# COST SUMMARY WORK

Task description:		Reclamation Cost Summary						
Site: Fountain Pit		Permit Action: TR-3 Update		Permit/Jol	o#: <u>M1982155</u>			
<u>P</u> ]	ROJECT	<u>IDENTIFIC</u>	CATION					
	Task #:	100	State:	Colorado		Abbreviation:	None	
	Date:	9/29/2022	County:	El Paso		Filename:	M155-100	
	User:	TC1						

Agency or organization name: \_\_\_\_\_\_DRMS\_\_\_\_\_

# TASK LIST (DIRECT COSTS)

Task	Description	Form	Fleet	Task Hours	Cost
101A	Description           Slope grading: NE Side Slopes (32 Ac @ 3.5 mph)	Used DOZERGRADER	Size	8.50	\$3,031
101A 101B	NE Side Slopes Windrow Grading	GRADER	-1	1.67	\$420
101B 101C	NE Sideslopes Topsoil Placement	TRUCK1	-1	83.24	\$ <del>9</del> 5,704
101C 101D	NE Sideslope Seed and Mulch 38 Acres	REVEGE	-1	76.00	\$69,357
	±				
200	NW area reseed 43.75 Ac @ 25% failure	REVEGE	1	20.00	\$15,916
300	10-Ac Overburden stockpile reseed 10 Ac @ 25% failure	REVEGE	1	5.00	\$3,650
400	HW Reduction (East-West Face)	DOZER	1	50.17	\$17,739
401	HW Reduction (West Sidewall)	DOZER	1	0.83	\$295
402	West Sidewall Backfill	TRUCK1	1	129.20	\$148,552
403	HW Reduction (East Sidewall)	DOZER	1	28.32	\$10,013
404	East Sidewall Backfill	TRUCK1	1	11.73	\$13,488
450	Growth Media Placement	TRUCK1	1	376.75	\$433,187
500	Demo Wash Plant	DEMOLISH	1	0.00	\$2,331
600	Seed and Mulch 172 Acres	REVEGE	1	344.00	\$313,930
700	mob/demob (includes AM-3 area)	MOBILIZE	1	2.20	\$8,021
A31	Cut and fill to 3:1 (AM-3 area)	DOZER	1	164.28	\$58,089
A32	Replace overburden (AM-3 area)	DOZER	1	23.90	\$8,451
A33	Replace topsoil (AM-3 area)	DOZER	1	7.10	\$2,512
A34	Replace overburden/pit bottom (AM-3 area)	DOZER	1	120.21	\$42,508
A35	Apply 4" of topsoil over 15 acres (AM-3 area)	DOZER	1	25.18	\$8,902
A36	Seed and Mulch AM-3 Area	REVEGE	1	42.00	\$33,948
		SUBT	<u>DTALS:</u>	1520.28	\$1,290,044

# **INDIRECT COSTS**

OVERHEAD AND PROFIT:			
Liability insurance:	2.02	Total =	\$26,059
Performance bond:	1.05	Total =	\$13,545
Job superintendent:	760.14	Total =	\$57,109
Profit:	10.00	Total =	\$129,004
		TOTAL O & P =	\$225,718
		CONTRACT AMOUNT (direct + O & P) = $($	\$1,515,762
LEGAL - ENGINEERING - PR	OJECT MANAC	<b>FEMENT</b> .	

#### GINEERING - PROJECT MANAGEMEI

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$64,420

Cost Summary Worksheet Cont'd Ta	ısk # 100		Page 2 of 2
Reclamation management and/or administration	n: 5.00		\$75,788
CONTINGENCY	7: 0.00	Total	= _\$0
		TOTAL INDIRECT COST	=\$365,926
TOTAL	= \$1,655,970		

## Task # 101A

Page 1 of 1

# DOZERGRADER WORK

Fountain Pit	Permit Action:	TR-3 Update	Permit/Jo	b#: <u>M1982155</u>
PROJECT IDENTI	FICATION			
Task #: 101A	State: Colorado		Abbreviation:	None
Date: 9/29/202	22 County: El Paso		Filename:	M155-101A
User: TC1				
Agency or or	ganization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machine:	Cat D9T - 9SU			
Horsepower:				
Blade Type:				
	l-shank ripper			
	l per day			
Data Source:				
Cost Breakdown:				
		<b>Utilization %</b>		
Ownership Cost/Hou		NA		
Operating Cost/Hou		100		
Ripper own		NA		
Cost/Hou Ripper op. Cost/Hou		100		
Operator Cost/Hou				
Operator Cost/1100		NA		
Total unit Cost/Hour:	\$356.54			
Total Fleet Cost/Hour	\$356.54			

Unit cost:	\$356.54/LCY
Total job time:	8.50 Hours
Total job cost:	\$3,031

# MOTOR GRADER WORK

Task description:	NE Side Slopes	Windrow G	rading			
te: Fountain Pit	Pe	rmit Action:	TR-3 Updat	te	Permit/Job	#: <u>M1982155</u>
PROJECT IDENTIF	<b>ICATION</b>					
Task #: 101B	State:	Colorado		Abbr	eviation:	None
Date: $9/29/2022$		El Paso			ilename:	M155-101B
User: TC1	<u></u> county:				_	
Agency or org	anization name: DF	RMS				
HOURLY EQUIPM	ENT COST					
Basic Machin				Horsepower:	2	259
Ripper Attachme		nner		Shift Basis:		er day
Ripper Attachine		pper		Data Source:		RG)
				Data Source.		<u>(()</u>
Cost Breakdown:				TT:11 .1 0/		
0			¢114.00	Utilization %		
	ership Cost/Hour:		\$114.80	NA 100		
	erating Cost/Hour: ership Cost/Hour:		\$79.39 \$5.34	100 NA		
11	erating Cost/Hour:		\$3.98	NA 100		
	erator Cost/Hour:		\$3.98	NA		
-	ll Unit Cost/Hour:		\$250.38	11/1		
100			ψ230.30			
Tota	l Fleet Cost/Hour:	\$25	0.38			
	to be graded or rippe		Turb I a 5			acres
	ce of estimated acreag	e: <u>1K-31</u>	Exh L, p. 5			
HOURLY PRODUC	TION					
	Average Grader Sp		3.25	mph		
	Selected Applicat			v blading (0-6 mph	1) - 3.25	
	Selected Blade Ar		30	degrees		
W7: 441-	Effective Blade Ler	·	12.10	feet		
	of blade overlap per p or ripping width per p		2.00 10.10	feet feet		
	d Hourly Unit Produc		3.9788	ieet acres/ho	ur	
Job Condition Correction	-			Site Altitude: <u>5740</u>		
<u></u> condition contection		Source	L		1001	
Altitude Adj:	1.00	(CAT HE	3)			
Job Efficiency:	0.90	(1sh/d, fav	<i></i>			
Net Correction:	0.9000	multiplier				
		-		/T T		
	Adjusted Hourly Unit		3.5809	acres/Hour		
A	djusted Hourly Fleet	Production:	3.5809	acres/Hour		
JOB TIME AND CO	<u>ST</u>					
Fleet size:	1 Grader(s)		Total job time	e: 1.68		Hours
Unit cost:	50.02 <b>man</b> aara		Total ich and			
Unit cost: \$6	59.92 per acre		Total job cos	st: \$420		

Task # 101C

Page 1 of 3

# TRUCK/LOADER TEAM WORK

Task description:		slopes Topsoil		-4-	Dama '4/L 1 //	M1092177
Site: Fountain Pit		Permit A	ction: <u>TR-3 Upd</u>	ate	Permit/Job#:	M1982155
PROJECT IDEN	<b>FIFICATION</b>					
Task #: 101C		State: Colo	orado	۸h	breviation: No	<b>n</b> 0
Date: $9/29/2$	2022	County: El Pa		A0		.55-101C
User: TC1				,		55 1010
	organization nam	e: DRMS				
HOURLY EQUIP	MENT COST			Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
Ti	ruck Loader Tear		at 730			
			AT 980H			
Suppo	ort Equipment -Lo		A at D7R DS Series I			
Road Ma	intenance – Moto		AT 14M			
10000 1110			ater Tanker, 5,000	Gal.		
		I				
Cost Breakdown:	Truck/Load		11	Equipment		nce Equipmen
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	100	25	2
Ownership cost/hour:	\$97.13	\$54.58	NA	\$92.78	\$114.80	\$37.1
Operating cost/hour:	\$65.52	\$53.14	NA	\$79.33	\$19.85	\$12.8
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.0
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.0
Operator cost/hour:	\$24.82	\$35.97	NA	\$40.04	\$46.87	\$0.0
Unit Subtotals:	\$187.47	\$143.69	NA	\$212.15	\$181.52	\$50.0
Number of Units:	3	1	0	1	1	
Group Subtotals:	Work:	\$706.10	Support:	\$212.15	Maint:	\$231.54
Total work team cost	/hour: \$1,149.7	9				
	μισμι <u>φιμιγγγ</u>	<u> </u>				
MATERIAL QUA	<b>NTITIES</b>					
Initial volume:	51,089	CC	V Swell	factor: 1.125		
Loose volume:				<u>1.125</u>		
Sou	rce of estimated	volume: TR	-3, Exh L, pp. 5 - 6	5		
	of estimated swel		Handbook	)		
	Material Purcha					
		al Cost: \$0.	00			
HOURLY PRO	DUCTION					
Truck Capacity:						
Truck Payload (weig						
Material w			Pounds/LCY	ζ		
Descr		Dry packed	D 1			
Rated Pa			Pounds			
Payload Cap	pacity: 24.31		LCY			

<u>Truck Bed (volume) Basis:</u> Struck Volume: Heaped Volume: Average Volume: Adjusted Volume:	17.10 22.10 19.60	LCY LCY LCY LCY				
Fina	ıl Truck Volume E	Based on Number of	Loader Passes:	16.50	LCY	
Loading Tool Capacity						
<u>Louding roor cupuony</u>			Buck	et Size Class:	NA	
Rated Capacity	7.500	LCY (heaped)	Duck	et Size Class.	INA	
Bucket Fill Factor		Other - rock/dir	t mixtures (100	0-120%) 1.100		
Adjusted Capacity		LCY	(10)			
<i>v i v</i>						
Job Condition Correction	18:	Sit	e Altitude (ft.):	<u>5740</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HB	5)		
Job Efficiency:	0.830	0.830	(CAT HB	8)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Tim	e• N	Number of Loading T	ool Passes Requ	uired to Fill		passes
Excavators and Front Shore				Truck:	2	
Machine Cycle Time Selected Valu	e vs. Job Conditior e within this Basic					
	– Material Descri	<u> </u>				
Cycle Time Elements (min		F 40011				
Load: NA	M	aneuver: NA		Dump: 0.	.100	_
Wheel and Tra	ack Loaders - Una	djusted Basic Loader	•	ad, dump, naneuver):	0.550	minutes
Cycle Time Factor	rs			Factor (min.)	) Sour	ce
Materia	1: Mixed mater	ial 0.02		0.020	(Cat H	IB)
Stockpile	e: No adjustmer	nt - factor not applica	ble 0.00	0.000	(Cat H	IB)
Truck Ownership	o: Common ow 0.04	nership of trucks and	loaders -	-0.040 (Cat HB		IB)
Operation				-0.040	(Cat H	IB)
Dump Targe	t: Nominal targ			0.000	(Cat H	IB)
		Net Cycle Time		-0.060	minu	
		Adjusted Loade		0.490	minu	
		Net Load Ti	ne per Truck: _	0.590	minu	tes

Task # 101C

#### Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.590	Minutes	Adjusted for site altitude:	0.590	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time: maintained 3.0 Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Γ	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	C	(Ft)			(%)	(%)	(fpm)	Time (min)	
	1	1000	.00	2.00	3.00	5.00	1427	0.823	
						Haul Time:	0.823	minute	es
I	Return Rou	ite:							
	Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
	1	1000	.00	-2.00	3.00	1.00	3060	0.459	
						Return Time:	0.459	minu	tes
					Total True	ck Cycle Time:	3.472	minu	tes
Lo	ading Too	ol unit							
	Produ		831.93	LCY/Hour		Adjusted for jo	b efficiency:	690.50	LCY/Hour
[ruck]	Unit Produ	iction							
			285.14	LCY/Hour		Adjusted for jo	b efficiency:	236.66	LCY/Hour
ptimal	l No. of Tr	ucks:	3	Truck(s)		Selected Numb	er of Trucks:	3	Truck(s)
				Adjusted	l hourly truck	team productio	on: 709.	.99 LC	Y/Hour
				Adjusted single					Y/Hour
			А	djusted multiple	e truck/loader	team production	on: 690.	.50 LC	Y/Hour
ا	JOB TIM	IE AN	D COST						
	Fleet	size:	1	Team(s)	T	otal job time:	83.24	<b>4</b> H	ours
	Unit o	cost:	\$1.665	/LCY	Т	otal job cost:	\$95,70	04	

# **REVEGETATION WORK**

Task description:		NE Sideslope Seed and Mulch 38 Acres		
Site: Fountair	n Pit	Permit Action: TR-3 Update	Permit/Job	#: <u>M1982155</u>
	IDENTIFIC		Abbreviation:	None
Task #: Date:	101D 9/29/2022	County: El Paso	Filename:	None M155-101D
User:	TC1			11100 1010

# **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
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	1.00	3.28	\$8.38
White Sweet Clover	0.50	2.98	\$2.06
Western Wheatgrass - Native	3.00	7.58	\$18.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Totals Seed Mix	8.00	36.28	\$72.42

#### Application

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

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Power mulcher (MEANS 32 91 13.16 0350)		\$141.57
	<b>Total Mulch Application Cost/Acre</b>	\$214.57

# NURSERY STOCK PLANTING

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

Estimate	No. of Acres: ed Failure Rate:		Cost /Acre: Cost /Acre*:	
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING	
Initial Job Cost:	\$55,485.32			
Reseeding Job Cost:	\$13,871.33			
Total Job Cost:	\$69,357			
Job Hours:	76.00			

# **REVEGETATION WORK**

Task description: <b>NW a</b>		NW area reseed 43.75 A	ac @ 25% failure		
e: Fountain	Pit	Permit Act	ion: TR-3 Update	Permit/Job	o#: <u>M1982155</u>
PROJECT Task #:	IDENTIFIC	CATION State: Color	ada	Abbreviation:	None
Date:	9/29/2022	County: El Pas		Filename:	M155-200

# **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
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	1.00	3.28	\$8.38
White Sweet Clover	0.50	2.98	\$2.06
Western Wheatgrass - Native	3.00	7.58	\$18.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Totals Seed Mix	8.00	36.28	\$72.42

#### Application

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

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Power mulcher (MEANS 32 91 13.16 0350)		\$141.57
	Total Mulch Application Cost/Acre	\$214.57

# NURSERY STOCK PLANTING

 Second Second

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

	No. of Acres:	10.9	Cost /Acre:	\$1,460.14
Estimate	ed Failure Rate:	0%	Cost /Acre*:	\$0.00
*Selected Replanting	ng Work Items:	NONE		
Initial Job Cost:	\$15,915.53			
Reseeding Job Cost:	\$0.00			

# **REVEGETATION WORK**

ite: Fountain Pit		Intain Pit   Permit Action:   TR-3 Update		Permit/Job#: M198215		
<u>PROJECT</u>	IDENTIFIC	CATION				
Task #:	300	State:	Colorado		Abbreviation:	None
Date:	9/29/2022	County:	El Paso		Filename:	M155-300
User:	TC1					

# **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	<b>Cost /Acre</b>
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	1.00	3.28	\$8.38
White Sweet Clover	0.50	2.98	\$2.06
Western Wheatgrass - Native	3.00	7.58	\$18.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Totals Seed Mix	8.00	36.28	\$72.42

#### Application

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

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Power mulcher (MEANS 32 91 13.16 0350)		\$141.57
	Total Mulch Application Cost/Acre	\$214.57

# NURSERY STOCK PLANTING

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

	No. of Acres:	2.5	Cost /Acre:	\$1,460.14
Estimate	ed Failure Rate:	0%	Cost /Acre*:	\$0.00
*Selected Replanti	ng Work Items:	NONE		
Initial Job Cost:	\$3,650.35			
Reseeding Job Cost:	\$0.00			

eseeding Job Cost:	\$0.00
Total Job Cost:	\$3,650
Job Hours:	5.00

# BULLDOZER WORK

Fountain Pit	]	Permit Action:	TR-3 Update	Permit/Jol	b#: M198215
		-			
<u>ROJECT IDENTIFI</u>	CATION				
Task #: 400	State			Abbreviation:	None
Date: <u>9/29/2022</u>	County	: El Paso		Filename:	M155-400
User: TC1					
Agency or organ	nization name:	DRMS			
OURLY EQUIPME	NT COST				
Basic Machine: Ca	t D9T - 9SU				
Horsepower: 403			-		
Blade Type: Sei	mi-Universal		-		
	hank ripper		_		
	er day		_		
Data Source: (Cl	RG)		_		
ost Breakdown:		,			
			Utilization %		
Ownership Cost/Hour:		\$146.30	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own. Cost/Hour:		\$17.01	NA		
Ripper op. Cost/Hour:		\$8.85	100		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$353.61 <b>\$353.61</b>	\$8.85 \$40.04	100 NA		
Fotal unit Cost/Hour: Fotal Fleet Cost/Hour: ATERIAL QUANT Initial Volume: <u>60,0</u> Swell factor: <u>1.12</u>	\$353.61 ITIES 089 24				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>ATERIAL QUANT</b> Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5	\$353.61 ITIES 089 24 516 LCY	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>ATERIAL QUANT</b> Initial Volume: <u>60,0</u> Swell factor: <u>1.12</u>	\$353.61 ITIES 089 24 516 LCY ume: TR-3 H		NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>ATERIAL QUANT</b> Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated swe	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         11       Cat Ha	\$40.04  Exh L & Tasks #	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>ATERIAL QUANT</b> Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated swe factor:	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         11       Cat Ha	\$40.04  Exh L & Tasks # indbook	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <b>ATERIAL QUANT</b> Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated swe Source of estimated swe Source of estimated swe Cource of estimated swe	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         11       Cat Ha         11       Cat Ha         11       50 feet         2,110.5 H       0.00000000000000000000000000000000000	\$40.04  Exh L & Tasks # indbook	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: TATERIAL QUANT Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated volu Source of estimated swe actor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         11       Cat Ha         11       Cat Ha         11       50 feet         2,110.5 H       0.00000000000000000000000000000000000	\$40.04 \$40.04 Exh L & Tasks # undbook	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: TATERIAL QUANT Initial Volume: 60,0 Swell factor: 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated volu Source of estimated swe Cactor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency defined Average for the stance of the stance	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         Cat Ha         'ION         50 feet         2,110.5 I         esscription:       Com	\$40.04 \$40.04 Exh L & Tasks # undbook	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: 1.12 Loose volume: 60,0 1.12 Loose volume: 60,0 1.12 Loose volume: 67,5 Source of estimated volu Source of estimated volu Source of estimated swe actor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	\$353.61         ITIES         089         24         516 LCY         ume:       TR-3 H         11       Cat Ha         12         11       Cat Ha         11       Cat Ha         11       Cat Ha         11       So feet         2,110.5 I       Corr         -15 %       Corr	\$40.04 \$40.04 Exh L & Tasks # undbook	NA		

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

 Net correction:
 0.6377

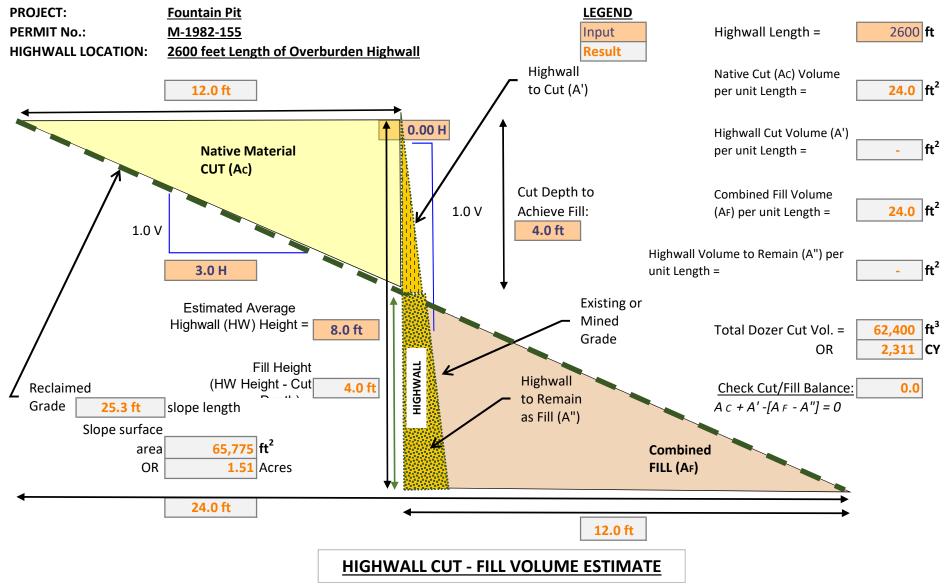
 Adjusted unit
 1,345.87 LCY/hr

 Adjusted fleet
 1345 87 LCY/hr

# production: 1345.87 LCY/hr

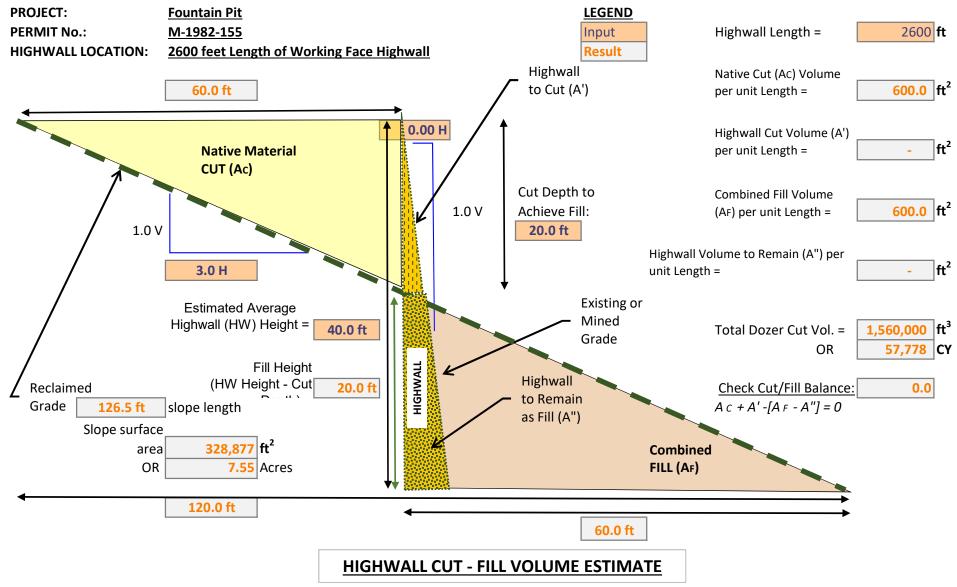
Fleet size:	1 Dozer(s)
Unit cost:	\$0.263/LCY

Total job time:	50.17 Hours
Total job cost:	\$17,739



# Task # 400.1A East-West Overburden Highwall Cut/Fill Volume Estimate

C:\Users\TC1\Documents\Projects\\_El Paso\M-82-155 Fountain Pit\_Schmidt\TR-3 Plan Update\M-82-155\_TR3\_HighwallBackfillCalculatorV3.xlsx // OvrB Highwall CutFill-Pushdown



# Task # 400.1B East-West Working Face Highwall Cut/Fill Volume Estimate

C:\Users\TC1\Documents\Projects\\_El Paso\M-82-155 Fountain Pit\_Schmidt\TR-3 Plan Update\M-82-155\_TR3\_HighwallBackfillCalculatorV3.xlsx // WFace Highwall CutFill-Pushd

# BULLDOZER WORK

e: Fountain Pit		_	West Sidewall	*	· ·	
		Per	rmit Action:	TR-3 Update	Permit/Jo	b#: <u>M1982155</u>
PROJECT IDEN	TIFICATI	<u>ON</u>				
Task #: 401		State:	Colorado		Abbreviation:	None
	2022	County:	El Paso		Filename:	M155-401
User: TC1						
Agency or	organizatior	n name: DR	RMS			
HOURLY EQUI	PMENT CO	<u>OST</u>				
Basic Machine:	Cat D9T -	· 9SU				
Horsepower:	405					
Blade Type:	Semi-Uni	versal				
Attachment:	3-shank ri	pper				
Shift Basis:	1 per day					
Data Source:	(CRG)					
<u>Cost Breakdown</u> :			I	Utilization %		
Ownership Cost/H	lour		\$146.30	NA		
Operating Cost/H			\$140.30	100		
Ripper						
Cost/H			\$17.01	NA		
Ripper op. Cost/H			\$8.85	100		
Operator Cost/H			\$40.04	NA		
MATERIAL QU	ANTITIES 1,000 1.124					
Swell factor: Loose volume:		r	_			
Loose volume:	1,124 LCY		_	_		
Loose volume: Source of estimate Source of estimate	<b>1,124</b> LCY d volume:		n L p. 3 & Figu book	re 2		
Loose volume: Source of estimate	<b>1,124</b> LCY d volume: d swell	TR-3 Exł		re 2		
Loose volume: Source of estimate Source of estimate factor:	<b>1,124</b> LCY d volume: d swell <u>UCTION</u> ance:	TR-3 Exł	lbook	re 2		
Loose volume: Source of estimate Source of estimate factor: HOURLY PROD Average push dista Unadjusted hourly	<b>1,124</b> LCY d volume: d swell <u>UCTION</u> ance:	<u>TR-3 Exh</u> Cat Hand <u>50 feet</u> 2,110.5 LC	lbook			
Loose volume: Source of estimate Source of estimate factor: <b>HOURLY PROD</b> Average push dista Unadjusted hourly production: Materials consisten Average push	<b>1,124</b> LCY d volume: d swell <u>UCTION</u> ance:	TR-3 Exh Cat Hand 	lbook Y/hr			
Loose volume: Source of estimate Source of estimate factor: <b>HOURLY PROD</b> Average push dista Unadjusted hourly production: Materials consister	<b>1,124</b> LCY d volume: d swell <u>UCTION</u> ance: ncy description -15 9	TR-3 Exh Cat Hand 	lbook Y/hr			
Loose volume: Source of estimate Source of estimate factor: <b>HOURLY PROD</b> Average push dista Unadjusted hourly production: Materials consisten Average push gradient:	1,124 LCY         d volume:         d swell         UCTION         ance:         hey description         -15 %         de:       5,74	<u>TR-3 Ext</u> Cat Hand <u>50 feet</u> 2,110.5 LC on: <u>Compa</u>	lbook Y/hr			

Task # 401

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

 Net correction:
 0.6377

 Adjusted unit
 1,345.87 LCY/hr

 production:
 1345.87 LCY/hr

 production:
 1345.87 LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$0.263/LCY

Total job time:	<b>0.83</b> Hours
Total job cost:	\$295

# TRUCK/LOADER TEAM WORK

Site:	Fountain Pit		Permi	t Action:	TR-3 Upda	ate	Permit/Job#:	M1982155
PI	ROJECT IDEN	TIFICATION						
	Task #:     402       Date:     9/29/       User:     TC1			Colorado El Paso		Abl	Filename: M1	ne 55-402
	Agency or	organization nar	ne: DRM	S				
н	OURLY EQUI	PMENT COST	r			Shift ba	sis: <u>1 per day</u>	
				Fau	ipment Descri		515. <u>1 per day</u>	
	Т	ruck Loader Tea	m -Truck:	Cat 730		iption		
			-Loader:	CAT 98				
	Suppo	ort Equipment -L	oad Area:	NA Cot D7	R DS Series I			
	Road Ma	aintenance –Mot	1	CAT 14		I LOP		
			ter Truck:		Tanker, 5,000	Gal.		
C	at Ducal-Jarren	Т1- /Т	dan Terre		<b>C</b>	E animen and	N / - : 4	maa Eauinnea d
<u>C(</u>	ost Breakdown:	Truck/Loa Truck	Loader	L	Support . oad Area	Equipment Dump Area	Maintena Motor	nce Equipment Water Truck
			200000			2 mil 1 mil	Grader	
Utili	zation-machine:	100	1	100	NA	100	25	25
Owne	ership cost/hour:	\$97.13	\$54	.58	NA	\$92.78	\$114.80	\$37.19
-	rating cost/hour:	\$65.52	\$53	.14	NA	\$79.33	\$19.85	\$12.83
	Utilization-riper:	NA		0	NA	NA	NA	NA
	own. cost/hour:	NA		.00	NA	\$0.00	\$0.00	\$0.00
	er op. cost/hour:	NA		.00	NA	\$0.00	\$0.00	\$0.00
Ope	erator cost/hour:	\$24.82	\$35		NA	\$40.04	\$46.87	\$0.00
N	Unit Subtotals:	\$187.47	\$143		NA	\$212.15	\$181.52	\$50.02
	umber of Units:	3	\$706.10	1	0	f 212.15	1 Mainte	f 221 54
	Froup Subtotals:	Work:	\$706.10		Support:	\$212.15	Maint:	\$231.54
To	tal work team cos	t/hour: <u>\$1,149.7</u>	/9					
Μ	ATERIAL QUA	ANTITIES						
	Initial volume Loose volume			CCY LCY	Swell	factor: <u>1.125</u>		
	Sou	urce of estimated	volume:	TR-3, E	kh L, p 3 & Fi	gure 2		
	Source	of estimated swe		Cat Hand	dbook	-		
		Material Purcha		\$0.00				
		10	otal Cost:	\$0.00				
H	OURLY PRO	<b>DUCTION</b>						
	uck Capacity:							
	uck Payload (weig	t) Basis						
<u>lr</u>	Material v				Pounds/LCY			

Pounds

LCY

Rated Payload:

Payload Capacity:

62,000

24.31

Truck Bed	(volume)	Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: 16.50 LCY

Site Altitude (ft.): 5740 feet

#### Loading Tool Capacity

		Bucket Size Class: NA
Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	8.250	LCY

#### Job Condition Corrections:

	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	

Loading Tool Cycle Time: Number	of Loading Tool Passes Required to Fill	2	passes
Excavators and Front Shovels:	Truck:		
Machine Cycle Time vs. Job Condition Rating	NA		
Selected Value within this Basic Rating	NA		
Track Loaders – Material Description:			

Cycle Time Elements (min.):

Load: NA	Maneuver:	NA	Dump:	0.100	
Wheel and Track	Loaders - Unadjusted Basic	•	d, dump, ineuver):	0.550	minutes
Cycle Time Factors			Factor (n	nin)	Source

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.490	minutes

Net Load Time per Truck: 0.590

### Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.590	Minutes	Adjusted for site altitude:	0.590	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel	Haul & Re	eturn) Time:	
maintained 3.0	)	,	

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

minutes

Haul Route:									
Seg #	Haul Dista	ance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time		
	(Ft)			(%)	(%)	(fpm)	(min)		
1	1000.00		1.00	3.00	4.00	1774	0.753		
					Haul Time:	0.753	m	inutes	
Return Rout	te:								
Seg #	Haul Dista	ance	Grade (%)	Roll. Res	Total Res	Velocity	Travel		
	(Ft)			(%)	(%)	(fpm)	Time (min)		
1	1000.00		-1.00	3.00	2.00	3040	0.476		
					Return Time:	0.476	r	ninutes	
				Total Tru	ck Cycle Time:	3.419	r	ninutes	
Loading Tool	unit								
Produc	ction	831.93	LCY/Hour		Adjusted for jo	b efficiency:	690	.50	LCY/Hour
Truck Unit Produc							• 10		
		289.56	LCY/Hour		Adjusted for jo	ob efficiency:	240	.33	LCY/Hour
Optimal No. of Tru	ucks:	3	Truck(s)		Selected Numb	er of Trucks:	3		Truck(s)
			Adjusted	l hourly truck	team productio	on: 721	.00	LCY/H	lour
					team production			LCY/H	
		А	djusted multiple	e truck/loader	team production	on: 690	.50	LCY/H	lour
JOB TIM	E AND C	<u>OST</u>							
Fleet s	ize:	1	Team(s)	Т	otal job time:	129.2	0	Hour	s
Unit c	ost: S	\$1.665	/LCY	Т	otal job cost:	\$148,5	52	_	

Page 1 of 2

# BULLDOZER WORK

Fountain Pit	Perm	it Action:	TR-3 Update	Permit/Jo	b#: <u>M198215</u>
ROJECT IDENTIFI	CATION				
Task #: 403		Colorado		Abbreviation:	None
Date: $9/29/2022$		El Paso		Filename:	M155-403
User: $TC1$		511 050		i nename.	11133-403
Agency or organ	nization name: DRM	[S			
OURLY EQUIPME	NT COST				
Basic Machine: Ca	t D9T - 9SU				
Horsepower: 40			_		
	mi-Universal		-		
· · ·	shank ripper		_		
Shift Basis: 1 p	ber day		_		
	RG)		_		
ost Breakdown:			_		
			Utilization %		
Ownership Cost/Hour:		\$146.30	NA		
Operating Cost/Hour:		\$141.41	100		
Ripper own. Cost/Hour:		\$17.01	NA		
Ripper op. Cost/Hour:		<b>#0.0#</b>	100		
		88.85	100		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:		\$8.85 \$40.04	100 NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 33,0 Swell factor: 1.12	\$353.61         ITIES         920         24         113 LCY         ume:       TR-3 Exh L         Sll       Cat Handbo	\$40.04 . p. 4 & Fig	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 33,9 Swell factor: 1.12 Loose volume: 38,1 Source of estimated vol Source of estimated swe factor:	\$353.61         ITIES         920         24         113 LCY         ume:       TR-3 Exh L         Sll       Cat Handbo	\$40.04 2 p. 4 & Fig pok	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 33,9 Swell factor: 1.12 Loose volume: 38,5 Source of estimated vol Source of estimated swe factor: OURLY PRODUCT Average push distance: Unadjusted hourly	\$353.61         ITIES         920         24         113 LCY         ume:       TR-3 Exh L         cat Handbo         Cat Handbo         CION         50 feet         2,110.5 LCY/	\$40.04 . p. 4 & Fig bok	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: <u>33,9</u> Swell factor: <u>1.12</u> Loose volume: <u>38,2</u> Source of estimated vol Source of estimated vol Source of estimated swe factor: <b>OURLY PRODUCT</b> Average push distance: Unadjusted hourly production: Materials consistency de Average push	\$353.61         ITIES         920         24         113 LCY         ume:       TR-3 Exh L         cat Handbo         Cat Handbo         CION         50 feet         2,110.5 LCY/	\$40.04 . p. 4 & Fig bok	 gures 3 & 4		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: <u>33,9</u> Swell factor: <u>1.12</u> Loose volume: <u>38,2</u> Source of estimated vol Source of estimated vol Source of estimated swe factor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency defined	\$353.61         ITIES         220         24         113 LCY         ume:       TR-3 Exh L         clil       Cat Handbo         CION	\$40.04 . p. 4 & Fig bok	 gures 3 & 4		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 33,9 Swell factor: 1.12 Loose volume: 38,2 Source of estimated vol Source of estimated vol Source of estimated swe factor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	\$353.61         ITIES         920         24         113 LCY         ume:       TR-3 Exh L         cll       Cat Handbo         Cat Handbo	\$40.04 . p. 4 & Fig bok	 gures 3 & 4		

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

 Net correction:
 0.6377

 Adjusted unit
 1,345.87 LCY/hr

 Adjusted fleet
 1345 87 LCY/hr

# production: 1345.87 LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$0.263/LCY

Total job time:	28.32 Hours
Total job cost:	\$10,013

# TRUCK/LOADER TEAM WORK

Task description:	East Sic	dewall Backfill				
Site: Fountain Pit		Permit Act	tion: <u>TR-3 Upd</u>	ate	Permit/Job#:	M1982155
<b>PROJECT IDE</b>	NTIFICATION					
Task #: 404		State: Colora		Ab	breviation: <u>No</u>	
Date: $9/29$ User: TC		County: El Pas	50		Filename: M1	55-404
Agency	or organization nar	ne: DRMS				
HOURLY EQU	IPMENT COST	-			sis: <u>1 per day</u>	
	Truck Loader Tea		Equipment Descr 730	iption		
	Truck Louder Teu		Т 980Н			
Sup	port Equipment -L					
Pood	Dı- Dı/Jaintenance – Moto		D7R DS Series I T 14M	I LGP		
Koad N			ter Tanker, 5,000	Gal.		
			, - , - • •			
Cost Breakdown:	Truck/Loa			Equipment		ince Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
6Utilization-machine:	100	100	NA	100	25	25
Ownership cost/hour:	\$97.13	\$54.58	NA	\$92.78	\$114.80	\$37.19
Operating cost/hour:	\$65.52	\$53.14	NA	\$79.33	\$19.85	\$12.83
%Utilization-riper:	NA	0	NA	NA	NA	NA
ipper 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:	\$24.82	\$35.97	NA	\$40.04	\$46.87	\$0.00
Unit Subtotals:	\$187.47	\$143.69	NA	\$212.15	\$181.52	\$50.02
Number of Units:	3	1	0	1	1	1
Group Subtotals:	Work:	\$706.10	Support:	\$212.15	Maint:	\$231.54
Total work team co	st/hour: <u>\$1,149.7</u>	79				
<u>MATERIAL QU</u>	J <b>ANTITIES</b>					
Initial volum	ne: 7,200	CCY	Swell	factor: 1.125		
Loose volum	ne: 8,10	0 LCY				
S	ource of estimated	volume: TR-3	3, Exh L, p 4 & F	igures 3 & 4		
Sourc	e of estimated swe		Handbook			
	Material Purcha					
	10	otal Cost: \$0.00	0			
HOURLY PRO	<b>DDUCTION</b>					
Truck Capacity:						
Truck Payload (we			<b>_</b>	-		
Material		Descent 1	Pounds/LCY			
	cription: <u>Earth</u> Payload: 62,000	- Dry packed	Pounds			
Payload C			LCY			

## Task # 404

Truck Bed	(volume)	Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes:	16.50	LCY
--	-------	-----

Site Altitude (ft.): 5740 feet

#### Loading Tool Capacity

		Bucket Size Class: NA
Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	8.250	LCY

#### Job Condition Corrections:

	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	

Loading Tool Cycle Time: Number o	f Loading Tool Passes Required to Fill	2	passes
Excavators and Front Shovels:	Truck:		_
Machine Cycle Time vs. Job Condition Rating:	NA		
Selected Value within this Basic Rating:	NA		
Track Loaders – Material Description:			

Cycle Time Elements (min.):

Load: NA	Maneuver:	NA	Dump:	0.100	
Wheel and Track Lo	oaders - Unadjusted Ba	asic Loader Cy	cle Time (load, dump, maneuver):	0.550	minutes
1					

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.490	minutes

Net Load Time per Truck:

### Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.590	Minutes	Adjusted for site altitude:	0.590	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel	Haul & Re	eturn) Time:	
maintained 3.0	)	,	

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

0.590

minutes

Haul Route:							
Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)		(%)	(%)	(fpm)	Time (min)	
1	1000.00	1.00	3.00	4.00	1774	0.753	
				Haul Time:	0.753	minutes	5
Return Rout	e:						
Seg #	Haul Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)		(%)	(%)	(fpm)	Time (min)	
1	1000.00	-1.00	3.00	2.00	3040	0.476	
				Return Time:	0.476	6 minute	es
			Total Tru	ick Cycle Time:	3.419	<b>)</b> minute	es
Loading Tool	unit						
Produc	tion 831.9	03 LCY/Hour		Adjusted for jo	b efficiency:	690.50	LCY/Hour
Fruck Unit Produc					1 00 .	240.22	
	289.5	6 LCY/Hour		Adjusted for jo	bb efficiency:	240.33	LCY/Hour
ptimal No. of Tru	icks: <u>3</u>	Truck(s)		Selected Numb	er of Trucks:	3	Truck(s)
				team production		.00 LCY.	/Hour
				r team productio			/Hour
		Adjusted multiple	e truck/loade	r team productio	on: 690	.50 LCY.	/Hour
JOB TIM	E AND COST						
Fleet si	ize: 1	Team(s)	Т	otal job time:	11.73	3 Ho	urs
Unit co	ost:\$1.66	5 /LCY	Т	Total job cost:	\$13,4	88	

# TRUCK/LOADER TEAM WORK

Site: Fountain Pit		Permit Ac	tion: <u>TR-3 Upd</u>	ate	Permit/Job#:	M1982155
PROJECT IDENT	FIFICATION					
Task #:         450           Date:         9/29/2           User:         TC1		State: Color County: El Pa			Filename: M1	ne 55-450
Agency or o	organization nan	ne: DRMS				
HOURLY EQUIP	MENT COST			Shift ba	sis: <u>1 per day</u>	
			Equipment Descr	iption		
Tr	uck Loader Tea		t 730			
Suppo	rt Equipment -L		Т 980Н			
	-Du	mp Area: Cat	t D7R DS Series I	II LGP		
Road Ma	intenance – Moto		T 14M			
	-Wa	ter Truck: Wa	ter Tanker, 5,000	Gal.		
<u>Cost Breakdown</u> :	Truck/Loa	der Team	Support	Equipment	Maintena	nce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
Utilization-machine:	100	100	NA	100	25	25
Ownership cost/hour:	\$97.13	\$54.58	NA	\$92.78	\$114.80	\$37.19
Operating cost/hour:	\$65.52	\$53.14	NA	\$79.33	\$19.85	\$12.83
%Utilization-riper:	NA NA	0	NA NA	NA \$0.00	NA \$0.00	NA \$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$24.82	\$35.97	NA	\$40.04	\$46.87	\$0.00
Unit Subtotals:	\$187.47	\$143.69	NA	\$212.15	\$181.52	\$50.02
Number of Units:	3	1	0	1	1	1
Group Subtotals:	Work:	\$706.10	Support:	\$212.15	Maint:	\$231.54
Total work team cost/	hour: <b>\$1,149.7</b>	9				
	<u> </u>					
MATERIAL QUA	NTITIES					
Initial volume:		CCY		factor: <u>1.125</u>		
Loose volume:	260,15	50 LCY	7			
	rce of estimated		3, Exh L: 10" ov	er 172 acres		
Source of	of estimated swe Material Purcha		Handbook 0			
		tal Cost: $\$0.0$				
HOUDI V DDOF	MICTION					
HOURLY PROE	DUCTION					
HOURLY PROD <u>Truck Capacity:</u> Truck Payload (weigł						
Truck Capacity:	nt) Basis: reight: _2,550	Dry packed	Pounds/LCY	ζ		

LCY

24.31

Payload Capacity:

17.10	LCY
22.10	LCY
19.60	LCY
22.10	LCY
	22.10 19.60

Final Truck Volume Based on Number of Loader Passes: 16.50 LCY

Site Altitude (ft.): 5740 feet

#### Loading Tool Capacity

		Bucket Size Class: NA
Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	8.250	LCY

Task # 450

#### Job Condition Corrections:

	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	

Loading Tool Cycle Time: Numb	er of Loading Tool Passes Required to Fill	2	passes
Excavators and Front Shovels:	Truck:		
Machine Cycle Time vs. Job Condition Rati	ng: NA		
Selected Value within this Basic Rati	ng: NA		
Track Loaders – Material Description			

Cycle Time Elements (min.):

Load: NA	Maneuver:	NA	Dump:	0.100	
Wheel and Track Los	aders - Unadjusted Ba	sic Loader Cy	cle Time (load, dump, maneuver):	0.550	minutes
Civila Tima Fastana			Eastan (m		Courses

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders - 0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.060	minutes
	Adjusted Loader Cycle Time:	0.490	minutes

Net Load Time per Truck: 0.590

#### Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.590	Minutes	Adjusted for site altitude:	0.590	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel	Haul &	Return)	Time:
maintained 3.0	Ĵ	,	

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

minutes

Haul Route	e: Haul Di	stance	Grade (%)	Roll. Res	Total Res	Valasity	Travel	]
Seg #	(Ft)		Grade (%)	(%)	(%)	Velocity (fpm)	Time (min)	
1	1200.00		0.00	3.00	3.00	2183	0.813	
					Haul Time:	0.813	minut	es
Return Rou	ute:							_
Seg #	Haul Di	stance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.00		0.00	3.00	3.00	2936	0.563	
				Total Tru	Return Time: ck Cycle Time:			
Loading Too	1 unit							
Produ	uction	831.93	LCY/Hour		Adjusted for jo	b efficiency:	690.50	LCY/Hour
uck Unit Produ	<u></u>	277.62	LCY/Hour		Adjusted for jo	b efficiency:	230.43	LCY/Hour
timal No. of Ti	ucks:	3	Truck(s)		Selected Numb	er of Trucks:	3	Truck(s)
			Adjusted	l hourly truck	team production	on: 691	.28 LC	Y/Hour
					r team productio			Y/Hour
		A	Adjusted multiple	e truck/loader	r team productio	on: <b>690</b>	.50 LC	Y/Hour
	IE AND	COST						
JUD IIW						376.7	<b>1</b>	
Fleet	size:	1	Team(s)	Т	otal job time:	5/0./	<u>з</u> п	lours

# **DEMOLITION WORK**

Т	ask description:	Demo Wash Plant			
Site:	Fountain Pit	Permit Action:	TR-3 Update	Permit/J	Job#: <u>M1982155</u>
ROJEC	CT IDENTIFICATION	<u>N</u>			
Task #: Date:		State: <u>Colorado</u> County: El Paso		Abbreviation: _ Filename:	None M155-500
User:		J		-	
User:	: TC1 Agency or organiza	tion name: DRMS			

# UNIT COSTS

# Location adjustment: 87.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Wash Plant Demo/Haul to Midway	8' x 36' x 7'	Plant (1S) demo./off-site disposal in approved landfill - Max. 15 mile haul	2,016.00	CF	\$0.73	\$1,467.65
Demo concrete support slab	800 sqft	Floor, concrete, demolition only, average reinforcing - 8 in. thick	800.00	SF	\$1.48	\$1,184.00

				<b>Total Cost</b>		
		Subtotal		(adjusted for		
Job Hours:	0.00	(unadjusted):	\$2,651.65	location):	\$2,330.80	

# **REVEGETATION WORK**

te: Fountain	n Pit	Permit Action:	TR-3 Update	Permit/Job	#: <u>M1982155</u>
PROJECT	IDENTIFIC	CATION			
Task #:	600	State: Colorado		Abbreviation:	None
Date:	9/28/2022	County: El Paso		Filename:	M155-600
Date.					

# **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
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	1.00	3.28	\$8.38
White Sweet Clover	0.50	2.98	\$2.06
Western Wheatgrass - Native	3.00	7.58	\$18.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Totals Seed Mix	8.00	36.28	\$72.42

#### Application

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

## **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Power mulcher (MEANS 32 91 13.16 0350)		\$141.57
	Total Mulch Application Cost/Acre	\$214.57

# NURSERY STOCK PLANTING

Job Hours: **344.00** 

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

	No. of Acres:	172	Cost /Acre:	\$1,460.14	
Estimate	ed Failure Rate:	25%	Cost /Acre*:	\$1,460.14	_
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING		_
Initial Job Cost:	\$251,144.08				
Reseeding Job Cost:	\$62,786.02				
Total Job Cost:	\$313.930				

# EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task descrip	tion: Mo	ob/demob (include	es AM-3 area)				
: Fountain	Pit	Permit	Action: TR-3	Update	Pe	ermit/Job#: <u>M1</u>	982155
PROJECT I	<b>IDENTIFICATI</b>	<u>ION</u>					
Task #:	700	State: Co	olorado		Abbrev	iation: None	
Date:	9/28/2022	· · · · · · · · · · · · · · · · · · ·	Paso			name: M155-	700
User:	TC1		1 450				/00
	101						
Age	ncy or organizatio	n name: DRMS					
EQUIPMEN	NT TRANSPOR	T RIG COST					
					Shift basi	at 1 mar day	
					Cost Data Source	e. <u>CRO Data</u>	1
7	Fruck Tractor Desc	cription GENE	RIC ON-HIGH	WAY TR	UCK TRACTOR	8 6X4 DIESEL	POWERED
-			lue on mon		P (2ND HALF, 2		row Little,
,	T				OSENECK, DRC		MENT
	Truck Trailer Desc	cription: G					PMENI
				RAILER	R (25T, 50T, ANI	) 1001)	
Cost Breakdov	wn·						
	ig Capacities	0-25 Tons	26-50 Tons	51	+ Tons		
Owne	rship Cost/Hour:	\$15.25	\$23.06	\$	537.58		
Oper	ating Cost/Hour:	\$25.26	\$30.83	\$	51.41		
	erator Cost/Hour:	\$27.71	\$27.71		527.71		
	elper Cost/Hour:	\$0.00	\$20.22		520.22		
	Unit Cost/Hour:	\$68.22	\$101.82		136.92		
10181	Unit Cost/Hour.	\$00.22	\$101.62	\$	130.92		
NON ROAL	DABLE EQUIP	<u>MENT:</u>					
Machine	Waight/	Owner shin	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
	Weight/	Owner ship	0		1	Cost/hr/ fleet	Cost/ fleet
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/ fleet		
	(TONS)				****		
Cat D9T - 9S		\$146.30	\$136.92	1	\$283.22	\$136.92	\$250.00
Drill/Broadca	st 25.00	\$6.25	\$68.22	1	\$74.47	\$68.22	\$250.00
Seeder with							
Tractor				1.			
Power Mulch		\$14.79	\$68.22	1	\$83.01	\$68.22	\$250.00
(Bowie LD-9	/						
Cat 730	25.19	\$97.13	\$68.22	3	\$496.05	\$204.66	\$750.00
CAT 14M	23.57	\$120.14	\$68.22	1	\$188.36	\$68.22	\$250.00
Cat D7R DS	34.57	\$92.78	\$101.82	1	\$194.60	\$101.82	\$250.00
Series II LGP							
CAT 980H	33.12	\$54.58	\$101.82	1	\$156.40	\$101.82	\$250.00
Water Tanker	, 15.00	\$37.19	\$68.22	1	\$105.41	\$68.22	\$250.00
5,000 Gal.						1	

Subtotals: **\$1,581.52 \$818.10** 

## **ROADABLE EQUIPMENT:**

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

\$2,500.00

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	COLORADO SPRINGS 15.00 50.00	miles mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$8,021.29	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$0.00	_

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.30	0.30
Return Time (Hours):	0.30	0.30
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	1.10	0.60

## JOB TIME AND COST

Total job time: **2.20** Hours

Total job cost: \$8,021

# BULLDOZER WORK

	Permit Action:	TR-3 Update	Permit/Job#	: <u>M198215</u>
ROJECT IDENTIF	ICATION			
			A11 - ' ('	NT
Task #: <u>A31</u> Date: <u>9/28/2022</u>	2 State: <u>Colorado</u> 2 County: El Paso			None M155-A31
User: TC1	County. El Paso		riteliame.	W155-A51
Agency or orga	nization name: DRMS			
OURLY EQUIPME	ENT COST			
	at D9T - 9SU	_		
Horsepower: 40		_		
×1	emi-Universal	_		
	shank ripper	_		
	per day	_		
Data Source: (C	CRG)	_		
ost Breakdown:				
		Utilization %		
Ownership Cost/Hour:		NA		
Operating Cost/Hour:		100		
Ripper own. Cost/Hour:		NA		
Ripper op. Cost/Hour:	\$8.85	100		
Operator Cost/Hour:	\$40.04	NA		
Swell factor: 1.1	722 80			
ATERIAL QUANT Initial Volume: 34, Swell factor: 1.1	722			
ATERIAL QUANT Initial Volume: 34, Swell factor: 1.1	722 80 <b>972</b> LCY lume: Division of Reclamatic	on, Mining & Safety		
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol	722 80 <b>972</b> LCY lume: Division of Reclamatic	on, Mining & Safety		
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swell	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook	on, Mining & Safety		
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol         Source of estimated swefactor:         OURLY PRODUCT	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook TION	on, Mining & Safety		
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swefactor:	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook TION	on, Mining & Safety		
ATERIAL QUANT         Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swo         Source of estimated swo       Source of estimated swo         Cource of estimated swo       Source of estimated swo         Source of estimate	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook <u>TION</u> 250 feet	on, Mining & Safety 		
ATERIAL QUANT Initial Volume: 34, Swell factor: 1.1 Loose volume: 40, cource of estimated vol cource of estimated swo actor: DURLY PRODUCT	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook <u>TION</u> 250 feet	on, Mining & Safety 		
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol         Source of estimated swafactor:         OURLY PRODUCT         Average push distance:	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook  IION 250 feet 546.0 LCY/hr			
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swell         Source of estimated swell       Source of estimated swell         Source of estimated vol       Source of estimated swell         Source of estimated swell       Source         Gurly PRODUCT       Source         Average push distance:       Unadjusted hourly         porduction:       Materials consistency d         Average push       Source	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook  IION 250 feet 546.0 LCY/hr			
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swelfactor:         OURLY PRODUCT         Average push distance:         Unadjusted hourly         production:         Materials consistency d         Average push         gradient:	722         80         972 LCY         lume:       Division of Reclamatic         cat Handbook         Image:       Division of Reclamatic         Cat Handbook         Image:       Division of Reclamatic         Cat Handbook         Image:       250 feet         546.0 LCY/hr         lescription:       Compacted fill or en         -15 %			
Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swell         Source of estimated swell       Source of estimated swell         Source of estimated vol       Source of estimated swell         Source of estimated swell       Source         Gurly PRODUCT       Source         Average push distance:       Unadjusted hourly         porduction:       Materials consistency d         Average push       Source	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook  TION 250 feet 546.0 LCY/hr lescription: Compacted fill or en			
Initial Volume:       34, Swell factor:         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swoffactor:         OURLY PRODUCT       Average push distance:         Unadjusted hourly       Source of estimated swoffactor:         Materials consistency d         Average push         gradient:         Average site altitude:	722 80 972 LCY lume: Division of Reclamatic ell Cat Handbook			
ATERIAL QUANT         Initial Volume:       34,         Swell factor:       1.1         Loose volume:       40,         Source of estimated vol       Source of estimated swo         Source of estimated swo       Source of estimated swo         Cource of estimated swo       Source         Source of estimated swo       Source         OURLY PRODUCT       Average push distance:         Jnadjusted hourly       Sourcduction:         Materials consistency d       Average push         Average push       Stency	722         80         972 LCY         lume:       Division of Reclamatic         cat Handbook         Image:       Division of Reclamatic         Cat Handbook         Image:       Division of Reclamatic         Cat Handbook         Image:       250 feet         546.0 LCY/hr         lescription:       Compacted fill or en         -15 %			

\_\_\_\_

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.568	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4568

Adjusted unit production:	249.41 LCY/hr
Adjusted fleet production:	<b>249.41</b> LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$1.418/LCY

Total job time:	164.28 Hours
Total job cost:	\$58,089

## BULLDOZER WORK

Fountain Pit	Permit Action:	TR-3 Update	Permit/Jo	b#: <u>M198215</u>
ROJECT IDENTIFI	CATION			
Task #: A32	State: Colorado		Abbreviation:	None
Date: 9/28/2022	County: El Paso		Filename:	M155-A32
User: TC1				
Agency or organ	nization name: DRMS			
OURLY EQUIPME	NT COST			
Basic Machine: Ca	t D9T - 9SU			
Horsepower: 40:	5	_		
Blade Type: Ser	mi-Universal	_		
Attachment: 3-s	shank ripper	_		
	ber day	=		
	RG)	_		
ost Breakdown:		=		
	I	Utilization %		
Ownership Cost/Hour:	\$146.30	NA		
Operating Cost/Hour:	\$140.50	100		
Ripper own.	\$17.01	NA		
Cost/Hour: Ripper op. Cost/Hour:	\$8.85	100		
Operator Cost/Hour:	\$8.83	NA		
	\$353.61 \$353.61			
Fotal unit Cost/Hour: Fotal Fleet Cost/Hour: ATERIAL QUANT Initial Volume: <u>5,85</u> Swell factor: <u>1.26</u>	\$353.61 <u>ITIES</u> 52 56			
Fotal Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26	<b>\$353.61</b> <u>ITIES</u> 52			
Fotal Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26	<b>\$353.61</b> <b>ITIES</b> 52 56 <b>07</b> LCY ume: Division of Reclamation	on, Mining & Safety		
Total Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       Source stimated swe	\$353.61 ITIES 52 56 57 LCY ume: Division of Reclamation Cat Handbook	on, Mining & Safety		
Fotal Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       Source of estimated swe         Source of estimated swe       Factor:         OURLY PRODUCT       Source	\$353.61 ITIES 52 56 07 LCY ume: Division of Reclamation Cat Handbook Cat Mandbook	on, Mining & Safety		
Fotal Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       Source of estimated swe         Factor:       1	\$353.61 ITIES 52 56 57 LCY ume: Division of Reclamation Cat Handbook	on, Mining & Safety		
Fotal Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       5         Source of estimated swe       5         factor:       0         OURLY PRODUCT       4         Average push distance:       0         Unadjusted hourly       1	\$353.61         ITIES         52         56         07 LCY         ume:       Division of Reclamation         cat Handbook         'ION         250 feet         546.0 LCY/hr			
Total Fleet Cost/Hour:         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       5         Source of estimated swe       5         factor:       0         OURLY PRODUCT       4         Average push distance:       0         Unadjusted hourly       5         oroduction:       4         Materials consistency de       4         Average push       5	\$353.61         ITIES         52         56         07 LCY         ume:       Division of Reclamation         211       Cat Handbook         YION         250 feet         546.0 LCY/hr			
Total Fleet Cost/Hour:         ATERIAL QUANT         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       Source of estimated swe         Source of estimated swe       Sactor:         OURLY PRODUCT       Average push distance:         Unadjusted hourly       Source of estimated swe         Source of estimated swe       Sactor:	\$353.61         ITIES         52         56         57 LCY         ume: Division of Reclamation         07 LCY         ume: Cat Handbook         Cat Handbook         Cat Handbook         Consolidated stockp         escription: Consolidated stockp			
Total Fleet Cost/Hour:         Initial Volume:       5,85         Swell factor:       1.26         Loose volume:       7,40         Source of estimated volu       5         Source of estimated swe       5         factor:       7         OURLY PRODUCT       4         Average push distance:       1         Unadjusted hourly       5         oroduction:       4         Materials consistency de       4         Average push       6         Average push       6	\$353.61         ITIES         52         56         57 LCY         ume: Division of Reclamatic         Cat Handbook         Cat Handbook         ION         250 feet         546.0 LCY/hr         escription: Consolidated stockp         -5 %			

\_\_\_\_

ob Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5677

Adjusted unit production:	309.96 LCY/hr
Adjusted fleet production:	<b>309.96</b> LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$1.141/LCY

Total job time:	23.90 Hours
Total job cost:	\$8,451

# BULLDOZER WORK

te: Fountain Pit	Permit Action:	TR-3 Update	Permit/Job	o#: M1982155
PROJECT IDENTIFI	CATION			
Task #: A33	State: Colorado		Abbreviation:	None
Date:         9/28/2022           User:         TC1	County: El Paso		Filename:	M155-A33
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	NT COST			
Basic Machine: Cat	t D9T - 9SU			
Horsepower: 405		-		
Blade Type: Ser	ni-Universal	=		
Attachment: 3-s	hank ripper	-		
Shift Basis: 1 p	er day	-		
Data Source: (CF	RG)	-		
Cost Breakdown:		<u>Utilization %</u>		
Ownership Cost/Hour:	\$146.30	NA		
Operating Cost/Hour:	\$140.50	100		
Ripper own. Cost/Hour:	\$17.01	NA		
Ripper op. Cost/Hour:	\$8.85	100		
Operator Cost/Hour:	\$40.04	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour:	\$353.61 <b>\$353.61</b>			
Total Fleet Cost/Hour: <u>MATERIAL QUANTI</u> Initial Volume: <u>1,95</u> Swell factor: <u>1.42</u>	\$353.61 ITIES 1 9			
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78	\$353.61 ITIES 1 9 7 LCY			
Total Fleet Cost/Hour: <u>MATERIAL QUANTI</u> Initial Volume: <u>1,95</u> Swell factor: <u>1.42</u>	\$353.61 ITIES 1 9 7 LCY Ime: Division of Reclamatic	n, Mining & Safety		
Total Fleet Cost/Hour:         MATERIAL QUANTI         Initial Volume:       1,95         Swell factor:       1.42         Loose volume:       2,78         Source of estimated volu       Source of estimated swell	\$353.61 ITIES 1 9 7 LCY ume: Division of Reclamatic 11 Cat Handbook	n, Mining & Safety		
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78 Source of estimated volu Source of estimated swelfactor:	\$353.61 ITIES 1 9 7 LCY ume: Division of Reclamatic 11 Cat Handbook	 n, Mining & Safety 		
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78 Source of estimated volu Source of estimated volu Source of estimated swell factor: HOURLY PRODUCT Average push distance: Unadjusted hourly	\$353.61         ITIES         1         9         77 LCY         ume:       Division of Reclamatic         11       Cat Handbook         ION         ION         250 feet         546.0 LCY/hr			
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78 Source of estimated volu Source of estimated volu Source of estimated swelf factor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push	\$353.61         ITIES         1         9         77 LCY         ume:       Division of Reclamatic         11       Cat Handbook         ION         ION         250 feet         546.0 LCY/hr			
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78 Source of estimated volu Source of estimated swelfactor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de	\$353.61         ITIES         1         9         77 LCY         Ime:       Division of Reclamatic         II       Cat Handbook         ION         ION         250 feet         546.0 LCY/hr         escription:         Consolidated stockpi			
Total Fleet Cost/Hour: MATERIAL QUANTI Initial Volume: 1,95 Swell factor: 1.42 Loose volume: 2,78 Source of estimated volu Source of estimated volu Source of estimated swelfactor: HOURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency de Average push gradient:	\$353.61         ITIES         1         9         77 LCY         Ime:       Division of Reclamatic         II       Cat Handbook         ION         ION         250 feet         546.0 LCY/hr         Consolidated stockpi         -5 %			

\_\_\_\_

ob Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7186

Adjusted unit production:	392.36 LCY/hr
Adjusted fleet production:	<b>392.36</b> LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$0.901/LCY

Total job time:	7.10 Hours
Total job cost:	\$2,512

## BULLDOZER WORK

Fountain Pit	Darmit Action	TR-3 Undata	Permit/Job	o#: M1982155
	Permit Action:	TK-5 Opuale		οπ. <u>IVI1962133</u>
ROJECT IDENTIFI	<u>CATION</u>			
Task #: A34	State: Colorado		Abbreviation:	None
Date: 9/28/2022	County: El Paso		Filename:	M155-A34
User: TC1				
Agency or organ	ization name: DRMS			
OURLY EQUIPMEN	NT COST			
Basic Machine: Cat	D9T - 9SU			
Horsepower: 405	;			
Blade Type: Sen	ni-Universal			
	hank ripper			
	er day			
Data Source: (CF	RG)			
ost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$146.30	NA		
Operating Cost/Hour:	\$141.41	100		
Ripper own. Cost/Hour:	\$17.01	NA		
Ripper op. Cost/Hour:	\$8.85	100		
Operator Cost/Hour:	\$40.04	NA		
Fotal unit Cost/Hour: Fotal Fleet Cost/Hour:	\$353.61 \$353.61			
	TIES			
ATERIAL QUANTI				
ATERIAL QUANTI Initial Volume: 24,24				
	00			
Initial Volume: 24,2 Swell factor: 1.26	00			
Initial Volume: 24,2 Swell factor: 1.26	00 6 <b>32</b> LCY me:Division of Reclamation	n, Mining & Safety		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu	00 6 <b>32</b> LCY ume: Division of Reclamation Il Cat Handbook	n, Mining & Safety		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swel factor: OURLY PRODUCT	00 6 32 LCY Ime: Division of Reclamation Il Cat Handbook	n, Mining & Safety		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell Cactor: OURLY PRODUCT Average push distance:	00 6 32 LCY ume: Division of Reclamation Il Cat Handbook ION 250 feet	n, Mining & Safety		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell factor: OURLY PRODUCT Average push distance: Unadjusted hourly	00 6 32 LCY Ime: Division of Reclamation Il Cat Handbook	1, Mining & Safety 		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell Cactor: OURLY PRODUCT Average push distance:	00 6 32 LCY ume: Division of Reclamation Il Cat Handbook ION 250 feet	ı, Mining & Safety 		
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell factor: OURLY PRODUCT Average push distance: Unadjusted hourly	00 6 32 LCY Ime: Division of Reclamation Il Cat Handbook ION 250 feet 546.0 LCY/hr			
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell Cactor: OURLY PRODUCT Average push distance: Unadjusted hourly production:	00 6 32 LCY me: Division of Reclamation Il Cat Handbook ION 250 feet 546.0 LCY/hr			
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swel factor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency dest	00 6 32 LCY me: Division of Reclamation I Cat Handbook ION 250 feet 546.0 LCY/hr scription: Consolidated stockpil			
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell Cactor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency dest Average push	00 6 32 LCY me: Division of Reclamation I Cat Handbook ION 250 feet 546.0 LCY/hr scription: Consolidated stockpil			
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell actor: OURLY PRODUCT Average push distance: Unadjusted hourly production: Materials consistency dest Average push gradient:	00         6         32 LCY         ume:       Division of Reclamation         II       Cat Handbook         II       250 feet         546.0 LCY/hr         scription:       Consolidated stockpil         0 %			
Initial Volume: 24,2 Swell factor: 1.26 Loose volume: 30,6 Source of estimated volu Source of estimated swell actor: OURLY PRODUCT Average push distance: Jnadjusted hourly broduction: Materials consistency des Average push gradient: Average site altitude:	00         6         32 LCY         ume:       Division of Reclamation         II       Cat Handbook         ION         250 feet         546.0 LCY/hr         scription:       Consolidated stockpil         0 %         5,342 feet			

\_\_\_\_

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.852	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4667

Adjusted unit production:	254.82 LCY/hr
Adjusted fleet production:	254.82 LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$1.388/LCY

Total job time:	<b>120.21</b> Hours
Total job cost:	\$42,508

# BULLDOZER WORK

Task description:	Apply 4" of topsoil over 15			
Fountain Pit	Permit Action:	TR-3 Update	Permit/Job	o#: <u>M1982155</u>
ROJECT IDENTIF	FICATION			
Task #: A35 Date: 9/28/2022 User: TC1	2 State: Colorado 2 County: El Paso		Abbreviation: Filename:	None M155-A35
Agency or orga	anization name: DRMS			
IOURLY EQUIPMI	ENT COST			
Basic Machine: C	Cat D9T - 9SU			
	05			
Blade Type: S	emi-Universal			
Attachment: 3	-shank ripper			
Shift Basis: 1	per day			
Data Source: (0	CRG)			
ost Breakdown:				
ost Divardo will.		Utilization %		
Ownership Cost/Hour	: \$146.30	NA		
Operating Cost/Hour		100		
Ripper own				
Cost/Hour		NA		
Ripper op. Cost/Hour	: \$8.85	100		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour:	\$353.61 <b>\$353.61</b>	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>IATERIAL QUAN</u> Initial Volume: 8,0	\$353.61 \$353.61 FITIES 067	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>IATERIAL QUAN</u> Initial Volume: <u>8,0</u> Swell factor: <u>1.4</u>	\$353.61 \$353.61 FITIES	NA		
Total unit Cost/Hour: Total Fleet Cost/Hour: <u>IATERIAL QUAN</u> Initial Volume: <u>8,0</u> Swell factor: <u>1.4</u>	\$353.61 \$353.61 <b>FITIES</b> 067 429 <b>,525</b> LCY blume: Division of Reclamat			
Total unit Cost/Hour: Total Fleet Cost/Hour: IATERIAL QUAN Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated sw	\$353.61 <b>\$353.61</b> <b>FITIES</b> 067 429 <b>,525</b> LCY blume: Division of Reclamat Vell Cat Handbook			
Total unit Cost/Hour: Total Fleet Cost/Hour: IATERIAL QUAN Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated sw factor: IOURLY PRODUC	\$353.61 \$353.61 <b>FITIES</b> 067 429 <b>,525</b> LCY 0lume: Division of Reclamat Cat Handbook <b>TION</b>			
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance Unadjusted hourly	\$353.61 \$353.61 <b>FITIES</b> 067 429 <b>,525</b> LCY 0lume: Division of Reclamat Cat Handbook <b>TION</b>			
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance	\$353.61 \$353.61 <b>FITIES</b> 067 429 <b>,525</b> LCY blume: Division of Reclamat Cat Handbook <b>TION</b> : 250 feet			
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: <u>8,0</u> Swell factor: <u>1.4</u> Loose volume: <u>11</u> Source of estimated vo Source of estimated sw factor: <b>IOURLY PRODUC</b> Average push distance Unadjusted hourly production:	\$353.61         \$353.61         FITIES         067         429         ,525 LCY         olume:       Division of Reclamat         cat Handbook         TION         :       250 feet         546.0 LCY/hr	ion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: <u>8,0</u> Swell factor: <u>1.4</u> Loose volume: <u>11</u> Source of estimated vo Source of estimated sw factor: <b>IOURLY PRODUC</b> Average push distance Unadjusted hourly production:	\$353.61 \$353.61 <b>FITIES</b> 067 429 <b>,525</b> LCY blume: Division of Reclamat Cat Handbook <b>TION</b> : 250 feet	ion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance Unadjusted hourly production: Materials consistency of Average push	\$353.61         \$353.61         FITIES         067         429         ,525 LCY         olume:       Division of Reclamat         cat Handbook         TION         :       250 feet         546.0 LCY/hr	ion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance Unadjusted hourly production: Materials consistency of Average push gradient:	\$353.61         \$353.61 <b>FITIES</b> 067         429         ,525 LCY         olume:       Division of Reclamat         cat Handbook         TION         :       250 feet         546.0 LCY/hr         description:       Consolidated stock         -5 %	ion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance Unadjusted hourly production: Materials consistency of Average push	\$353.61         \$353.61         FITIES         067         429         ,525 LCY         olume:       Division of Reclamat         cat Handbook         TION         :       250 feet         546.0 LCY/hr         description:       Consolidated stock	ion, Mining & Safety		
Total unit Cost/Hour: Total Fleet Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 8,0 Swell factor: 1.4 Loose volume: 11 Source of estimated vo Source of estimated vo Source of estimated sw factor: IOURLY PRODUC Average push distance Unadjusted hourly production: Materials consistency of Average push gradient:	\$353.61         \$353.61 <b>FITIES</b> 067         429         ,525 LCY         olume:       Division of Reclamat         cat Handbook         TION         :       250 feet         546.0 LCY/hr         description:       Consolidated stock         -5 %	ion, Mining & Safety		

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

	Net correction:	0.8384
Adjusted unit production:	4:	57.77 LCY/hr
Adjusted fleet production:	4	57.77 LCY/hr

Fleet size:	1 Dozer(s)
Unit cost:	\$0.772/LCY

Total job time:	25.18 Hours
Total job cost:	\$8,902

# **REVEGETATION WORK**

Task descrij	ption:	Seed and Mulch AM-3 Area			
ite: Fountain	Pit	Permit Action:	TR-3 Update	Permit/Jol	o#: <u>M1982155</u>
<u>PROJECT</u> Task #:	IDENTIFIC A36			Abbreviation:	None
Task #: Date:	A30 9/28/2022	State: <u>Colorado</u> County: El Paso		Abbreviation: Filename:	M155-A36
User:	TC1				

# **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
Chisel plowing {DMG}	\$98.43
Total Tilling Cost/Acre	\$98.43

# **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	0.50	8.16	\$6.86
Little Bluestem - Native	1.00	5.97	\$13.57
Sideoats Grama - Vaughn	1.00	3.28	\$8.38
White Sweet Clover	0.50	2.98	\$2.06
Western Wheatgrass - Native	3.00	7.58	\$18.00
Needlegrass, Green - Lodorm	2.00	8.31	\$23.55
Totals Seed Mix	8.00	36.28	\$72.42

#### Application

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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$421.36	\$842.72
Total Mulch Materials Cost/Acre				\$842.72

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$73.00
Power mulcher (MEANS 32 91 13.16 0350)		\$141.57
	Total Mulch Application Cost/Acre	\$214.57

# NURSERY STOCK PLANTING

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

## JOB TIME AND COST

	No. of Acres:	18.6	Cost /Acre:	\$1,460.14
Estimated Failure Rate:		25%	Cost /Acre*:	\$1,460.14
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING	
Initial Job Cost:	\$27,158.60			
Reseeding Job Cost:	/			
Total Job Cost:	\$33.948			

 Total Job Cost:
 \$33,948

 Job Hours:
 42.00