$4.00	\$5,982,240.00

Job Hours: 0.00

Total Cost: \$5,982,240.00

## SITE MAINTENANCE

Task description: Phases 1,3,5, 20.8 Ac, 10' Depth

Site: Platte Valley Operation

Permit Action: SO4 Bond Estimate

Permit/Job#: M1989120

### PROJECT IDENTIFICATION

Task #: 403

State: Colorado

Abbreviation: None

Date: 2/19/2023

County: Weld

Filename: M120-403

User: PSH

Agency or organization name: DRMS

### UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Import Backfill Material	1500.00	USER PROVIDED ITEM	335,573.00	1	\$4.00	\$1,342,292.00

Job Hours: 0.00

Total Cost: \$1,342,292.00

**SCRAPER TEAM WORK**Task description: Topsoil 190 Ac @ 6" DepthSite: Platte Valley OperationPermit Action: SO4 Bond EstimatePermit/Job#: M1989120**PROJECT IDENTIFICATION**

Task #: 404 State: Colorado Abbreviation: None  
 Date: 2/19/2023 County: Weld Filename: M120-404  
 User: PSH

Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	NA
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 3,500 Gal.

**Cost Breakdown:**

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	100	NA	100	100
Ownership cost/hour:	\$264.49	NA	\$124.85	NA	\$163.86	\$14.98
Operating cost/hour:	\$296.10	NA	\$97.63	NA	\$109.86	\$33.32
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$0.00	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	NA	\$0.00	NA	\$0.00	\$0.00
Operator cost/hour:	\$47.07	NA	\$40.04	NA	\$46.87	\$38.91
Unit Subtotals:	\$607.66	NA	\$262.52	NA	\$320.59	\$87.21
Number of Units:	4	0	1	0	1	1
Group Subtotals:	Work:	\$2,430.64	Support:	\$262.52	Maint:	\$407.80

Total work team cost/hour: \$3,100.96**MATERIAL QUANTITIES**

Initial volume: 153,266 CCY Swell factor: 1.000  
 Loose volume: 153,266 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

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

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4950 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: Very hard, smooth, asphalt or concrete, no tire penetration 1.2Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2952	0.51

Haul Time: 0.51 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	1.20	1.20	2963	0.45

Return Time: 0.45 minutesTotal Scraper team cycle time: 2.36 minutesAdjusted for job conditions: 611.95 LCY/HourSelected Number of Scrapers: 4 Scraper(s)Adjusted single scraper team (unit) hourly production: 2,447.80 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 2,447.80 LCY/HourUnadjusted unit production/hour: 737.29 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 62.61 HoursUnit cost: \$1.267 /LCYTotal job cost: \$194,163

REVEGETATION WORKTask description: Vegetate 190 AcSite: Platte Valley OperationPermit Action: SO4 Bond EstimatePermit/Job#: M1989120PROJECT IDENTIFICATIONTask #: 405State: ColoradoAbbreviation: NoneDate: 2/19/2023County: WeldFilename: M120-405User: PSHAgency or organization name: DRMSFERTILIZING**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			<b>Total Fertilizer Materials 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.18
<b>Total Tilling Cost/Acre</b>	<b>\$117.18</b>

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Switchgrass - Blackwell	0.50	4.47	\$5.75
Blue Grama - Lovington	0.30	4.90	\$4.79
Sideoats Grama - Vaughn	1.35	4.43	\$11.31
Western Wheatgrass - Barton	2.40	6.06	\$16.80
<b>Totals Seed Mix</b>	<b>4.55</b>	<b>19.85</b>	<b>\$38.65</b>

**Application**

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

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

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$3.04	\$3.04
<b>Total Mulch Materials Cost/Acre</b>				<b>\$845.76</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$73.00
Weed spray, truck, aquatic area, annuals [DMG]	\$22.81
Weed spray, truck, aquatic area, nox. [DMG]	\$62.72
<b>Total Mulch Application Cost/Acre</b>	<b>\$158.53</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres: 190 Cost /Acre: \$1,392.12  
 Estimated Failure Rate: 30% Cost /Acre\*: \$1,392.12  
 \*Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$264,502.80**  
 Reseeding Job Cost: **\$79,350.84**  
 Total Job Cost: **\$343,854**  
 Job Hours: **120.00**

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mob / Demob**Site: **Platte Valley Operation**Permit Action: **SO4 Bond Estimate**Permit/Job#: **M1989120****PROJECT IDENTIFICATION**Task #: **406**State: **Colorado**Abbreviation: **None**Date: **2/19/2023**County: **Weld**Filename: **M120-406**User: **PSH**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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

**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 D8T - 8SU	47.71	\$124.85	\$101.82	1	\$226.67	\$101.82	\$250.00
Cat 637G	57.28	\$264.49	\$136.92	4	\$1,605.64	\$547.68	\$1,000.00
CAT 16M	28.73	\$163.86	\$101.82	1	\$265.68	\$101.82	\$250.00

Subtotals: **\$2,097.99** **\$751.32** **\$1,500.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$87.21	1	\$87.21	\$87.21
Light Duty Pickup, 4x4, 1 T. Crew	\$24.30	1	\$24.30	\$24.30

Subtotals: **\$111.51** **\$111.51**



**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: BRIGHTON, CO  
 Total one-way travel distance: 5.00 miles  
 Average Travel Speed: 30.00 mph

Total Non-Roadable Mob/Demob Cost \* \$12,341.73  
 \*\* two round trips with haul rig:  
 Total Roadable Mob/Demob Cost \*\* \$37.17  
 \*\* one round trip, no haul rig:

**Transportation Cycle Time:**

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	2.33	0.33

**JOB TIME AND COST**

Total job time: 4.67 Hours

Total job cost: \$12,379