

December 27, 2022

Jim Doody Grand Junction Pipe & Supply Co. 556 Struthers Avenue Grand Junction, CO 81501

Re: Delta Paving Gravel Pit, File No. M-1998-105,

Amendment Application (AM-01) – Reclamation Cost Estimate

Mr. Doody:

The Division of Reclamation, Mining and Safety (Division) has reviewed your AM-01 application for the Delta Paving Gravel Pit. Enclosed is the related estimate of reclamation costs using our CIRCES computer software program. The total amount is \$167,661.

Please let me know if you have any comments or questions on this estimate. You can contact me at rob.zuber@state.co.us or (720) 601-2276.

Sincerely,

Robert D. Zuber

Phot D. ZL

**Environmental Protection Specialist** 

Enclosure: Reclamation Cost Estimate

Copied via e-mail: Michael Cunningham, DRMS

Ben Langenfeld, Lewicki & Associates



# **ENCLOSURE**

#### **COST SUMMARY WORK**

te: Delta Pavin	g Gravel Pit	Perr	nit Action:	AM-01	Permit/Joba	#: <u>M1998105</u>
PROJECT ID						
	000	State:	Colorado		Abbreviation:	None
Date:	1/15/2022	County:	Delta		Filename:	M105-000
User: I	RDZ	_			<del></del>	

#### **TASK LIST (DIRECT COSTS)**

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01	Dewatering pit	PUMPING	1	437.70	\$27,794
04a	Phase 1 - haul material to pond slopes	TRUCK1	2	31.44	\$22,694
04b	Phase 1 - grade material on pond slopes	DOZER	2	12.30	\$7,106
05a	Haul topsoil	TRUCK1	2	17.23	\$12,440
05b	Grade topsoil	DOZER	2	4.93	\$2,847
06	Rip area for revegetation	RIPPER	2	22.54	\$13,023
07	Vegetate Phase 1 and stockpile area	REVEGE	1	27.00	\$49,283
10	Mobilization and Demobilization	MOBILIZE	1	0.44	\$1,776
		SUBTO	OTALS:	553.58	\$136,963

### **INDIRECT COSTS**

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02 Total = \$2,767 Performance bond: 1.05 Total =\$1,438 Job superintendent: 57.72 Total = \$4,337 Profit: 10.00 Total = \$13,696

TOTAL O & P =\$22,238

CONTRACT AMOUNT (direct + O & P) =  $\frac{7-3,100}{159,201}$ 

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):

Engineering work and/or contract/bid preparation:

Reclamation management and/or administration:

\$500 Total = \$500

Total = \$0

\$7,960

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$30,698

TOTAL BOND AMOUNT (direct + indirect) = \$167,661

### **PUMPING WORK**

Task description:  Delta Paving Gravel	Dewar	Permit Action	n: AM-01	Permit/Job#: N	 М1998105	
PROJECT IDENTII		<del>_</del>			,11,5,01,05	
Task #: 01		State: Colorad	lo	Abbreviation: N	one	
Date: $\frac{01}{11/15/202}$	2.	County: Delta			1105-01	
User: RDZ	<del>-</del>				1100 01	
Agency or orga	nization n	ame: DRMS				
HOURLY EQUIPM	ENT CO	ST				
	Descrip	otion .		Quantity		
Make and Model:	Centrif	ugal pump - 200M, 1	0 in.	1	_	
Attachment 1: Suction hose - 6 in. diam., 25				1		
Attachment 2:		rge hose - 6 in. D., 25	i ft.	1		
Labor Unit 1:	Pump o	perator		1		
Horsepower:	70					
	per day					
Weight:	1.95 (S Tons)	<u> </u>				
Cost Breakdown:	is rolls)					
Cost Breakdown.			Utilization %			
Ownership Cost		\$16.19	NA			
Operating Cost		\$19.63	100			
Operator Cost		\$27.68	NA			
Total Unit Cost	Hour:	\$63.50	_			
Total Fleet Cos	t/Hour:	\$63.50				
PUMPING QUANT	ITIES					
Initial Pond Vo	lume:	294.00		Conversion factor:	325850.5800	
Final Pond Vo	lume:	95,800,070.52	gallons			
Total Pond Inflow Su	ırface			Unit inflow rate in	0.0879	
	Area:	75,000	Sq. ft.	gph/sq. ft.:		
Total Pond Inflow Vo	olume Hour:	6,592.50	gallons			
•		·	eant's Exhibit L			
PUMPING TIME	or estimat	ed vorame. Tippine	ant 5 Emilot E			
·	vimum Du	mp Capacity:	200,000	gph/pump		
		Suction Head:	10	feet		
F		detion fieud.				
	imated Dis	scharge Head:	5	reet		
	imated Dis	scharge Head: Total Head:	5 15	feet feet		
		Total Head:		feet		
	CPB Pu		15			
Est	CPB Pu	Total Head: Imp Capacity: Site Altitude:	15 201,000 4,990	feet gph/pump feet		
Est Adju	CPB Pu	Total Head: Imp Capacity: Site Altitude: ing Capacity:	15 201,000 4,990 201,000	feet gph/pump feet gph		
Est Adju Initial Una	CPB Pu sted Pump udjusted Pu	Total Head: Imp Capacity: Site Altitude: ing Capacity: Imping Time:	15 201,000 4,990 201,000 476.62	feet gph/pump feet gph hours		
Est Adju Initial Una Inflow	CPB Pu sted Pump adjusted Pu during Ini	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping:	15 201,000 4,990 201,000 476.62 3,142,099	feet gph/pump feet gph hours gallons		
Est Adju Initial Una Inflow Net Una	CPB Pu sted Pump idjusted Pu during Ini idjusted Pu	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping: Imping Time:	15 201,000 4,990 201,000 476.62 3,142,099 492.25	feet gph/pump feet  gph hours gallons Hours		
Est Adju Initial Una Inflow Net Una Altit	CPB Pusted Pumpadjusted Puduring Iniadjusted Pudude Adjusted Pusted Pust	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping: Imping Time: Itment Factor:	15 201,000 4,990 201,000 476.62 3,142,099 492.25 0.9700	feet gph/pump feet  gph hours gallons Hours (3% rule)		
Est Adju Initial Una Inflow Net Una Altit	CPB Pusted Pumpadjusted Puduring Iniadjusted Pusted Adjusted Pusted Pusted Efficient Pump Efficient CPUmp Efficient Pump Effic	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping: Imping Time:	15 201,000 4,990 201,000 476.62 3,142,099 492.25	feet gph/pump feet  gph hours gallons Hours		
Est Adju Initial Una Inflow Net Una Altit	CPB Punt djusted Puduring Ini djusted Pudusted Pude Adjus Pump Effic djusted Pu	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping: Imping Time: Itiment Factor: Eiency Factor:	15 201,000 4,990 201,000 476.62 3,142,099 492.25 0.9700 0.9167 437.71	feet gph/pump feet  gph hours gallons Hours (3% rule) (55 min./hr.) hours	**	
Adju Initial Una Inflow Net Una Altii I Total A	CPB Punt djusted Puduring Ini djusted Pudusted Pude Adjus Pump Effic djusted Pu	Total Head: Imp Capacity: Site Altitude:  ing Capacity: Imping Time: tial Pumping: Imping Time: Itiment Factor: Eiency Factor:	15 201,000 4,990 201,000 476.62 3,142,099 492.25 0.9700 0.9167	feet gph/pump feet  gph hours gallons Hours (3% rule) (55 min./hr.) hours	Hours	

## TRUCK/LOADER TEAM WORK

Task description:		- haul mate					
Site: Delta Paving C	Gravel Pit	Permit	Action:	AM-01		Permit/Job#: _	M1998105
PROJECT IDE	ENTIFICATION	<u>[</u>					
Task #: 04A		State: C	Colorado	)	Ab	breviation:	None
		County: [	Delta			Filename:	M105-04a
User: RD2	<u>Z</u>						
Agency	or organization nar	ne: DRM	S				
HOURLY EQU	JIPMENT COS	<u>r</u>			Shift bas	sis: 1 per day	
	Truck Loader Tea	m Truele		uipment Descri c 12-18 cy, 6x <sup>2</sup>			
	Truck Loader Tea	-Loader:		c 12-18 cy, 6x <sup>2</sup> 66H high lift	+		
Sup	pport Equipment -I		NA	8			
D 41		ump Area:	NA				
Road I	Maintenance –Mot -Wa	or Grader: iter Truck:	NA NA				
			-				
Cost Breakdown		ader Team	T	Support I oad Area	Equipment		nance Equipmen  Truc
	Truck	Loader		oad Area	Dump Area	Motor Grade	r water fruc
%Utilization-machine:	100		100	NA	NA	N/	
Ownership cost/hour:	\$24.21	\$49		NA	NA	N.	
Operating cost/hour:	\$57.28	\$43		NA	NA	N/	
%Utilization-riper:	NA NA	\$0	0.00	NA NA	NA NA	NA NA	
Ripper own. cost/hour: Ripper op. cost/hour:	NA NA		0.00	NA NA	NA NA	NA NA	
Operator cost/hour:	\$32.54	\$40		NA NA	NA NA	N <sub>2</sub>	
Unit Subtotals:	\$114.03	\$132		NA	NA	N <sub>2</sub>	
Number of Units:	4	4102	2	0	0		0
Group Subtotals:	Work:	\$721.92	_	Support:	\$0.00	Main	
Total work team c		<u>·</u>				-	, , , , , , ,
Total work team c	08t/110til. <u>\$721.92</u>	<u>.                                    </u>					
MATERIAL Q	<u>UANTITIES</u>						
Initial volum	ne: 27,000		CCY	Swell	factor: 1.000		
Loose volum			LCY	S Well	1.000		
S	Source of estimated	volume:	Applica	nt's Exhibit L			
	ce of estimated swe	ell factor:	Cat Han				
	Material Purch		\$0.00				
	10	otal Cost:	\$0.00				
HOURLY PR	<u>ODUCTION</u>						
<b>Truck Capacity:</b>							
Truck Payload (w				Dougla /I CV			
Material Des		nd gravel - D	)rv	Pounds/LCY			
	Payload: 50,300		- · J	Pounds			
Payload C				LCY			

LCY

Truck Travel (Haul & Return) Time:

penetration 1.2

Struck Volume:	12.00	LCY				
Heaped Volume:	18.00	LCY				
Average Volume:	15.00	LCY				
Adjusted Volume:	17.34	LCY				
Final	Truck Volume	Based on Number of L	oader Passes:	13.88	LCY	
Loading Tool Capacity			ъ .	. G' GI N		
D + 10 - 1	<b>7.000</b>	LOVA	Buck	et Size Class: N	A	_
Rated Capacity:  Bucket Fill Factor:	5.000	LCY (heaped) Loose material - 1	/9" to 2/9" (00	050() 0.025		_
Adjusted Capacity:	0.925 <b>4.625</b>	LOOSE material - 1	/8 10 3/8 (90	- 95%) 0.925		_
Adjusted Capacity.	4.025					
Job Condition Corrections:		Site	Altitude (ft.): 4	990 feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB)			
Job Efficiency:	0.830	0.830	(CAT HB)	)		
Net Correction:	0.830	0.830				
	N. 1	CI II TI ID	ъ	2:11 772 1	2	
<b>Loading Tool Cycle Time:</b>	Number	of Loading Tool Passe	es Required to F	'III Iruck:	3 1	passes
Excavators and Front Shove	<u>ls:</u>					
Excavators and Front Shove Machine Cycle Time v Selected Value v	s. Job Condition					
Machine Cycle Time v	s. Job Condition within this Basic	c Rating: NA				
Machine Cycle Time v Selected Value v Track Loaders –	s. Job Condition within this Basic Material Descri	c Rating: NA				
Machine Cycle Time v Selected Value v Track Loaders –	s. Job Condition within this Basic Material Descri	c Rating: NA		Dump: 0.100		
Machine Cycle Time von Selected Value von Track Loaders – Cycle Time Elements (min.):	s. Job Condition within this Basic Material Descri	e Rating: NA  ption:  Anneuver: NA	(load, dump, m		500 minu	utes
Machine Cycle Time von Selected Value von Track Loaders — Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders —	s. Job Condition within this Basic Material Descri	e Rating: NA  ption:  Anneuver: NA	(load, dump, m	naneuver): 0.	500 minu	utes
Machine Cycle Time von Selected Value von Track Loaders – Cycle Time Elements (min.):  Load: NA	s. Job Condition within this Basic Material Descri	c Rating: NA ption:  Anneuver: NA sic Loader Cycle Time				utes
Machine Cycle Time von Selected Value von Track Loaders — Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders — Cycle Time Factors	s. Job Condition within this Basic Material Descri  M Unadjusted Ba	e Rating: NA  ption:  Anneuver: NA	e 0.00	naneuver): 0. Factor (min.)	500 minu Source	utes
Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material:	s. Job Condition within this Basic Material Descri  M Unadjusted Ba  No adjustmen No adjustmen	c Rating: NA ption: NA faneuver: NA sic Loader Cycle Time t - factor not applicable	e 0.00 e 0.00	naneuver): 0.  Factor (min.)  0.000	500 minu Source (Cat HB)	utes
Machine Cycle Time verselected Value verselected	Material Descri Muterial Descri	c Rating: NA  ption: NA  faneuver: NA  sic Loader Cycle Time  t - factor not applicable	e 0.00 e 0.00 e 0.00 le 0.00	naneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes   
Machine Cycle Time von Selected Value von Selected Value von Track Loaders – Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders – Cycle Time Factors  Material: Stockpile: Truck Ownership:	Material Descri Muterial Descri	c Rating: NA  ption: NA  aneuver: NA  sic Loader Cycle Time  t - factor not applicable	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00	naneuver):0. Factor (min.)0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes
Machine Cycle Time verselected Value verselected	Material Descri Muterial Descri	c Rating: NA  ption:  Index aneuver: NA  sic Loader Cycle Time  t - factor not applicable Net Cycle Time	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00 e 0.00 Adjustment:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	utes
Machine Cycle Time verselected Value verselected	Material Descri Muterial Descri	c Rating: NA  ption:  Taneuver: NA  sic Loader Cycle Time  t - factor not applicable Net Cycle Time Adjusted Loader	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00 Adjustment: Cycle Time:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.500	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes
Machine Cycle Time verselected Value verselected	Material Descri Muterial Descri	c Rating: NA  ption:  Index aneuver: NA  sic Loader Cycle Time  t - factor not applicable Net Cycle Time	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00 Adjustment: Cycle Time:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	utes
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:  Operation:  Dump Target:	Material Descri Muterial Descri	c Rating: NA  ption:  Taneuver: NA  sic Loader Cycle Time  t - factor not applicable Net Cycle Time Adjusted Loader	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00 Adjustment: Cycle Time:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.500	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes — — — —
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:  Operation:	S. Job Condition within this Basic Material Description of Material Descriptio	c Rating: NA  ption:  Taneuver: NA  sic Loader Cycle Time  t - factor not applicable Net Cycle Time Adjusted Loader	e 0.00 e 0.00 e 0.00 le 0.00 e 0.00 Adjustment: Cycle Time: le per Truck:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.500	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	utes    
Machine Cycle Time verselected Value verselected	Material Descri Material Descri M Unadjusted Ba No adjustmen No adjustmen No adjustmen No adjustmen No adjustmen No adjustmen O adjustmen No adjustmen No adjustmen No adjustmen	raneuver: NA  Sic Loader Cycle Time  t - factor not applicable Net Cycle Time Adjusted Loader Net Load Time	e 0.00 e 0.00 e 0.00 le 0.00 de 0.00 Adjustment: Cycle Time: le per Truck:	Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.500  1.100	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	——————————————————————————————————————

CIRCES Cost Estimating Software

Road Condition: Very hard, smooth, asphalt or concrete, no tire

#### Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2895	0.409

				Haul Time:	0.409	minutes
Return R	oute:			•		
Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2913	0.309

Return Time: 0.309 minutes
Total Truck Cycle Time: 3.218 minutes

Loading Tool unit

Production 520.31 LCY/Hour Adjusted for job efficiency: 431.86 LCY/Hour Truck Unit Production 258.70 LCY/Hour Adjusted for job efficiency: 214.72 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 429.44 LCY/Hour Adjusted single truck/loader team production: 429.44 LCY/Hour Adjusted multiple truck/loader team production: 858.89 LCY/Hour

### **JOB TIME AND COST**

 Fleet size:
 2
 Team(s)
 Total job time:
 31.44
 Hours

 Unit cost:
 \$0.841
 /LCY
 Total job cost:
 \$22,694

### **BULLDOZER WORK**

Task descrip	ption:	Phas	e 1 - grade ı	naterial on p	ond slopes		
Delta Pa	ving Gra	avel Pit	Per	mit Action:	AM-01	Permit/Job#:	M1998105
<b>PROJEC</b>	Γ IDEN	TIFICATI	<u>ON</u>				
Task #:	04B		State:	Colorado		Abbreviation:	None
Date:	11/15/	2022	County:	Delta		Filename:	M105-04b
User:	RDZ		•			-	
Aş	gency or	organization	name: DF	RMS			
<b>HOURLY</b>	EQUI	PMENT CO	<u>DST</u>				
Basic Ma	achine:	Cat D8T - 8	BSU				
	power:	310					
	Type:	Semi-Unive					
	hment:	1-shank rip	per		<u> </u>		
	Basis:	1 per day			<u> </u>		
Data S	Source:	(CRG)			<u> </u>		
Cost Break	down:						
·	_				<u>Utilization %</u>		
Ownership				\$124.85	NA		
Operating				\$97.63	100		
Ripper own				\$16.38	NA		
Ripper op	. Cost/H	our:		\$8.60	100		
Operator	Cost/H	our:		\$41.30	NA		
TT . 1	1 //TT	Φ200	7.6				
Total unit C					<del></del>		
Total Tiect	C031/1101	л. <del>ф377.</del>	34				
MATERI	AL OU	ANTITIES					
Initial Vo		27,000					
Swell f		1.000		_			
Loose vo	lume:	27,000 LCY		_			
Source of es		volume: swell factor:	Applicant Cat Hand	's Exhibit L book			
HOURLY	PROD	UCTION					
	.113 - 4 -		50 fact				
U 1	sh distan	_	50 feet	V /l			
Average pur Unadjusted		_	50 feet 1,400.0 LC	Y/hr			
Unadjusted	hourly p	_	1,400.0 LC	Y/hr stockpile 1.2			
Unadjusted  Materials co	hourly ponsistences  sh gradie	roduction:ey description ent:10 %	1,400.0 LC				
Unadjusted  Materials co	hourly ponsistences  sh gradie	roduction:ey description ent:10 %	1,400.0 LC				
Unadjusted  Materials co	hourly ponsistencesh gradie	ent: -10 % c: 4,990	1,400.0 LC				
Unadjusted  Materials co  Average pur  Average site	hourly ponsistencesh gradie altitude	roduction:	1,400.0 LC  : Loose s	stockpile 1.2			
Unadjusted  Materials co  Average pur  Average site  Material we  Weight desc	hourly ponsistencesh gradie e altitude eight:	roduction:	1,400.0 LC : Loose s feet lbs/LCY	stockpile 1.2	Source		
Unadjusted  Materials co Average pur Average site Material we Weight desc  Job Conditi	hourly ponsistences of gradie e altitude e e e e e e e e e e e e e e e e e e	ent: -10 % 2,900  Sand ection Factor rator Skill:	feet  lbs/LCY  and gravel - 1	Dry	(AVG.)		
Unadjusted  Materials co Average pur Average site Material we Weight desc  Job Conditi	hourly ponsistence sh gradice e altitude eight: cription: Oper aterial co	ent:	feet  lbs/LCY  and gravel - 1  0.	Dry 750 200	(AVG.) (CAT HB)	)	
Unadjusted  Materials co Average pur Average site Material we Weight desc  Job Conditi	hourly ponsistences of gradie e altitude e altitude e cription:  on Correct Operaterial con Dozin	ent: -10 % 2,900  Sand ection Factor rator Skill:	feet  lbs/LCY  and gravel - 1  0.  1.	Dry	(AVG.)	)	

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7837

Adjusted unit production: 1,097.18 LCY/hr
Adjusted fleet production: 2194.36 LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)
Unit cost: \$0.263/LCY

Total job time: 12.30 Hours
Total job cost: \$7,106

## TRUCK/LOADER TEAM WORK

Task description:	Haul to	psoil				
Site: Delta Paving G	Fravel Pit	Permit Action	on: <u>AM-01</u>		Permit/Job#: M	1998105
PROJECT IDE	NTIFICATION	<u>I</u>				
Task #:05A		State: Color	ado	Ab	breviation: No	-
		County: Delta			Filename: M1	05-05a
User: RD2	<u>Z</u>					
Agency	or organization na	me: DRMS				
HOURLY EQU	IPMENT COS	<u>r</u>		Shift bas	sis: 1 per day	
	Truck Loader Tea		Equipment Descri			
	Truck Loader Tea		T 966H high lift	<del>†</del>		
Sup	port Equipment -I	oad Area: NA				
Road I	-D Maintenance –Mot	ump Area: NA or Grader: NA				
		ater Truck: NA				
Cost Breakdown	Tenals/Lo	ader Team	Cunnort I	Equipment	Maintanar	ice Equipment
Cost Breakdown	Truck/Lo	Loader	Load Area	Equipment  Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	NA	NA	NA	NA
Ownership cost/hour:	\$24.21	\$49.15	NA NA	NA NA	NA NA	NA NA
Operating cost/hour:	\$57.28	\$43.04	NA	NA	NA	NA NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$32.54	\$40.71	NA	NA	NA	NA
Unit Subtotals:	\$114.03	\$132.90	NA	NA	NA	NA
Number of Units:	4	2	0	0	0	C
Group Subtotals:	Work:	\$721.92	Support:	\$0.00	Maint:	\$0.00
Total work team c	ost/hour: <b>\$721.9</b> 2	2				
MATERIAL Q	<u>UANTITIES</u>					
Initial volum		CCY		factor: 1.000		
Loose volum	e: 14,80	00 LCY				
	ource of estimated		icant's Exhibit L			
Sourc	ce of estimated swe		Handbook			
	Material Purch	tase Cost: $\frac{\$0.00}{\$0.00}$				
	_					
<b>HOURLY PR</b>	<b>ODUCTION</b>					
Truck Capacity:						
Truck Payload (we						
Material		. 11	Pounds/LCY			
	eription: Top So Payload: 50,300		Pounds			
	apacity: 31.44	•	LCY			

\_\_\_\_\_ LCY

Struck Volume:	12.00	LCY				
Heaped Volume:	18.00	LCY				
Average Volume:	15.00	LCY				
Adjusted Volume:	18.00	LCY				
Final	Truck Volume	e Based on Number of	f Loader Passes:	15.75	LCY	
Loading Tool Capacity			_			
			Buck	et Size Class: N	A	
Rated Capacity:	5.000	LCY (heaped)				
Bucket Fill Factor:	1.050	Moist loam or s	andy clay (100% -	- 110%) 1.050		
Adjusted Capacity:	5.250	LCY				
Job Condition Corrections:	<u>-</u>	Si	te Altitude (ft.): 49	990 feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB)	1		
Job Efficiency:	0.830	0.830	(CAT HB)	<u> </u>		
Net Correction:	0.830	0.830				
<b>Loading Tool Cycle Time:</b>	Numbe	er of Loading Tool Pa	sses Required to F	ill Truck:	3	passes
Excavators and Front Shove		C	1			passes
Excavators and Front Shove	ls:		1			pusses
Excavators and Front Shove Machine Cycle Time v Selected Value v	l <u>s:</u> s. Job Conditic		1		<u> </u>	pusses
Machine Cycle Time v	l <u>s:</u> s. Job Conditic within this Bas	ic Rating: NA				pusses
Machine Cycle Time v Selected Value v Track Loaders –	ls: s. Job Conditic within this Bas Material Descr	ic Rating: NA			<u> </u>	pusses
Machine Cycle Time v Selected Value v Track Loaders –	ls: s. Job Conditic within this Bas Material Descr	ic Rating: NA		Dump: 0.100		pusses
Machine Cycle Time von Selected Value von Track Loaders – Cycle Time Elements (min.):	ls: s. Job Condition within this Bas Material Descri	ic Rating: NA ription:  Maneuver: NA		Dump: 0.100		utes
Machine Cycle Time von Selected Value von Track Loaders – Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –	ls: s. Job Condition within this Bas Material Descri	ic Rating: NA ription:  Maneuver: NA		Dump: 0.100		
Machine Cycle Time von Selected Value von Track Loaders – Cycle Time Elements (min.):  Load: NA	ls: s. Job Condition within this Bas Material Descript M Unadjusted B	ic Rating: NA ription:  Maneuver: NA	ne (load, dump, m	Dump: 0.100 aneuver): 0.	500 min	
Machine Cycle Time von Selected Value von Track Loaders — Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders — Cycle Time Factors	ls: s. Job Condition within this Bas Material Description  Unadjusted B  No adjustme	ic Rating: NA ription: NA  Maneuver: NA asic Loader Cycle Tir	me (load, dump, m	Dump: 0.100 aneuver): 0. Factor (min.)	500 min Source	
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:	Is: s. Job Condition within this Bas Material Description  Unadjusted B  No adjustme No adjustme No adjustme	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica	me (load, dump, m ble 0.00 ble 0.00 ble 0.00	Dump: 0.100 aneuver): 0. Factor (min.) 0.000 0.000 0.000	500 min  Source (Cat HB) (Cat HB) (Cat HB)	
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:  Operation:	s. Job Condition within this Bas Material Description Material Descripti	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica	me (load, dump, m ble 0.00 ble 0.00 ble 0.00	Dump: 0.100 naneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000	500 min Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:	s. Job Condition within this Bas Material Description Material Descripti	ic Rating: NA ription: NA Maneuver: NA asic Loader Cycle Tin nt - factor not applica ent - factor not applica nt - factor not applica	me (load, dump, m lble 0.00 lble 0.00 lble 0.00 able 0.00 lble 0.00	Dump: 0.100 aneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000 0.000	500 min    Source	
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:  Operation:	s. Job Condition within this Bas Material Description Material Descripti	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica nt - factor not applica nt - factor not applica ent - factor not applica ent - factor not applica Net Cycle Tin	me (load, dump, m ble 0.00 ble 0.00 ble 0.00 able 0.00 ble 0.00	Dump: 0.100 aneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000 0.000 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	
Machine Cycle Time von Selected Value von Track Loaders –  Cycle Time Elements (min.):  Load: NA  Wheel and Track Loaders –  Cycle Time Factors  Material:  Stockpile:  Truck Ownership:  Operation:	s. Job Condition within this Bas Material Description Material Descripti	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica nt - factor not applica nt - factor not applica ent - factor not applica Net Cycle Tin Adjusted Load	me (load, dump, m ble 0.00 ble 0.00 ble 0.00 able 0.00 ble 0.00 me Adjustment: er Cycle Time:	Dump: 0.100 aneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes	
Machine Cycle Time von Selected Value von 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 within this Bas Material Description Material Descripti	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica nt - factor not applica nt - factor not applica ent - factor not applica Net Cycle Tin Adjusted Load	me (load, dump, m ble 0.00 ble 0.00 ble 0.00 able 0.00 ble 0.00	Dump: 0.100 aneuver): 0. Factor (min.) 0.000 0.000 0.000 0.000 0.000 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes	
Machine Cycle Time verselected Value verselected	s. Job Condition within this Bas Material Description Material Description Material Description Madjusted Box adjustments No a	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica nt - factor not applica nt - factor not applica ent - factor not applica nt - factor not applica Net Cycle Tin Adjusted Load Net Load T	me (load, dump, m ble 0.00 ble 0.00 ble 0.00 able 0.00 ble 0.00 me Adjustment: er Cycle Time: ime per Truck:	Dump: 0.100  aneuver): 0.  Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.500  1.100	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Machine Cycle Time von Selected Value von 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	s. Job Condition within this Bas Material Description Material	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica ent - factor not applica Net Cycle Tin Adjusted Load Net Load T  Minutes	me (load, dump, m lble 0.00 lble 0.00 lble 0.00 lble 0.00 lble 0.00 me Adjustment: er Cycle Time: ime per Truck:  Adjusted f	Dump: 0.100  aneuver): 0.  Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.500  1.100  Cor site altitude:	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes
Machine Cycle Time verselected Value verselected	s. Job Condition within this Bas Material Description Material Materi	ic Rating: NA ription: NA  Maneuver: NA  asic Loader Cycle Tin  nt - factor not applica nt - factor not applica nt - factor not applica ent - factor not applica nt - factor not applica Net Cycle Tin Adjusted Load Net Load T	me (load, dump, m ble 0.00 ble 0.00 ble 0.00 ble 0.00 me Adjustment: er Cycle Time: ime per Truck:	Dump: 0.100  aneuver): 0.  Factor (min.)  0.000  0.000  0.000  0.000  0.000  0.500  1.100	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes	utes

<u>Truck Travel (Haul & Return) Time:</u> Road Condition: <u>Very hard, smooth, asphalt or concrete, no tire penetration 1.2</u>

#### Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	800.00	0.00	1.20	1.20	2895	0.409

Haul Time: 0.409 minutes Return Route: Seg# Haul Distance Grade (%) Roll. Res Total Res Velocity Travel Time (Ft) (%) (%) (fpm) (min) 800.00 1.20 1.20 2913 0.00 0.309

Return Time: 0.309 minutes
Total Truck Cycle Time: 3.218 minutes

Loading Tool unit

Production 590.63 LCY/Hour Adjusted for job efficiency: 490.22 LCY/Hour Truck Unit Production 293.66 LCY/Hour Adjusted for job efficiency: 243.74 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 487.48 LCY/Hour Adjusted single truck/loader team production: 487.48 LCY/Hour Adjusted multiple truck/loader team production: 974.95 LCY/Hour

### **JOB TIME AND COST**

 Fleet size:
 2
 Team(s)
 Total job time:
 15.18
 Hours

 Unit cost:
 \$0.740
 /LCY
 Total job cost:
 \$10,959

### **BULLDOZER WORK**

Task description:	Grac	le topsoil				
Delta Paving Gr	ravel Pit	Permi	t Action:	AM-01	Permit/Job#:	M1998105
PROJECT IDEN	NTIFICATI	<u>ON</u>				
Task #: 05B		State: (	Colorado		Abbreviation:	None
	5/2022		Delta		Filename:	M105-05b
User: $\frac{1775}{RDZ}$	72022	county	Dena		i ilcitatile.	141105 050
	• ,•	. DDM	r C			
Agency or	organization	name: DRM	18			
<b>HOURLY EQUI</b>	PMENT CO	<u>OST</u>				
Basic Machine:	Cat D8T - 8	BSU				
Horsepower:	310			<del></del>		
Blade Type:	Semi-Unive	ersal		<u> </u>		
Attachment:	1-shank rip	per		<del></del>		
Shift Basis:	1 per day			<del></del>		
Data Source:	(CRG)			<u> </u>		
Cost Breakdown:						
Obst Birthing Wil				Utilization %		
Ownership Cost/H	lour:		\$124.85	NA		
Operating Cost/H			\$97.63	100	<del></del>	
Ripper own. Cost/H	lour:		\$16.38	NA		
Ripper op. Cost/H	lour:		\$8.60	100		
Operator Cost/H	lour:		\$41.30	NA		
	iour.		\$41.50	NA		
-	-		\$41.30	NA		
Total unit Cost/Hou	r: \$288.		\$41.50	IVA		
-	r: \$288.		\$41.30	INA		
Total unit Cost/Hou Total Fleet Cost/Ho	\$288. sur: \$577.		\$41.30	INA		
Total unit Cost/Hou	\$288. \$577. \$28NTITIES		\$41.30	INA		
Total unit Cost/Hou Total Fleet Cost/Ho	\$288. 50ur: \$577. \$577. \$14,800		\$41.30	INA		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU	\$288. \$577. \$577. \$14,800 1.215	52	\$41.50	INA		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:	\$288. 50ur: \$577. \$577. \$14,800	52	\$41.50	INA		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume: Swell factor: Loose volume: Source of estimated	\$288. \$577. \$577. \$4,800 1.215 17,982 LCY \$1 volume:	Applicant's	Exhibit L	INA		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume: Swell factor: Loose volume:	\$288. \$577. \$577. \$4,800 1.215 17,982 LCY \$1 volume:	52	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume: Swell factor: Loose volume: Source of estimated	\$288. \$577. \$577. \$4,800 1.215 17,982 LCY \$1 volume: \$1 swell factor:	Applicant's	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:    Swell factor:    Loose volume:  Source of estimated Source of estimated	\$288. \$287.  \$288. \$577.  \$288. \$577.  \$288. \$28	Applicant's Cat Handbo	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated	\$288. \$277.  SANTITIES  14,800 1.215 17,982 LCY  I volume: I swell factor:  DUCTION  nce:	Applicant's	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:    Swell factor:    Loose volume:    Source of estimated Source of estimated  HOURLY PROI  Average push distar	\$288.  \$377.  \$4,800  1.215  17,982 LCY  \$288.  VANTITIES  14,800  1.215  17,982 LCY  \$288.  \$388.  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215  \$4,800  1.215	Applicant's Cat Handbo  50 feet 1,400.0 LCY/	Exhibit L	stockpile 1.1		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated  HOURLY PROI  Average push distar Unadjusted hourly p	\$288.  \$377.  \$4,800  1.215  17,982 LCY  \$577.  \$1,982 LCY  \$1,000 mce:  \$288.  \$14,800  \$1,215  \$1,982 LCY  \$1,000 mce:	Applicant's _Cat Handbo  50 feet 1,400.0 LCY/I :Partly cor	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:    Swell factor:    Loose volume:    Source of estimated Source of estimated  HOURLY PROI  Average push distar Unadjusted hourly publication  Materials consistence  Average push gradie	\$288.  \$14,800  1.215  17,982 LCY    volume:   swell factor:     broduction:   cy description     ent:   -10 %     e:   4,990	Applicant's _Cat Handbo  50 feet 1,400.0 LCY/I :Partly cor	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:    Swell factor:    Loose volume:    Source of estimated Source of estimated  HOURLY PROI  Average push distar Unadjusted hourly publicated  Average push gradical sources of estimated	\$288. \$277.  \$288. \$577.  \$288. \$577.  \$288. \$288. \$577.  \$288. \$2	Applicant'sCat Handbo  50 feet1,400.0 LCY/I :Partly confeet	Exhibit L			
Total unit Cost/Hou Total Fleet Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated  HOURLY PROI Average push distart Unadjusted hourly push Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Corrections	\$288. \$377.  SANTITIES  14,800 1.215 17,982 LCY  Volume: Swell factor:  DUCTION  nce: production: cy description  ent: e: 1,600  Top Section Factor	Applicant's Cat Handbo  50 feet 1,400.0 LCY/I : Partly confeet  lbs/LCY oil	Exhibit Look  hr  nsolidated	stockpile 1.1		
Total unit Cost/Hou Total Fleet Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated  HOURLY PROD  Average push distar Unadjusted hourly push distar Unadjusted hourly push gradie Average site altitude Material weight: Weight description: Job Condition Correct Ope	\$288. \$277.  \$288. \$577.  \$288. \$577.  \$288. \$577.  \$288. \$288. \$577.  \$288. \$288. \$288. \$377.  \$288. \$288. \$388. \$4,800 \$1.215 \$215. \$217,982 LCY \$21 volume: \$2288. \$238. \$2	Applicant's _Cat Handbo  50 feet1,400.0 LCY/I :Partly confeet  lbs/LCY oil  0.75	Exhibit Look  hr  nsolidated	stockpile 1.1  Source (AVG.)		
Total unit Cost/Hou Total Fleet Cost/Ho  MATERIAL QU  Initial Volume:    Swell factor:    Loose volume:    Source of estimated Source of estimated  HOURLY PROI  Average push distar Unadjusted hourly p  Materials consistence Average push gradic Average site altitude  Material weight:  Weight description:  Job Condition Corre Ope Material co	\$288. \$377.  SANTITIES  14,800 1.215 17,982 LCY  Volume: Swell factor:  DUCTION  nce: production: cy description  ent: e: 1,600  Top Section Factor	Applicant's Cat Handbo  50 feet 1,400.0 LCY/I : Partly confeet  lbs/LCY oil	Exhibit Look  hr  nsolidated	stockpile 1.1		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3027

Adjusted unit production: 1,823.78 LCY/hr
Adjusted fleet production: 3647.56 LCY/hr

### **JOB TIME AND COST**

Fleet size: 2 Dozer(s)

Unit cost: \$0.158/LCY

Total job time: 4.93 Hours
Total job cost: \$2,847

### **BULLDOZER RIPPING WORK**

PROJECT IDENTIFICATION		Task description:	Rip a	rea for revegetation					
Task #: 06	Site	: Delta Paving	Gravel Pit	Permit Action:	AM-01	Permit/	Job#:	M1998	105
Date:   L1/15/2022   County:   Delta   Filename:   Mi05-06		PROJECT ID	ENTIFICATION	<u>ON</u>					
Date:   L1/15/2022   County:   Delta   Filename:   Mi05-06		Task # 06		State: Colorado		Abbreviat	ion·	None	
Agency or organization name:   DRMS			/15/2022				_		<u> </u>
HOURLY EQUIPMENT COST							_	1,1100 0	
Basic Machine:   Cat D8T - 8SU		Agency	or organization	name: DRMS					
Ripper Attachment: I-Shank Ripper		HOURLY EQ	UIPMENT CO	<u>DST</u>					
Cost Breakdown:   CRG    CRG		Basic	Machine: Cat	D8T - 8SU		Horsepower:	3	10	
Cost Breakdown:   Utilization %   NA		Ripper Att	tachment: 1-S	hank Ripper					
Ownership Cost/Hour:   \$124.85   NA						Data Source:	(CI	RG)	
Ownership Cost/Hour   \$124.85		Cost Breakdown:	<u>.</u>						
Operating Cost/Hour:   \$97.6.3   100					445405				
Ripper Ownership Cost/Hour:   \$16.38   NA   Ripper Operating Cost/Hour:   \$88.60   100     Operator Cost/Hour:   \$288.76     Total Unit Cost/Hour:   \$288.76     Total Fleet Cost/Hour:   \$577.52									
Ripper Operating Cost/Hour:		D'			·				
Operator Cost/Hour:   \$41,30									
Total Unit Cost/Hour:   \$288.76     Total Fleet Cost/Hour:   \$577.52		Kipj							
MATERIAL QUANTITIES  Altermate Methods:  Seismic:  NA  Area:    Seismic   NA			-			TVA			
MATERIAL QUANTITIES  Altermate Methods:  Seismic:  NA  Area:    Seismic   NA			Total Fleet Co	est/Hour \$57	7.52				
Alternate Methods:   Seismic: NA		MATEDIAI (				.1. 1. A			
Seismic: NA acres Rip Depth (ft): 0.50 Volume: 17,747 BCY or CCY  Source of estimated quantity: Applicant's Exhibit L  HOURLY PRODUCTION  Seismic: Seismic Velocity: NA feet/second  Area: Average Ripping Depth: 3.71 feet/pass Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Maneuver Time: 0.25 minutes/pass acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr  Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (I shift/day) NA BCY NA  Rey On CCY  NA BCY NA  NA BCY NA  NA BCY NA  NA  BCY NA  NA  BCY NA  NA  Applicant's Exhibit L  Seismic Velocity: NA feet/second  Feet/pass Acres/pass Average Ripping Depth: 0.556 feet/pass Average Ripping Length: 0.25 minutes/pass acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr  Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (I shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  Adjusted Hourly Fleet Production: 0.98 Acres/hr  Adjusted Hourly Fleet Production: 0.98 Acres/hr			-	Sei	ected estimating	g method: Area			
Area: 22.00 acres Rip Depth (ft): 0.50 Volume: 17,747 BCY or CCY  Source of estimated quantity: Applicant's Exhibit L  HOURLY PRODUCTION  Seismic: Seismic Velocity: NA feet/second  Area: Average Ripping Depth: 3.71 feet/pass feet/pass Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Roped: 88.00 feet/minute Average Maneuver Time: 0.25 minutes/pass acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr  Site Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST	~		<u> 18:</u>					<del>.</del> .	
Source of estimated quantity: Applicant's Exhibit L  HOURLY PRODUCTION  Seismic:  Seismic Velocity: NA feet/second  Area:  Average Ripping Depth: 3.71 feet/pass Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 feet/minute Average Maneuver Time: 0.25 minutes/pass Production per unit area: 0.588 acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST			acres					IA .	BCY or CC
HOURLY PRODUCTION  Seismic:  Seismic Velocity: NA feet/second  Area:  Average Ripping Depth: 3.71 feet/pass Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 feet/minute Average Maneuver Time: 0.25 minutes/pass Production per unit area: 0.588 acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST									
Seismic:  Seismic Velocity:  NA  feet/second  Area:  Average Ripping Depth: Average Ripping Width: 5.56 feet/pass Average Ripping Length: Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 feet/minute Average Maneuver Time: 0.25 minutes/pass Production per unit area: 0.588  Acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (I shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr JOB TIME AND COST		HOUDI V DD		nated quantity. Tapping	ant 3 Exhibit E				
Seismic Velocity: NA feet/second  Area:  Average Ripping Depth: 3.71 feet/pass Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 feet/minute Average Maneuver Time: 0.25 minutes/pass Production per unit area: 0.588 acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST			<u>obuction</u>						
Area:  Average Ripping Depth: Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 Average Maneuver Time: 0.25 minutes/pass Production per unit area:  0.588  Acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: Site Altitude: Altitude Adj: Altitude Adj: 1.00 CCAT HB) Job Efficiency: 0.83 Acres/hr Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98  JOB TIME AND COST		Seismic:	•	Saismia Valacity	NΑ	foot/second			
Average Ripping Depth: Average Ripping Width: 5.56 feet/pass Average Ripping Length: 150.00 feet/pass Average Dozer Speed: 88.00 feet/minute Average Maneuver Time: O.25 minutes/pass Acres/hour  Job Condition Correction Factors  Unadjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: O.83 Adjusted Hourly Unit Production: O.83 Multiplier  Adjusted Hourly Unit Production: O.83 Acres/hr Adjusted Hourly Unit Production: O.84 Acres/hr Adjusted Hourly Unit Production: O.85 Acres/hr Adjusted Hourly Unit Production: O.87 Acres/hr Adjusted Hourly Fleet Production: O.88 Acres/hr Acres/hr Acres/hr			<b>.</b>	beising velocity.	NA				
Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:  Unadjusted Hourly Unit Production: Site Altitude: Altitude Adj: Altitude Adj: Job Efficiency: Net Correction:  Adjusted Hourly Unit Production:  Adjusted Hourly Unit Production:  O.588 Acres/hr  Feet Altitude Adj: Altitude Adj: Net Correction:  Adjusted Hourly Unit Production: O.83  Macres/hr  Acres/hr  Adjusted Hourly Unit Production: O.83  Acres/hr  Adjusted Hourly Unit Production: O.89  Acres/hr  Adjusted Hourly Fleet Production: O.998  Acres/hr  JOB TIME AND COST		Area:							
Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:  Unadjusted Hourly Unit Production:  Site Altitude: Altitude Adj: Job Efficiency: Net Correction:  Adjusted Hourly Unit Production:  Adjusted Hourly Unit Production:  Adjusted Hourly Unit Production:  O.588  Acres/hr  feet  4,990 feet  Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction:  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98  Acres/hr  Adjusted Hourly Fleet Production: 0.98  Acres/hr  Acres/hr									
Average Dozer Speed: Average Maneuver Time: Production per unit area:    0.25			_						
Average Maneuver Time: Production per unit area:    0.25									
Production per unit area:    Job Condition Correction Factors									
Job Condition Correction Factors  Unadjusted Hourly Unit Production: 0.588 Acres/hr  Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST			_						
Unadjusted Hourly Unit Production:  Site Altitude: Altitude Adj: Job Efficiency: Net Correction:  Adjusted Hourly Unit Production: Adjusted Hourly Unit Production: Adjusted Hourly Fleet Production: D.83 Acres/hr Acres/hr Acres/hr Acres/hr Adjusted Hourly Fleet Production: D.98 Acres/hr Acres/hr		Job Condition Co			0.500	acros/nour			
Site Altitude: 4,990 feet Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST					0.588	Acres/hr			
Altitude Adj: 1.00 (CAT HB) Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST		On	addusted Hourry						
Job Efficiency: 0.83 (1 shift/day) Net Correction: 0.83 multiplier  Adjusted Hourly Unit Production: 0.49 Acres/hr Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST									
Net Correction:  O.83 multiplier  Adjusted Hourly Unit Production: O.49 Acres/hr  Adjusted Hourly Fleet Production: O.98 Acres/hr  JOB TIME AND COST				<u> </u>					
Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST									
Adjusted Hourly Fleet Production: 0.98 Acres/hr  JOB TIME AND COST			Adjusted	Hourly Unit Production:	0.49				
Fleet size: 2 Grader(s) Total job time: 22.55 Hours		JOB TIME AN	ND COST						
		Fleet size:	2	Grader(s)	Total job tim	ne: 22.55		Но	ours
Unit cost: \$591.937 Per acre Total job cost: \$13,023		Unit cost:	\$591.937	Per acre	Total job cos	st: <b>\$13,02</b> 3	3		

## **REVEGETATION WORK**

Delta Paving Gravel Pit	Pern	nit Action: AM	-01		Permit/Job#	: M1998105
<u>ROJECT IDENTIFICATI</u>	<u>ON</u>					
Task #: 07	State:	Colorado		Abl	previation:	None
Date: 11/15/2022	County:	Delta			Filename:	M105-07
User: RDZ						
Agency or organization	n name: DRM	1S				
ERTILIZING						
aterials						
<b></b>		Units /		C	4 / TT 24	C 4 / 4
Description		Acre	Unit		t / Unit	Cost /Acre
10-34-0, 18-46-0, 5-10-5		200.00	pound	\$0.3	8	\$76.00
				Tot	al Fertilizer Materials	
					Cost/Acre	\$76.00
		Tota	al Fertilizer Ap	plicatio	n Cost/Acre	\$39.64
<u>ILLING</u>						
Description						Cost /Acre
Chisel plowing {DMG}						\$98.43
Weed control spraying (MEA	NS 31 31 16.13	3 3100)				\$290.40
			Tota	al Tillin	g Cost/Acre	\$388.83
EEDING						
				ate –	G 1	G
Seed Mix			L	LS BS / cre	Seeds per SQ. FT	Cost /Acre
	-			50	8.16	\$6.86
Blue Grama - Native						
Indian Ricegrass - Native			1.	60	5.18	\$10.40
Indian Ricegrass - Native Sand Dropseed			1. 0.	60 10	5.18 11.94	\$10.40 \$0.98
Indian Ricegrass - Native			1. 0. 2.	60	5.18	\$10.40

**Totals Seed Mix** 

\$69.26

33.45

6.20

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

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$7.94	\$7.94
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$850.66

**Application** 

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Weed spray, truck, non-aquatic area, nox. [DMG]		\$62.72
	<b>Total Mulch Application Cost/Acre</b>	\$135.72

#### **NURSERY STOCK PLANTING**

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

### **JOB TIME AND COST**

No. of Acres: 22 Cost /Acres: \$1,792.11

Estimated Failure Rate: 25% Cost /Acre\*: \$1,792.11

\*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MU

LCHING

Initial Job Cost: \$39,426.42

Reseeding Job Cost: \$9,856.61

Total Job Cost: \$49,283

Job Hours: 27.00