

**COLORADO** Division of Reclamation, Mining and Safety Department of Natural Resources 1313 Sherman Street, Room 215

Denver, CO 80203

October 29, 2019

Jason Burkey Oldcastle SW Group, Inc. dba United Companies of Mesa County 2273 River Road Grand Junction, CO 81502

### RE: Otter Creek Pit, Permit No.M-2012-050, Construction Material Regular (112c) Amendment Application (AM-1) Decision Letter – Financial Warranty Request

Dear Mr. Burkey:

On October 29, 2019, the Division of Reclamation, Mining, and Safety (Division) <u>approved</u> the Amendment application (AM-1) submitted to the Division on August 1, 2019, addressing the following:

Add 5.8 acres to the northeast

The financial warranty set by the Division for this operation is an amount of \$125,282. This amount exceeds the \$124,375.61 of financial warranty currently held by the Division. If you have not already done so, please submit the additional bond in the amount of \$906.39. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted. The revision will not be final until the bond is approved by the Division.

Please make arrangements with Gabriel Benvenuti at the Division of Reclamation, Mining, and Safety Denver Office, phone no. 303-866-3567, Ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution, and/or submittal of financial and/or performance warranty forms should also be directed to Gabriel Benvenuti.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext. 8183 or via email at amy.yeldell@ state.co.us

Sincerely,

Geldell

Amy Yeldell Environmental Protection Specialist



M-2012-050 October 29, 2019 Page 2

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS Gabriel Benvenuti, DRMS Ivan Geer, Consultant

# COST SUMMARY WORK

Task description:		AM-1					
Site:	ite: Otter Creek Pit		Permit Action: AM-1		AM-1	Permit/Job#: <u>M2012050</u>	
<u>PI</u>	ROJECT	IDENTIFIC	CATION				
	Task #:	ACY	State:	Colorado		Abbreviation:	None
	Date:	10/11/2019	County:	Mesa		Filename:	M050-ACY
	User:	ACY					
	Age	ency or organi	zation name: DI	RMS			

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01	Equipment Removal	DEMOLISH	1	16.00	\$4,000
02a	Backfill Highwall	LOADER	1	46.07	\$6,917
03a	Push Backfill Down 3H:1V Slope	DOZER	1	6.86	\$1,991
04a	Topsoil berm pushed to backfill	DOZER	1	53.02	\$15,387
05a	Move topsoil to 6 acre overburden storage area	TRUCK1	1	17.39	\$16,616
06a	Topsoil Compaction Relief	RIPPER	1	17.62	\$5,115
07a	Revegetate 12.5 acres + Trees	REVEGE	1	24.00	\$26,014
08a	Revegetate 1.2 Acres Wetland Area	REVEGE	1	8.00	\$7,982
09a	Initial Mobilization	MOBILIZE	] 1	2.57	\$7,313
09b	Secondary Mobilization	MOBILIZE	1	2.57	\$1,470
		194.1	\$92,805		

# **INDIRECT COSTS**

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$1,875
Performance bond:	1.05	Total =	\$974
Job superintendent:	97.05	Total =	\$6,734
Profit:	10.00	Total =	\$9,280
		TOTAL O & P =	\$18,864
		CONTRACT AMOUNT (direct + O & P) = $($	\$111,669

### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

TOTAL BO	\$125,282		
	Т	OTAL INDIRECT COST =	\$32,477
CONTINGENCY:	3.00	Total =	\$2,784
Reclamation management and/or administration:	5.00		\$5,583
Engineering work and/or contract/bid preparation:	4.25	Total =	\$4,746
Financial warranty processing (legal/related costs):	\$500	Total =	\$500

# **DEMOLITION WORK**

Т	ask description:	Equipment Remov	val		
Site:	Otter Creek Pit	Permit	t Action: Am-1	Permit/.	Job#: M2012050
<b>PROJEC</b>	CT IDENTIFICATI	<u>ON</u>			
Task #: Date:	01 10/11/2019	State: Colo County: Mes	orado a	Abbreviation: Filename:	None M050-01
User:	ACY Agency or organi	zation name: _ DRMS			
<u>UNIT CO</u>	<u>STS</u>			Location adju	stment: 100.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Removal of Buried	15' x 60'	USER PROVIDED	1.00	1	\$3,500.00	\$3,500.00
Truck Scale		ITEM				
Removal of 500	500 gal	USER PROVIDED	1.00	1	\$250.00	\$250.00
gallon tank		ITEM				
Removal of Pit Pump	n/a	USER PROVIDED	1.00	1	\$250.00	\$250.00
and Piping		ITEM				

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	16.00	(unadjusted):	\$4,000.00	location):	\$4,000.00

### WHEEL LOADER - LOAD AND CARRY WORK

Task description:	Backfill	Highwall				
: Otter Creek Pit		Permit Actio	on: AM-1		Permit/Job#:	M2012050
PROJECT IDENT	<b>TIFICATION</b>					
Task #: 02A		State: Colora	do		Abbreviation:	None
Date: $\frac{0211}{10/11/2}$	019	County: Mesa	40		Filename:	M050-02a
User: ACY		<u></u>				111000 024
Agency or o	rganization nam	ne: DRMS				
HOURLY EQUIP	MENT COST	1				
Basic Machine				Horsepo	).Wer	315
Attachment 1		ingii int		Shift E		ber day
7 Attachment 1				Data So	1	CRG)
				2 20		
Cost Breakdown:			Utilizatio	on %		
Ownership Co	ost/Hour.	\$52.71	NA	/0		
Ownership Co Operating Co		\$61.51	100			
Operator Co		\$35.93	NA			
Total Unit Co		\$150.14				
Total Elect C		\$150.14				
Total Fleet C		\$130.14				
	5,350 5,965 cce of estimated	volume: 500 L	FA 17'H 1:1		115	
Source of	f estimated swel	Il factor: <u>Cat H</u>	andbook			
HOURLY PRODU	TCTION					
Loader Cycle Time:	Unadjuste	ed Basic Cycle Ti	me (load, dum	p, maneuver):	0.550	minutes
Cycle Time F	actors				Factor (min.)	Source
		al 3/4" to 6" diam			0.000	(Cat HB)
		yor or dozer piled			0.010	(Cat HB)
Truck Owne	1	on ownership of t		lers -0.04	-0.040	(Cat HB)
		int operation -0.04	1		-0.040	(Cat HB)
Dump T	arget: Nomin	al target 0.00	Carala Time A	1	0.000	(Cat HB)
			Cycle Time A justed Basic C		-0.070	minutes
		Adj	Justed Dasic C	ycie i fille:	0.400	minutes
Rolling Resistance -	Road Condition	<u>s</u>				
н	aul: Rutted d	irt, little maintena	nce, no water	2" tire penetrat	tion 5.0	
Retu		irt, little maintena				
			-, -, -, -, -, -, -, -, -, -, -, -, -, -	r		
Haul and Return Tim	1			1	1	
	Length	Grade Res.	Rolling	Total Res.	Travel Time	Source
	(feet)	(%)	Res. (%)	(%)	(minutes)	
Haul Route:	1300	0.00	5.00	5.00	1.1492	(Cat HB)

Return Route:

1300

0.00

5.00

5.00

(Cat HB)

1.0392

			Total Travel Tir Total Cycle Tir		2.1884 2.6684	minutes minutes
Load Bucket Capacity						
Rated Capac	ity: 7.50	LCY (hea	ped)			
Bucket Fill Fac	tor: 0.925	Loose ma	terial - 1/8" to 3/8	" (90 - 95	5%) 0.925	
Adjusted Capac	ity: <b>6.94</b>	LCY				
Job Condition Correcti Site Altitude: <u>4630</u> fee						
		Source				
Altitude Adj:	1.00	(CAT HB	)			
Job Efficiency:	0.83	(1 shift/da	y)			
Net Correction:	0.83	multiplier				
U	Inadjusted Hourly Uni	it Production:	155.99	LCY/I	Hour	
	Adjusted Hourly Uni		129.47	LCY/I	Hour	
	Adjusted Hourly Flee		129.47	LCY/I	Hour	
JOB TIME AND C	<u>OST</u>					
Fleet size:	1 Loader(s	3)	Total job time:		46.07	Hours

 Unit cost:
 \$1.160
 /LCY
 Total job cost:
 \$6,917

# BULLDOZER WORK

				Slope		
Otter Creek Pit		Peri	mit Action:	AM-1	Permit/Job#:	M2012050
PROJECT IDEN	TIFICATI	ON				
Task #: $03A$ Date: $10/11$ User: ACY	/2019	State: County:	Colorado Mesa		Abbreviation: Filename:	None M050-03a
Agency or	organization	name: DR	RMS			
HOURLY EQUI	PMENT C	<u>OST</u>				
Basic Machine:	Cat D9T -	9SU				
Horsepower:	405	1				
Blade Type: Attachment:	Semi-Univ					
Shift Basis:	3-shank rip 1 per day	oper				
Data Source:	(CRG)			_		
	(CKU)					
Cost Breakdown:			1			
o			<b>M101</b>	<u>Utilization %</u>		
Ownership Cost/H			\$121.49	NA		
Operating Cost/H			\$105.84	100		
Ripper own. Cost/H Ripper op. Cost/H			\$13.94 \$8.96	<u>NA</u> 100		
Operator Cost/H	our		\$39.98	NA		
Total unit Cost/Hou Total Fleet Cost/Ho	r: \$290 ur: <b>\$290</b>	.20				
Total unit Cost/Hou Total Fleet Cost/Ho <u>MATERIAL QU</u> Initial Volume:	r: <u>\$290</u> , ur: <b>\$290</b> , <b>ANTITIES</b> 5,965	.20				
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU	r: \$290 ur: <b>\$290</b> ANTITIES	.20				
Total unit Cost/Hou Total Fleet Cost/Ho <u>MATERIAL QU</u> Initial Volume: Swell factor:	r: \$290. ur: <b>\$290.</b> <b>ANTITIES</b> 5,965 1.000 <b>5,965</b> LCY volume:	20	ed Volume f	irom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated	r: \$290. ur: \$290. ANTITIES 5,965 1.000 5,965 LCY volume: swell factor:	20		rom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated	r: \$290. ur: \$290. ANTITIES 5,965 1.000 5,965 LCY volume: swell factor: DUCTION ace:	20	book	rom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distar Unadjusted hourly p	r: \$290. ur: <b>\$290.</b> <b>ANTITIES</b> 5,965 1.000 <b>5,965</b> LCY volume: swell factor: <b>DUCTION</b> nce: production:	20 	book	irom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distant	r: \$290. ur: \$290. ANTITIES 5,965 1.000 5,965 LCY volume: swell factor: PUCTION ace: production: cy description ent: 15 %	20 	book Y/hr	rom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated <b>HOURLY PROD</b> Average push distar Unadjusted hourly p Materials consistence Average push gradie Average site altitude	r: \$290 ur: \$290 <b>ANTITIES</b> 5,965 1.000 5,965 LCY volume: swell factor: <b>DUCTION</b> ace: production: cy description ent: 15 % 2.5%	20 	book Y/hr	irom 02a		
Total unit Cost/Hou Total Fleet Cost/Hou Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distar Unadjusted hourly p Materials consistence	r: \$290 ur: \$290 <b>ANTITIES</b> 5,965 1.000 5,965 LCY volume: swell factor: <b>DUCTION</b> ace: production: cy description ent: 15 % 2.5%	20 Transport Cat Hand 50 feet 2,110.5 LCY h: Loose s 0 feet 0 lbs/LCY	book Y/hr	rom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated <b>HOURLY PROD</b> Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight:	r: $$290$ . ur: $$290$ . <b>ANTITIES</b> 5,965 1.000 <b>5,965</b> LCY volume: swell factor: <b>DUCTION</b> ace: production: cy description ent: $15 \%$ 4,630 2,500 Clay	20 Transport Cat Hand 50 feet 2,110.5 LC n: Loose s 0 feet 0 lbs/LCY - Dry	book Y/hr	rom 02a		
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated <b>HOURLY PROD</b> Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Correc Oper	r: $$290$ ur: $$290$ <b>ANTITIES</b> 5,965 1.000 <b>5,965</b> LCY volume: swell factor: <b>DUCTION</b> ace: production: cy description ent: $15 \%$ 4,630 2,500 Clay ection Factor rator Skill:	20 Transport Cat Hand 50 feet 2,110.5 LCY a: Loose s 0 feet 0 lbs/LCY - Dry 0.	book Y/hr stockpile 1.2			
Total unit Cost/Hou Total Fleet Cost/Ho MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated MOURLY PROD Average push distan Unadjusted hourly p Materials consistence Average push gradid Average push gradid Average site altitude Material weight: Weight description: Job Condition Correc Oper Material co	r: $$290$ ur: $$290$ and $$200$ and $$2,500$ and $$2,500$ and $$2,500$ and and $$2,500$ and and and and and and and and and and	.20 	book Y/hr stockpile 1.2	<u>Source</u> (AVG.) (CAT HB)		
Total unit Cost/Hou Total Fleet Cost/Hou Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated <b>HOURLY PROD</b> Average push distan Unadjusted hourly p Materials consistence Average push gradid Average site altitude Material weight: Weight description: Job Condition Correc Oper Material co	r: $$290$ ur: $$290$ <b>ANTITIES</b> 5,965 1.000 <b>5,965</b> LCY volume: swell factor: <b>DUCTION</b> ace: production: cy description ent: $15 \%$ 4,630 2,500 Clay ection Factor rator Skill:	.20 	book Y/hr stockpile 1.2	<u>Source</u> (AVG.)		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.920	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4119	
Adjusted unit production: 86	59.31 LCY/hr	
Adjusted fleet production: 86	69.31 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.334/LCY

Total job time:	<b>6.86</b> Hours
Total job cost:	\$1,991

# BULLDOZER WORK

	Topsoil berm pu	silcu to back			
Otter Creek Pit	Per	mit Action:	AM-1	Permit/Job#:	M2012050
PROJECT IDENTI	FICATION				
Task #: 04A	State:	Colorado		Abbreviation:	None
Date: 10/11/20	19 County:	Mesa		Filename:	M050-04a
User: ACY					
Agency or org	ganization name:	RMS			
HOURLY EQUIPM	IENT COST				
	Cat D9T - 9SU				
L	05 Semi-Universal				
VI	-shank ripper				
	per day				
	CRG)				
	- /				
Cost Breakdown:		1	Utilization %		
Ownership Cost/Hour		\$121.49	NA		
Operating Cost/Hour		\$105.84	100		
Ripper own. Cost/Hour		\$13.94	NA		
Ripper op. Cost/Hour		\$8.96	100		
Operator Cost/Hour	:	\$39.98	NA		
Total Fleet Cost/Hour:	\$290.20 \$290.20 NTITIES				
Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>18</u>	\$290.20 NTITIES 3,518				
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: <u>18</u> Swell factor: <u>1.1</u>	\$290.20 NTITIES				
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol	\$290.20 <b>NTITIES</b> 3,518 115 <b>0,648</b> LCY lume: L-2	lbook			
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol       Source of estimated swell	\$290.20 <b>NTITIES</b> 3,518 115 <b>,648</b> LCY lume: L-2 ell factor: Cat Hance <b>CTION</b>	lbook			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 18 Swell factor: 1.1 Loose volume: 20 Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance:	\$290.20 <b>NTITIES</b> 3,518 115 <b>9,648</b> LCY lume: L-2 ell factor: Cat Hance CTION 90 feet				
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 18 Swell factor: 1.1 Loose volume: 20 Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod	\$290.20           NTITIES           3,518           115           9,648 LCY           lume:         L-2           cat Hance           CTION           duction:         90 feet		).8		
MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol       30         Source of estimated swo       40         HOURLY PRODUC       Average push distance:         Unadjusted hourly prod       Materials consistency d         Average push gradient:       10	\$290.20           NTITIES           3,518           115           9,648 LCY           lume:         L-2           ell factor:         Cat Hance           CTION           induction:         90 feet           luction:         1,351.7 LC           lescription:         Dry, not           10 %         10 %	Y/hr	).8		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 18 Swell factor: 1.1 Loose volume: 20 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient:	\$290.20           NTITIES           3,518           115           9,648 LCY           lume:         L-2           cat Hance           CTION           induction:         90 feet           fluction:         1,351.7 LC           description:         Dry, not	Y/hr			
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 18 Swell factor: 1.1 Loose volume: 20 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude:	\$290.20           NTITIES           3,518           115           9,648 LCY           lume:         L-2           ell factor:         Cat Hance           CTION           induction:         90 feet           luction:         1,351.7 LC           lescription:         Dry, not           10 %         10 %	Y/hr	).8		
Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 18 Swell factor: 1.1 Loose volume: 20 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight:	\$290.20           NTITIES           3,518           115           9,648 LCY           lume:         L-2           ell factor:         Cat Hand           CTION           duction:         1,351.7 LC           lescription:         Dry, not           10 %         4,630 feet	Y/hr	).8		
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol       Source of estimated swell         HOURLY PRODUC         Average push distance:         Unadjusted hourly prod         Materials consistency d         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction	\$290.20         NTITIES         3,518         115         9,648 LCY         lume:       L-2         ell factor:       Cat Hand         CTION         duction:       1,351.7 LC         lescription:       Dry, not         10 %       4,630 feet         2,500 lbs/LCY       Clay - Dry         on Factor       0	Y/hr on-cohesive ()	Source		
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol       Source of estimated swell         HOURLY PRODUC         Average push distance:         Unadjusted hourly prod         Materials consistency d         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction         Operator	\$290.20         NTITIES         3,518         115         9,648 LCY         lume:       L-2         cell factor:       Cat Hand         CTION         duction:       90 feet         duction:       1,351.7 LC         lescription:       Dry, not         4,630 feet       2,500 lbs/LCY         Clay - Dry       On Factor         or Skill:       0	Y/hr on-cohesive () 	Source (AVG.)		
Total Fleet Cost/Hour:         MATERIAL QUAN         Initial Volume:       18         Swell factor:       1.1         Loose volume:       20         Source of estimated vol       Source of estimated swell         HOURLY PRODUC         Average push distance:         Unadjusted hourly prod         Materials consistency d         Average push gradient:         Average site altitude:         Material weight:         Weight description:         Job Condition Correction	\$290.20NTITIES3,518115 $0,648$ LCYlume:L-2rell factor:Cat HanceCTIONthe duction:90 feetduction:1,351.7 LCdescription:Dry, notthe duction:10 %4,630 feet2,500 lbs/LCYClay - DryClay - Dryon Factor or Skill:0tency:0	Y/hr on-cohesive ()	Source		

Job efficienc	y: 0.830	(1 SHIFT/DAY)
Spoil pil	e: 0.800	(FND-RF)
Push gradier	nt: 0.786	(CAT HB)
Altitud	e: 1.000	(CAT HB)
Material Weigh	nt: 0.920	(CAT HB)
Blade typ	e: 1.000	(PAT)
Net correctio	n: 0.2881	
Adjusted unit production:	389.42 LCY/hr	
Adjusted fleet production:	389.42 LCY/hr	
=		

Fleet size:	1 Dozer(s)
Unit cost:	\$0.745/LCY

Total job time:	53.02 Hours
Total job cost:	\$15,387

# Page 1 of 3

# TRUCK/LOADER TEAM WORK

Task description:	Move to	psoil to 6 a	cre ov	verburden storag	e area		
Site: Otter Creek Pit	Site:       Otter Creek Pit       Permit Action:       AM-1       Permit/Job#:       M2						2012050
	JTIELO A TION	r					
PROJECT IDEN	NIFICATION	_	~ •				
Task #: 05A Date: 10/11	/2019		Colora Mesa	ado	Ab	breviation: Nor Filename: M0	ne 150-05a
User: ACY	/2019	County:	viesa			Filename: Mo	30-03a
	organization nar	ne: DRM	S				
Argeney of	organization har		5				
HOURLY EQU	PMENT COST	<u>Γ</u>			Shift bas	is: <u>1 per day</u>	
				Equipment Descri	ption		
	Fruck Loader Tea	m -Truck: -Loader:		770D T 980H high lift			
Supr	ort Equipment -L		NA				
	-Di	ump Area:		D9T - 9SU			
Road M	laintenance – Mot			<u>T 140M</u>	G 1		
	-W2	ter Truck:	Wat	ter Tanker, 5,000	Gal.		
Cost Breakdown:	Truck/Loa	ader Team		Support I	Equipment	Maintenan	ce Equipment
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	NA	100	100	100
Ownership cost/hour:	\$80.59	\$52	2.71	NA	\$121.49	\$42.12	\$27.40
Operating cost/hour:	\$66.37	\$6	1.51	NA	\$105.84	\$39.67	\$39.99
%Utilization-riper:	NA		0	NA	NA	NA	NA
Ripper own. cost/hour:	NA		0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA		0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.79		5.93	NA	\$39.98	\$45.39	\$0.00
Unit Subtotals:	\$171.75	\$15		NA	\$267.31	\$127.18	\$67.39
Number of Units:	2	<b>*</b> 10 <b>*</b> 11	1	0	1	1	1
Group Subtotals:	Work:	\$493.64		Support:	\$267.31	Maint:	\$194.57
Total work team co	st/hour: <u>\$955.52</u>	2					
MATERIAL OF							
<u>MATERIAL QU</u>							
Initial volume		<u></u>	CCY		factor: <u>1.115</u>		
Loose volume	· · · · · ·		LCY				
	ource of estimated			@12" D			
Source	e of estimated swe Material Purch		\$0.00	Handbook			
		otal Cost:	\$0.00				
HOURLY PRO	DUCTION						
<u>Truck Capacity:</u> Truck Payload (wei	ght) Basis:						
Material	weight: 2,500			Pounds/LCY			
	ription: Clay -						
Rated Pa Payload Ca				Pounds LCY			
i ayioad Ca	puerty. <u>52.00</u>						

Struck Volume:	21.60 L	.CY				
Heaped Volume:		.CY				
Average Volume:		.CY				
Adjusted Volume:		.CY				
Adjusted volume.	<u> </u>					
Final	Truck Volume E	Based on Number of I	Loader Passes:	27.75	LCY	
Loading Tool Capacity						
			Buck	et Size Class: N	А	
Rated Capacity:	7.500	LCY (heaped)				
Bucket Fill Factor:	0.925	Loose material -	1/8" to 3/8" (90	- 95%) 0.925		-
Adjusted Capacity:	6.938	LCY	· · · · · · · · · · · · · · · · · · ·			-
Job Condition Corrections:	_	Site	Altitude (ft.): 4	<u>1630</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB			
Job Efficiency:	0.830	0.830	(CAT HB			
too Emerency.	0.020	0.020				
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	Number	of Loading Tool Pass	as Doquirad to I	Cill Transler	4 r	00000
		of Loading 1001 Pass	es Required to I		ŀ	asses
Excavators and Front Shovel	<u>IS:</u>					
Machine Cycle Time vs						
Selected value v	VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Rating: NA				
	vithin this Basic Material Descrir	<u> </u>				
Track Loaders – Cycle Time Elements (min.):	Material Descrip	<u> </u>				
Track Loaders – Cycle Time Elements (min.):	Material Descrip	<u> </u>		 Dump: 0.100		
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	Material Descrip Ma	neuver: NA		<b>I I I I I I I I I I</b>	)	
Track Loaders – Cycle Time Elements (min.):	Material Descrip Ma	neuver: NA	e (load, dump, n	<b>I I I I I I I I I I</b>		ıtes
Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors	Material Descrip  Unadjusted Basi	neuver: <u>NA</u> NA		naneuver): 0. Factor (min.)	.550 minu Source	ites
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material:	Material Descrip  Unadjusted Basi Material 1/8" t	otion:NA neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02		naneuver):0. Factor (min.) -0.020	.550 minu Source (Cat HB)	ites
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	Material Descrip Ma Unadjusted Basi Material 1/8" t Conveyor or do	otion: neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high	or less 0.01	naneuver): 0. Factor (min.) -0.020 0.010	.550 minu Source (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descrip Ma Unadjusted Basi Material 1/8" t Conveyor or de Common owne	otion:NA ineuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo	or less 0.01	naneuver): 0. Factor (min.) -0.020 0.010 -0.040	550 minu Source (Cat HB) (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera	otion: neuver: NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo ttion -0.04	or less 0.01	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	Material Descrip Ma Unadjusted Basi Material 1/8" t Conveyor or de Common owne	otion:NA ineuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00	or less 0.01 paders -0.04	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000	550 mim Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera	otion: neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time	or less 0.01 paders -0.04 Adjustment:	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	Ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera	otion: neuver: NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader	or less 0.01 paders -0.04 Adjustment: Cycle Time:	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites   
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera	otion: neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time	or less 0.01 paders -0.04 Adjustment: Cycle Time:	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	ites 
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera	otion: neuver: NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader	or less 0.01 paders -0.04 Adjustment: Cycle Time:	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	ites    
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material Descrip Ma Unadjusted Basi Material 1/8" t Conveyor or de Common owne Constant opera Nominal target	otion: neuver: NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader	Adjustment: Cycle Time: ne per Truck:	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: <b>Truck Cycle Time:</b>	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or do Common owne Constant opera Nominal target	otion: neuver: NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader Net Load Tin	or less 0.01 paders -0.04 Adjustment: Cycle Time: ne per Truck: Adjusted	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460 1.480	550minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutesminutesminutesminutes	
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:	Material Descrip Ma Unadjusted Bas Material 1/8" t Conveyor or de Common owne Constant opera Nominal target	otion: neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader Net Load Tin Minutes	Adjustment: Cycle Time: he per Truck: Adjusted Adjusted	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460 1.480 for site altitude:	550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	Ites 
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:	Material Descrip Ma Unadjusted Basi Material 1/8" t Conveyor or do Common owne Constant opera Nominal target	otion: neuver:NA ic Loader Cycle Time o 3/4" diameter -0.02 ozer piled 10 ft. high ership of trucks and lo tion -0.04 t 0.00 Net Cycle Time Adjusted Loader Net Load Tin Minutes Minutes	Adjustment: Cycle Time: ne per Truck: Adjusted Adjusted Adjusted	naneuver): 0. Factor (min.) -0.020 0.010 -0.040 -0.040 0.000 -0.090 0.460 1.480 for site altitude: for site altitude: for site altitude: 	550minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutesminutesminutes0.6001.4801.000	    Minute

Haul Rou	te:							
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1000.0	00	0.00	4.00	4.00	2051	0.735	
					Haul Time:	0.735	minutes	
Return Ro	oute:							
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1000.0	00	0.00	4.00	4.00	3891	0.638	
					Return Time:	0.638	minutes	
				Total Tru	ck Cycle Time:	4.453	minutes	
Loading Too	ol unit							
Produ	-	800.48	LCY/Hour		Adjusted for j	ob efficiency:	664.40	LCY/Hour
Truck Unit Produ	iction _	373.91	LCY/Hour		Adjusted for j	ob efficiency:	310.34	_ LCY/Hour
Optimal No. of Tr	ucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	d hourly truc	k team production	on: 620	.68 LCY/I	Hour
					er team production			
			Adjusted multip	le truck/loade	er team production	on: 620	.68 LCY/I	Iour
JOB TI	ME AN	D COST						
Fleet	size:	1	Team(s)	]	Fotal job time:	17.3	9 Hou	rs
Unit	cost:	\$1.539	/LCY	,	Total job cost:	\$16,6	16	

# BULLDOZER RIPPING WORK

Site:	Task description:	<b>Topsoil Compaction Releif</b>				
	Otter Creek Pit	Permit Action:	AM-1	Permit/	Job#: <u>M2012050</u>	)
Ī	PROJECT IDEN	NTIFICATION				
	Task #:         06A           Date:         10/11           User:         ACY	State:Colorado/2019County:Mesa		Abbreviati Filena		
	Agency of	r organization name: DRMS				
ז		IPMENT COST				_
-	Basic M			Horsepower:	405	
	Ripper Attac			Shift Basis:	1 per day	_
		<u>* * * * * * * * * * * * * * * * * </u>		Data Source:	(CRG)	_
<u>(</u>	Cost Breakdown:					
			<b>*121</b> 10	Utilization %		
		Ownership Cost/Hour: Operating Cost/Hour:	\$121.49 \$105.84	<u>NA</u> 100		
	Ripper	Ownership Cost/Hour:	\$13.94	NA		
		r Operating Cost/Hour:	\$8.96	100		
		Operator Cost/Hour:	\$39.98	NA		
		Total Unit Cost/Hour:	\$290.20			
		Total Fleet Cost/Hour: \$29	00.20			
7						
	MATERIAL QU		lected estimating	method: Area		
<u> </u>	Alternate Methods:					
nic:	NA	Bank Volume:	NA	BCY	NA	
rea:	12.50	acres Rip Depth (ft):	1.00	Volume: 20,167	7 B	CY or
	:	Source of estimated quantity: <u>Exhib</u>	it L			_
J	HOURLY PRO	DUCTION				
_	Seismic:					
F	<u>seisinie.</u>	Seismic Velocity:	NA	feet/second		
	A	<u> </u>				
<u>I</u>	Area:	Average Ripping Depth:	2.63	feet/pass		
		Average Ripping Width:	7.67	feet/pass		
		Average Ripping Length:	250.00	feet/pass		
		Average Dozer Speed:	88.00	feet/minute		
		Average Maneuver Time:	0.25	minutes/pass		
		Production per unit area:	0.855	acres/hour		
<u>J</u>	Job Condition Corr	ection Factors				
	Unad	justed Hourly Unit Production:	0.855	Acres/hr		
		Site Altitude:	4,630	feet		
		Altitude Adj:	1.00	(CAT HB)		
		Job Efficiency:	0.83	(1 shift/day)		
		Net Correction:	0.83	multiplier		
		Adjusted Hourly Unit Production	0.71	Acres/hr		
				A ana a/bu		
		Adjusted Hourly Fleet Production	0.71	Acres/hr		
<u>]</u>	JOB TIME ANI		0.71			
<u>]</u>	JOB TIME AND Fleet size:		Total job time		Hours	5

# **REVEGETATION WORK**

Task description: Reveg		Revegetate 12.5 acres + Tree	s		
e: Otter Cro	eek Pit	Permit Action:	AM-1	Permit/Job	o#: M2012050
PROJECT Task #:	IDENTIFIC	CATION State: Colorado		Abbreviation:	None
Date: User:	0/A 10/11/2019 ACY	County: Mesa		Filename:	M050-07a

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
12/4/2008 12:00:00 AM	100.00	pound	\$0.43	\$42.50
			Total Fertilizer Materials	
			Cost/Acre	\$42.50

### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$36.15
	Total Fertilizer Application Cost/Acre	\$36.15

# **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$101.93
Total Tilling Cost/Acre	\$101.93

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	1.90	226.81	\$18.53
Sandberg Bluegrass - VNS	1.50	31.85	\$12.60
Galleta	1.90	6.94	\$42.47
Rabbitbrush, Rubber	0.20	2.98	\$12.86
Winter Fat	1.13	2.87	\$23.06
Yarrow, Western	0.40	24.32	\$16.72
Kochia, Forage (Prostrate)	0.20	28.09	\$1.80
Globemallow, Munro	0.40	4.53	\$35.00
Totals Seed Mix	7.63	328.39	\$163.03

#### Application

Description		Cost /Acre
		\$0.00
	Total Seed Application Cost/Acre	\$0.00

# **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$2.74	\$274.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$864.00

# Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$95.83
Weed spray, truck, aquatic area, nox. [DMG]		\$68.50
	Total Mulch Application Cost/Acre	\$234.50

## **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood,	9	Container, 1 gallon (MEANS)	\$14.93	\$0.00	\$134.37
Narrowleaf					
		Tatala	N	le Cost / A ana	¢12427
		Totals	Nursery Stoc	k Cost / Acre	\$134.37

	No. of Acres:	12.5	Co	ost /Acre:	\$1,576.48
Estimate	ed Failure Rate:	40%	Cos	t /Acre*:	\$1,261.53
*Selected Replanti	ng Work Items:	SEEDING,MUI	.CHING		
Initial Job Cost:	\$19,706.00				
Reseeding Job Cost:	\$6,307.65				

minui Job Cost.	φ1,9,700.00
eseeding Job Cost:	\$6,307.65
Total Job Cost:	\$26,014
Job Hours:	24.00

# **REVEGETATION WORK**

ription:	Revegetate 1.2 Acres Wetlan	nd Area		
Creek Pit	Permit Action:	AM-1	Permit/Jol	o#: <u>M2012050</u>
<u>r identific</u>	ATION			
: 08A	State: Colorado		Abbreviation:	None
: 10/11/2019	County: Mesa		Filename:	M050-08a
: ACY				
	: 08A : 10/11/2019	Creek Pit       Permit Action:         T IDENTIFICATION	Creek Pit     Permit Action: AM-1       T IDENTIFICATION       : 08A     State: Colorado       : 10/11/2019     County: Mesa	Creek Pit     Permit Action:     AM-1     Permit/Joh       T IDENTIFICATION       ::     08A     State:     Colorado     Abbreviation:       ::     10/11/2019     County:     Mesa     Filename:

# **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials	
			Cost/Acre	\$0.00

# Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

# **TILLING**

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	2.00	78.05	\$56.95
Aquatic Sedge	0.20	5.29	\$35.00
Orchardgrass - Paiute	2.00	24.79	\$8.15
Slender Wheatgrass - Native	6.00	21.90	\$27.75
Western Wheatgrass - Native	0.20	0.51	\$1.20
Red Top	2.00	229.11	\$15.75
Reedgrass, Canadian (or Blue Joint)	0.40	41.14	\$81.30
Reedgrass, Northern - Native	1.00	102.85	\$136.65
Saltgrass, Inland	2.00	27.72	\$85.60

Snowberry, Western	2.00	3.44	\$127.00
Sumac, Skunkbrush	0.80	0.37	\$16.80
Timothy - Climax	2.00	57.39	\$3.20
Basin Wildrye - Trailhead	3.00	12.19	\$46.23
Greasewood, Black	2.00	280.90	\$38.00
Totals Seed Mix	25.60	885.66	\$679.58

#### Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$267.22
	Total Seed Application Cost/Acre	\$267.22

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	100.00	ACRE	\$2.74	\$274.00
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Total Mulch Materials Cost/Acre				\$864.00

#### Application

Description		Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)		\$3,339.60
Weed spray, hand, aquatic area, nox. [DMG]		\$170.90
	Total Mulch Application Cost/Acre	\$3,510.50

## NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totolo	Numeoux Stor	k Cost / Acre	\$0.00

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	25%	 LCHING	Cost /Acre: Cost /Acre*:	
Initial Job Cost:	\$6,385.56				
Reseeding Job Cost:	\$1,596.39				
Total Job Cost:	\$7,982				
Job Hours:	8.00				

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Ini	tial Mobilization					
te: Otter Creek P	it	Permit	Action: <u>Am-1</u>			Permit/Job#: <u>M</u>	2012050
PROJECT IDE	NTIFICATI	ON					
Task #: 09A	Δ	State: Co	olorado		Abbro	eviation: None	
Date: 10/ User: AC	11/2019 Y	County: Mo	esa		Fi	ilename: M050	0-09a
Agency of	or organization	n name: DRMS					
EQUIPMENT T	RANSPOR	<u>T RIG COST</u>					
					Shift ba	sis: 1 per da	V
					Cost Data Sour		
	<b>T</b> ( <b>D</b>						DOWEDED
Iruck	Tractor Desc	ription: GENE	RIC ON-HIGH			DR, 6X4, DIESEL	L POWERED,
	<b>T</b> 'I D				2 (2ND HALF,		
Truch	x Trailer Desc	ription: G				ROP DECK EQUI	IPMENT
			_	RAILER	(25T, 50T, AN	ND 1001)	
Cost Breakdown:							
Available Rig Ca		0-25 Tons	26-50 Tons		+ Tons		
	Cost/Hour:	\$17.20	\$29.63		38.69		
	Cost/Hour:	\$26.56	\$47.02	\$	55.69		
	Cost/Hour:	\$23.63	\$23.63	\$	23.63		
Helper	Cost/Hour:	\$0.00	\$23.53	\$	23.53		
Total Unit	Cost/Hour:	\$67.39	\$123.81	\$	141.54		
NON ROADAB	LE EQUIPI	MENT:					
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
-	(TONS)		t		fleet		
Cat D9T - 9SU	60.01	\$121.49	\$141.54	1	\$263.03	\$141.54	\$250.00
Cat D6T LGP	28.63	\$65.96	\$123.81	1	\$189.77	\$123.81	\$250.00
CAT 980H high	33.12	\$52.71	\$123.81	1	\$176.52	\$123.81	\$250.00
lift							
Cat 770D	37.54	\$80.59	\$123.81	2	\$408.80	\$247.62	\$500.00
CAT 140M	16.68	\$42.12	\$67.39	1	\$109.51	\$67.39	\$250.00
Drill/Broadcast	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Seeder with							
Tractor					<b>*==</b> < -		<b>**</b>
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
			1		1	1	1

Subtotals: **\$1,310.30 \$838.95** 

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 5,000 Gal.	\$67.39	1	\$67.39	\$67.39
Light Duty Pickup, 4x4, 3/4 T.	\$69.36	3	\$208.08	\$208.08

Subtotals: \$275.47

CIRCES Cost Estimating Software

\$275.47

\$2,000.00

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 5.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$7,234.67	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$78.71	_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

Total job time:	2.57	Hours
Total job cost:	\$7,313	_

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Sec	ondary Mobilizat	tion				
te: Otter Creek Pit		Permit Action: Am-1		Permit/Job#: <u>M201205</u>		2012050	
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 09E	3	State: Co	olorado		Abbro	eviation: None	
Date: 10/	11/2019	County: Me	esa		F	ilename: M050	)-09b
User: AC	Y						
Agency	or organization	n name: DRMS					
EQUIPMENT T	'RANSPOR'	T RIG COST					
		<u>1 MU COB1</u>			Shift ba	usis: 1 per da	N/
					Cost Data Sou	F	
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH			OR, 6X4, DIESEI	_ POWERED,
T	- T: 1 D		ENEDIC EOLD		(2ND HALF,	Z006) ROP DECK EQU	IDMENT
Iruci	k Trailer Desc	ription: G			,	•	IPMENI
			-	IKAILEK	(25T, 50T, Al	ND 1001)	
Cost Breakdown:							
Available Rig Ca	apacities	0-25 Tons	26-50 Tons	51-	+ Tons		
	Cost/Hour:	\$17.20	\$29.63		38.69		
	Cost/Hour:	\$26.56	\$47.02		55.69		
Operator Cost/Hour:		\$23.63	\$23.63		23.63		
Helper Cost/Hour:		\$0.00	\$23.53		23.53		
Total Unit	Cost/Hour:	\$67.39	\$123.81	\$1	41.54		
NON ROADAB	LE EQUIPN	<u>AENT:</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
*	(TONS)		t		fleet		
Drill/Broadcast	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Seeder with							
Tractor				_	<b>***</b>		
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
				Subtotals	\$162.67	\$134.78	\$500.00

# **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$69.36	3	\$208.08	\$208.08
		Subtotals:	\$208.08	\$208.08

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GRAND JUNCTION 5.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$1,410.33	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$59.45	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

### JOB TIME AND COST

Total job time: 2.57 Hours

Total job cost: \$1,470