

October 30, 2023

Mark Gardner Whitewater Building Materials Corporation 940 S. 10th St. P.O. Box 1769 Grand Junction, CO 81502

#### Re: Whitewater Pit 500 - File No. M-1977-129 Whitewater Building Materials Corporation Technical Revision (TR-6) TR to address inspection May 9, 2023

Dear Mark Gardner:

On October 30, 2023 the Division of Reclamation, Mining and Safety concluded its review of the Technical Revision application submitted to the Division on July 12, 2023, addressing the following:

This Technical Revision increases the 1) allowed sloping distance, 2) increases the total allowed area of disturbance, 3) revise the Weed Control Plan and 4) make minor changes and update the Reclamation Plan and Reclamation Plan Map for Stages W, Z & 2 areas now designated Stage S.

The decision reached by the Division is: approve. Committed to a 2,000 LF max of 1H: 1V highwall requiring backfill and 5,000 LF of 2H: 1V cut/fill. Total affected lands is 416.47. Maximum disturbance at any time is 250 acres the majority would be lakes. Seeding and topsoil maximum of 50 ac. Bond for Option 2 in Stage S until mined. Max of 35 ac gravel RV parking area. Acreages are based off of TR-6 Option 2 table

The terms of Technical Revision No. 6 approved by the Division are hereby incorporated into Permit No. M-1977-129. All other conditions and requirements of Permit No. M-1977-129 remain in full force and effect.

The revised liability amount exceeds the financial warranty currently held (see below), please submit additional bond or a rider to your existing bond that equals or exceeds the Revised Liability. The revision will not be final until the bond is approved by the Division.

Bond Held:	\$287,500.00
Prior Liability:	\$287,500.00



Change in Liability:	\$286,951.00
Revised Liability:	\$574,451.00
Prior Permit Acreage:	430.68
Change in Permit Acreage:	0.00
Revised Permit Acreage:	430.68
Prior Affected Acreage:	430.68
Change in Affected Acreage:	0.00
Revised Affected Acreage:	430.68

If you have any questions, please contact me by telephone at (303) 866-3567 x 8183, or by email at Amy.yeldell@state.co.us.

Sincerely,

Amy Geldell

Amy C. Yeldell Environmental Protection Specialist

M-GR-04



October 30, 2023

Mark Gardner Ephemeral Resources, LLC P.O. Box 1769 Grand Junction, CO 81502

## RE: Whitewater Pit 500, Permit No. M-1977-129, Bonding Changes with TR-6

Dear Mr. Gardner:

This reclamation cost update was in response to Technical Revision (TR-6) and the follow up site inspection conducted on August 29, 2023. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2009 with TR-4. Below is a table summarizing input values that have been updated based on site conditions. 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 plan.

Assumptions:

- Revised TR-5 seed mix. TR-5 does not clarify which areas area salty vs not salty. Anything within 25 feet of a pond is salty (wetlands), and all other reclamation is non-salty (uplands).
- TR-6 committed to a 2,000 LF max of 1H: 1V highwall requiring backfill and 5,000 LF of 2H: 1V cut/fill
- Total affected lands is 416.47. Maximum disturbance at any time is 250 acres the majority would be lakes. Seeding and topsoil maximum of 50 ac.
- Bond for Option 2 in Stage S until mined. Max of 35 ac gravel RV parking area
- Acreages are based off of TR-6 Option 2 table
- Topsoil is located within Stage 6, Stage 4 Part B, none in south mine, has to be hauled if required.
- Stages are named based off of TR-6 revised map. Stage 4B is included with Stage 3 Part B

Task	Form Used	Description
03a	Pump	Stage 3 Part B Dewater approx. 40 ac



		Current estimated pit/pond
03b	Truck/ loader	Stage 3 Part B Haul Backfill 1:1 backfill 1,600LF @ 20'H from pile in Stage 3 Part B (1100LF truck) = 23,704 CY Combination TR-6 grading max and site conditions
03c	Dozer	Stage 3 Part B Grading slopes = 29,260 CY 2:1 cut/fill 3,000 LF @ 20'H = 5,556 CY Plus grading transported backfill vol 23,704 CY
03d	Ripper	Stage 3 Part B Rip stockpiled area, 4 ac overburden/topsoil, stripped areas, and CW stockpile area = 12 ac
03e	Truck/ loader	Stage 3 Part B Apply topsoil to affected lands, 21.99 ac ac @ 9" = 26,607 CY Pit will become inundated. Current unreclaimed shore line approx. 5800 LF x 75'W = 9.99 ac Plus stockpile areas above water 12 ac Topsoil source is berm in phase avg. 1100 LF to placement
03f	Reveg	Stage 3 Part B Reveg Salty Mix = 3.33 ac affected lands = 21.99 ac Pit will become inundated. Shore line – 5800 LF * 25'W = 3.33 ac
03g	Reveg	Stage 3 Part B Reveg Non-Salty Mix = 18.66 ac 21.99 ac -3.33c = 18.66
04f	Reveg	Stage 4 Part A Reveg Salty Mix - 3.44 ac Affected lands = 8.66 ac Pit will become inundated. Shore line – 6,000 LF * 25'W = 3.44 ac Per TR-6 remaining items
04g	Reveg	Stage 4 Part A Reveg Non-Salty Mix = 5.22 8.66 ac – 3.44 ac = 5.22 ac
06c	Dozer	Stage 6 Grading stockpiles flat = 13,230 CY 2000LF of 5' berms = 9260 CY 700 LF @ 35'H of 2H: 1V stockpile to 3H: 1V cut/fill = 3970 CY Site conditions

06d	Ripper	Stage 6 Ripping affected lands = 9.3 ac
06e	Truck/ loader	Stage 6 Apply topsoil to affected lands, 9.3 ac @ 9" = 11,253 CY Topsoil hauled from north of raw material stockpile stage 6, avg 700 LF to placement
06g	Reveg	Stage 6 Reveg affected lands = 9.3 ac in Salty Mix- No pond/shore areas Non-Salty Mix = 9.3 ac
S2	Reveg	Phase S-Opt 2 Secondary failure seeding of reclaimed = 8.9 Salty Mix-areas adjacent to ponds 50% of 16.38 ac previously reclaimed per TR-6
X01	Mob	Initial Mobilization
X02	Mob	Secondary Mobilization reveg equipment only

The changes requested under TR6 and inflation will result in a total required bond amount of **\$574,451**, which is <u>an increase of \$286,951</u> over the \$287,500 currently held.

Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, Rm 215, 1001 E 62<sup>nd</sup> Ave, Denver CO 80216. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@ state.co.us

Sincerely,

Amy Geldell

*Amy Yeldell* Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS

# COST SUMMARY WORK

Т	ask descrip	otion:	TR-6 Bond upda	ate			
Site:	Whitewa	ter Pit 500	Per	rmit Action:	TR-6	Permit/Jo	o#: <u>M1977129</u>
<u>P1</u>	<u>ROJECT</u>	IDENTIFIC	CATION				<b>)</b>
	Task #: Date:	ACY 8/20/2023	State:	Colorado		Abbreviation:	None M120 ACV
	User:	ACY	County.	Iviesa			WI129-ACT
	User: Age	ACY ency or organi	 zation name: DF	RMS			

# TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	Cost
	Description	Used	Size	Hours	Cost
03a	Stage 3 Part B Dewater Pit	PUMPING	1	1,476.73	\$72,788
03b	Stage 3 Part B Haul Backfill	TRUCK1	1	53.02	\$43,129
03c	Stage 3 Part B Grading slopes	DOZER	2	28.58	\$24,310
03d	Stage 3 Part B Rip stockpiled areas	RIPPER	2	9.35	\$8,357
03e	Stage 3 Part B Apply Topsoil	TRUCK1	1	57.26	\$101,238
03f	Stage 3 Part B Reveg Salty Mix	REVEGE	1	5.00	\$9,294
03g	Stage 3 Part B Reveg Non-Salty Mix	REVEGE	1	28.00	\$53,421
04f	Stage 4 Part A Reveg Salty	REVEGE	1	5.00	\$9,601
04g	Stage 4 Part A Reveg Non-Salty	REVEGE	1	8.00	\$14,944
06c	Stage 6 Grading slopes and slopes	DOZER	2	18.43	\$15,674
06d	Stage 6 Rip affected lands	RIPPER	2	7.24	\$6,477
06e	Stage 6 Apply Topsoil	TRUCK1	1	26.94	\$42,121
06g	Stage 6 Reveg Non-Salty	REVEGE	] 1	14.00	\$26,625
S2	Phase S - Opt 2 Secondary failure seeding of reclaimed	REVEGE	1	9.00	\$16,560
X01	Initial Mobilization	MOBILIZE	1	2.53	\$10,505
X02	Secondary Mobilization	MOBILIZE	1	2.53	\$1,527
		<u>SUBT</u>	OTALS:	1751.61	\$456,571

## **INDIRECT COSTS**

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$9,223
Performance bond:	1.05	Total =	\$4,794
Job superintendent:	140.00	Total =	\$9,111
Profit:	10.00	Total =	\$45,657
		TOTAL O & P =	\$68,785
		CONTRACT AMOUNT (direct + O & P) = $\frac{1}{2}$	\$525,356

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$22,328
Reclamation management and/or administration:	5.00	-	\$26,268
		-	
CONTINGENCY:	0.00	Total =	\$0
	TOTAL IN	DIRECT COST =	\$117,880
TOTAL BO	ND AMOUNT (d	irect + indirect) =	\$574,451

# PUMPING WORK

Task description:	Stage	e 3 Part B Dewater Pi	t		
e: Whitewater Pit 500		Permit Action	n: TR-6	Permit/Job#	: M1977129
PROJECT IDENTI	FICATIO	<u>ON</u>			
Task #:       03A         Date:       8/29/2023         User:       ACY	l	State: Colorad County: Mesa	0	Abbreviation: Filename:	None M129-03a
Agency or org	anization	name: DRMS			
HOURLY EOUIPM	ENT CO	DST			
<b>_</b>	Descri	intion		Quantity	
Make and Model:	Subme	ersible pump - 460v, 8	in.	1	
Attachment 1:	Suctio	n hose - 6 in. diam., 25	5 ft.	1	
Attachment 2:	Discha	arge hose - 6 in. D., 25	ft.	4	
Labor Unit 1:	Pump	operator		1	
Horsepower:	95				
Shift Basis: 1	per day				
Weight:	0.70				
(U	JS Tons)				
Cost Breakdown:			1		
		<b>*15 ••</b>	Utilization %		
Ownership Cost	/Hour:	\$17.02	NA 100		
Operating Cost	/Hour:	\$4.04	100 NA		
Total Unit Cost		\$28.25	NA		
Total Unit Cost	Hour:	\$49.29	_		
Total Fleet Cos	t/Hour:	\$49.29			
PUMPING OUANT	ITIES				
Initial Pond Vo	lume	800.00		Conversion factor:	325850 5800
Final Pond Vo	lume:	260 680 464 00	gallons	conversion factor.	525650.5600
Total Pond Inflow S	urface	200,000,10100	guilons	Unit inflow rate in	
	Area:	22,000	Sq. ft.	gph/sq. ft.:	0.1758
Total Pond Inflow V	olume	· · · · · ·			
per	Hour:	3,867.60	gallons		
Source	of estima	ted volume: Anticip	pated 40 ac pond 2	20'D	
PUMPING TIME					
	vimum D	umn Canacity:	170.000	aph/nump	
1410	Estimated	Suction Head:	170,000	gpn/pump	
Est	imated Di	scharge Head:	15	feet	
		Total Head:	25	feet	
	CPB P	ump Capacity:	165,600	gph/pump	
		Site Altitude:	4,600	feet	
Adju	isted Pum	ping Capacity:	165,600	gph	
Initial Un	adjusted P	Pumping Time:	1,574.16	hours	
Inflow	during In	itial Pumping:	6,088,211	gallons	
Net Un	adjusted P	stmont Factor:	1,610.92	Hours (304 mula)	
Alu	uue Auju Pumn Effi	ciency Factor:	0.9167	(5%  fule)	
Total A	Adjusted P	Pumping Time:	1,476.73	hours	
IOR TIME AND CO	)ST				
JOD IIVIL AND CC	101		Total	job time: <b>1,476.7</b>	3 Hours
Unit cost: \$0.0	00273	/Gallon	Total	l job cost: \$72,788	3

# TRUCK/LOADER TEAM WORK

Task description:	Stage 3	Part B Haul Bac	kfill			
Site: Whitewater Pit 5	500	Permit Actio	on: TR-6		Permit/Job#: <u>M</u>	1977129
PROJECT IDEN	TIFICATION	[				
Task #:         03B           Date:         8/29/2           User:         ACY	023	State: Colora County: Mesa	ado	Ab	breviation: No Filename: M1	ne 29-03b
Agency or	organization nar	ne: DRMS				
HOURLY EQUI	PMENT COST	<u> </u>		Shift bas	is: <u>1 per day</u>	
		]	Equipment Descri	ption		
Т	ruck Loader Tea	m -Truck: Cat -Loader: CA	730 T 972H	•		
Suppo	ort Equipment -L -Du	Load Area: NA ump Area: NA				
Road Ma	aintenance – Mot	or Grader: CA	T 14M ter Terker, 2 500	Cal		
	- <b>vv</b> a	uer Truck: wa	ter Tanker, 2,300	Gal.		
Cost Breakdown:	Truck/Loa	ader Team	Support l	Equipment	Maintenan	ce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	50	0
Ownership cost/hour:	\$108.06	\$57.78	NA	NA	\$149.33	\$11.35
Operating cost/hour:	\$71.88	\$56.23	NA	NA	\$46.40	\$0.00
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	\$0.00
Operator cost/hour:	\$24.82	\$35.97	NA	NA	\$46.87	\$0.00
Unit Subtotals:	\$204.76	\$149.98	NA	NA	\$242.60	\$11.35
Number of Units:	2	1	0	0	1	1
Group Subtotals:	Work:	\$559.50	Support:	\$0.00	Maint:	\$253.95
Total work team cos	t/hour: <u><b>\$813.45</b></u>	5				
MATERIAL QUA	<u>ANTITIES</u>					
Initial volume: Loose volume:	23,704 <b>25,83</b>	CCY LCY	Swell	factor: <u>1.090</u>		
Sou	rce of estimated	volume: 1:1 b	ackfill 1.600LF	20'H		
Source	of estimated swe	ell factor: Cat H	Handbook			
	Material Purch	ase Cost: \$0.00	)			
	То	otal Cost: \$0.00	)			
HOURLY PRO	<b>DUCTION</b>					
<u>Truck Capacity:</u> <u>Truck Payload (weig</u> Material w	ght) Basis: reight: 2,400		Pounds/LCY			
Descri	ption: Clay and Clay	nd gravel - Dry	Dound			
Kated Pay Pavload Car	yioad: <u>62,000</u> acity: 25.83		Pounds			
i ayioad Cap	25.05					

Heaped Volume:	17.10	LCY				
· I · · · · · · · · · · · · · · · · · ·	22.10	LCY				
Average Volume:	19.60	LCY				
Adjusted Volume:	22.10	LCY				
Final	Truck Volume	Based on Number of	of Loader Passes:	18.48	LCY	
Loading Tool Capacity						
			Buc	ket Size Class: N	A	
Rated Capacity:	5.600	LCY (heaped)				_
Bucket Fill Factor:	1.100	Other - rock/di	rt mixtures (100	-120%) 1.100		-
Adjusted Capacity:	6.160	LCY	(			-
		G	1. A 1. (C. ).	1600 6		
Job Condition Corrections:	•		ate Altitude (ft.):	<u>4600</u> feet		
A 1. 1. A 11	Truck	Loader	Source	N		
Altitude Adj:	1.000	1.000	(CAT HE	<u>s)</u>		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
L	N		D 14	<b>C'11 T</b> = 1	2	
Loading 1001 Cycle 11me:	Number	of Loading 1001 Pa	asses Required to	Fill I fuck:	<u> </u>	asses
Excavators and Front Shovel	<u>s:</u>					
Machine Cycle Time vs Selected Value v	s. Job Condition	n Rating: <u>NA</u>				
Machine Cycle Time vs Selected Value v Track Loaders –	3. Job Condition within this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u>				
Machine Cycle Time vs Selected Value v Track Loaders – T Cycle Time Elements (min.):	s. Job Condition vithin this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:				
Machine Cycle Time vs Selected Value v Track Loaders – 2 Cycle Time Elements (min.):	s. Job Conditior vithin this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:		 	)	
Machine Cycle Time vs Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	s. Job Conditior vithin this Basic Material Descri M	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: aneuver: <u>NA</u>		Dump:0.100	)	
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Machine Cycle Time vs Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	. Job Condition vithin this Basic Material Descri M Unadjusted Bas M Mixed materia Conveyor or c	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Ti al 0.02 dozer piled 10 ft. hig	me (load, dump, r	Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.000	) .525 minu Source (Cat HB) (Cat HB)	ites
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Machine Cycle Time vs Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	S. Job Condition vithin this Basic Material Descri Munadjusted Bas Mixed materia Conveyor or c Common own Constant oper Nominal targe	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u></u> aneuver: <u>NA</u> sic Loader Cycle Ti al 0.02 dozer piled 10 ft. hig nership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T	gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time: Fime per Truck:	Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030	) .525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	ites    
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Machine Cycle Time vs Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time: Truck Load Time:	S. Job Condition vithin this Basic Material Descri M Unadjusted Bas Mixed materia Conveyor or c Common own Constant oper Nominal targe 0.60 1.030 1.00	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Ti al 0.02 dozer piled 10 ft. hig nership of trucks and ation -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes Minutes	me (load, dump, r gh and up 0.00 d loaders -0.04 me Adjustment: der Cycle Time: Fime per Truck: Adjusted Adjusted Adjusted	Dump: 0.100 naneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030 for site altitude: for site altitude: for site altitude:	) .525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.030 1.000	ntes             

Haul H	Route:							
Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time	
1	1100	00	5.00	1.00	1.00	2090	(min)	
1	1100	.00	-5.00	4.00	-1.00	3080	0.425	
					Haul Time:	0.425	minutes	
Return	n Route:							
Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	1100	.00	5.00	4.00	9.00	1700	0.722	
				Total Tru	Return Time: ck Cycle Time:	0.722 3.777	minute minute	S S
Loading ' Pi Truck Unit Pi	Tool unit oduction	680.25	LCY/Hour		Adjusted for j	ob efficiency:	564.60	LCY/Hour
	oddetion	293.57	LCY/Hour		Adjusted for j	ob efficiency:	243.66	LCY/Hour
Optimal No. o	f Trucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	ed hourly truc	k team production	on: 487	.32 LCY	/Hour
			Adjusted sing	le truck/loade	er team production	on: 487	.32 LCY	/Hour
			Adjusted multip	le truck/loade	er team production	on: 487	.32 LCY	/Hour
JOB	TIME AN	ND COST						
Fl	eet size:	1	Team(s)	ŗ	Fotal job time:	53.02	<b>2</b> Ho	ours
U	nit cost:	\$1.669	/LCY		Total job cost:	\$43,12	29	

Page 1 of 2

# BULLDOZER WORK

Task description:	Stage 3 Pa	it D Grauing stop	<b>C</b> 5		
Whitewater Pit 50	00	Permit Action:	TR-6	Permit/Job#:	M1977129
PROJECT IDENT	<b>TIFICATION</b>				
Task # 03C		State: Colorado		Abbreviation.	None
Date: $\frac{8/29}{20}$		ounty: Mesa		Filename:	M129-03c
User: ACY	<u></u> 00	<u> </u>			
Agency or o	organization name	DRMS			
HOURLY EQUIP	MENT COST				
Basic Machine:	Cat D8T - 8SU				
Horsepower:	310				
Blade Type:	Semi-Universal				
Attachment:	NA				
Shift Basis:	I per day				
Data Source:	(CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Ho	ur:	\$241.38	NA		
Operating Cost/Ho	ur:	\$143.92	100		
Ripper own. Cost/Ho	ur:	\$0.00	NA		
Ripper op. Cost/Ho	ur:	\$0.00	0		
		<b>\$ 10 0 1</b>			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour	ur: \$425.34 r: \$850.67	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA	ur: \$425.34 <b>\$850.67</b> <b>NTITIES</b> 29.260	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor:	ur: *** \$\frac{\\$425.34}{\\$850.67} *** \$\frac{\\$850.67}{\\$000} \$\\$000	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume:	ur: \$425.34 <b>\$850.67</b> <b>NTITIES</b> 29,260 1.090 <b>31,893</b> LCY	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU	ur:	\$40.04	  @ 20'H and transported b	ackfill	
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 3 Source of estimated v Source of estimated s HOURLY PRODU	ur:	\$40.04 	  20'H and transported b	ackfill	
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro- Materials consistency	ur:	\$40.04 \$40.04	  @ 20'H and transported b   pile 1.0	ackfill	
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average push gradien	ur: $$425.34$ r: $$850.67$ NTITIES         29,260         1.090         31,893 LCY         rolume:       2:1         well factor:       Ca         UCTION         e:       70 fe         oduction:       1,092         r description:	\$40.04		ackfill	
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 3 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro- Materials consistency Average push gradien Average site altitude: Material weight:	ur: $$425.34$ r: $$850.67$ <b>NTITIES</b> 29,260         1.090         31,893 LCY         rolume:       2:1         well factor:       Ca <b>UCTION</b> e:       70 fe         oduction:       1,093         r description:       0         at:       -20 %         2,400 lbs/L0	\$40.04		ackfill	
Operator Cost/Ho Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description:	ur:	\$40.04 \$40.04	NA     NA	ackfill	
Operator Cost/Ho Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 2 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description: Job Condition Correc	ur:		NA     NA     Description	ackfill	
Operator Cost/Ho Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: Swell factor: Loose volume: Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description: <u>Job Condition Correc</u> Opera	ur:	\$40.04 \$40.04 \$40.04 \$40.04 \$40.04 \$40.04 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		ackfill	
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 3 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradier Average site altitude: Material weight: Weight description: Job Condition Correc Opera Material con	ur:	\$40.04 \$40.04 \$40.04 \$40.04 \$40.04 \$40.04 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	NA           20'H and transported b	ackfill	
Operator Cost/Ho Total unit Cost/Hour: Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 2 Swell factor: 1 Loose volume: 3 Source of estimated v Source of estimated v Source of estimated s HOURLY PRODU Average push distanc Unadjusted hourly pro Materials consistency Average push gradien Average site altitude: Material weight: Weight description: Iob Condition Correc Opera Material con Dozing	ur:	\$40.04 \$40.04	NA           20'H and transported b	ackfill	

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.426	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.5102	
Adjusted unit production: 5	58.01 LCY/hr	
Adjusted fleet production: 1	116.02 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.762/LCY

Total job time:	28.58 Hours
Total job cost:	\$24,310

# BULLDOZER RIPPING WORK

	Task description:	Stage 3 Part B Rip stock	piled areas			
Site	: Whitewater Pi	t 500 Permit Actio	on: TR-6	Permit/Job	o#: <u>M1977129</u>	
	PROJECT IDE	<b>INTIFICATION</b>				
	Task #: 03D	State: Colora	do	Abbreviation	: None	
	Date: $\frac{8/29}{4C}$	0/2023 County: Mesa		Filename	:: <u>M129-03d</u>	
		or organization name: DRMS				
	HOURLY EQU	JIPMENT COST				
	Basic N Ripper Atta	Aachine: Cat D8T - 8SU Schwent: 3-Shank Ripper		Horsepower:	310 1 per day	
	Ripper 7 du			Data Source:	(CRG)	
	Cost Breakdown:					
			¢0.41.00	Utilization %		
		Ownership Cost/Hour:	\$241.38 \$143.92	<u>NA</u> 100		
	Rippe	r Ownership Cost/Hour:	\$14.11	NA		
	Ripp	er Operating Cost/Hour:	\$7.45	100		
		Operator Cost/Hour:	\$40.04	NA		
			\$440.90			
		Total Fleet Cost/Hour:	\$893.79			
	MATERIAL Q	<u>UANTITIES</u>	Selected estimating	method: Area		
	Alternate Method	<u>s:</u>				
Seismic:	NA	Bank Volume	e: NA	BCY	NA	
Area:	12.00	acres Rip Depth (ft	): 2.00	Volume: 38,720	BCY or	CC
		Source of estimated quantity: Sto	ckpiles and stripped	l areas		
	HOURLY PRO	DUCTION				
	Seismic:					
		Seismic Velocity:	NA	feet/second		
	Area:					
		Average Ripping Depth:	2.56	feet/pass		
		Average Ripping Length:	200.00	feet/pass		
		Average Dozer Speed:	88.00	feet/minute		
		Average Maneuver Time:	0.25	minutes/pass		
		Froduction per unit area.	0.773			
	Job Condition Con	rrection Factors				
	Una	adjusted Hourly Unit Production:	0.773	Acres/hr		
		Site Altitude:	4,600	feet		
		Altitude Adj: Job Efficiency:	1.00	(CAT HB) (1 shift/day)		
		Net Correction:	0.83	multiplier		
		Adjusted Hourly Unit Production	on: 0.64	Acres/hr		
		Adjusted Hourly Fleet Production	on: <b>1.28</b>	Acres/hr		
	JOB TIME AN	D COST				
	Fleet size:	2 Grader(s)	Total job time	e: 9.35	Hours	
	Unit cost:	\$696.428 Per acre	Total job cos	st: <b>\$8,357</b>		

# TRUCK/LOADER TEAM WORK

Site: Whitewater Pit 50	00	Permit Acti	on: TR-6		Permit/Job#: <u>M</u>	1977129
PROJECT IDEN	<u>TIFICATION</u>					
Task #: 03E		State: Color	ado	Ab	breviation: No	ne 20.02
Date: $\frac{8/31/20}{4CY}$	<u>)23</u> Co	ounty: Mesa			Filename: MI	29-03e
User. <u>ACT</u>						
Agency or o	organization name	E: DRMS				
HOURLY EQUIP	MENT COST			Shift bas	is: <u>1 per day</u>	
			Equipment Descri	ption		
Tr	uck Loader Team	-Truck: Cat	730	L		
~		-Loader: CA	Т 972Н			
Suppo	rt Equipment -Lo	ad Area: Cat	D8T - 8SU			
Road Ma	intenance – Motor	Grader: CA	T 14M			
	-Wate	er Truck: Wa	ter Tanker, 2,500	Gal.		
		_	~			<b>—</b> .
<u>Cost Breakdown</u> :	Truck/Load	ler Team Loador	Support I	Equipment	Maintenan Motor Grader	ce Equipment Water Truck
	TTUCK	LUauei	Load Alea	Dump Alea	Wotor Grader	Water Huek
%Utilization-machine:	100	100	30	100	50	(
Ownership cost/hour:	\$108.06	\$57.78	\$241.38	\$241.38	\$149.33	\$11.3
Operating cost/hour:	\$71.88	\$56.23	\$43.18	\$143.92	\$46.40	\$0.00
% Utilization-riper:	NA	0	NA	NA \$0.00	NA \$0.00	
Ripper on cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.82	\$35.00	\$40.00	\$40.04	\$46.87	\$0.00
Unit Subtotals:	\$204.76	\$149.98	\$324 59	\$425.34	\$242.60	\$11.34
Number of Units:	3	1	4321.39	0125.51	\$212.00	φ11.5
Group Subtotals:	Work:	\$764.26	Support:	\$749.93	Maint:	\$253.95
T	/h	I	11			
I otal work team cost	/nour: <u>\$1,768.14</u>	<u>}</u>				
MATERIAL QUA	NTITIES					
Initial volume:	26 607	CCV	Swall	factor: 1.215		
Loose volume:	32,328		, Swell	1actor. <u>1.215</u>		
Sou	rce of estimated y	volume: 21.0	9 ac ac @ 9"			
Source of	of estimated swell	factor: Cat	Handbook			
	Material Purchas	e Cost: \$0.0	0			
	Tota	al Cost: <u>\$0.0</u>	0			
	MICTION					
<u>noukly proi</u>	JUCTION					
Truck Capacity:	ht) Decisi					
<u>I ruck Payload (weig</u> Material we	<u>ni) Basis:</u> eight: 1.600		Pounds/LCY			
Descrip	otion: Top Soil					
Rated Pay	load: 62,000		Pounds			

	17.10	LCY				
Heaped Volume:	22.10	LCY				
Average Volume:	19.60	LCY				
Adjusted Volume:	22.10	LCY				
		-				
Final '	Truck Volume	Based on Number o	of Loader Passes:	18.48	LCY	
Loading Tool Capacity						
<u>v</u>			Buc	ket Size Class: N	IA	
Rated Capacity:	5 600	I CY (heaped)	200			_
Bucket Fill Factor:	1.100	Other - rock/di	rt mixtures (100	)-120%) 1.100		-
Adjusted Capacity:	6.160	LCY	(100	120,0) 1.100		_
Job Condition Corrections:	-	S	ite Altitude (ft.):	<u>4600</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	3)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
		<b>AX 11 - - -</b>			2	
Loading Tool Cycle Time:	Number	of Loading Tool Pa	asses Required to	Fill Truck:	<u> </u>	asses
Excavators and Front Shovel	<u>s:</u>					
Machine Cycle Time vs	Job Condition	n Rating: NA				
Wideline Cycle Time vs	S. JOD COndition					
Selected Value w	vithin this Basic	c Rating: NA				
Selected Value w	vithin this Basic	c Rating: NA				
Selected Value v Track Loaders – J	vithin this Basic Material Descri	c Rating: NA				
Selected Value v Track Loaders – I Cycle Time Elements (min.):	vithin this Basic Material Descri	c Rating: <u>NA</u>				
Selected Value v Track Loaders – I Cycle Time Elements (min.): Load: <u>NA</u>	vithin this Basic Material Descri M	c Rating: NA		Dump: 0.100	)	
Selected Value v Track Loaders – E Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders -	vithin this Basic Material Descri M – Unadiusted Ba	c Rating: <u>NA</u> iption: <u>NA</u> faneuver: <u>NA</u> sic Loader Cycle Ti	me (load, dump, i	Dump: 0.100	)	ites
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors	vithin this Basic Material Descri  Unadjusted Ba	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Ti	me (load, dump, 1	Dump: 0.100 maneuver): 0	) 0.525 minu	ıtes
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - <u>Cycle Time Factors</u> Material:	vithin this Basic Material Descri  Unadjusted Ba	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Ti	me (load, dump, 1	Dump: 0.100 maneuver): 0 Factor (min.) 0.020	) .525 minu Source (Cat HB)	ites
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	vithin this Basic Material Descri M Unadjusted Ba <u>Mixed materia</u> Convevor or c	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig	me (load, dump, 1	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000	) .525 minu Source (Cat HB) (Cat HB)	ites 
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	vithin this Basic Material Descri M Unadjusted Ba Mixed materia Conveyor or C Common own	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Ti al 0.02 dozer piled 10 ft. hig iership of trucks and	me (load, dump, 1 gh and up 0.00 1 loaders -0.04	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040	) .525 minu Source (Cat HB) (Cat HB) (Cat HB)	ites  
Selected Value v Track Loaders – ] Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	vithin this Basic Material Descri M Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04	me (load, dump, 1 gh and up 0.00 l loaders -0.04	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040	) Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites 
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basic Material Descri M Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> ianeuver: <u>NA</u> sic Loader Cycle Tit al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00	me (load, dump, 1 gh and up 0.00 l loaders -0.04	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000	) 525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites   
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basic Material Descri M Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> interver: <u>NA</u> sic Loader Cycle Tit al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tit	me (load, dump, 1 gh and up 0.00 1 loaders -0.04 me Adjustment:	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060	) 525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites    
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basic Material Descri M Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> iption: <u>NA</u> isic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tir Adjusted Load	me (load, dump, 1 gh and up 0.00 l loaders -0.04 me Adjustment: der Cycle Time:	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 <b>0.465</b>	) 525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites   
Selected Value v Track Loaders – ] Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	vithin this Basic Material Descri M Unadjusted Ba Unadjusted Ba <u>Mixed materia</u> Conveyor or c Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> iption: <u>NA</u> isic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tir Adjusted Load Net Load T	me (load, dump, r gh and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Fime per Truck:	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030	) 525 minu Source (Cat HB) (Cat HB)	ites   
Selected Value v Track Loaders – ] Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time:	vithin this Basic Material Descri M Unadjusted Baa Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: NA iption:	me (load, dump, 1 gh and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Fime per Truck:	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 0.000 -0.040 0.000 -0.060 0.465 1.030	) Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	Ites   
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Eychange Time:	vithin this Basic Material Descri M Unadjusted Ba Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> interver: <u>NA</u> sic Loader Cycle Tit al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T	me (load, dump, r gh and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Fime per Truck:	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030	) 525 minu Source (Cat HB) (Cat	ites   
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Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time: K Maneuver and Dump Time:	vithin this Basic Material Descri M Unadjusted Ba Unadjusted Ba Mixed materia Conveyor or c Common own Constant oper Nominal targe	c Rating: <u>NA</u> iption: <u>NA</u> iption: <u>NA</u> isic Loader Cycle Times al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Times Adjusted Load Net Load Tomes Minutes Minutes	me (load, dump, r gh and up 0.00 l loaders -0.04 me Adjustment: ler Cycle Time: Fime per Truck: Adjusted Adjusted	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030 for site altitude: for site altitude:	) 525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.030 1.000	Minute Minute Minute
Selected Value v Track Loaders – ] Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time: k Maneuver and Dump Time:	vithin this Basic Material Descri M Unadjusted Bas Unadjusted Bas Mixed materia Conveyor or o Common own Constant oper Nominal targe 0.60 1.030 1.00	c Rating: <u>NA</u> iption: <u></u> interver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. high hership of trucks and ration -0.04 et 0.00 Net Cycle Tir Adjusted Load Net Load T Minutes Minutes Minutes	me (load, dump, r gh and up 0.00 1 loaders -0.04 me Adjustment: ler Cycle Time: Fime per Truck: Adjusted Adjusted Adjusted	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030 for site altitude: for site altitude:	0.525       minu         Source       (Cat HB)         (Cat HB)       (Cat HB)         (Cat HB)       (Cat HB)         (Cat HB)       (Cat HB)         (Cat HB)       (Cat HB)         0.600       1.030         1.000       1.000	Minute Minute Minute
Selected Value v Track Loaders – 1 Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time: Truck Load Time: k Maneuver and Dump Time: Truck Travel (Haul & Return)	vithin this Basic Material Descri M Unadjusted Bas Unadjusted Bas Mixed materia Conveyor or o Common own Constant oper Nominal targe 0.60 1.030 1.00	c Rating: <u>NA</u> iption: <u>NA</u> iption: <u>NA</u> isic Loader Cycle Tit al 0.02 dozer piled 10 ft. hig hership of trucks and ration -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes Minutes Minutes Minutes	me (load, dump, 1 gh and up 0.00 l loaders -0.04 me Adjustment: der Cycle Time: Fime per Truck: Adjusted Adjusted Adjusted Adjusted	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.465 1.030 for site altitude: for site altitude: for site altitude:	) 525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.030 1.000 ter 1" tire	ntes 

Haul Rout	e:			I				
Seg #	Haul l	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1100.	00	0.00	4.00	4.00	1774	0.810	
-	11000		0.00			1771		
					Haul Time:	0.810	minutes	
Return Ro	ute:							
Seg #	Haul l	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	1100.	00	5.00	4.00	9.00	1700	0.722	
					Return Time:	0.722	minute	es
				Total Tru	ck Cycle Time:	4.162	minute	es
Loading Tool	lunit							
Produ	ction	680.25	LCY/Hour		Adjusted for j	ob efficiency:	564.60	LCY/Hour
Truck Unit Produ	ction							
	=	266.41	LCY/Hour		Adjusted for j	ob efficiency:	221.12	LCY/Hour
Optimal No. of Tru	ucks:	3	Truck(s)		Selected Num	ber of Trucks:	3	Truck(s)
			Adjuste	ed hourly true	k team production	on: 663	.36 LCY	//Hour
			Adjusted sing	le truck/loade	er team production	on: 564	.60 LCY	Y/Hour
			Adjusted multip	le truck/loade	er team production	on: 564	.60 LCY	ſ/Hour
JOB TIN	1E AN	D COST						
Fleet s	ize:	1	Team(s)	r	Total job time:	57.20	6 H	ours
Unit c	ost:	\$3.132	/LCY		Total job cost:	\$101,2	38	

# **REVEGETATION WORK**

]	Task description: S		Stage 3 Part B R	Stage 3 Part B Reveg Salty Mix				
Site:	te: Whitewater Pit 500		Permit Action: TR-6		Permit/Job#: M1977129			
<u>P</u> ]	ROJECT	IDENTIFIC	CATION State:	Colorado		Abbreviation	None	
	Date: User:	8/31/2023 ACY	County:	Mesa		Filename:	M129-03f	
	Age	ency or organi	zation name: DF	RMS				

# **FERTILIZING**

#### Materials

Description	Units /	Unit	Cost / Unit	Cost /Acre
Ammenium niterate 22.0.0	120.00	e me	¢0.(2	\$74.90
Ammonium nitrate, 55-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer	
			Materials	
			Cost/Acre	\$143.80

## **Application**

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.50	19.51	\$14.24
Saltbush, Four Wing - Dewinged	1.00	1.61	\$18.50
Saltgrass, Inland	4.00	55.45	\$171.20
Spike Muhly	0.60	22.04	\$5.82
Totals Seed Mix	6.10	98.61	\$209.76

## Application

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

Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Co	ost/Acre \$232.00

## **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
Total Mulch Materials Cost/Acre				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$468.01

## NURSERY STOCK PLANTING

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

	No. of Acres:	3.33	Cost /Acre:	\$1,860.65
Estimate	ed Failure Rate:	50%	Cost /Acre*:	\$1,860.65
*Selected Replanti	ng Work Items:	FERTILIZING,TI	LLING,SEEDING,MU	
		LCHING		
Initial Job Cost:	\$6,195.96			
Reseeding Job Cost:	\$3,097.98			
Total Job Cost:	\$9,294			
Job Hours:	5.00			

# **REVEGETATION WORK**

	0	eveg non bu			
r Pit 500	Per	mit Action:	TR-6	Permit/Jol	o#: <u>M1977129</u>
DENTIFIC	ATION State:	Colorado		Abbreviation	None
8/31/2023 ACY	County:	Mesa		Filename:	M129-03g
	er Pit 500 DENTIFIC 03G 8/31/2023 ACY	r Pit 500PerDENTIFICATION03GState:8/31/2023County:ACY	Permit Action:       DENTIFICATION       03G     State:       8/31/2023     County:       ACY	Permit Action:     TR-6       DENTIFICATION     State:     Colorado       03G     State:     Colorado       8/31/2023     County:     Mesa	Permit Action:     TR-6     Permit/John       DENTIFICATION     Ogg     State:     Colorado     Abbreviation:       03G     State:     Colorado     Abbreviation:       8/31/2023     County:     Mesa     Filename:

# **FERTILIZING**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer Materials	
			Cost/Acre	\$143.80

# Application

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Bluebunch Wheatgrass - Secar	9.50	30.53	\$103.31
Crested Wheatgrass - Ephraim	3.00	13.77	\$12.98
Galleta	4.00	14.60	\$89.40
Western Wheatgrass - Arriba	8.00	20.20	\$52.00
Totals Seed Mix	24.50	79.11	\$257.69

## Application

Description	Cost /Acre

Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Co	ost/Acre \$232.00

## **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
Total Mulch Materials Cost/Acre				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$468.01

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	k Cost / Acre	\$0.00

No. of Ac	res: 18.66	Cost /Acre:	\$1,908.58
Estimated Failure R	ate: 50%	Cost /Acre*:	\$1,908.58
*Selected Replanting Work Ite	ms: FERTILIZING,7	TILLING, SEEDING, MU	
	LCHING		
Initial Job Cost: \$35,614.10	)		
Reseeding Job Cost: \$17,807.05	5		
Total Job Cost: <b>\$53,421</b>			
Job Hours: <b>28.00</b>			

# **REVEGETATION WORK**

Task descri	ption:	Stage 4 Part A R	eveg Salty			
te: Whitewa	ter Pit 500	Per	mit Action:	TR-6	Permit/Jo	b#: <u>M1977129</u>
PROJECT	<b>IDENTIFIC</b>	CATION State:	Colorado		Abbreviation:	None
Date:	8/31/2023 ACY	County:	Mesa		Filename:	M129-04f

# **FERTILIZING**

#### Materials

Description	Units /	Unit	Cost / Unit	Cost /Acre
Ammenium niterate 22.0.0	120.00	e me	¢0.(2	\$74.90
Ammonium nitrate, 55-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer	
			Materials	
			Cost/Acre	\$143.80

## **Application**

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.50	19.51	\$14.24
Saltbush, Four Wing - Dewinged	1.00	1.61	\$18.50
Saltgrass, Inland	4.00	55.45	\$171.20
Spike Muhly	0.60	22.04	\$5.82
Totals Seed Mix	6.10	98.61	\$209.76

## Application

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

Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Co	ost/Acre \$232.00

# **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
<b>Total Mulch Materials Cost/Acre</b>				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	<b>Total Mulch Application Cost/Acre</b>	\$468.01

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	k Cost / Acre	\$0.00

	No. of Acres:	3.44	Cost /Acre:	\$1,860.65
Estimate	ed Failure Rate:	50%	Cost /Acre*:	\$1,860.65
*Selected Replanting	ng Work Items:	FERTILIZING,TI	LLING,SEEDING,MU	
		LCHING		
Initial Job Cost:	\$6,400.64			
Reseeding Job Cost:	\$3,200.32			
Total Job Cost:	\$9,601			
Job Hours:	5.00			

# **REVEGETATION WORK**

Г	Task descrip	otion:	Stage 4 Part A Re	veg Non-Salty		
Site:	Whitewa	ter Pit 500	Perm	it Action: <u>TR-6</u>	Permit/Job	o#: <u>M1977129</u>
<u>P</u> ]	<u>ROJECT</u>	IDENTIFIC	CATION			
	Task #:	04G	State:	Colorado	Abbreviation:	None
	Date:	8/31/2023	County:	Mesa	Filename:	M129-04g
	Hear	ACY				

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer Materials Cost/Acre	\$143.80

# Application

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Bluebunch Wheatgrass - Secar	9.50	30.53	\$103.31
Crested Wheatgrass - Ephraim	3.00	13.77	\$12.98
Galleta	4.00	14.60	\$89.40
Western Wheatgrass - Arriba	8.00	20.20	\$52.00
Totals Seed Mix	24.50	79.11	\$257.69

## Application

Description	Cost /Acre

Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Applicati	on Cost/Acre \$232.00

# **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
Total Mulch Materials Cost/Acre				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$468.01

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	k Cost / Acre	\$0.00

No. of Ac	cres: 5.22	Cost /Acre:	\$1,908.58
Estimated Failure R	late: 50%	Cost /Acre*:	\$1,908.58
*Selected Replanting Work Ite	ems: FERTILIZING,T	TILLING,SEEDING,MU	
	LCHING		
Initial Job Cost: \$9,962.79			
Reseeding Job Cost: \$4,981.39			
Total Job Cost: <b>\$14,944</b>			
Job Hours: <b>8.00</b>			

Page 1 of 2

# BULLDOZER WORK

Task description:	Stage o Gra	and slopes and s	slopes		
Whitewater Pit 500		Permit Action:	TR-6	Permit/Job#:	M1977129
PROJECT IDENTI	<b>FICATION</b>				
Task #: 06C	Si	tate: Colorado		Abbreviation:	None
Date: $\frac{8/31/2023}{ACY}$	Cou	inty: Mesa		Filename:	M129-06c
Agency or orga	anization name:	DRMS			
HOURLY EQUIPM	ENT COST				
Basic Machine: Ca	at D8T - 8SU				
Horsepower: 31	0				
Blade Type: Se	mi-Universal				
Shift Paging 1	A ar day				
Data Source: (C	PCI Uay				
Data Source: (C	NU)				
Cost Breakdown:					
			Utilization %		
Ownershin Cost/Hour		\$241.38	NA		
Ownership Cost Hour.		\$143.92	100		
Operating Cost/Hour:		+			
Operating Cost/Hour: Ripper own. Cost/Hour:		\$0.00	NA		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour:		\$0.00 \$0.00	NA 0		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$425.34 \$850.67	\$0.00 \$0.00 \$40.04	NA 0 NA		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN'	\$425.34 \$850.67 FITIES	\$0.00 \$0.00 \$40.04	NA 0 NA		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swall factors 1000	\$425.34 \$850.67 FITIES 230	\$0.00 \$0.00 \$40.04	NA 0 NA		
Operating Cost/Hour: Nipper own. Cost/Hour: Nipper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 14	\$425.34 \$850.67 FITIES 230 90	\$0.00 \$0.00 \$40.04	NA 0 NA		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14,	\$425.34 \$850.67 FITIES 230 90 421 LCY	\$0.00 \$0.00 \$40.04	NA 0 NA		
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu	\$425.34 \$850.67 FITIES 230 90 421 LCY Ime:200	\$0.00 \$0.00 \$40.04	NA 0 NA 	  H: 1V	
Operating Cost/Hour: Nipper own. Cost/Hour: Nipper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe	<u>\$425.34</u> <b>\$850.67</b> <b><u><b>IITIES</b></u> 230 90 <b>421</b> LCY Ime: <u>200</u> Il factor: <u>Cat</u></b>	\$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook	NA 0 NA 	 H: 1V	
Operating Cost/Hour: Ripper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe	\$425.34 <b>\$850.67</b> <b>FITIES</b> 230 90 <b>421</b> LCY Ime: 200 Il factor: Cat	\$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook	NA 0 NA 	 H: 1V	
Operating Cost/Hour:         Operating Cost/Hour:         Ripper own. Cost/Hour:         Operator Cost/Hour:         Operator Cost/Hour:         Total unit Cost/Hour:         Total unit Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       13,         Swell factor:       1.0         Loose volume:       14,         Source of estimated volu         Source of estimated swe	<u>\$425.34</u> <b>\$850.67</b> <b>TITIES</b> 230 90 <b>421</b> LCY 1me: <u>200</u> 1l factor: <u>Cat</u> <b>TION</b>	\$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook	NA 0 NA 	H: 1V	
Operating Cost/Hour: Nipper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance:	<u>\$425.34</u> <b>\$850.67</b> <b>TITIES</b> 230 90 <b>421</b> LCY Ime: <u>200</u> Il factor: <u>Cat</u> <b>TION</b> _70 fee	\$0.00 \$0.00 \$40.04 \$40.04 0LF of 5' berms a Handbook	NA 0 NA 	 H: 1V	
Operating Cost/Hour: Nipper own. Cost/Hour: Nipper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	\$425.34 <b>\$850.67</b> <b>FITIES</b> 230 90 <b>421</b> LCY Ime: 200 Il factor: Cat <b>TION</b> 70 fee 1,093.	\$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr	NA 0 NA 	 H: 1V	
Operating Cost/Hour: Nipper own. Cost/Hour: Nipper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ	<u>\$425.34</u> <b>\$850.67</b> <b>TITIES</b> 230 90 <b>421</b> LCY Ime: 200 Il factor: Cat <b>TION</b> action: 1,093. escription: C	\$0.00 \$0.00 \$40.04 ULF of 5' berms a Handbook t 7 LCY/hr onsolidated stocky	NA 0 NA 	<u>H: 1V</u>	
Operating Cost/Hour: Nipper own. Cost/Hour: Nipper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	<u>\$425.34</u> <b>\$850.67</b> <b>FITIES</b> 230 90 <b>421</b> LCY Ime: <u>200</u> Il factor: <u>Cat</u> <b>TION</b> action: <u>70 fee</u> 1,093. escription: <u>C</u> 0 %	\$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp	NA 0 NA 	H: 1V	
Operating Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Operator Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN' Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average push gradient: Average site altitude:	\$425.34         \$850.67 <b>FITIES</b> 230         90 <b>421</b> LCY         ime:       200 <b>421</b> LCY         ime:       200         II factor:       Cat <b>TION</b> action:       1,093.         escription:       C         0 %       4,600 feet	\$0.00 \$0.00 \$40.04 ULF of 5' berms a Handbook t 7 LCY/hr	NA 0 NA 	H: 1V	
Operating Cost/Hour: Nipper own. Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated swe <b>HOURLY PRODUC</b> Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight:	\$425.34         \$850.67 <b>FITIES</b> 230         90         421 LCY         Ime:       200         11 factor:       Cat <b>TION</b> action:       70 fee         action:       1,093.         escription:       C         0 %       4,600 feet         2,400 lbs/LC	\$0.00 \$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr fonsolidated stockp	NA 0 NA 	H: 1V	
Operating Cost/Hour:         Operating Cost/Hour:         Ripper op. Cost/Hour:         Operator Cost/Hour:         Operator Cost/Hour:         Total unit Cost/Hour:         Total unit Cost/Hour:         Total Fleet Cost/Hour:         Total Fleet Cost/Hour:         Initial Volume:       13,         Swell factor:       1.0'         Loose volume:       14,         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly product         Materials consistency de         Average site altitude:         Material weight:         Weight description:	\$425.34         \$850.67 <b>FITIES</b> 230         90 <b>421</b> LCY         Ime:       200 <b>421</b> LCY         Ime:       200 <b>11</b> factor:       Cat <b>TION</b> action:       1,093.         escription:       C         0 %       4,600 feet         2,400 lbs/LC       Clay and gra	\$0.00 \$0.00 \$40.04 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp Y vel - Dry	NA 0 NA 	H: 1V	
Operating Cost/Hour:         Operating Cost/Hour:         Ripper own. Cost/Hour:         Operator Cost/Hour:         Operator Cost/Hour:         Total unit Cost/Hour:         Total unit Cost/Hour:         Total Elect Cost/Hour:         Total Fleet Cost/Hour:         MATERIAL QUAN'         Initial Volume:       13,         Swell factor:       1.0         Loose volume:       14,         Source of estimated volu         Source of estimated swe         HOURLY PRODUC         Average push distance:         Unadjusted hourly produ         Materials consistency de         Average site altitude:         Material weight:         Weight description:         Job Condition Correction	\$425.34         \$850.67 <b>FITIES</b> 230         90 <b>421</b> LCY         ime:       200 <b>421</b> LCY         ime:       200 <b>11</b> factor:       Cat <b>TION</b> action:       70 fee         inction:       1,093.         escription:       C         0 %       4,600 feet         2,400 lbs/LC       Clay and gra         n Factor       Clay and gra	\$0.00 \$0.00 \$0.00 \$40.04 ULF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp 'Y vel - Dry	NA 0 NA 	H: 1V	
Operating Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Operator Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correctio Operator	<u>\$425.34</u> <b>\$850.67</b> <b>FITIES</b> 230 90 <b>421</b> LCY Ime: 200 Il factor: Cat <b>TION</b> action: 1,093. escription: C 0 % 4,600 feet 2,400 lbs/LC Clay and gra n Factor Skill:	\$0.00 \$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp 'Y vel - Dry 0.750	NA 0 NA 	H: 1V	
Operating Cost/Hour: Operating Cost/Hour: Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>MATERIAL QUAN</b> Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated volu Source of estimated swe <b>HOURLY PRODUC</b> Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consistency	<u>\$425.34</u> <b>\$850.67</b> <b>TITIES</b> 230 90 <b>421</b> LCY Ime: 200 Il factor: Cat <b>TION</b> 200 200 200 200 200 200 200 20	\$0.00 \$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp 	NA           0           NA   Ind 700 LF @ 35'H of 21 Ind 700 LF @ 35'H of 21 Ind 700 LF @ 100 L	H: 1V	
Operating Cost/Hour: Operating Cost/Hour: Ripper own. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 13, Swell factor: 1.0 Loose volume: 14, Source of estimated volu Source of estimated volu Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist Dozing m	\$425.34         \$850.67 <b>TITIES</b> 230         90 <b>421</b> LCY         ime:       200 <b>421</b> LCY         ime:       200 <b>421</b> LCY         ime:       200         if factor:       Cat <b>TION</b> action:       1,093.         escription:       C         0 %       4,600 feet         2,400 lbs/LC       Clay and gra         n Factor       Skill:         tency:	\$0.00 \$0.00 \$0.00 \$40.04 0LF of 5' berms a Handbook t 7 LCY/hr onsolidated stockp 'Y vel - Dry 0.750 1.000 1.000	NA           0           NA             Ind 700 LF @ 35'H of 21             Image: mail of the second seco	H: 1V	

Job efficient	cy:	0.830	(1 SHIFT/DAY)
Spoil pi	ile:	0.600	(FND-SF)
Push gradie	ent:	1.000	(CAT HB)
Altitud	de:	1.000	(CAT HB)
Material Weig	,ht:	0.958	(CAT HB)
Blade typ	pe:	1.000	(PAT)
Net correction	on:	0.3578	
Adjusted unit production:	39	1.33 LCY/hr	
Adjusted fleet production:	78	2.66 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$1.087/LCY

Total job time:	18.43 Hours
Total job cost:	\$15,674

# BULLDOZER RIPPING WORK

	Task description	Stag	e 6 Rip affected lands			
Site	: Whitewater F	rit 500	Permit Action:	TR-6	Permit/Job#	: M1977129
	PROJECT ID	ENTIFICATI	<u>ON</u>			
	Task #:       06         Date:       8/3         User:       AC	D 31/2023 CY	State:ColoradoCounty:Mesa		Abbreviation: Filename:	None M129-06d
	Agency	or organization	name: DRMS			
	HOURLY EO	UIPMENT CO	OST			
	Basic Ripper Att	Machine: Cat cachment: 3-S	t D8T - 8SU hank Ripper		Horsepower:	310 per day
	Cost Breakdown					
	Ripp Ripp	- Ownership Co Operating Co er Ownership Co per Operating Co Operator Co Total Unit Co	ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour:	\$241.38 \$143.92 \$14.11 \$7.45 \$40.04 \$446.90	Utilization % NA 100 NA 100 NA	
		Total Fleet Co	ost/Hour: \$893	79		
	MATERIAL (	MIANTITIFS	Sala Sala	••••••••••••••••••••••••••••••••••••••	and had had had	
	Alternate Mathe		Sele	cted estimating i	method: Area	
Seismic:	NA	<u>15.</u>	Bank Volume	NΛ	BCV	NΔ
Area:	9.30	acres	Rip Depth (ft):	2.00	Volume: 30,008	BCY or CCY
		Source of estin	mated quantity: Affecte	d areas		
	HOURLY PR	ODUCTION				
	<u>Seismic:</u>		Seismic Velocity:	NA	feet/second	
	Area:					
		Averag Averag	e Ripping Depth:	2.56	feet/pass	
		Average	e Ripping Length:	200.00	feet/pass	
		Aver	age Dozer Speed:	88.00	feet/minute	
		Average	tion per unit area:	0.25	minutes/pass	
	Job Condition Co	prrection Factors		0.775		
	Ur	adjusted Hourly	Unit Production:	0.773	Acres/hr	
			Site Altitude:	4,600	feet	
			Altitude Adj:	1.00	(CAT HB)	
			Job Efficiency:	0.83	(1 shift/day) multiplier	
		Adjusted Adjusted	Hourly Unit Production:	0.64	Acres/hr Acres/hr	
	IOR TIME AN	ND COST	<b>1000110000000</b>	1.20		
	Fleet size:	2	Grader(s)	Total job time	7.25	Hours
	Unit cost:	\$696.428	Per acre	Total job cost	: \$6,477	

# TRUCK/LOADER TEAM WORK

Task description:	Stage 6 A	Apply Topsoil				
Site: Whitewater Pit 5	00	Permit Ac	tion: TR-6		Permit/Job#: <u>M</u>	1977129
PROJECT IDEN	<b><u><b>FIFICATION</b></u></b>					
Task #: 06E		State: Colo	orado	Ab	breviation: No	ne
Date: $\frac{8/31/20}{4}$	023 0	County: Mes	a		Filename: M1	29-06e
User. ACT						
Agency or o	organization nam	e: DRMS				
HOURLY EQUIP	MENT COST			Shift bas	is: <u>1 per day</u>	
			Equipment Descri	ption		
Tı	ruck Loader Tear	n -Truck: C	at 730			
Suppo	rt Equipment -La	-Loader: C oad Area: C	at D8T - 8SU			
	-Du	mp Area: C	at D8T - 8SU			
Road Ma	intenance – Moto	r Grader: C	AT 14M	~ .		
	-Wat	er Truck: W	ater Tanker, 2,500	Gal.		
Cost Breakdown:	Truck/Loa	der Team	Support	Equipment	Maintenan	ce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	) 30	100	50	0
Ownership cost/hour:	\$108.06	\$57.78	\$ \$241.38	\$241.38	\$149.33	\$11.35
Operating cost/hour:	\$71.88	\$56.23	\$ \$43.18	\$143.92	\$46.40	\$0.00
%Utilization-riper:	NA	(	) NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	) \$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.82	\$35.97	7 \$40.04	\$40.04	\$46.87	\$0.00
Unit Subtotals:	\$204.76	\$149.98	\$324.59	\$425.34	\$242.60	\$11.35
Number of Units:	2	1	<u> </u>	1	1	1
Group Subtotals:	Work:	\$559.50	Support:	\$749.93	Maint:	\$253.95
Total work team cost	/hour: <u>\$1,563.3</u>	8				
Initial volume: Loose volume:	11,253 <b>13,67</b> 2	2 CC 2 LC	CY Swell	factor: <u>1.215</u>		
Sou	rce of estimated	volume: 9.3	ac @ 9"			
Source of	of estimated swel	l factor: <u>Ca</u>	t Handbook			
	To	tal Cost: $\frac{100}{50}$	00			
HOURLY PRO	DUCTION					
Truck Capacity: Truck Payload (weig	ht) Basis:					
Material we	eight: <u>1,600</u>	1	Pounds/LCY			
Rated Pav	vload: 62.000	1	Pounds			
1	02,000					

Struck Volumor	17.10	<u>av</u>				
	$\frac{17.10}{22.10}$ L	CY				
Heaped Volume:	<u>22.10</u> L	CY				
Average Volume:	<u>19.60</u> L	CY				
Adjusted Volume:	22.10 L	ĊŶ				
Final 7	Truck Volume E	Based on Number of	Loader Passes:	18.48	LCY	
Loading Tool Capacity						
			Buck	ket Size Class: N	A	_
Rated Capacity:	5.600	LCY (heaped)				
Bucket Fill Factor:	1.100	Other - rock/dirt	mixtures (100	-120%) 1.100		
Adjusted Capacity:	6.160	LCY				
Job Condition Corrections:		Sit	e Altitude (ft.): 4	<u>1600</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB	5)		
Job Efficiency:	0.830	0.830	(CAT HB	5)		
Net Correction:	0.830	0.830				
					_	
Loading Tool Cycle Time:	Number of	of Loading Tool Pas	ses Required to I	Fill Truck:	<u>3</u> p	asses
Excavators and Front Shovels	<u>s:</u>					
Machine Cycle Time vs	. Job Condition	Rating: NA				
Selected Value w	vithin this Basic	Rating: NA				
Track Loaders – I	Material Descrip	otion:				
Cycle Time Elements (min.):						
Load NA	Ma	neuver NA		Dump: 0.100	)	
				Dump		
Wheel and Track Loaders -	Unadjusted Basi	ic Loader Cycle Tin	ne (load, dump, r	$(n_{1}, n_{2}, \dots, n_{n})$		
Cuolo Timo Fostera					. <u>525</u> minu	tes
Cycle Time Factors				Factor (min.)	. <u>525</u> minu Source	ites
Material:	Mixed material	1 0.02		Factor (min.) 0.020	.525 minu Source (Cat HB)	ites
Material: Stockpile:	Mixed material Conveyor or do	1 0.02 ozer piled 10 ft. higł	n and up 0.00	Factor (min.) 0.020 0.000	.525 minu Source (Cat HB) (Cat HB)	ites 
Material: Stockpile: Truck Ownership:	Mixed material Conveyor or do Common owne	l 0.02 ozer piled 10 ft. high ership of trucks and	n and up 0.00 loaders -0.04	Factor (min.)           0.020           0.000           -0.040	.525minuSource(Cat HB)(Cat HB)(Cat HB)	ites 
Material: Stockpile: Truck Ownership: Operation:	Mixed material Conveyor or do Common owne Constant opera	1 0.02 ozer piled 10 ft. high ership of trucks and tion -0.04	n and up 0.00 loaders -0.04	Factor (min.)           0.020           0.000           -0.040           -0.040	.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	.tes   
Material: Stockpile: Truck Ownership: Operation: Dump Target:	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. high ership of trucks and titon -0.04 c 0.00	n and up 0.00 loaders -0.04	Factor (min.)         0.020           0.000         -0.040           -0.040         0.000	.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	tes - - - -
Material: Stockpile: Truck Ownership: Operation: Dump Target:	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. high ership of trucks and tion -0.04 c 0.00 Net Cycle Tim	n and up 0.00 loaders -0.04 e Adjustment:	Factor (min.)         0.020           0.000         -0.040           -0.040         -0.040           0.000         -0.060	.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutes	tes - - - - -
Material: Stockpile: Truck Ownership: Operation: Dump Target:	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. high ership of trucks and tion -0.04 c 0.00 Net Cycle Tim Adjusted Loade	n and up 0.00 loaders -0.04 e Adjustment: er Cycle Time:	Factor (min.)         0.020           0.000         -0.040           -0.040         -0.040           -0.060         0.465	.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutesminutesminutes	tes - - - -
Cycle Time Factors         Material:         Stockpile:         Truck Ownership:         Operation:         Dump Target:	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. high ership of trucks and ttion -0.04 c 0.00 Net Cycle Tim Adjusted Loade Net Load Ti	n and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: me per Truck:	Factor (min.)         0.020           0.000         -0.040           -0.040         0.000           -0.060         0.465           1.030         -0.030	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes       minutes     minutes	tes - - - -
Cycle Time Factors         Material:         Stockpile:         Truck Ownership:         Operation:         Dump Target:	Mixed material Conveyor or do Common owne Constant opera Nominal target	1 0.02 ozer piled 10 ft. high ership of trucks and ttion -0.04 0.00 Net Cycle Tim Adjusted Loade Net Load Ti	n and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: me per Truck:	Factor (min.)         0.020           0.000         -0.040           -0.040         -0.040           0.000         -0.060           0.465         1.030	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes       minutes     minutes	tes   
Cycle Time Factors         Material:         Stockpile:         Truck Ownership:         Operation:         Dump Target:    Truck Cycle Time: Truck Exchange Time:	Mixed material Conveyor or do Common owne Constant opera Nominal target 0.60	1 0.02 ozer piled 10 ft. high ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes	n and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: me per Truck: Adjusted	Factor (min.)       0.020         0.000       -0.040         -0.040       0.000         -0.060       0.465         1.030       1.030	.525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes 0.600	tes - - - - Minute
Cycle Time Factors         Material:         Stockpile:         Truck Ownership:         Operation:         Dump Target:             Truck Cycle Time:         Truck Exchange Time:         Truck Load Time:	Mixed material Conveyor or do Common owne Constant opera Nominal target 0.60 1.030	1 0.02 ozer piled 10 ft. high ership of trucks and titon -0.04 c 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes	a and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: me per Truck: Adjusted Adjusted	Factor (min.)       0.         0.020       0.000         -0.040       0.000         -0.060       0.465         1.030       1.030	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes       0.600     1.030	tes 
Cycle Time Factors         Material:         Stockpile:         Truck Ownership:         Operation:         Dump Target: <b>Truck Cycle Time:</b> Truck Exchange Time: Truck Load Time: x Maneuver and Dump Time:	Mixed material Conveyor or do Common owne Constant opera Nominal target 0.60 1.030 1.00	1 0.02 ozer piled 10 ft. high ership of trucks and titon -0.04 c 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes Minutes	a and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: me per Truck: Adjusted Adjusted	Factor (min.)       0.         0.020       0.000         -0.040       0.000         -0.060       0.465         1.030       1.030         for site altitude:	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes       0.600     1.030       1.000     1.000	Minute Minute Minute

Haul Ro	oute:	~ .			<b>m</b> 1 <b>b</b>	** 1 1	<b>T</b>	
Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Time	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	700.00	)	0.00	4.00	4.00	1774	0.584	
					Haul Time:	0.584	minutes	
Return I	Route:				-			
Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	700.00	)	0.00	4.00	4.00	2855	0.413	
				Total Tru	Return Time: ck Cycle Time:	0.413	minutes	
Loading To	ool unit							
Pro	duction _	680.25	LCY/Hour		Adjusted for j	ob efficiency:	564.60	_ LCY/Hour
Iruck Unit Pro	duction _	305.71	LCY/Hour		Adjusted for j	ob efficiency:	253.74	_ LCY/Hour
Optimal No. of	Frucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	d hourly truc	k team production	on: 507	.47 LCY/I	Hour
			Adjusted sing	le truck/loade	er team production	on: 507	.47 LCY/I	Hour
			Adjusted multip	le truck/loade	er team production	on: <b>507</b>	.47 LCY/I	Hour
JOB T	IME AN	D COST						
Flee	et size:	1	Team(s)	r	Fotal job time:	26.9	4 Hou	rs
Uni	t cost:	\$3.081	/LCY		Total job cost:	\$42,1	21	

# **REVEGETATION WORK**

Task descri	ption:	Stage 6 Reveg No	on-Salty			
ite: Whitewater Pit 500		Permit Action: TR-6			Permit/Job#: M1977129	
<u>PROJECT</u> Task #·	IDENTIFIC	CATION State:	Colorado	Ab	breviation:	None
Date:	8/31/2023 ACY	County:	Mesa		Filename:	M129-06g

# **FERTILIZING**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer	
			Materials	
			Cost/Acre	\$143.80

# Application

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Bluebunch Wheatgrass - Secar	9.50	30.53	\$103.31
Crested Wheatgrass - Ephraim	3.00	13.77	\$12.98
Galleta	4.00	14.60	\$89.40
Western Wheatgrass - Arriba	8.00	20.20	\$52.00
Totals Seed Mix	24.50	79.11	\$257.69

## Application

Description	Cost /Acre

Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Applicati	on Cost/Acre \$232.00

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
Total Mulch Materials Cost/Acre				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$468.01

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres	: 9.3	Cost /Acre:	\$1,908.58
Estimated Failure Rate	50%	Cost /Acre*:	\$1,908.58
*Selected Replanting Work Items	FERTILIZING,TI	LLING,SEEDING,MU	
	LCHING		
Initial Job Cost: <b>\$17,749.79</b>			
Reseeding Job Cost: \$8,874.90			
Total Job Cost: <b>\$26,625</b>			
Job Hours: <b>14.00</b>			

# **REVEGETATION WORK**

iption:	Phase S - Opt 2 Secondary fa	ailure seeding of	f reclaimed	
ater Pit 500	Permit Action:	TR-6	Permit/Joh	o#: M1977129
<u>TIDENTIFI(</u> S2	CATION State: Colorado		Abbreviation:	None
8/29/2023 ACY	County: Mesa		Filename:	M129-S2
	iption: <b>ater Pit 500</b> <u> <b>SIDENTIFIC</b></u> <u> <u> 8/29/2023</u> <u> ACY</u></u>	Phase S - Opt 2 Secondary fa         ater Pit 500       Permit Action:         C IDENTIFICATION         S2       State:       Colorado         8/29/2023       County:       Mesa	Phase S - Opt 2 Secondary failure seeding o         ater Pit 500       Permit Action: TR-6         CIDENTIFICATION         S2       State: Colorado         8/29/2023       County: Mesa         ACY	iption:       Phase S - Opt 2 Secondary failure seeding of reclaimed         ater Pit 500       Permit Action:       TR-6       Permit/Job         CIDENTIFICATION       State:       Colorado       Abbreviation:         §2       State:       Colorado       Filename:         ACY       ACY       Mesa       Filename:

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	120.00	pound	\$0.62	\$74.80
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.69	\$69.00
			Total Fertilizer Materials Cost/Acre	\$143.80

## **Application**

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

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.50	19.51	\$14.24
Saltbush, Four Wing - Dewinged	1.00	1.61	\$18.50
Saltgrass, Inland	4.00	55.45	\$171.20
Spike Muhly	0.60	22.04	\$5.82
Totals Seed Mix	6.10	98.61	\$209.76

## Application

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

Drill Seeding (DRMS Survey Cost)		\$232.00
Total	Seed Application Cost/Acre	\$232.00

# **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$3.75	\$3.75
Straw, delivered {MEANS 31 25 14.16 1200}	1.50	TON	\$429.79	\$644.68
Total Mulch Materials Cost/Acre				\$652.44

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	<b>Total Mulch Application Cost/Acre</b>	\$468.01

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

Estimate *Selected Replantir	No. of Acres: ed Failure Rate: ng Work Items:	8.9 0% NONE	Cost /Acre: Cost /Acre*:	\$1,860.65 \$0.00
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$16,559.79 \$0.00 \$16,560 9.00			

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	ial Mobilization					
: Whitewater Pit	500	Permit	Action: <u>TR-6</u>			Permit/Job#: <u>M</u>	1977129
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #· X01		State: Co	olorado		Abbro	eviation None	
Date: $\frac{8/31}{}$	2023	County: M	esa		F	ilename: M129	-X01
User: ACY							
A gency or	organization	name: DRMS					
Agency of	organization						
EQUIPMENT TH	RANSPOR'	<u>T RIG COST</u>					
					Shift ba	sis: 1 per da	У
					Cost Data Sou	rce: CRG Da	ta
Truck	Fractor Desc	ription: GENE	RIC ON-HIGH	WAV TR		DR 6X4 DIESEI	POWERED
TTUCK				700 HI	OCK TRACTO	2006	TOWERED,
Tmale	Trailar Daga	mintion: C	ENEDIC EOL		OSENECK DI	$\frac{2000}{\text{POP}}$	IDMENIT
Truck	Traffer Desc	ription: G	ENERIC FULL		OSENECK, DI	NUP DECK EQU	IPMENI
				INAILEN	(251, 501, Al	ND 1001)	
Cost Breakdown:							
Available Dig Cor	position	0 25 Tons	26 50 Tons	51	+ Tops		
Available Kig Ca	Cost/Hour:	\$20.26	\$26 04		+1005		
Operating	Cost/Hour:	\$20.20	\$76.04	ۍ د	82.85		
Operator (	Cost/Hour:	\$22.52	\$70.00	φ \$	22.05		
Helper (	Cost/Hour:	\$0.00	\$23.52	φ \$	22.52		
Total Unit (	Cost/Hour:	\$82.20	\$158.17	پ ۲	175.05		
	Jost/Hour.	\$62.29	\$136.17	φ	175.95		
NON KOADABL	<u>E EQUIPN</u>	<u>1ENI:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
1	(TONS)		t		fleet		
Submersible pump	0.70	\$15.28	\$82.29	1	\$97.57	\$82.29	\$250.00
- 460v, 8 in.	••••	<b>*</b> -0	<u> </u>		<b>**</b>	<u> </u>	<b>***</b>
CAT 9/2H	28.00	\$57.78	\$158.17	1	\$215.95	\$158.17	\$250.00
	25.19	\$108.06	\$82.29 \$82.20	5	\$5/1.05	\$246.87	\$/50.00
UAI 14M Water Terlier	23.37	\$149.55	\$82.29 \$82.20	1	\$231.62	\$82.29 \$82.20	\$250.00
2,500 Gal.	3.23	\$11.33	\$82.29	1	\$93.04	\$82.29	\$230.00
Cat D8T - 8SU	53.08	\$255.49	\$175.95	2	\$862.88	\$351.90	\$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

Subtotals: **\$2,269.96 \$1,168.39** 

#### **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
Light Duty Pickup, 4x4, 3/4 T.	\$44.06	2	\$88.12	\$88.12

CIRCES Cost Estimating Software

\$2,500.00

Subtotals:	\$180.80	\$180.80
EQUIPMENT HAUL DISTANCE and Time		
Nearest Major City or Town within project area region:	GRAND JUNCT	TION
Total one-way travel distance:	6.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost *	\$10,456.81	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$48.21	
-		

## Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	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

Total job time:	2.53	Hours
Total job cost:	\$10,505	

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Tas	sk descrip	ption:	Sec	condary Mobiliza					
e: <u> </u>	Whitewa	ter Pit s	500	Permit	t Action: <u>TR-6</u>	5	1	Permit/Job#:	M1977129
<u>PR(</u>	DJECT	IDEN	<b>FIFICATI</b>	ON					
,	Task #:	X02		State: C	olorado		Abbre	eviation: N	None
	Date:	8/31/2	2023	County: N	lesa		Fi	ilename: N	M129-X02
	User:	ACY							
	Age	ency or o	organizatio	n name: DRMS	5				
EQI	UIPME	NT TR	ANSPOR	<u>T RIG COST</u>					
							Shift ba	usis: <u>1 p</u>	er day
							Cost Data Sour	rce: CR	G Data
		Truck T	ractor Desc	ription: GENE	FRIC ON HIGH				ESEL DOWERED
		ITUCK I	Tactor Dese			400 HF	2 (2ND HAI F	2006)	LSEL I OWERED,
						400 111	(21)D	20001	
		Truck 1	Frailar Dasa	rintion:	ENEDIC FOLI	NNG GOO	OSENECK DE		FOLIDMENT
		Truck 7	Frailer Desc	ription: C	GENERIC FOLI	DING GOO	OSENECK, DF	ROP DECK I	EQUIPMENT
		Truck 7	Frailer Desc	eription: C	GENERIC FOLI	DING GOO TRAILER	OSENECK, DF R (25T, 50T, AN	ROP DECK I ND 100T)	EQUIPMENT
<u>Cost</u>	Breakdo	Truck T	Frailer Desc	ription: C	JENERIC FOLI	DING GOO TRAILER	OSENECK, DF 2 (25T, 50T, AN	ROP DECK I ND 100T)	EQUIPMENT
Cost	Breakdo	Truck T own: Rig Cap	Frailer Desc	0-25 Tons	GENERIC FOLI	DING GOO TRAILER	OSENECK, DF (25T, 50T, AN + Tons	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	<u>Breakdo</u> zailable I Owne	Truck T own: Rig Cap ership C	Frailer Desc acities ost/Hour:	0-25 Tons \$20.26	GENERIC FOLI 26-50 Tons \$36.04	DING GOO TRAILER 51 \$	OSENECK, DF 2 (25T, 50T, AN + Tons 647.05	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo vailable H Owne Ope	Truck T own: Rig Cap ership C rating C	Frailer Desc acities ost/Hour: ost/Hour:	O-25 Tons           \$20.26           \$39.51	GENERIC FOLI 26-50 Tons \$36.04 \$76.08	DING GOO TRAILER 51 \$ \$	OSENECK, DF 2 (25T, 50T, AN + Tons 547.05 582.85	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo railable H Owne Oper Oper	Truck T own: Rig Cap ership C rating C erator C	Frailer Desc acities ost/Hour: ost/Hour: ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52	GENERIC FOLI 26-50 Tons \$36.04 \$76.08 \$22.52	DING GOO TRAILER 51 \$ \$ \$ \$	OSENECK, DF 2 (25T, 50T, AN + Tons 647.05 682.85 622.52	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo zailable I Owne Oper Op	Truck T own: Rig Cap ership C rating C erator C Helper C	Trailer Desc acities ost/Hour: ost/Hour: ost/Hour: ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00	<b>26-50 Tons</b> \$36.04 \$76.08 \$22.52 \$23.53	DING GOO TRAILER 51 \$ \$ \$ \$ \$ \$ \$ \$	CSENECK, DF (25T, 50T, AN + Tons (47.05 (32.52 (52.52 (52.53)	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo railable I Owne Ope Ope F Tota	Truck 7 own: Rig Cap ership C rating C erator C felper C 1 Unit C	acities ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29	<b>26-50 Tons</b> \$36.04 \$76.08 \$22.52 \$23.53 \$158.17	DING GOO TRAILER	OSENECK, DF (25T, 50T, AN + Tons 047.05 082.85 022.52 023.53 175.95	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo vailable H Owne Ope Op F Tota	Truck T own: Rig Cap ership C rating C erator C Helper C I Unit C	acities ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29	<b>26-50 Tons</b> \$36.04 \$76.08 \$22.52 \$23.53 \$158.17	DING GOO TRAILER 51 \$ \$ \$ \$ \$ \$ \$ \$	OSENECK, DF           (25T, 50T, AN)           + Tons           447.05           522.52           523.53           175.95	ROP DECK I ND 100T)	EQUIPMENT
	Breakdo railable I Owne Ope Op F Tota	Truck 7 own: Rig Cap ership C rating C erator C Helper C I Unit C	acities ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29	<b>26-50 Tons</b> \$36.04 \$76.08 \$22.52 \$23.53 \$158.17	DING GOO TRAILER	OSENECK, DF         (25T, 50T, AN         + Tons         647.05         682.85         622.52         623.53         175.95	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo zailable I Owne Ope Op F Tota N ROA	Truck 7 own: Rig Cap ership C rating C erator C lelper C 1 Unit C	acities ost/Hour: ost/Hour: ost/Hour: ost/Hour: ost/Hour: E EQUIPM	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29	<b>26-50 Tons</b> \$36.04 \$76.08 \$22.52 \$23.53 \$158.17	DING GOO TRAILER	OSENECK, DF         2 (25T, 50T, AN         + Tons         647.05         582.85         522.52         523.53         175.95	ROP DECK I	EQUIPMENT
Cost Av NOI	Breakdo <b>railable H</b> Owne Oper Op F Tota <b>N ROA</b> achine	Truck 7 own: Rig Cap ership C rating C erator C telper C 1 Unit C DABLI	acities         ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29           MENT:           Owner ship	26-50 Tons           \$36.04           \$76.08           \$22.52           \$23.53           \$158.17           Haul Rig	DING GOO TRAILER	OSENECK, DF         (25T, 50T, AN         + Tons         647.05         582.85         522.52         523.53         175.95         Haul Trip	ROP DECK I ND 100T)	EQUIPMENT
Cost Av	Breakdo <b>railable I</b> Owne Ope Op H Tota <b>N ROA</b> achine scription	Truck 7 own: Rig Cap ership C rating C erator C Helper C 1 Unit C	acities         ost/Hour:         ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29           MENT:           Owner ship           Cost/hr/ unit	26-50 Tons           \$36.04           \$76.08           \$22.52           \$23.53           \$158.17           Haul Rig Cost/hr/uni	DING GOO TRAILER	OSENECK, DF (25T, 50T, AN + Tons 647.05 682.85 522.52 523.53 175.95 Haul Trip Cost/hr/	ROP DECK I ND 100T) Return Tri Cost/hr/ fl	EQUIPMENT ip DOT Permit eet Cost/ fleet
Cost Av	Breakdo <b>railable I</b> Owne Ope Op F Tota <b>N ROA</b> achine scription	Truck 7 own: Rig Cap ership C rating C erator C Helper C 1 Unit C	acities         ost/Hour:         ost/Hour:	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29           MENT:           Owner ship           Cost/hr/ unit	26-50 Tons           \$36.04           \$76.08           \$22.52           \$23.53           \$158.17           Haul Rig Cost/hr/uni t	DING GOO TRAILER	OSENECK, DF         (25T, 50T, AN         + Tons         347.05         382.85         322.52         33.53         175.95         Haul Trip         Cost/hr/         fleet	ROP DECK I ND 100T) Return Tri Cost/hr/ fl	ip eet DOT Permit Cost/ fleet
Cost Av NOI	Breakdo vailable I Owne Oper Oper Oper Tota N ROAI achine escription ill/Broadc: eder with actor	Truck 7 <u>own:</u> Rig Cap ership C rating C erator C lelper C 1 Unit C DABLI ast	acities         ost/Hour:         25.00	0-25 Tons           \$20.26           \$39.51           \$22.52           \$0.00           \$82.29           MENT:           Owner ship           Cost/hr/ unit           \$6.73	26-50 Tons           \$36.04           \$76.08           \$22.52           \$23.53           \$158.17           Haul Rig Cost/hr/uni t           \$82.29	DING GOO TRAILER	OSENECK, DF         (25T, 50T, AN         + Tons         647.05         582.85         522.52         523.53         175.95         Haul Trip         Cost/hr/         fleet         \$89.02	ROP DECK I ND 100T) Return Tri Cost/hr/ fl \$82.29	EQUIPMENT ip eet DOT Permit Cost/ fleet \$250.00

Subtotals: **\$197.25 \$164.58 \$500.00** 

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
Light Duty Pickup, 4x4, 3/4 T.	\$44.06	1	\$44.06	\$44.06
		Subtotals:	\$136.74	\$136.74

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	6.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$1,490.99	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$36.46	_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	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: \$1,527