



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

December 7, 2015

Mr. John P. Ary
Fremont Paving & Redi-Mix, Inc.
P.O. Box 841
Canon City, CO 81215

**Re: McKenzie Pit, Permit No. M-1980-224;
Technical Revision Approval, Revision No. TR-1**

Dear Mr. Ary:

On December 7, 2015 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on November 24, 2015, addressing the following:

Exposed high walls at the time of termination would be sloped 3H:1V.

The terms of the Technical Revision No. 1 approved by the Division are hereby incorporated into Permit No. M-1980-224. All other conditions and requirements of Permit No. M-1980-224 remain in full force and effect.

The performance bond currently held by the Division is \$58,241.00. The Division has reviewed this change for impacts to the financial warranty and has determined that the revised reclamation liability is \$10,460.00. A revised cost summary is enclosed. If you wish to reduce the required bond held by the Division, you must request a surety reduction. A surety reduction request form is enclosed for your convenience.

If you have any questions, please contact me at (303)866-3567 x8169.

Sincerely,

Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosures

ec: Wally Erickson, DRMS
DRMS file
Angela Bellantoni Ph.D., EAI



COST SUMMARY WORK

Task description: Cost Summary

Site: McKenzie Pit

Permit Action: TR-01

Permit/Job#: M1980224

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 12/7/2015

County: Fremont

Filename: M224-000

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
010	Grade 2 acres to 3:1 slope	DOZER	1	16.78	\$3,737.00
020	Reveg 2 acres	REVEGE	1	2.00	\$2,410.00
030	Mob / Demob	MOBILIZE	1	1.26	\$1,997.00
<u>SUBTOTALS:</u>				20.04	\$8,144

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$164.51

Performance bond: 1.05

Total = \$85.51

Job superintendent: 10.02

Total = \$753.10

Profit: 10.00

Total = \$814.40

TOTAL O & P = \$1,817.52

CONTRACT AMOUNT (direct + O & P) = \$9,961.52

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$498.08

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$2,315.60

TOTAL BOND AMOUNT (direct + indirect) = \$10,459.60

Figure 1A. Existing Highwalls to be Reclaimed

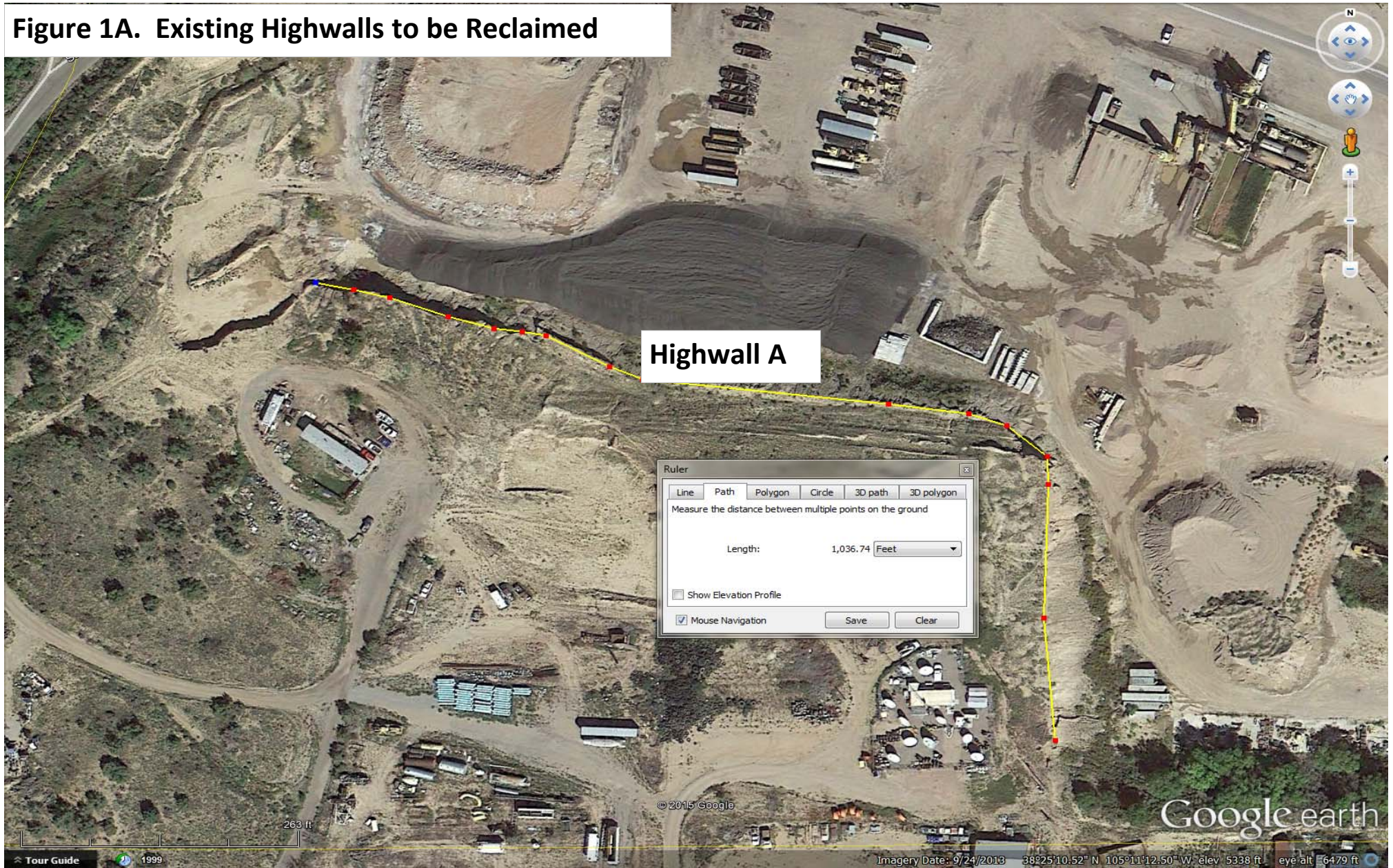


Figure 1B. Existing Highwalls to be Reclaimed



Figure 1C. Existing Highwalls to be Reclaimed



Figure 1D. Existing Highwalls to be Reclaimed

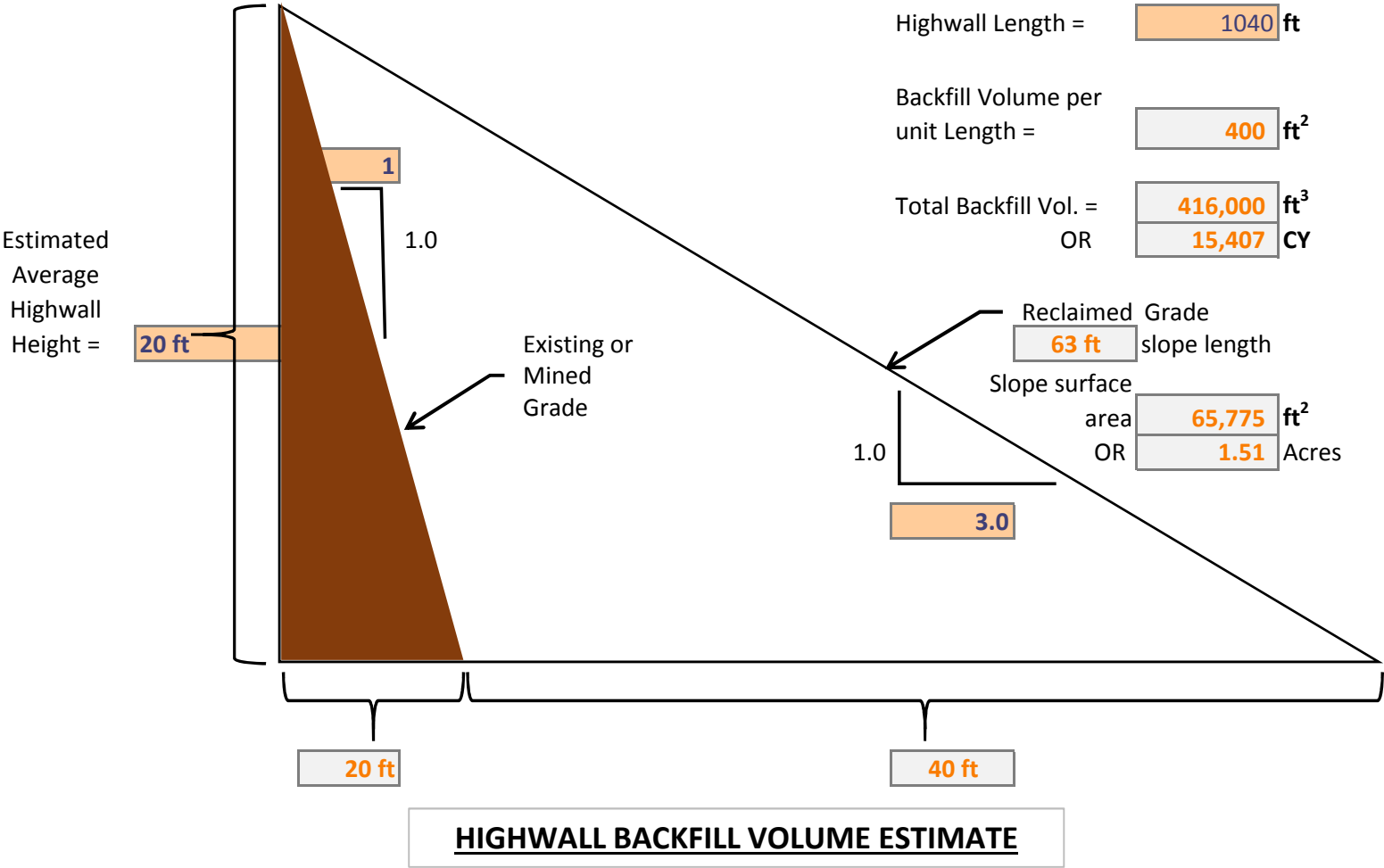


Task # 003.A Highwall Backfill Volume Estimate

PROJECT: McKenzie Pit
PERMIT No.: M-1980-224
HIGHWALL LOCATION: Highwall A

LEGEND

Input
Result



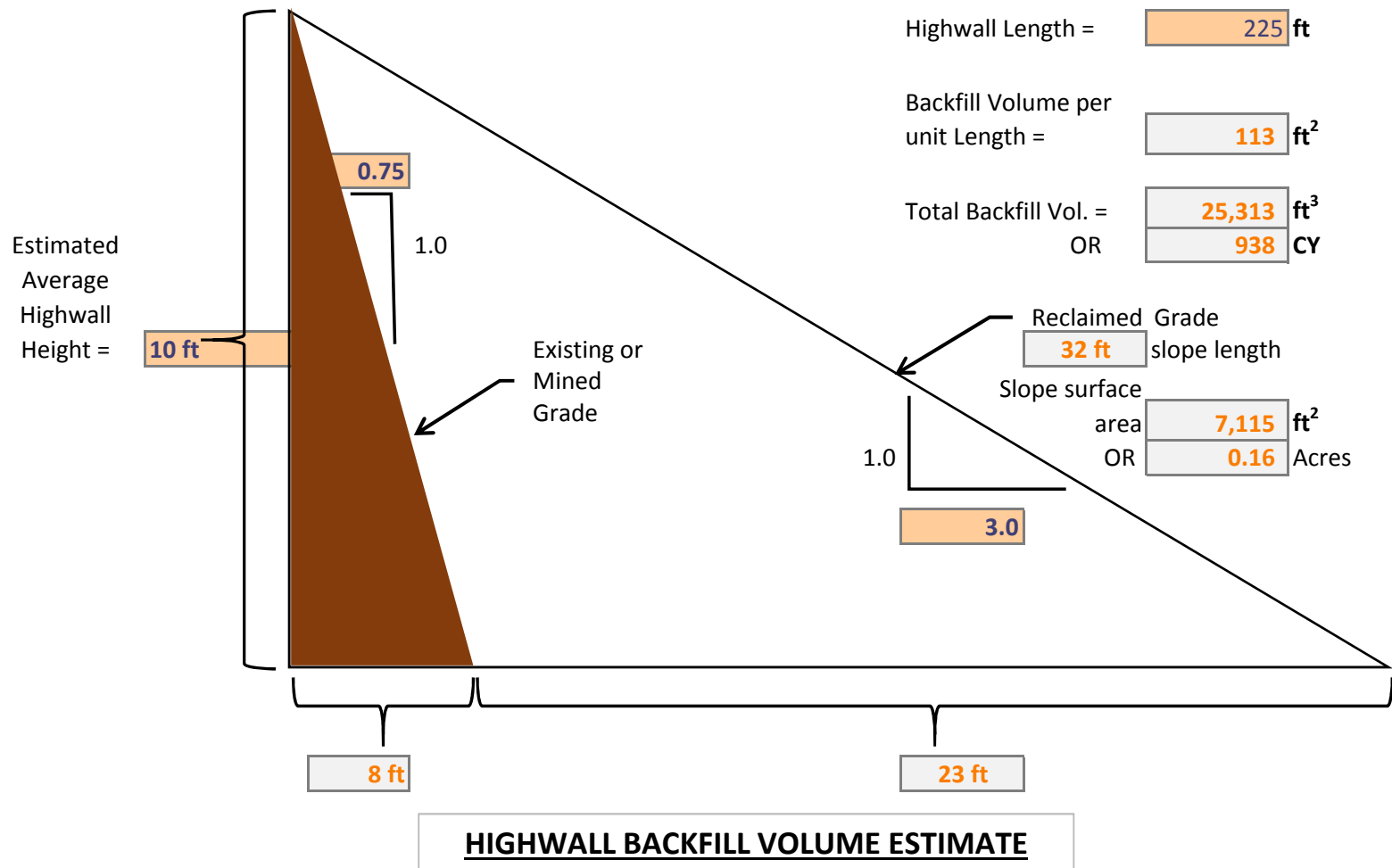
Task # 003.B Highwall Backfill Volume Estimate

PROJECT: McKenzie Pit
PERMIT No.: M-1980-224
HIGHWALL LOCATION: Highwall B

LEGEND

Input

Result

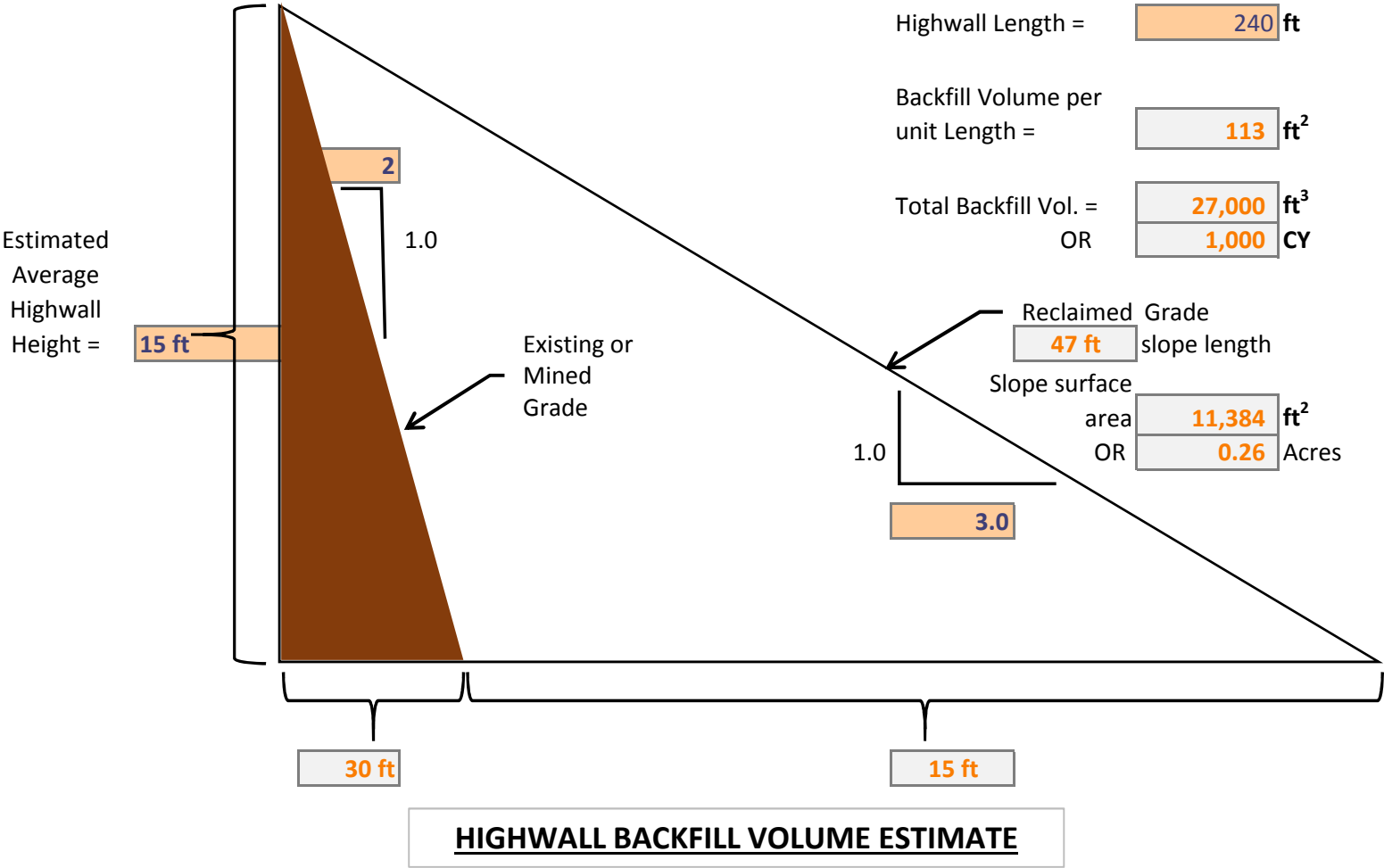


Task # 003.C Highwall Backfill Volume Estimate

PROJECT: McKenzie Pit
PERMIT No.: M-1980-224
HIGHWALL LOCATION: Highwall C

LEGEND

Input
Result



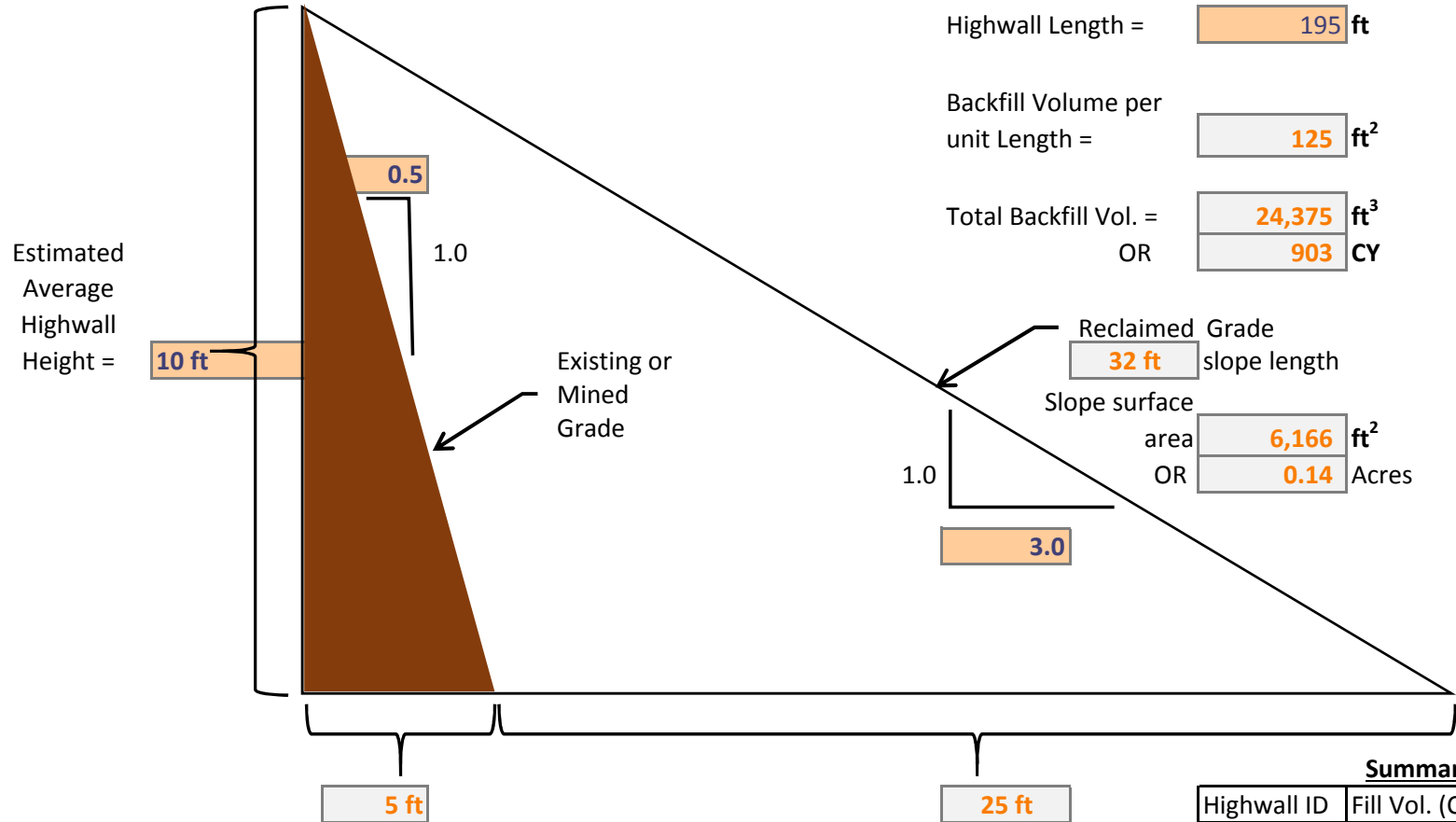
Task # 003.D Highwall Backfill Volume Estimate

PROJECT: McKenzie Pit
 PERMIT No.: M-1980-224
 HIGHWALL LOCATION: Highwall D

LEGEND

Input

Result



HIGHWALL BACKFILL VOLUME ESTIMATE

Summary

Highwall ID	Fill Vol. (CY)	Area (ac)
A	15,407	1.51
B	938	0.16
C	1,000	0.26
D	903	0.14
Total:	18,248	2.08

BULLDOZER WORKTask description: **Grade 2 acres to 3:1 slope**Site: **McKenzie Pit**Permit Action: **TR-01**Permit/Job#: **M1980224****PROJECT IDENTIFICATION**Task #: **010**State: **Colorado**Abbreviation: **None**Date: **12/7/2015**County: **Fremont**Filename: **M224-010**User: **TC1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper op. Cost/Hour:	\$7.46	100
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: **\$222.73**Total Fleet Cost/Hour: **\$222.73****MATERIAL QUANTITIES**Initial Volume: **18,246**Swell factor: **1.000**Loose volume: **18,246 LCY**Source of estimated volume: **9/24/13 Google Earth/TR-01 - Adjusted push dist. & slope**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,400.0 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-30 %**Average site altitude: **4,700 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor**

		<u>Source</u>
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:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7767

Adjusted unit production: 1,087.38 LCY/hr

Adjusted fleet production: **1087.38** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.205/LCY

Total job time: **16.78** Hours

Total job cost: **\$3,737**

REVEGETATION WORKTask description: Reveg 2 acresSite: McKenzie PitPermit Action: TR-01Permit/Job#: M1980224**PROJECT IDENTIFICATION**Task #: 020State: ColoradoAbbreviation: NoneDate: 12/7/2015County: FremontFilename: M224-020User: TC1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Superphosphate, 0-20-0 with 12% S	2.00	pound	\$0.23	\$0.46
			Total Fertilizer Materials Cost/Acre	\$0.46

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
Total Fertilizer Application Cost/Acre	\$52.71

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.58
Total Tilling Cost/Acre	\$88.58

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Native	1.50	4.48	\$14.72
Blue Grama - Lovington	0.50	8.16	\$5.43
Western Wheatgrass - Arriba	4.00	10.10	\$14.72
Totals Seed Mix	6.00	22.74	\$34.87

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20

Total Seed Application Cost/Acre	\$88.20
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MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Total Mulch Application Cost/Acre	\$65.89

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: 2 Cost /Acre: \$860.71
 Estimated Failure Rate: 40% Cost /Acre*: \$860.71
 *Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MU
LCHING

Initial Job Cost: **\$1,721.42**
 Reseeding Job Cost: **\$688.57**
 Total Job Cost: **\$2,410**
 Job Hours: **2.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob / Demob**Site: **McKenzie Pit**Permit Action: **TR-01**Permit/Job#: **M1980224****PROJECT IDENTIFICATION**Task #: **030**State: **Colorado**Abbreviation: **None**Date: **12/7/2015**County: **Fremont**Filename: **M224-030**User: **TC1**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck 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 D8T - 8SU	47.71	\$62.67	\$117.55	1	\$180.22	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Power Mulcher (Reinco M90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$404.18** **\$294.89** **\$750.00****ROADABLE EQUIPMENT:**

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

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>CAÑON CITY</u>	
Total one-way travel distance:	<u>2.00</u>	miles
Average Travel Speed:	<u>30.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,997.39</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.07</u>	<u>0.07</u>
Return Time (Hours):	<u>0.07</u>	<u>0.07</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>0.63</u>	<u>0.13</u>

JOB TIME AND COST

Total job time: 1.27 Hours

Total job cost: \$1,997