



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

September 1, 2023

Neil Whitmer
Holcim - WCR, Inc.
1687 Cole Blvd Suite 300
Golden, CO 80401

**Re: Phillips Ranch Property Gravel Pit #2 - File No. M-2000-046;
Technical Revision (TR-1) Preliminary Adequacy Review**

Dear Mr. Whitmer:

On August 10, 2023, the Division of Reclamation, Mining and (Division) received your technical revision application (TR-1) for the Phillips Ranch Property Gravel Pit #2 to increase the bonded area. The Division has reviewed the TR-1 application and found no technical deficiencies.

Based on the information provided in TR-1, photographs of the recontoured highwalls (provided via email on August 11, 2023), and our 2023 inspection; the Division has generated a revised bond estimate (enclosed) for your review. The new estimate eliminates task SO11 to push down highwalls and task SO02 to place topsoil on the 13 acres undergoing reclamation that were included in the Succession of Operator (SO-1) bond estimate. The Division updates the unit costs in our bond estimating software in July. Therefore, the unit costs are generally higher for the TR-1 bond estimate than they were for the SO-1 bond estimate provided to you in June of this year.

The decision date for TR-1 is September 11, 2023. Please provide a written response either accepting the revised cost estimate or provide comments prior to the decision date. If the Division does not receive a response, we will approve TR-1 and request the additional surety.

If you have any questions, please contact me (303-328-5229).

Sincerely,

Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosure: Revised Bond Estimate

ec: Michael, Cunningham, DRMS
DRMS file
Kurt Thurmann, Holcim - WCR



COST SUMMARY WORK

Task description: TR-1 Cost Estimate

Site: Phillips Ranch Property
Gravel Pit #2

Permit Action: TR-1

Permit/Job#: M2000046

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 8/31/2023 County: Fremont Filename: X0x0x0
User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
T001	Spread existing overburden pile	SCRAPER1	1	159.38	\$37,169
T003	Reveg 13 acres (Completed Phase)	REVEGE	1	40.00	\$22,458
T012	Replace 6 inches of topsoil (Active Phase)	SCRAPER1	1	188.78	\$44,025
T013	Reveg 52 acres (Active Phase)	REVEGE	1	40.00	\$89,833
T020	Mob/demob Equipment	MOBILIZE	1	3.50	\$4,125
<u>SUBTOTALS:</u>				431.66	\$197,610

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$3,992
Performance bond:	1.05	Total =	\$2,075
Job superintendent:	215.83	Total =	\$14,046
Profit:	10.00	Total =	\$19,761
		TOTAL O & P =	\$39,874
		CONTRACT AMOUNT (direct + O & P) =	\$237,484

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$10,093
Reclamation management and/or administration:	5.00		\$11,874

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$61,841

TOTAL BOND AMOUNT (direct + indirect) = \$259,451

SCRAPER TEAM WORKTask description: Spread existing overburden pileSite: Phillips Ranch Property
Gravel Pit #2Permit Action: TR-1Permit/Job#: M2000046**PROJECT IDENTIFICATION**

Task #: T001 State: Colorado Abbreviation: None
 Date: 8/31/2023 County: Fremont Filename: M046-T001
 User: TC1

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

Equipment Description	
-Scraper:	Cat 613C Series 2
-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:	\$109.92	NA	NA	NA	NA	NA
Operating cost/hour:	\$92.39	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:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$233.21	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work: \$233.21		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: **\$233.21****MATERIAL QUANTITIES**

Initial volume: 26,000 CCY Swell factor: 1.250
 Loose volume: 32,500 LCY

Source of estimated volume: Google Earth 2011 Image
 Source of estimated swell factor: Cat Handbook

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

Material weight: 2,650 lbs/LCY Struck Volume: 8.90 LCY
 Material description: Decomposed rock - 25% Rock, Heaped Volume: 11.00 LCY
75% Earth
 Rated Payload: 26,400 pounds Average Volume: 9.95 LCY

Payload Capacity: 9.96 LCYAdjusted Capacity: 9.95 LCYCycle Time:Scraper Loading Time: 0.90 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5350 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: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-15.00	5.00	-10.00	1602	0.28

Haul Time: 0.28 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	15.00	5.00	20.00	555	0.55

Return Time: 0.55 minutesTotal Scraper team cycle time: 2.43 minutesAdjusted for job conditions: 203.91 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 203.91 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 203.91 LCY/HourUnadjusted unit production/hour: 245.68 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 159.38 HoursUnit cost: \$1.144 /LCYTotal job cost: \$37,169

REVEGETATION WORKTask description: Reveg 13 acres (Completed Phase)Site: Phillips Ranch Property
Gravel Pit #2Permit Action: TR-1Permit/Job#: M2000046**PROJECT IDENTIFICATION**Task #: T003
Date: 9/1/2023
User: TC1State: Colorado
County: FremontAbbreviation: None
Filename: M046-T003Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	10.00	pound	\$0.62	\$6.23
Superphosphate, 0-20-0 with 12% S	20.00	pound	\$0.69	\$13.80
			Total Fertilizer Materials Cost/Acre	\$20.03

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	\$17.42
Total Fertilizer Application Cost/Acre	\$17.42

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$100.40
Total Tilling Cost/Acre	\$100.40

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	\$11.98
Indian Ricegrass - Native	1.25	4.05	\$8.13
Little Bluestem - Pastura	0.70	4.18	\$9.44
Sideoats Grama - El Reno	2.70	8.86	\$22.61
Western Wheatgrass - Arriba	4.00	10.10	\$26.00
Totals Seed Mix	9.40	39.43	\$78.16

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
Straw, 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
Total Mulch Application Cost/Acre	\$74.46

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: 13 Cost /Acre: \$1,382.04
 Estimated Failure Rate: 25% Cost /Acre*: \$1,382.04
 *Selected Replanting Work Items: FERTILIZING, TILLING, SEEDING,
MULCHING

Initial Job Cost: **\$17,966.52**
 Reseeding Job Cost: **\$4,491.63**
 Total Job Cost: **\$22,458**
 Job Hours: **40.00**

SCRAPER TEAM WORKTask description: Replace 6 inches of topsoil (Active Phase)Site: Phillips Ranch Property
Gravel Pit #2Permit Action: TR-1Permit/Job#: M2000046**PROJECT IDENTIFICATION**

Task #: T012 State: Colorado Abbreviation: None
 Date: 9/1/2023 County: Fremont Filename: M046-T012
 User: TC1

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

Equipment Description	
-Scraper:	Cat 613C Series 2
-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:	\$109.92	NA	NA	NA	NA	NA
Operating cost/hour:	\$92.39	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:	\$30.90	NA	NA	NA	NA	NA
Unit Subtotals:	\$233.21	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work: \$233.21		Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: **\$233.21****MATERIAL QUANTITIES**

Initial volume: 41,947 CCY Swell factor: 1.000
 Loose volume: 41,947 LCY

Source of estimated volume: 52 acres, 6" deep
 Source of estimated swell factor: Cat Handbook

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

Material weight: 1,600 lbs/LCY Struck Volume: 8.90 LCY
 Material description: Top Soil Heaped Volume: 11.00 LCY
 Rated Payload: 26,400 pounds Average Volume: 9.95 LCY
 Payload Capacity: 16.50 LCY Adjusted Capacity: 9.95 LCY

Cycle Time:Scraper Loading Time: 0.90 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 5350 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: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	-5.00	5.00	0.00	2259	0.27

Haul Time: 0.27 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	350.00	5.00	5.00	10.00	1058	0.36

Return Time: 0.36 minutesTotal Scraper team cycle time: 2.23 minutesAdjusted for job conditions: 222.20 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 222.20 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 222.20 LCY/HourUnadjusted unit production/hour: 267.71 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 188.78 HoursUnit cost: \$1.050 /LCYTotal job cost: \$44,025

REVEGETATION WORKTask description: Reveg 52 acres (Active Phase)Site: Phillips Ranch Property
Gravel Pit #2Permit Action: TR-1Permit/Job#: M2000046**PROJECT IDENTIFICATION**Task #: T013
Date: 9/1/2023
User: TC1State: Colorado
County: FremontAbbreviation: None
Filename: M046-T013Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	10.00	pound	\$0.62	\$6.23
Superphosphate, 0-20-0 with 12% S	20.00	pound	\$0.69	\$13.80
			Total Fertilizer Materials Cost/Acre	\$20.03

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	\$17.42
Total Fertilizer Application Cost/Acre	\$17.42

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$100.40
Total Tilling Cost/Acre	\$100.40

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.75	12.24	\$11.98
Indian Ricegrass - Native	1.25	4.05	\$8.13
Little Bluestem - Pastura	0.70	4.18	\$9.44
Sideoats Grama - El Reno	2.70	8.86	\$22.61
Western Wheatgrass - Arriba	4.00	10.10	\$26.00
Totals Seed Mix	9.40	39.43	\$78.16

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
Straw, 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
Total Mulch Application Cost/Acre	\$74.46

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: 52 Cost /Acre: \$1,382.04
 Estimated Failure Rate: 25% Cost /Acre*: \$1,382.04
 *Selected Replanting Work Items: FERTILIZING, TILLING, SEEDING,
MULCHING

Initial Job Cost: **\$71,866.08**
 Reseeding Job Cost: **\$17,966.52**
 Total Job Cost: **\$89,833**
 Job Hours: **40.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/demob Equipment**Site: **Phillips Ranch Property**
Gravel Pit #2Permit Action: **TR-1**Permit/Job#: **M2000046****PROJECT IDENTIFICATION**

Task #: T020 State: Colorado Abbreviation: None
 Date: 9/1/2023 County: Fremont Filename: M046-T020
 User: TC1

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 613C Series 2	18.61	\$109.92	\$82.29	1	\$192.21	\$82.29	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00
Cat D7R DS Series II LGP	34.57	\$114.76	\$158.17	1	\$272.93	\$158.17	\$250.00

Subtotals: **\$662.39** **\$405.04** **\$1,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CAÑON CITY	
Total one-way travel distance:	15.00	miles
Average Travel Speed:	40.00	mph

Total Non-Roadable Mob/Demob Cost *	\$4,125.35
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.38	0.38
Return Time (Hours):	0.38	0.38
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.75	0.75

JOB TIME AND COST

Total job time:	3.50	Hours
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Total job cost:	\$4,125
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