

November 18, 2024

Jason McGraw General Shale Brick, Inc. 1845 W. Dartmouth Ave. Denver, CO 80110-1308

Re: North Chieftain - File No. M-1978-014

General Shale Brick, Inc. Surety Increase (SI-1) M1978014 North Chieftain Surety Increase

Willy 70014 North Chieftani Surety increase

Dear Jason McGraw:

On November 18, 2024 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$185,236.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$111,805.00.

During the review of the North Chieftain Mine, it has come to the Division's attention that the reclamation liability amount has not been updated since 2008. Because the reclamation bond has not been adjusted in some time, the Division has updated the reclamation cost estimate for the North Chieftain Mine to ensure the financial warranty reflects the actual current cost of fulfilling the requirements of the reclamation plan per Rule 4.2.1. The financial warranty increase accounts for the increased cost in the event the state is to perform earthwork and revegetation. The operator has 60 days to post the additional financial warranty from the date of this written notice from the Division per Rule 4.2.1(2).

On November 18, 2024, the Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase, within 60 days.

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567, or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit if the amount of any increased Financial Warranty has not been provided by January 17,

Physical Address: 1313 Sherman Street, Room 215, Denver, CO 80203 P 303.866.3567 F 303.832.8106

Mailing Address: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 https://drms.colorado.gov

Jared S. Polis, Governor | Dan Gibbs, Executive Director | Michael A. Cunningham, Director



2025.

| Bond Held: | \$73,431.00 |
|-----------------------------|--------------|
| Prior Liability: | \$73,431.00 |
| Change in Liability: | \$111,805.00 |
| Revised Liability: | \$185,236.00 |
| Prior Permit Acreage: | 126.40 |
| Change in Permit Acreage: | 0.00 |
| Revised Permit Acreage: | 126.40 |
| Prior Affected Acreage: | 126.40 |
| Change in Affected Acreage: | 0.00 |
| Revised Affected Acreage: | 126.40 |

If you have any questions, please contact me by telephone at (720) 793-2988, or by email at Ben.hammar@state.co.us.

Sincerely,

Ben E. Hammar

Environmental Protection Specialist

cc: Jason McGraw

M-GR-04

COST SUMMARY WORK

| | North Chieftain | Permit Action: | 2024 Bond Ca | lculation | Permit/Job | #: <u>M1978014</u> |
|-----|--|---|-------------------------------|----------------------|--|---|
| PR | OJECT IDENTIFICATION | <u>ON</u> | | | | |
| | Task #: 010 | State: Colorado | | | Abbreviation: | None |
| | Date: 9/18/2024 | County: Jefferson | | | Filename: | M014-010 |
| | User: BEH | | | | _ | |
| | Agency or organization | name: DRMS | | | | |
| | Agency of organization | name. DRWS | | | | |
| TΑ | SK LIST (DIRECT COS | <u>ΓS)</u> | | | | |
| | | | Form | Fleet | Task | |
| k | Description | | Used | Size | Hours | Cost |
| | Regrade | | TRUCK1 | 1 | 44.99 | \$38,295 |
| | Topsoil | | TRUCK1 | 1 | 88.57 | \$75,394 |
| | Reveg | | REVEGE | $\frac{1}{1}$ | 39.00 | \$23,533 |
| | Equipment Mobilization | | MOBILIZE | 1 | 1.57 | \$3,176 |
| [N] | DIRECT COSTS | | | | | |
| | DIRECT COSTS ERHEAD AND PROFIT: | | | | | |
| | ERHEAD AND PROFIT: | 2.02 | | | Tatal #2 | 926 |
| | ERHEAD AND PROFIT: Liability insurance: | 2.02 | | | | ,836 |
| | ERHEAD AND PROFIT: Liability insurance: Performance bond: | 1.05 | | | Total = | ,474 |
| | ERHEAD AND PROFIT: Liability insurance: | | | | Total = | ,474 ,872 |
| | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: | 1.05 74.07 | | TOTAI | Total = | ,474 |
| | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: | 1.05 74.07 10.00 | RACT AMOUNT | | Total = | ,474 ,872 4,040 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: | 1.05 74.07 10.00 CONTI | | | Total = | ,474 ,872 4,040 4,222 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PRO | 1.05 74.07 10.00 CONTI | | | Total = \$1 Total = \$5 Total = \$1 O & P = \$2 O & P) = \$1 | ,474 ,872 4,040 4,222 64,620 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PROFINANCIAL STATE OF THE PROFINANCIAL WARRANTY PROCESSION AND PROFINANCIAL WARRANTY PROFINANCIAL WARR | 1.05 74.07 10.00 CONTI | | | $ \begin{array}{r} \text{Total} = & \$1 \\ \text{Total} = & \$5 \\ \text{Total} = & \$1 \\ \text{C O & P} = & \$2 \\ \text{O & P} = & \$1 \\ \text{Total} = & \$5 \\ \end{array} $ | ,474 ,872 4,040 4,222 64,620 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PRO | 1.05 74.07 10.00 CONTI | \$500 7.22 | | Total = \$1 Total = \$5 Total = \$1 O & P = \$2 O & P) = \$1 Total = \$5 Total = \$5 Total = \$5 | ,474 ,872 4,040 4,222 64,620 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PROFINANCIAL WARTEN WARTEN WARTEN WARTEN WORK AND COMMENT OF THE PROFINANCIAL WARTEN WARTE | 1.05 74.07 10.00 CONTI | \$500 7.22 | | Total = \$1 Total = \$5 Total = \$1 O & P = \$2 O & P) = \$1 Total = \$5 Total = \$5 Total = \$5 | ,474 ,872 4,040 4,222 64,620 00 1,886 ,231 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PROFINANCIAL WARTEN WARTEN WARTEN WARTEN WORK AND COMMENT OF THE PROFINANCIAL WARTEN WARTE | 1.05 74.07 10.00 CONTI | \$500 7.22 5.00 0.00 | Γ (direct + | Total = \$1 Total = \$5 Total = \$1 O & P = \$2 O & P) = \$1 Total = \$5 Total = \$5 Total = \$1 \$8 | ,474 ,872 4,040 4,222 64,620 00 1,886 ,231 |
| OV | ERHEAD AND PROFIT: Liability insurance: Performance bond: Job superintendent: Profit: GAL - ENGINEERING - PROFINANCIAL WARTEN WARTEN WARTEN WARTEN WORK AND COMMENT OF THE PROFINANCIAL WARTEN WARTE | 1.05 74.07 10.00 CONTINUET MANAGEMENT (In a contract/bid preparation: a tand/or administration: CONTINGENCY: | \$500 7.22 5.00 0.00 | Γ (direct + NDIRECT | Total = \$1. Total = \$5. Total = \$1. C O & P = \$2. O & P) = \$1. Total = \$5. Total = \$5. Total = \$5. Total = \$1. \$8. Total = \$0. T COST = \$4. | ,474 ,872 4,040 4,222 64,620 00 1,886 ,231 |

TRUCK/LOADER TEAM WORK

| Ownership cost/hour: \$108.67 \$36.61 NA \$173.32 NA NA Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA | Task description: Site: North Chieftain | Regrade | | on:2024 Bond (| Calculation_ | Permit/Job#: M | I1978014 |
|---|---|------------------------|-----------------|------------------|---------------|----------------|--------------|
| Date: 9/19/2024 County: Jefferson Filename: M014-011 | PROJECT IDENT | <u> </u> | | | | | |
| Agency or organization name: DRMS | Task #: 011 | | State: Colora | ido | Ab | breviation: No | one |
| Agency or organization name: DRMS | |)24 | County: Jeffers | on | | Filename: Mo | 014-011 |
| Equipment Description | User: BEH | | | | | | |
| Equipment Description Truck Loader Team -Truck: Cat 730 CAT 950H | Agency or o | organization nan | ne: DRMS | | | | |
| Truck Loader Team -Truck: Cat 730 CAT 950H Support Equipment -Load Area: NA Cat D8T - 8SU NA NA NA NA NA NA NA | HOURLY EQUIP | MENT COST | <u>r</u> | | Shift bas | is: 1 per day | |
| CAT 950H Support Equipment -Load Area: NA Cat D8T - 8SU | | | I | Equipment Descri | ption | | |
| Support Equipment - Load Area: | Tr | uck Loader Tea | | | | | |
| Cost Breakdown: Truck/Loader Team Support Equipment Maintenance Equipment | | | | Г 950Н | | | |
| Road Maintenance | Suppo | | | DOT OCIT | | | |
| Cost Breakdown: | Road Mai | | | D61 - 65U | | | |
| Wutilization-machine: 100 100 NA 100 NA NA Ownership cost/hour: \$108.67 \$36.61 NA \$173.32 NA NA Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Touc Ivia | | | | | | |
| Wutilization-machine: 100 100 NA 100 NA NA Ownership cost/hour: \$108.67 \$36.61 NA \$173.32 NA NA Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | | | 1 | | | | |
| %Utilization-machine: 100 100 NA 100 NA NA Ownership cost/hour: \$108.67 \$36.61 NA \$173.32 NA NA Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Namber of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Cost Breakdown: | | | | | | |
| Ownership cost/hour: \$108.67 \$36.61 NA \$173.32 NA NA Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| Operating cost/hour: \$66.26 \$35.43 NA \$109.71 NA NA %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | %Utilization-machine: | 100 | 100 | NA | 100 | NA | NA |
| %Utilization-riper: NA 0 NA NA NA NA Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Ownership cost/hour: | \$108.67 | \$36.61 | NA | \$173.32 | NA | NA |
| Ripper own. cost/hour: NA \$0.00 NA \$0.00 NA NA Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Operating cost/hour: | \$66.26 | \$35.43 | NA | \$109.71 | NA | NA |
| Ripper op. cost/hour: NA \$0.00 NA \$0.00 NA NA Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | %Utilization-riper: | NA | 0 | NA | NA | NA | NA |
| Operator cost/hour: \$24.82 \$56.64 NA \$40.04 NA NA Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Ripper own. cost/hour: | NA | \$0.00 | NA | \$0.00 | NA | NA |
| Unit Subtotals: \$199.75 \$128.68 NA \$323.07 NA NA Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Ripper op. cost/hour: | NA | \$0.00 | NA | \$0.00 | NA | NA |
| Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Operator cost/hour: | \$24.82 | \$56.64 | NA | \$40.04 | NA | NA |
| Number of Units: 2 1 0 1 0 0 Group Subtotals: Work: \$528.18 Support: \$323.07 Maint: \$0.00 | Unit Subtotals: | \$199.75 | \$128.68 | NA | \$323.07 | NA | NA |
| | Number of Units: | | | 0 | | 0 | 0 |
| 1 | Group Subtotals: | Work: | \$528.18 | Support: | \$323.07 | Maint: | \$0.00 |
| Total work team cost/hour: \$851.25 | - | | , | 11 | | 1 | . |
| | Total work team cost | /hour: \$851.25 | <u> </u> | | | | |
| | • | | | | | | |
| MATERIAL QUANTITIES | Initial volume: | 16,000 | CCY | Swell | factor: 1.090 | | |

Initial volume: 16,000 CCY Swell factor: 1.090 Loose volume: 17,440 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety

Source of estimated swell factor: Cat Handbook

Material Purchase Cost: \$0.00

Total Cost: \$0.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,400 Pounds/LCY
Description: Clay and gravel - Dry

Rated Payload: 62,000 Pounds
Payload Capacity: 25.83 LCY

Truck Travel (Haul & Return) Time:

maintained 3.0

| | | J | _ | | - Min |
|-----------------|--|---|--|----------|--------|
| | _ | J | _ | | Min |
| 0.60 | Maria | A 1 | C | 0.600 |) C |
| | Net Load Time | per Truck: _ | 1.720 | minutes | |
| | | | 0.540 | minutes | |
| | Net Cycle Time A | _ | 0.040 | minutes | _ |
| | | | 0.000 | (Cat HB) | _ |
| • | | | 0.000 | (Cat HB) | |
| | | 0.00 | | | _ |
| | | | | | _ |
| Material up to | 1/8" diameter 0.02 | | 3 / | | _ |
| Unadjusted Ba | sic Loader Cycle Time (| load, dump, m | , | | utes |
| M | aneuver: NA | | Dump: 0.100 | 0 | |
| | | | | | |
| Material Descri | ption: | | | | |
| | | | | | |
| | | | | | |
| ls: | | | | | |
| Number | of Loading Tool Passes | Required to F | ill Truck: | 4 | passes |
| 0.830 | 0.830 | | | | |
| 0.830 | 0.830 | (CAI HB |) | | |
| | | | | | |
| | | | | | |
| | | | 000 feet | | |
| 4.313 | | | | | |
| | | (100-1 | 10%) 1.050 | | _ |
| 4.300 | | (100 1 | 100/\ 1.050 | | _ |
| | | Buck | et Size Class: N | IA | _ |
| | | | | | |
| Truck Volume | Based on Number of Loa | ader Passes: | 18.06 | LCY | |
| 22.10 | LC I | | | | |
| | | | | | |
| | LCY | | | | |
| 22.10 | I OX | | | | |
| | Truck Volume 4.300 1.050 4.515 Truck 1.000 0.830 Number s. Job Condition within this Basic Material Describe Material Describe Material Up to Dumped by truck No adjustmen No adjustmen No adjustmen No adjustmen | Truck Volume Based on Number of Lo 4.300 | Truck Volume Based on Number of Loader Passes: Buck 4.300 LCY (heaped) 1.050 Other - moist loam (100-1) 4.515 LCY Site Altitude (ft.): 6 Truck Loader Source 1.000 1.000 (CAT HB) 0.830 0.830 (CAT HB) 0.830 0.830 (CAT HB) within this Basic Rating: Material Description: Maneuver: NA Unadjusted Basic Loader Cycle Time (load, dump, material up to 1/8" diameter 0.02 Dumped by truck 0.02 No adjustment - factor not applicable 0.00 No adjustment - factor not applicable 0.00 No minal target 0.00 Net Cycle Time Adjustment: Adjusted Loader Cycle Time: Net Load Time per Truck: 1.720 Minutes Adjusted to the same truck of the same truck | 19.60 | 19.60 |

CIRCES Cost Estimating Software

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

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2183 | 0.722 |

Haul Time: **0.722** minutes Return Route: Travel Haul Distance Grade (%) Roll. Res Total Res Velocity Seg# Time (Ft) (%) (%) (fpm) (min) 1000.00 0.00 3.00 3.00 2936 0.495

Return Time: 0.495 minutes
Total Truck Cycle Time: 4.537 minutes

Loading Tool unit

Production Truck Unit Production

238.84 LCY/Hour Adjusted for job efficiency: 387.67 LCY/Hour

Adjusted for job efficiency: 198.23 LCY/Hour

Optimal No. of Trucks: 2 Truck(s)

Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 396.47 LCY/Hour Adjusted single truck/loader team production: 387.67 LCY/Hour Adjusted multiple truck/loader team production: 387.67 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 44.99
 Hours

 Unit cost:
 \$2.196
 /LCY
 Total job cost:
 \$38,295

TRUCK/LOADER TEAM WORK

| Task description: | Topsoil | | | | | |
|--|---|-----------------------------------|---|-------------------|----------------|---------------|
| Site: North Chieftain | | Permit Ac | tion: 2024 Bond | Calculation | Permit/Job#: M | 1978014 |
| PROJECT IDEN | TIFICATION | | | | | |
| Task #: 012 | | State: Colo | orado | Ab | breviation: No | ne |
| Date: 9/18/2 | .024 C | County: Jeffe | erson | | Filename: MO | 014-012 |
| User: BEH | | | | | | |
| Agency or | organization name | e: DRMS | | | | |
| HOURLY EQUI | PMENT COST | • | | Shift bas | sis: 1 per day | |
| | | | Equipment Descri | ption | | |
| Т | ruck Loader Tean | | at 730 | | | |
| Sunn | ort Equipment -Lo | | AT 950H A | | | |
| Бирр | | | at D8T - 8SU | | | |
| Road M | aintenance –Motor | | | | | |
| | -Wate | er Truck: N | A | | | |
| Cost Breakdown: | Truck/Load | der Team | Support 1 | Equipment | Maintenan | ice Equipment |
| Cost Bicandown. | | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
| Utilization-machine: | 100 | 100 | NA NA | 100 | NA | NA |
| Ownership cost/hour: | \$108.67 | \$36.61 | NA | \$173.32 | NA | NA |
| Operating cost/hour: | \$66.26 | \$35.43 | | \$109.71 | NA | NA |
| %Utilization-riper: | NA | 0 | - 1 | NA | NA | NA |
| ipper own. cost/hour: | NA | \$0.00 | | \$0.00 | NA | NA |
| Ripper op. cost/hour: | NA | \$0.00 | | \$0.00 | NA | NA |
| Operator cost/hour: | \$24.82 | \$56.64 | | \$40.04 | NA | NA |
| Unit Subtotals: | \$199.75 | \$128.68 | | \$323.07 | NA | NA |
| Number of Units: | 2 | 1 | | 1 | 0 | 0 |
| Group Subtotals: | Work: | \$528.18 | Support: | \$323.07 | Maint: | \$0.00 |
| Total work team cos | | | | | | |
| Initial volume | 31.500 | CC | Y Swell | factor: 1 090 | | |
| Loose volume | , | | | 1.070 | | |
| | urce of estimated v of estimated swell Material Purchas | l factor: Cat se Cost: \$0.0 | | on, Mining & Safe | ety | |
| Total work team cos MATERIAL QU Initial volume Loose volumes | ANTITIES 31,500 34,335 urce of estimated woof estimated swell Material Purchas Tot | CC 5 LC volume: Div l factor: Cat | Y Swell Y vision of Reclamation t Handbook 00 | factor: 1.090 | | |

HOURLY PRODUCTION

Truck Capacity:
Truck Payload (weight) Basis:

| Material weight: | 2,400 | Pounds/LCY |
|-------------------|-----------------------|------------|
| Description: | Clay and gravel - Dry | |
| Rated Payload: | 62,000 | Pounds |
| Payload Capacity: | 25.83 | LCY |

| Struck Volume: | 17.10 | LCY | | | | |
|---|--|--|--|---|--|--|
| Heaped Volume: | | LCY | | | | |
| Average Volume: | | LCY | | | | |
| Adjusted Volume: | | LCY | | | | |
| _ | | | | | | |
| | Truck Volume | Based on Number of Loa | ader Passes: | 18.06 | LCY | |
| Loading Tool Capacity | | | Bucket Si | go Closse N | ٨ | |
| Poted Conscitus | 4.300 | LCY (heaped) | Ducket Si | ze Class: N | A | _ |
| Rated Capacity: Bucket Fill Factor: | 1.050 | Other - moist loam | (100-110% | 1.050 | | _ |
| Adjusted Capacity: | 4.515 | LCY | (100-11070 |) 1.030 | | |
| | | | | | | |
| Job Condition Corrections | | | ltitude (ft.): <u>6000</u> | feet | | |
| Altitude Adj: | Truck 1.000 | Loader 1.000 | Source (CAT HB) | | | |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) | | | |
| Job Efficiency. | 0.830 | 0.030 | (CAT IIB) | | | |
| Net Correction: | 0.830 | 0.830 | | | | |
| Loading Tool Cycle Time : | Numbe | r of Loading Tool Passes | Required to Fill T | ruck: | 4 r | passes |
| | _" | of Loading 10011 asses | Required to 1 m 1 | ruck. | } | passe |
| Hycavatore and Front Show | ale: | | | | | |
| Excavators and Front Shove | | D .: NA | | | | |
| Machine Cycle Time | vs. Job Conditio | | | | | |
| Machine Cycle Time v Selected Value | vs. Job Conditio within this Basi | c Rating: NA | | | | |
| Machine Cycle Time Selected Value Track Loaders - | vs. Job Conditio within this Basi Material Descr | c Rating: NA | | | | |
| Machine Cycle Time v Selected Value Track Loaders - Cycle Time Elements (min.) | vs. Job Conditio within this Basi Material Descr | c Rating: NA | Γ | | | |
| Machine Cycle Time Selected Value Track Loaders - | vs. Job Conditio within this Basi Material Descr | c Rating: NA | Ε | Dump: 0.100 |) | |
| Machine Cycle Time v Selected Value Track Loaders - Cycle Time Elements (min.) | vs. Job Conditio within this Basi Material Descr : | c Rating: NA iption: Ianeuver: NA | | | .500 mini | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA | vs. Job Conditio within this Basi Material Descr : | c Rating: NA iption: Ianeuver: NA | oad, dump, mane | | | utes |
| Machine Cycle Time of Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders | vs. Job Conditio within this Basi Material Descr : | c Rating: NA iption: Ianeuver: NA | oad, dump, mane | aver):0. | .500 min | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors | vs. Job Conditio within this Basi Material Descr : | c Rating: NA ription: NA Maneuver: NA asic Loader Cycle Time (1) o 1/8" diameter 0.02 | oad, dump, mane | uver): 0. | .500 minu | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustmen | ruck 0.02 nt - factor not applicable (1.2) | oad, dump, maner | actor (min.) 0.020 0.020 0.000 | Source (Cat HB) (Cat HB) (Cat HB) | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustment | ription: Maneuver: NA Masic Loader Cycle Time (Inc.) 10 1/8" diameter 0.02 Manual Truck 0.02 Manual Tru | oad, dump, maner | actor (min.) 0.020 0.020 0.000 0.000 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustmen | ription: Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Manual of 1/8" diameter 0.02 | 0.00 0.00 | actor (min.) 0.020 0.020 0.000 0.000 0.000 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustment | ruck 0.02 nt - factor not applicable of the factor not applicable of the total one of the t | oad, dump, maner Fa | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustment | ruck 0.02 nt - factor not applicable et 0.00 Net Cycle Time A Adjusted Loader C | oad, dump, maner 0.00 0.00 djustment: ycle Time: | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 0.540 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes | utes |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: | ys. Job Conditio within this Basi Material Descr : M - Unadjusted Ba Material up to Dumped by t No adjustment | ruck 0.02 nt - factor not applicable of the factor not applicable of the total one of the t | oad, dump, maner 0.00 0.00 djustment: ycle Time: | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes | utes |
| Machine Cycle Time y Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: | ys. Job Conditio within this Basi Material Descr : Unadjusted Basi Material up to Dumped by to No adjustment No adjustment No adjustment Nominal targ | ription: Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA | oad, dump, maner 0.00 0.00 djustment: ycle Time: per Truck: | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 0.540 1.720 | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes | |
| Machine Cycle Time Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time | ys. Job Condition within this Basin Material Describes: Musterial Describes: Musterial up to Dumped by the No adjustment No adjustment No adjustment Nominal target: Dumped by the No adjustment No adjustment Nominal target: Dumped by the No adjustment No adjustment Nominal target: Dumped by the Nominal target | Inc Rating: NA Inpition: NA Inpition: NA Insic Loader Cycle Time (Inc.) Input 1/8" diameter 0.02 Inc. 1/8" diameter | oad, dump, maner Fail | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 0.540 1.720 ite altitude: | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600 | |
| Machine Cycle Time y Selected Value Track Loaders - Cycle Time Elements (min.) Load: NA Wheel and Track Loaders Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: | Material Describer Unadjusted Basis No adjustment No adjus | ription: Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA Masic Loader Cycle Time (Interpretation of 1/8" diameter 0.02 Maneuver: NA | oad, dump, maner 0.00 0.00 djustment: ycle Time: per Truck: | actor (min.) 0.020 0.020 0.000 0.000 0.000 0.040 0.540 1.720 ite altitude: | Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes | —————————————————————————————————————— |

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

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|-----------------------|-----------|------------------|------------------|-------------------|-------------------------|
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2183 | 0.722 |

Haul Time: 0.722 minutes

Return Route:

| recturn rec | rate. | | | | | |
|-------------|-----------------------|-----------|------------------|---------------|-------------------|-------------------------|
| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
| 1 | 1000.00 | 0.00 | 3.00 | 3.00 | 2936 | 0.495 |

2 Truck(s)

Return Time: 0.495 minutes
Total Truck Cycle Time: 4.537 minutes

Selected Number of Trucks: 2 Truck(s)

Loading Tool unit

Optimal No. of Trucks:

Production 467.07 LCY/Hour Adjusted for job efficiency: 387.67 LCY/Hour Truck Unit Production 238.84 LCY/Hour Adjusted for job efficiency: 198.23 LCY/Hour

Adjusted hourly truck team production: 396.47 LCY/Hour Adjusted single truck/loader team production: 387.67 LCY/Hour

Adjusted multiple truck/loader team production: 387.67 LCY/Hour

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 88.57
 Hours

 Unit cost:
 \$2.196
 /LCY
 Total job cost:
 \$75,394

REVEGETATION WORK

| North Chieftain | Permit Action: _20 | 24 Bond Calo | culation | Permit/Job# | : <u>M1978014</u> |
|---|-----------------------------|----------------|---------------------------------|------------------------------------|--|
| PROJECT IDENTIFIC | ATION | | | | |
| Task #: 014 | State: Colorado | | Ał | breviation: | None |
| Date: 9/18/2024 | County: Jefferson | | | | M014-014 |
| User: BEH | | | | | |
| Agency or organiz | ation name: DRMS | | | | |
| FERTILIZING | | | | | |
| /aterials | | | | | |
| Daniel d'an | Units / | TI24 | Co | st / Unit | Cost /Acre |
| Description | Acre | Unit | | | |
| 13-13-13, 19-9-0 | 45.00 | pound | \$0. | 72 | \$32.45 |
| | | | To | tal Fertilizer | |
| | | | | Materials | |
| | | | | Cost/Acre | \$32.45 |
| Description | er (MEANS 32 01 90.13 0140) | | | | Cost /Acre \$17.86 |
| | , | tal Fertilizer | Application | on Cost/Acre | |
| Description | , | tal Fertilizer | Applicatio | on Cost/Acre | \$17.86 |
| Description Truck whirlwind spreado | , | tal Fertilizer | Application | on Cost/Acre | \$17.86 |
| Description Truck whirlwind spreado | , | tal Fertilizer | Application | on Cost/Acre | \$17.86 \$17.86 |
| Description Truck whirlwind spreado TILLING Description | | tal Fertilizer | Application | on Cost/Acre | \$17.86 \$17.86 Cost /Acre |
| Description Truck whirlwind spreado TILLING Description | | | | on Cost/Acre | \$17.86 \$17.86 Cost /Acre |
| Description Truck whirlwind spreado TILLING Description | | | | | \$17.86 \$17.86 Cost /Acre \$102.41 |
| Description Truck whirlwind spreads TILLING Description Chisel plowing {DMG} | | | Fotal Tillin | ng Cost/Acre | \$17.86 \$17.86 Cost /Acre \$102.41 \$102.41 |
| Description Truck whirlwind spreads TILLING Description Chisel plowing {DMG} | | | Rate – PLS LBS / | Seeds per SQ. | \$17.86 \$17.86 Cost /Acre \$102.41 |
| Description Truck whirlwind spreade TLLING Description Chisel plowing {DMG} EEEDING Seed Mix | То | | Rate – PLS LBS / Acre | Seeds per SQ. FT | \$17.86 \$17.86 Cost /Acre \$102.41 \$102.41 |
| Description Truck whirlwind spreade TLLING Description Chisel plowing {DMG} SEEDING Seed Mix Crested Wheatgrass - No | ordan | | Rate – PLS LBS / Acre 4.00 | Seeds per SQ. FT | \$17.86 \$17.86 Cost /Acre \$102.41 \$102.41 Cost /Acre |
| Description Truck whirlwind spreade TILLING Description Chisel plowing {DMG} SEEDING Seed Mix Crested Wheatgrass - No Pubescent Wheatgrass - | ordan Luna | | Rate – PLS LBS / Acre 4.00 5.40 | Seeds per SQ. FT 18.37 11.16 | \$17.86 \$17.86 Cost /Acre \$102.41 \$102.41 Cost /Acre \$21.25 \$27.02 |
| Description Truck whirlwind spreade CILLING Description Chisel plowing {DMG} SEEDING Seed Mix Crested Wheatgrass - No | ordan Luna | | Rate – PLS LBS / Acre 4.00 | Seeds per SQ. FT | \$17.86 \$17.86 Cost /Acre \$102.41 \$102.41 Cost /Acre |

Description
Drill Seeding (DRMS Survey Cost)

Cost /Acre \$236.64

| Total Seed Application Cost/Acre | \$236.64 |
|----------------------------------|----------|

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---------------------------------|-----------------|------|-------------|------------|
| | | | \$ | \$ |
| Total Mulch Materials Cost/Acre | | | | \$0.00 |

Application

| Description | Cost /Acre |
|--------------------------------|-------------|
| | \$ |
| Total Mulch Application Cost/A | Acre \$0.00 |

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: 39 Cost /Acre: \$482.73

Estimated Failure Rate: 25% Cost /Acre*: \$482.73

*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING

Initial Job Cost: \$18,826.47

Reseeding Job Cost: \$4,706.62

Total Job Cost: \$23,533

39.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

| Task description | n: Equi | pment Mobi | lization | | | | |
|------------------|-------------------|------------|-------------|----------|----------------------------|---------------|-----------------------|
| e: North Chieft | ain | Perr | mit Action: | 2024 Box | nd Calculation | Permit/Jol | b#: <u>M1978014</u> |
| PROJECT IDI | ENTIFICATIO | <u>N</u> | | | | | |
| Task #: 01 | 15 | State: | Colorado | | | Abbreviation: | None |
| Date: 9/ | 18/2024 | County: | Jefferson | | | Filename: | M014-015 |
| User: B | EH | | | | | | |
| | | | | | Sh Cost Data | | 1 per day CRG Data |
| True | ck Tractor Descri | ption: GE | NERIC ON- | | Y TRUCK TR 00 HP (2ND H | , , | DIESEL POWERED, |
| Tru | ck Trailer Descri | ption: | GENERIC | | , | | K EQUIPMENT |
| | | | | TRA | AILER (25T, 50 | T, AND 100T) | <u> </u> |
| Cost Breakdown: | - | | | | | | |
| Available Rig | Capacities | 0-25 Tons | 26-50 | Tons | 51+ Tons | <u>—</u> | |
| 0 | in Cost/House | ¢10.44 | \$22 | 10 | \$22.04 | | |

| Available Rig Capacities | 0-25 Tons | 26-50 Tons | 51+ Tons |
|--------------------------|-----------|------------|----------|
| Ownership Cost/Hour: | \$10.44 | \$22.18 | \$23.94 |
| Operating Cost/Hour: | \$26.48 | \$54.55 | \$55.65 |
| Operator Cost/Hour: | \$22.52 | \$22.52 | \$22.52 |
| Helper Cost/Hour: | \$0.00 | \$23.53 | \$23.53 |
| Total Unit Cost/Hour: | \$59.44 | \$122.78 | \$125.64 |

NON ROADABLE EQUIPMENT:

| Machine | Weight/ | Owner ship | Haul Rig | Fleet | Haul Trip | Return Trip | DOT Permit |
|-----------------|---------|---------------|-------------|-------|-----------|----------------|-------------|
| Description | Unit | Cost/hr/ unit | Cost/hr/uni | Size | Cost/hr/ | Cost/hr/ fleet | Cost/ fleet |
| | (TONS) | | t | | fleet | | |
| Cat D8T - 8SU | 47.71 | \$173.32 | \$122.78 | 1 | \$296.10 | \$122.78 | \$250.00 |
| Drill/Broadcast | 25.00 | \$41.02 | \$59.44 | 1 | \$100.46 | \$59.44 | \$250.00 |
| Seeder with | | | | | | | |
| Tractor | | | | | | | |
| Cat 730 | 25.19 | \$108.67 | \$59.44 | 2 | \$336.22 | \$118.88 | \$250.00 |
| CAT 950H | 20.13 | \$36.61 | \$59.44 | 1 | \$96.05 | \$59.44 | \$250.00 |

Subtotals: \$828.83 \$360.54 \$1,000.00

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 1 T. Crew | \$24.60 | 1 | \$24.60 | \$24.60 |

| Subtotals: | \$24.60 | \$24.60 |
|------------|---------|---------|
| | | |

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

LAKEWOOD

miles

5.00

mph

Transportation Cycle Time:

| | Non- | |
|-------------------------|-----------|-----------|
| | Roadable | Roadable |
| | Equipment | Equipment |
| Haul Time (Hours): | 0.14 | 0.14 |
| Return Time (Hours): | 0.14 | 0.14 |
| Loading Time (Hours): | 0.25 | NA |
| Unloading Time (Hours): | 0.25 | NA |
| Subtotals: | 0.79 | 0.29 |
| | | |

JOB TIME AND COST

| Total job time: | 1.57 | Hours |
|-----------------|---------|-------|
| Total job cost: | \$3.176 | |