

COST SUMMARY WORK

Task description: _____

Site: Garrett Pit

Permit Action: AM-01

Permit/Job#: M1978271

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 9/12/2018

County: Conejos

Filename: M271-000

User: LJW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Highwall Reduction from 0.5H:1V to 3H:1V	DOZER	1	14.52	\$3,806.00
002	Grade & Rip Pit Floor, prepare for topsoil replacement	DOZER	1	97.54	\$25,940.00
003	Topsoil Replacement across 60 Ac Distrubed area	DOZER	1	17.22	\$4,478.00
004	Reveg 60 Acres Disturbed lands	REVEGE	1	24.00	\$104,894.00
005	Haul reclamation equipment to and from job site	MOBILIZE	1	2.20	\$2,200.00
<u>SUBTOTALS:</u>				155.48	\$141,318

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$2,854.62

Performance bond: 1.05

Total = \$1,483.84

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$14,131.80

TOTAL O & P = \$18,470.26

CONTRACT AMOUNT (direct + O & P) = \$159,788.26

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$7,989.41

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$26,959.67

TOTAL BOND AMOUNT (direct + indirect) = \$168,277.67

BULLDOZER WORKTask description: Highwall Reduction from 0.5H:1V to 3H:1VSite: Garrett PitPermit Action: AM-01Permit/Job#: M1978271**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 9/12/2018County: ConejosFilename: M271-001User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$110.70	NA
Operating Cost/Hour:	\$95.46	100
Ripper own. Cost/Hour:	\$12.36	NA
Ripper op. Cost/Hour:	\$1.97	25
Operator Cost/Hour:	\$41.52	NA
Total unit Cost/Hour:	\$262.02	
Total Fleet Cost/Hour:	\$262.02	

MATERIAL QUANTITIESInitial Volume: 14,000Swell factor: 1.000Loose volume: 14,000 LCYSource of estimated volume: See attached drawing, "Highwall Reduction..."Source of estimated swell
factor: NA**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly
production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push
gradient: -15 %Average site altitude: 7,750 feetMaterial weight: 3,300 lbs/LCYWeight description: Decomposed rock - 75% Rock, 25% Earth**Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(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:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4567

Adjusted unit
production: 963.87 LCY/hr



Adjusted fleet
production: 963.87 LCY/hr

JOB TIME AND COST

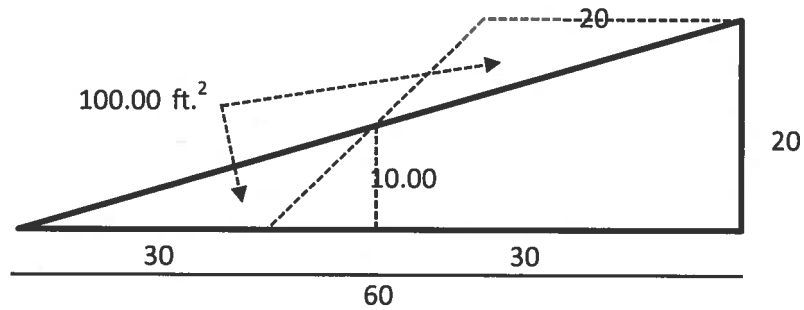
Fleet size: 1 Dozer(s)
Unit cost: \$0.272/LCY

Total job time: 14.52 Hours
Total job cost: \$3,806

Highwall reduction - cut and fill

Highwall Height (ft.)	20	
Length of Highwall (lft.)	300	
 Initial Slope	1	H:1V
 Desired Slope	3	H:1V
Volume of material to be moved (ft. ³)	30,000	
Volume of material to be moved (yd. ³)	1,111	

All dimensions measured in feet
Drawing not to scale



BULLDOZER WORKTask description: **Grade & Rip Pit Floor, prepare for topsoil replacement**Site: **Garrett Pit**Permit Action: **AM-01**Permit/Job#: **M1978271****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **9/12/2018**County: **Conejos**Filename: **M271-002**User: **LJW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D9T - 9SU**Horsepower: **405**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$110.70	NA
Operating Cost/Hour:	\$95.46	100
Ripper own. Cost/Hour:	\$12.36	NA
Ripper op. Cost/Hour:	\$5.91	75
Operator Cost/Hour:	\$41.52	NA
Total unit Cost/Hour:	\$265.95	
Total Fleet Cost/Hour:	\$265.95	

MATERIAL QUANTITIESInitial Volume: **46,141**Swell factor: **1.000**Loose volume: **46,141 LCY**Source of estimated volume: **(28.6ac)(43560sf/ac)(1'D) / 27 = 46,141 cy**Source of estimated swell
factor: **NA****HOURLY PRODUCTION**Average push distance: **75 feet**Unadjusted hourly
production: **1,514.3 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push
gradient: **0 %**Average site altitude: **7,750 feet**Material weight: **3,300 lbs/LCY**Weight description: **Decomposed rock - 75% Rock, 25% Earth****Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3124

Adjusted unit
production: 473.07 LCY/hr

Adjusted fleet
production: 473.07 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.562/LCY

Total job time: 97.54 Hours
Total job cost: \$25,940

BULLDOZER WORKTask description: Topsoil Replacement across 60 Ac Distrubed areaSite: Garrett PitPermit Action: AM-01Permit/Job#: M1978271**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 9/12/2018County: ConejosFilename: M271-003User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$110.70	NA
Operating Cost/Hour:	\$95.46	100
Ripper own. Cost/Hour:	\$12.36	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.52	NA
Total unit Cost/Hour:	\$260.05	
Total Fleet Cost/Hour:	\$260.05	

MATERIAL QUANTITIESInitial Volume: 20,166Swell factor: 1.000Loose volume: 20,166 LCYSource of estimated volume: 60 Ac, 2.5" depth = 20,166 CYSource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly
production: 1,514.3 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push
gradient: 0 %Average site altitude: 7,730 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor****Source**

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

Net correction: 0.7734

Adjusted unit
production: 1,171.16 LCY/hr

Adjusted fleet
production: 1171.16 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.222/LCY

Total job time: 17.22 Hours

Total job cost: \$4,478

REVEGETATION WORKTask description: Reveg 60 Acres Disturbed landsSite: Garrett PitPermit Action: AM-01Permit/Job#: M1978271**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 9/12/2018County: ConejosFilename: M271-004User: LJWAgency or organization name: DRMS**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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	1.50	4.86	\$10.50
Bottlebrush Squirreltail	0.25	1.10	\$6.02
Burnett, Small (or Little) - Delar	1.00	1.26	\$2.56
Galleta	1.50	5.48	\$37.94
Rabbitbrush, Rubber	0.25	3.72	\$16.46
Daisy, Goldenglow	0.50	2.72	\$122.88
Saltbush, Four Wing	0.25	0.34	\$3.20
Globemallow, Scarlet (or copper)	0.25	2.83	\$34.69
Saltbush, Shadscale	0.25	0.37	\$2.56
Winter Fat	0.25	0.64	\$5.25

Sulphur Flower (or Buckwheat)	1.00	2.07	\$132.10
Totals Seed Mix	7.00	25.39	\$374.15

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost / Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$576.00

Application

Description	Cost / Acre
Crimping, with tractor {DMG survey data}	\$68.78
Weed spray, truck, non-aquatic area, nox. [DMG]	\$73.22
Total Mulch Application Cost/Acre	\$142.00

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:	60	Cost / Acre:	\$1,430.44
Estimated Failure Rate:	24%	Cost / Acre*:	\$1,324.15
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$85,826.40		
Reseeding Job Cost:	\$19,067.76		
Total Job Cost:	\$104,894		
Job Hours:	24.00		

EQUIPMENT MOBILIZATION/DEMobilIZATIONTask description: Haul reclamation equipment to and from job siteSite: Garrett PitPermit Action: AM-01Permit/Job#: M1978271**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 9/12/2018County: ConejosFilename: M271-005User: LJWAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	66.13	\$123.06	\$125.45	1	\$248.51	\$125.45	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$500.00

Subtotals: **\$352.72** **\$214.12** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$12.23	1	\$12.23	\$12.23

Subtotals: **\$12.23** **\$12.23**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	ALAMOSA	
Total one-way travel distance:	15.00	miles
Average Travel Speed:	50.00	mph

Total Non-Roadable Mob/Demob Cost *	\$2,192.82
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$7.34
** one round trip, no haul rig:	

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:	\$2,200	