

NEW MEXICO

# *Abandoned Mine Lands*

Project Manual  
Including Plans and Specifications  
for Construction of

BOSTON HILL MINE SAFEGUARD PROJECT – PHASE I

Silver City, New Mexico

PROJECT NO.

EMNRD-MMD- \*\*\*\*\*

AUTHORIZED BY:

ABANDONED MINE LAND PROGRAM  
MINING and MINERALS DIVISION  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
STATE OF NEW MEXICO

(with reclamation fees paid by the New Mexico Coal Industry)

MAY 2022



---

**00002 – CERTIFICATION PAGE**

---

PROJECT NAME: Boston Hill Mine Safeguard Project – PHASE I

LOCATION: Silver City, New Mexico

PROJECT NUMBER: ENMRD-MMD-\*\*\*\*\*

ENGINEER OF RECORD: Steve Needles, P.E.  
Mining and Minerals Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
Telephone 505.476.3417

The technical material and data contained in the specifications were prepared under the supervision and direction of the undersigned, whose seal as a Professional Engineer (P.E.), licensed to practice in the State of New Mexico, is affixed below.

24658

---

Steve Needles, P.E. (Project Engineer)

---

License No.

---

Authorized Representative/Title  
Energy, Minerals and  
Natural Resources Department

---

Date

**Michelle Lujan Grisham, Governor**

**All questions about the meaning or intent of these documents shall be submitted only to the Engineer of Record, stated above, in writing. Refer to Section 00120 - Supplementary Instructions to Bidders as to interpretations.**

**00003 – TABLE OF CONTENTS**

<b>TITLE PAGE</b>	00001
<b>CERTIFICATION PAGE</b>	00002
<b>TABLE OF CONTENTS</b>	00003
<b>LIST OF FIGURES, STATUTES, AND TABLES</b>	00004
<i>I. Figures</i>	
<i>II. Statutes</i>	
<i>III. Tables</i>	
<b>INVITATION TO BID</b>	00020
<b>INSTRUCTIONS TO BIDDERS</b>	00100
<b>SUPPLEMENTARY INSTRUCTIONS TO BIDDERS</b>	00120
<i>I. Information</i>	
<i>II. Bid</i>	
<i>III. Security</i>	
<i>IV. References</i>	
<i>V. Supplements</i>	
<i>VI. New Mexico Employees Health Insurance</i>	
<i>VII. Use of Brand Name Specifications</i>	
<b>BID ASSURANCES</b>	00125
<i>I. General</i>	
<i>II. Confidentiality</i>	
<i>III. Inspection</i>	
<i>IV. Samples</i>	
<i>V. Cancellation</i>	
<b>MANDATORY PRE-BID CONFERENCE</b>	00130
<b>BID FORMS</b>	00300
<b>SUPPLEMENTS TO BID FORMS</b>	00400
<b>BID SECURITY FORM</b>	00410
<b>BIDDER'S QUALIFICATION FORMS</b>	00420
<i>I. Experience</i>	
<i>II. References</i>	
<b>SUBCONTRACTORS LIST</b>	00430
<b>EQUIPMENT LIST</b>	00450
<b>SAMPLE AGREEMENT FORMS</b>	00500
<b>BONDS AND CERTIFICATES</b>	00600
<b>PERFORMANCE BONDS</b>	00610
<b>PAYMENT BONDS</b>	00620
<b>CERTIFICATE OF INSURANCE</b>	00650
<b>GENERAL CONDITIONS</b>	00700
<b>DIFFERING SITE CONDITIONS</b>	00704
<b>WARRANTY AND GUARANTEE</b>	00713

<b>DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF THE PROJECT MANAGER</b>	00720
<b>SUPPLEMENTARY CONDITIONS</b>	00800
<b>CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS, DRUG-FREE WORKPLACE REQUIREMENTS AND LOBBYING</b>	00825
<b>APPLICANT/VIOLATOR SYSTEM INFORMATION</b>	00826
<b>WAGE DETERMINATION SCHEDULE</b>	00830
<b>APPLICATION FOR PAYMENT</b>	00900
 <b>SPECIFICATIONS</b>	
<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
<b>SUMMARY OF WORK</b>	01010
<b>SUMMARY OF PROJECT AND CONSTRUCTION ACCESS REQUIREMENTS</b>	01011
<b>AVOIDANCE AREAS FOR CULTURAL AND BIOLOGICAL PRESERVATION</b>	01012
<b>BACKGROUND AND SITE HISTORY</b>	01013
<b>CONTRACTOR’S USE OF THE PREMISES</b>	01015
<b>MEASUREMENT AND PAYMENT</b>	01025
<b>APPLICATIONS FOR PAYMENT</b>	01027
<b>PRICES</b>	01028
I. <i>Lump Sum Prices</i>	
II. <i>Unit Bid Prices</i>	
<b>ALTERNATES</b>	01030
<b>MODIFICATION PROCEDURES</b>	01035
<b>CHANGE ORDER PROCEDURES</b>	01036
<b>COORDINATION</b>	01040
<b>PROJECT COORDINATION</b>	01041
<b>MECHANICAL AND ELECTRICAL COORDINATION</b>	01042
<b>JOB SITE ADMINISTRATION</b>	01043
<b>FIELD ENGINEERING</b>	01050
<b>REGULATORY REQUIREMENTS</b>	01060
<b>REFERENCES</b>	01090
<b>ABBREVIATIONS</b>	01092
<b>DEFINITIONS</b>	01094
<b>SPECIAL PROJECT PROCEDURES</b>	01100
<b>WORK SUSPENSION DUE TO PLANNED HUNTING ACTIVITIES</b>	01110
<b>HAZARDOUS AND CONFINED AREA PROCEDURES</b>	01135
<b>INDUSTRIAL WASTES AND TOXIC SUBSTANCES</b>	01170
<b>PROJECT MEETINGS</b>	01200
<b>PRE-CONSTRUCTION CONFERENCES</b>	01210
<b>PROGRESS MEETINGS</b>	01220
<b>SUBMITTALS</b>	01300
<b>PROGRESS SCHEDULES</b>	01310

<b>PROGRESS REPORTS</b>	01320
<b>HEALTH AND SAFETY PLAN</b>	01330
<b>SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES</b>	01340
<b>CONSTRUCTION PHOTOGRAPHS</b>	01380
<b>QUALITY CONTROL</b>	01400
<b>CONTRACT QUALITY CONTROL</b>	01405
<b>TESTING LABORATORY SERVICES</b>	01410
<b>CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS</b>	01500
<b>MOBILIZATION</b>	01505
<b>TEMPORARY UTILITIES</b>	01510
<b>TEMPORARY SANITARY FACILITIES</b>	01516
<b>BARRIERS AND ENCLOSURES</b>	01530
<b>TREE PLANT AND WILDLIFE PROTECTION</b>	01533
<i>I. Tree and Plant Protection</i>	
<i>II. Wildlife Protection</i>	
<b>PROTECTION OF INSTALLED WORK</b>	01535
<b>SECURITY</b>	01540
<b>ACCESS ROADS, PARKING AREAS AND STAGING AREAS</b>	01550
<b>TEMPORARY CONTROLS</b>	01560
<b>CONSTRUCTION CLEANING</b>	01561
<b>DUST CONTROL</b>	01562
<b>NOISE CONTROL</b>	01564
<b>FIRE PROTECTION AND SAFETY AWARENESS</b>	01565
<b>TRAFFIC REGULATION</b>	01570
<b>FLAGGERS</b>	01572
<b>HAUL ROUTES</b>	01574
<b>PROJECT IDENTIFICATION AND SIGNS</b>	01580
<b>FIELD OFFICES AND SHEDS</b>	01590
<b>MATERIAL AND EQUIPMENT</b>	01600
<b>CONTRACT CLOSEOUT</b>	01700
<b>CONTRACT CLOSEOUT PROCEDURES</b>	01701
<b>FINAL INSPECTION</b>	01702
<b>FINAL CLEANING</b>	01710
<b>PROJECT RECORD DOCUMENTS</b>	01720
 <b>DIVISION 2 – SITEWORK</b>	
<b>DEMOLITION</b>	02050
<b>SELECTIVE DEMOLITION</b>	02070
<b>SITE PREPARATION</b>	02100
<b>SITE CLEARING</b>	02110
<b>EARTHWORK</b>	02200
<b>GRADING</b>	02110
<b>ROUGH GRADING</b>	02211

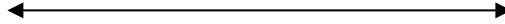
<b>DECOMPACTION</b>	02212
<b>LANDSCAPE GRADING</b>	02218
<b>EXCAVATING, BACKFILLING, AND COMPACTING</b>	02220
<b>EXCAVATION</b>	02222
<b>BACKFILLING OF MINE OPENINGS</b>	02223
<b>BORROW</b>	02224
<b>COMPACTION</b>	02229
<b>PRECAST STACKABLE CONCRETE UNITS</b>	02279
<b>SITE IMPROVEMENTS</b>	02800
<b>WIRE FENCE</b>	02820
<b>CHAIN LINK FENCE AND GATES</b>	02831
<b>SURVEY MARKERS</b>	02890
<b>LANDSCAPING</b>	02900
<b>SOIL PREPARATION / EXTREME SURFACE ROUGHENING</b>	02920
<b>TOPDRESSING</b>	02921
<b>GRASSES</b>	02930
<b>SEEDING</b>	02933
I. <i>Seeding Time</i>	
II. <i>Seed Species and Mixtures</i>	
III. <i>Seeding Methods</i>	
IV. <i>Table I – Seed Mix</i>	
<b>SALVAGE OF NATIVE PLANTS</b>	02955
<b>SUBMITTALS</b>	02990
 <b>DIVISION 3 – CONCRETE</b>	
<b>GENERAL REQUIREMENTS</b>	03001
<b>CONCRETE MATERIALS</b>	03010
I. <i>Materials</i>	
II. <i>Concrete Mix Design</i>	
III. <i>Mixing Concrete</i>	
IV. <i>Ready-Mixed Concrete</i>	
V. <i>Proportioning</i>	
VI. <i>Consistency</i>	
VII. <i>Placing Concrete</i>	
VIII. <i>Concrete Equipment</i>	
IX. <i>Tests</i>	
<b>CONCRETE FORMWORK</b>	03100
<b>CONCRETE REINFORCEMENT</b>	03200
<b>REINFORCING STEEL</b>	03210
I. <i>Bars</i>	
II. <i>Placing Reinforcing Steel</i>	
<b>CONCRETE ACCESSORIES</b>	03250

<b>CAST-IN-PLACE CONCRETE</b>	03300
<b>INTEGRALLY COLORED CAST-IN-PLACE CONCRETE</b>	03310
<b>CONCRETE CURING</b>	03370
<b>GROUTS</b>	03600
<b>GROUT MATERIALS</b>	03610
<b>NON-SHRINK GROUT</b>	03620
<b>SUBMITTALS</b>	03990
 <b>DIVISION 4 – UNIT MASONRY</b>	
Unit Masonry	04200
I. General - Submittals	
II. Products	
III. Execution	
 <b>DIVISION 5 – METALS</b>	
<b>METAL MATERIALS</b>	05010
<b>METAL FINISHES</b>	05030
<b>SHOP COATING</b>	05031
I. Materials	
II. Cleaning	
III. Galvanizing	
IV. Steel	
V. Aluminum	
VI. Other Surfaces	
VII. Film Thickness	
<b>METAL FABRICATIONS</b>	05500
<b>FIELD ERECTION</b>	05501
<b>GRATING</b>	05530
<b>SUBMITTALS</b>	05990
 <b>DIVISION 13 – SPECIAL CONSTRUCTION</b>	
<b>POLYURETHANE FOAM CLOSURES</b>	13050
<b>MATERIALS AND EQUIPMENT</b>	13051
<b>MATERIAL SAFETY, HANDLING AND TRANSPORT</b>	13052
<b>EXECUTION</b>	13055
I. Formwork	
II. Ventilation/Drainage Pipe and Corrugated Steel Pipe	
III. Polyurethane Foam (PUF)	
IV. Field Quality Control	
V. Backfilling	
VI. Survey Caps	
VII. Cleanup	



<b>HIGH STRENGTH STEEL MESH</b>	13137
<b>SUBMITTALS</b>	13990

**END OF TABLE OF CONTENTS**



---

**00004 – LIST OF FIGURES, STATUTES, AND TABLES**

---

The following sections list the figures, statutes, and tables that are referenced in the Specifications and are incorporated herein by reference as if set out in their entirety.

**I. FIGURES**

The following figures may be found as an attachment:

Title:	Cover Sheet
Sheet 1:	Index of Sheet, Explanation, and Notes
Sheet 2:	Site Vicinity Map
Sheet 3:	Phase I Project Location and Plan View Index
Sheet 4:	Boston Hill Safeguard Features Plan View (1 of 10)
Sheet 5:	Boston Hill Safeguard Features Plan View (2 of 10)
Sheet 6:	Boston Hill Safeguard Features Plan View (3 of 10)
Sheet 7:	Boston Hill Safeguard Features Plan View (4 of 10)
Sheet 8:	Boston Hill Safeguard Features Plan View (5 of 10)
Sheet 9:	Boston Hill Safeguard Features Plan View (6 of 10)
Sheet 10:	Boston Hill Safeguard Features Plan View (7 of 10)
Sheet 11:	Boston Hill Safeguard Features Plan View (8 of 10)
Sheet 12:	Boston Hill Safeguard Features Plan View (9 of 10)
Sheet 13:	Boston Hill Safeguard Features Plan View (10 of 10)
Sheet 14:	Machine and Hand Waste Rock Backfill Placement Details
Sheet 15:	Machine Waste Rock Backfill Summary Table (1 of 2)
Sheet 16:	Machine Waste Rock Backfill Summary Table (2 of 2)
Sheet 17:	Waste Rock Borrow Area Details
Sheet 18:	Waste Rock Borrow Summary Table (1 of 2)
Sheet 19:	Waste Rock Borrow Summary Table (2 of 2)
Sheet 20:	Polyurethane Foam, Sackrete, and Waste Rock Adit Closure Detail
Sheet 21:	PUF, Sackrete, and Waste Rock Adit Closure Summary Table
Sheet 22:	Polyurethane Foam and Waste Rock Adit Closure Detail
Sheet 23:	Polyurethane Foam and Waste Rock Adit Closure Summary Table
Sheet 24:	PUF & Waste Rock Vertical Shaft Closure Detail and Summary Table
Sheet 25:	Steel Mesh Closure Detail and Summary Table
Sheet 26:	Metal Barrier Fence Detail and Summary Table
Sheet 27:	Horizontal Metal Grate Closure Detail
Sheet 28:	Horizontal Metal Grate Closure Additional Detail
Sheet 29:	Adit and Stope Metal Grate Closure and Summary Table
Sheet 30:	Egress Adit Closure Detail
Sheet 31:	Egress Closure Door and Lock Detail
Sheet 32:	Egress Closure Lock Box Detail and Summary Table
Sheet 33:	Chain Link Fence and Gate Detail and Summary Table

---

**II. STATUTES**

The following statutes may be referenced in the text:

NMSA 1978, §§ 13-1-28 through 199:	Procurement Code
NMSA 1978, §§ 13-4-1 through 30:	Public Works Contracts
NMSA 1978, §§ 13-4-31 through 43:	Subcontractors Fair Practices Act
NMSA 1978, §§ 41-4-1 through 2 :	Tort Claims Act
NMSA 1978, §§ 52-1-1 through 70:	Workers' Compensation Act
NMSA 1978, §§ 69-25B-1 through 12:	Abandoned Mine Reclamation Act
NMSA 1978, §§ 74-13-1, <i>et seq.</i> :	Recycling and Illegal Dumping Act
NMSA 1978, §§ 76-10-11 through 22:	New Mexico Seed Law

**III. TABLES**

The following tables are referenced in the text:

Table I: Seed Mix Table

**IV. APPENDIX**

The following appendix is referenced in the text:

Appendix A: Vendor Information Form

Appendix B: Naturally Occurring Asbestos Potential, Regulations and Testing



**PURCHASING DIVISION (GSD)**  
*(Hand Deliver Only)* 1100 S. Saint Francis Drive,  
 Room 2016, Santa Fe, New Mexico 87505  
*(Mail Only)* PO Box 6850  
 Santa Fe, New Mexico 87502-6850  
 (505) 827-0472

**BIDDER:**

Name:  
 Address:  
 Phone:  
 Fax:  
 E-mail:

**PROJECT:**

BOSTON HILL MINE  
 SAFEGUARD PROJECT – PHASE I  
 GRANT COUNTY, NEW MEXICO  
 PROJECT NO.: ENMRD-MMD-\*\*\*\*

**ARCHITECT/ENGINEER OF RECORD**

Steve Needles, P.E.  
 Telephone: (505) 476.3417  
 FAX: (505) 476.3402

**OWNER/POINT OF CONTACT:**

Abandoned Mine Land Program  
 Mining and Minerals Division  
 Energy, Minerals and Natural Resources  
 Department  
 State of New Mexico  
 1220 S. St. Francis Drive  
 Santa Fe, New Mexico 87505  
 Telephone: (505) 476.3400

**INVITATION TO BID  
 CONSTRUCTION CONTRACT**

BID NUMBER: \*\*\*\*

Sealed bid opening FORMAL  
 NM STATE PURCHASING DIVISION

**BID DUE DATE: Friday, July 15, 2022**  
**AND TIME: 2:00 p.m. MDT**

Procurement Officer: **Michael Saavedra**  
 Contact Number: 505-827-0610

**IMPORTANT**

**FOR MAILED-IN BIDS:** bids must be submitted in a sealed envelope with the bid number and opening date clearly indicated on the bottom left hand side of the front of the envelope.

**FOR ELECTRONICALLY UPLOADED BIDS:** such bids will be time-stamped in the system when Bidder clicks "OK" after "Review and Submit." You will receive a confirmation email of the submission for your records. Such electronic submissions will be considered sealed bids in conformance with statute. To register as a Supplier with the State of New Mexico, or to log in if already registered go to:  
<https://suppliers.scquest.com/StateOfNewMexico>

SEALED BIDS WILL BE RECEIVED UNTIL THE ABOVE-SPECIFIED DATE AND LOCAL TIME, THEN PUBLICLY OPENED AT THE NEW MEXICO STATE PURCHASING DIVISION BID ROOM AND READ ALOUD. HAND DELIVER OR MAIL BIDS TO THE STATE PURCHASING DIVISION, JOSEPH M. MONTOYA BLDG. AT THE ADDRESSES STATED IN THE ABOVE LETTERHEAD.

THIS BID IS SUBJECT TO THE REQUIREMENTS OF THE BIDDING DOCUMENTS AS DEFINED IN THE "INSTRUCTIONS TO BIDDERS."

THE BID PROPOSAL FORM MUST BE ACCOMPANIED BY A SURETY BOND, SUBCONTRACTOR LISTING FORM, AND DOCUMENTS SPECIFIED IN THE "INSTRUCTIONS TO BIDDERS."

**PLEASE NOTE:** HAND DELIVER OR MAIL BIDS TO THE STATE PURCHASING DIVISION, JOSEPH M. MONTOYA BLDG. AT THE ADDRESSES STATED IN THE ABOVE LETTERHEAD.

**This mailing contains four pages**

---

**INVITATION TO BID page 2**

**Bidding Documents:** Bidding documents, plans, specifications, drawings etc. may be obtained at the office of the Architect / Engineer of Record at no charge for each complete set. CHECKS SHOULD BE MADE PAYABLE TO N/A. Incomplete sets will not be issued.

**Bidding Documents may be obtained / reviewed at the following location:**

STEVEN NEEDLES, P.E.  
ENGINEER OF RECORD  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
1220 SOUTH ST. FRANCIS DRIVE  
SANTA FE, NM 87505  
(505) 476.3417  
STEVEN.NEEDLES@STATE.NM.US

The Bidding Documents contain a time for completion of the work and further impose liquidated damages for failure to complete the work within that time period.

Bids shall be presented in the form of a total Base Bid proposal under a Lump Sum Contract plus any additive or deductive alternates that are selected by the Owner. A bid must be submitted on all bid items and alternates; segregated bids will not be accepted.

**NOTE:** Base Bid price shall not include state gross receipts or local options taxes. Taxes will be included in the Contracted Amount at prevailing rates as a separate item to be paid by Owner.

In submitting this bid, each Bidder must satisfy all terms and conditions of the Bidding Documents. No Bidder may withdraw his bid for **NINETY (90) DAYS** after the actual date of the opening thereof.

**Wage Rates & Workforce Solutions Registration:** Pursuant to the Public Works Minimum Wage Act, Section 13-4-10 to 13-4-17 NMSA 1978, all work covered by this Invitation to Bid shall be in accordance with applicable state laws and, if the bid amount is sixty thousand dollars (\$60,000) or more, is subject to the minimum wage rate determination issued by the New Mexico Department of Workforce Solutions, Labor Relations Division, Public Works Unit. Section 13-4-13.1 *requires* Contractors when their bid is over sixty thousand dollars (\$60,000) and subcontractors of all tiers when their portion of the work is over sixty thousand dollars (\$60,000), to be registered with the Labor Relations Division of the Department of Workforce Solutions. This registration is available under the “Contractor Registration” section at the following website:

<http://www.dws.state.nm.us/LaborRelations/LaborInformation/PublicWorks>

---

**INVITATION TO BID page 3**

There may be some administrative delay in processing your registration. Pursuant to Section 13-4-13.1 NMSA 1978, the State Purchasing Division **cannot accept your bid if you are not registered at the time of bid opening.**

Please direct all questions concerning registration to DWS at (505) 841-4400.

A completed Subcontractor Listing Form must accompany each bid.

**Bonds:** Bid Security in the form of a surety bond executed by a surety company authorized to do business in the state of New Mexico in the amount of five percent (**5%**) of the total bid, or the equivalent in cash by means of a cashier's check or in a form satisfactory to the Owner, must accompany each bid in accordance with the Instructions to Bidders.

A one hundred percent (100%) Performance Bond and a one hundred percent (100%) Payment and Materials Bond for the total contract amount, including appropriate New Mexico Gross Receipts Tax, executed by a surety company authorized to do business in the state of New Mexico shall be required from the successful Bidder prior to award of contract. A subcontractor shall provide performance and payment bonds if the subcontractor's contract (to the Contractor) for work to be performed is one hundred twenty five thousand dollars (\$125,000) or more. Failure of a subcontractor to provide the required bonds shall not subject owner to any increase in cost due to approved substitution of subcontractor.

**Preferences:** Because this project is one hundred percent (100%) federally funded, neither the New Mexico Resident Contractor's Preference nor the New Mexico Resident Veterans preference, apply to this procurement.

The Owner intends to award this Project to the lowest responsible Bidder. The Owner reserves the right to reject any and all bids, to waive technical irregularities, and to award the contract to the Bidder whose bid it deems to be in the best interest of the Owner.

**A Mandatory Pre-Bid Meeting will be held as follows:**

DATE: Tuesday, June 28, 2022

TIME: 9 a.m.

LOCATION: **Spring Street Trailhead**  
**604 Spring Street,**  
**Silver City, NM 88061**

**The Spring Street Trailhead is located near downtown Silver City, NM. The trailhead is located at the west end of Spring Street. The most direct route to the Spring Street Trailhead**

is by turning west onto West Broadway Street from South Hudson Street (NM HWY 90), travelling west to the end of West Broadway Street, then turning south onto South Cooper Street (at the District Court House), then taking the second right onto Spring Street, and travelling to the end of Spring Street. There is a large parking area at the Spring Street Trailhead. Please note that the Spring Street Trailhead is open from 7:00AM to 6:00PM.

The site showing itself is expected to take approximately four (4) hours, including hiking to a number of the mine features and tour of the site access route. Prospective Bidders must provide their own transportation to the site. An off-road capable high-clearance 4WD vehicle will be needed for driving the proposed site access route. The minimum factory specification for ground clearance recommended for driving on the project site roads is eight (8) inches. Those with less capable vehicles should group up with other attendees with vehicles more suited for the terrain. Attendees should be prepared to hike 2-3 miles during the pre-bid meeting. Much of the site is not currently accessible by vehicle.

Access to the mine features on the tour will require very strenuous hiking up and down steep, high-altitude, back-country terrain on loose, rocky ground covered with thorny desert vegetation. AML recommends that those with medical conditions consult a physician before making this hike. AML advises attendees to carry plenty of water during the hikes, wear clothing appropriate for the weather, wear long sleeves and long pants to protect from the abundant thorns, and wear sturdy hiking boots.

POINT OF CONTACT: Steve Needles, Project Engineer, New Mexico Abandoned Mine Land Program, 505.629.3076, [Steven.Needles@state.nm.us](mailto:Steven.Needles@state.nm.us)

**END OF INVITATION TO BID**

**APPENDIX A**  
**VENDOR INFORMATION FORM**

PURSUANT TO INTERNAL REVENUE SERVICE REGULATIONS, VENDORS MUST FURNISH THEIR TAXPAYER IDENTIFICATION NUMBER (TIN) TO THE STATE. IF THIS NUMBER IS NOT PROVIDED, THE VENDOR MAY BE SUBJECT TO A TWENTY PERCENT (20%) WITHHOLDING ON EACH PAYMENT. TO AVOID THIS TWENTY PERCENT (20%) WITHHOLDING AND TO ENSURE ACCURATE TAX INFORMATION IS REPORTED TO THE INTERNAL REVENUE SERVICE AND THE STATE, PLEASE USE THIS FORM TO PROVIDE THE REQUESTED INFORMATION.

Legal Business Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

**9 DIGIT TAXPAYER IDENTIFICATION NUMBER**

Social Security Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

---- or ----

Federal Employer Identification Number \_\_\_\_\_

Type of Business (Check One):

- \_\_\_\_\_ Individual
- \_\_\_\_\_ Sole Proprietorship
- \_\_\_\_\_ Partnership
- \_\_\_\_\_ General Limited
- \_\_\_\_\_ Corporation
- \_\_\_\_\_ Public Service Corporation
- \_\_\_\_\_ Government/Nonprofit
- \_\_\_\_\_ Other (please specify)

**OTHER TAX ACCOUNT NUMBERS**

New Mexico CRS Identification Number: \_\_\_\_\_

State Unemployment Tax Number: \_\_\_\_\_



Under penalties of perjury, I hereby declare that I have examined this form and to the best of my knowledge and belief, it is true and correct, and complete.

\_\_\_\_\_  
Name (print or type)

\_\_\_\_\_  
Title (print or type)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

---

**00100 – INSTRUCTIONS TO BIDDERS**

---

Title IV of the federal Surface Mining Control and Reclamation Act (SMCRA) of 1977, 30 U.S.C. Section 1201, *et seq.* provides for the reclamation of abandoned mine lands. All operators of coal mining operations subject to the provisions of SMCRA pay to the Secretary of the Interior Department, for deposit in the fund, a reclamation fee of thirty one and a half (31.5) cents per ton of coal produced by surface coal mining and thirteen and a half (13.5) cents per ton of coal produced by underground mining. Under SMCRA, individual states acquire federal funds from the Office of Surface Mining, Reclamation, and Enforcement (OSMRE) to administer an approved state reclamation program and to implement specific reclamation projects. The New Mexico Energy, Minerals and Natural Resources Department (EMNRD) administers the Abandoned Mine Land (AML) Program within New Mexico pursuant to a state approved plan and the requirements of the New Mexico Abandoned Mine Reclamation Act, NMSA 1978, § 69-25B-1, *et seq.* The supervision and coordination of work done under the AML Program are conducted by the Mining and Minerals Division (MMD) of EMNRD. Wherever the term Owner is used, it shall mean the MMD Director. EMNRD, MMD, and Owner may be collectively referred to as “EMNRD.”

MMD has obtained one hundred percent (100%) federal funds for this construction project. MMD is, by this Invitation to Bid (ITB), requesting bids from responsible, qualified Bidders for the construction project in accordance with the terms of this ITB. Bidders are advised that responsive bids are invited from both profit making and nonprofit organizations. EMNRD is an affirmative action and equal opportunity employer.

The deadline date for receipt of bids is no later than as listed in the Invitation to Bid. One each of the required bid documents, with original signature, must be received and stamped in at:

State Purchasing Division of the General Services Department  
Room 2016, Joseph M. Montoya Building  
1100 Saint Francis Drive  
Santa Fe, New Mexico 87505  
Phone: (1.505.827.0472)

Bids in response to this ITB will be opened publicly at:

State Purchasing Division of the General Services Department  
Joseph M. Montoya Building  
1100 Saint Francis Drive  
Santa Fe, New Mexico 87505

The name of each Bidder, the lump sum of each bid, and the Bidder’s Contractor License Number will be announced.

The Contract Time for project completion shall be no later than two hundred forty (240) calendar days, including all Sundays, holidays, and non-work days, after the Contractor receives a Notice to Proceed via USPS mail.

An abstract of the bids may be available for public inspection from the State Purchasing Division upon request. Those portions of any bid for which a Bidder has made a written request for confidentiality and for which the SPD Director has made a finding which concurs in that confidentiality shall be withheld from public inspection.

**IMPORTANT - BIDS MUST BE SUBMITTED IN A SEALED ENVELOPE WITH THE INVITATION TO BID NUMBER AND OPENING DATE CLEARLY INDICATED ON THE BOTTOM LEFT-HAND SIDE OF THE FRONT OF THE ENVELOPE.**

---

**00120 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS**

---

The following shall be included with each responsive bid:

I. Information

A fully completed Vendor Information Form (see Section 00010, Pre-Bid Information), including the name, address, telephone number, Taxpayer Identification Numbers, and signature of the Bidder, or of an officer or employee who has the authority of the Bidder. Do not leave blanks. This signature shall signify that the matters stated or certified on the form are true and accurate to the best of the Bidder's knowledge.

II. Bid

A fully completed Bid Form (Section 00300), including the name, address, telephone number, New Mexico Contractor's License Number, Contractor and Subcontractor New Mexico Labor Enforcement Fund Registration Numbers for bids and subcontracts greater than sixty thousand dollars (\$60,000.00), and signature of the Bidder, or of an officer or employee who has the authority to bind the Bidder. Do not leave blanks. This signature shall signify that the matters stated or certified in the bid are true and accurate to the best of the Bidder's knowledge and that the bid was made without collusion or fraud.

III. Security

Bid security shall be required of Bidders for construction contracts procured by competitive sealed bid. A bid security shall be in the form of a negotiable Surety Bond (see an example in Section 00410), Cashier's Check, Certified Check, or Money Order in the amount of at least five percent (5%) of the total bid payable to the Energy, Minerals and Natural Resources Department. A letter of credit is not acceptable.

#### IV. References

A list of the Bidder's general background including relevant resources, capabilities, experience, and references with telephone numbers (Section 00420). Do not leave blanks. The Bidder must have a minimum of five (5) years of related construction experience to qualify, and the helicopter subcontractor must have experience on three (3) projects in the previous five (5) years utilizing sling loads to deliver materials or equipment on construction projects.

#### V. Supplements

A complete listing of all subcontractors (Section 00430), if applicable, including for each subcontractor: the work to be performed; the subcontractor's name, address, telephone number, and New Mexico Contractor License Number, if applicable; and a complete listing of pertinent equipment (Section 00450) including for each piece of equipment: the type, manufacturer, model, capacity, and condition. Do not leave blanks.

If for any reason this ITB requires further amendment, such amendments shall be sent via addenda to all parties recorded by the Project Engineer as having received the Bidding Documents. Each Bidder shall be required to acknowledge the receipt of any addenda on the bid form. If such addenda become necessary, they will be distributed within a reasonable time to allow the Bidders to consider the amendment in preparation of their bid.

A responsive bid to the ITB shall be submitted as a sealed bid and shall include project costs for each work task on the Bid Form (Section 00300). Prices quoted in these sealed bids shall be firm fixed prices for both lump sum and/or unit prices as listed on the Bid Form. This ITB shall become a part of the final contract agreement.

The total bid amounts as read at the Bid Opening are tentative only and subject to verification of mathematical accuracy. Such verification may result in a change to the order of the bids. The Bidder with the lowest overall total bid price will be announced as the apparent low Bidder. The apparent low Bidder's bid will be carefully evaluated to ensure that it complies with the evaluation criteria listed below and the other requirements of this ITB. The bid will be awarded with reasonable promptness by written Notice of Award via certified mail to the lowest responsible, qualified Bidder. If for any reason the apparent low Bidder does not meet all the evaluation criteria listed below or comply with all the requirements of this ITB, the next lowest Bidder will be evaluated and awarded the contract if the evaluation criteria are met.

#### **The evaluation criteria include:**

1. possession of a valid New Mexico Contractor License appropriate for the work;
2. proof of registration with Labor Relations Division of the New Mexico Department of Workforce Solutions for contractor and all subcontractors when Bidder submits a bid valued at more than \$60,000;

3. proven records of satisfactory work performance for both Bidder and listed subcontractors; and

This evaluation is not conducted to determine whether one Bidder's offering is superior to another Bidder's but only to determine that a Bidder's offering is acceptable as set forth in the ITB.

Each Bidder shall submit information sufficient to evaluate the bid based on documentation of the Bidder's proven ability to perform the required tasks. Failure to provide the information required to evaluate the bid shall result in rejection of the bid without further discussion.

All questions about the meaning or intent of the Bidding Documents shall be submitted to the Project Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by the Project Engineer as having received the Bidding Documents. Questions received less than ten (10) business days before the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without effect. Bidders or the Contractor shall promptly notify the Project Engineer of any ambiguity, inconsistency, or error which they may perceive upon examination of the Bidding Documents or of the site and local conditions.

***Note: Because this project is one hundred percent (100%) federally funded, neither the New Mexico Resident Contractor's Preference nor the New Mexico Resident Veterans preference, apply to this procurement.***

#### VI. New Mexico Employees Health Insurance

- A. If Bidder has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least twenty (20) hours per week over a six (6) month period during the term of any Agreement which may result from this ITB, Bidder agrees, by submitting a bid, to have in place, and agree to maintain for the Agreement's term, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Bidder and the state exceed two hundred fifty thousand dollars (\$250,000).
- B. Bidder agrees to maintain a record of the number of employees who have:
  - 1) accepted health insurance;
  - 2) declined health insurance due to other health insurance coverage already in place; or
  - 3) declined health insurance for other reasons.

These records are subject to review and audit by a representative of the state.

- C. Bidder agrees to advise all employees of the availability of state publicly-financed health care coverage programs.

VI. Use of Brand Name Specifications

Use of any brand name herein is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

---

**00125 – BID ASSURANCES**

---

In addition to the requirements above, the Bidder must make, include, and agree to the following assurances as a part of the responsive bid submitted in response to this Invitation for Bids (ITB)

I. General

This ITB does not commit EMNRD to pay any costs incurred by any Bidder in the submission of a responsive bid, in making necessary studies and designs for the responsive bid, or in procuring or contracting for services or supplies for the preparation of the responsive bid. Issuance of this ITB does not constitute an award commitment by EMNRD. An ITB may be canceled and any or all bids may be rejected in whole or in part, when it is in the best interest of the State of New Mexico. EMNRD may waive, in its sole discretion, technical irregularities that do not affect the contractual conditions, delivery, price, quality, or quantity of the construction, services, or items of tangible personal property that are bid. EMNRD specifically reserves the right to reject responsible, qualified bids from which EMNRD is not able to determine the true amount of the bid, and bids that exceed EMNRD's budgeted or available funds for the project. Final approval for funding is contingent upon approval from the Department of the Interior: Office of Surface Mining - Albuquerque Field Office.

II. Confidentiality

It is further understood that all bids shall become a part of the official file on this matter without obligation of EMNRD and shall be made available for public inspection, unless the Bidder specifies in writing that specific portions of the bid are confidential and are to be held confidential by EMNRD in accordance with NMSA 1978, § 71-2-8. All matter intended to be confidential shall be submitted in a sealed envelope marked "confidential" and each page of the material shall also be marked clearly with the word "confidential". EMNRD reserves the right to review information submitted as to confidentiality. For this purpose, confidential information includes, but is not limited to, matter that relates to trade secrets or which is privileged commercial or financial information that affects the competitive rights of the person, firm, or corporation that submits it.

### III. Inspection

To assure EMNRD that the Bidder has the competence, equipment, facilities, and staff to furnish the services required under this contract, EMNRD shall be allowed to determine the adequacy of the competence, equipment, facilities, and staff of any Bidder considered for the contract award. For this purpose, if EMNRD deems it appropriate, the Bidder shall permit representatives of EMNRD to inspect the Bidder's equipment and facilities.

### IV. Samples

Bid samples or descriptive literature should not be submitted unless expressly requested. Regardless of any attempt by a Bidder to condition the bid, unsolicited bid samples or descriptive literature, which are submitted at the Bidder's risk, will not be examined or tested, and will not be deemed to vary any of the provisions of this ITB.

### V. Cancellation

Failure by the successful Bidder to return the signed contract with acceptable contract bond and insurance within ten (10) business days after receipt via certified mail of the Notice of Award shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of EMNRD, not as a penalty, but in liquidation of damages sustained.

---

## **00130 – MANDATORY PRE-BID CONFERENCE**

---

Prospective Bidders are required to attend the pre-bid conference, in order to inspect some of the mine features where the work is to be conducted and to familiarize themselves with the existing conditions that may affect the performance of the contract work. The mine features are located on public land and accessed by a narrow, unimproved 4WD road and then by foot. Subcontractors and suppliers are not required to attend the pre-bid conference; however, failure to inspect the site will not relieve subcontractors and suppliers from the responsibility of properly estimating the difficulty and cost of performing their portion of the work.

The mandatory pre-bid conference and site showing will be held at the project site to explain the work requirements. AML representatives will guide potential Bidders through a selection of the proposed work sites and will answer any questions. See the Invitation to Bid for date, location, and time.

The site showing is expected to take about four (4) hours including travel to the site from the meeting place. Prospective Bidders must provide their own transportation to the site, although they may be asked to consolidate into fewer vehicles depending on the number of persons who attend. Access to the features will require difficult hiking up and down steep, loose,

rocky ground. AML advises attendees to bring food and water, appropriate clothing, and hiking boots.

Those attending are advised to be prompt.

**NOTE: NOTHING STATED AT THE PRE-BID CONFERENCE SHALL CHANGE THIS INVITATION FOR BIDS UNLESS SUCH CHANGE IS MADE BY WRITTEN AMENDMENT.**



---

**ATTACHMENT CHECKLIST****THIS IS THE ATTACHMENT CHECKLIST:**

- A. \_\_\_\_\_ Bid Security Bond with Agent's Affidavit
- B. \_\_\_\_\_ List of Subcontractors and Equipment
- C. \_\_\_\_\_ Certificate of Insurance with Agency named as additional insured. (All subcontractors also insured.) **(due at time of award)**
- D. \_\_\_\_\_ Valid NM Contractor's License issued by Construction Industries Division (CID) per NMSA 1978, Section 60-13-12
- E. \_\_\_\_\_ New Mexico Employee Health Coverage Form **(due at time of award)**
- F. \_\_\_\_\_ List of 3 Customer References
- G. \_\_\_\_\_ Public Works Registration Number
- H. \_\_\_\_\_ Wage Rate Determination if bid amount is sixty thousand (\$60,000) or more issued by NM Dept. of Workforce Solutions **(due at time of award)**
- I. \_\_\_\_\_ Performance Bond and Payment & Materials Bond **(due at time of award)**

**00300 – BID FORMS****BIDDER NAME:** \_\_\_\_\_

<b>BID ITEM</b>	<b>MATERIAL OR WORK DESCRIPTION</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>ESTIMATED QUANTITY</b>	<b>BID AMOUNT</b>
1	MOBILIZATION/ DEMobilIZATION	LS		1	
2	MACHINE WASTE ROCK BACKFILL	CY		6650	
3	HAND WASTE ROCK BACKFILL	CY		89	
4	IMPORT WASTE ROCK BACKFILL	CY		1017	
5	PUF, SACKRETE, AND WASTE ROCK CLOSURE				
5a	POLYURETHANE FOAM AND BACKING	CY		111	
5b	SACKRETE AND REBAR	SF		941	
5c	WASTE ROCK BACKFILL	CY		100	
6	PUF AND WASTE ROCK HORIZONTAL CLOSURE				
6a	POLYURETHANE FOAM AND BACKING	CY		52	
6b	WASTE ROCK BACKFILL	CY		229	
7	PUF AND WASTE ROCK VERTICAL CLOSURE				
7a	POLYURETHANE FOAM AND BACKING	CY		40	
7b	WASTE ROCK BACKFILL	CY		22	

BID ITEM	MATERIAL OR WORK DESCRIPTION	UNIT	UNIT PRICE	ESTIMATED QUANTITY	BID AMOUNT
1	MOBILIZATION/ DEMobilIZATION	LS		1	
2	MACHINE WASTE ROCK BACKFILL	CY		6650	
3	HAND WASTE ROCK BACKFILL	CY		89	
4	IMPORT WASTE ROCK BACKFILL	CY		1017	
5	PUF, SACKRETE, AND WASTE ROCK CLOSURE				
5a	POLYURETHANE FOAM AND BACKING	CY		111	
5b	SACKRETE AND REBAR	SF		941	
5c	WASTE ROCK BACKFILL	CY		100	
6	PUF AND WASTE ROCK HORIZONTAL CLOSURE				
6a	POLYURETHANE FOAM AND BACKING	CY		52	
6b	WASTE ROCK BACKFILL	CY		229	
7	PUF AND WASTE ROCK VERTICAL CLOSURE				
7a	POLYURETHANE FOAM AND BACKING	CY		40	
7b	WASTE ROCK BACKFILL	CY		22	

BID ITEM	MATERIAL OR WORK DESCRIPTION	UNIT	UNIT PRICE	ESTIMATED QUANTITY	BID AMOUNT
8	METAL GRATE CLOSURE				
8a	4"X2"X1/4" METAL CROSS BARS AND BEAMS	LF		1484	
8b	BEAM SUPPORT ANCHORS	PER		52	
8c	ALTERNATE CONCRETE BEAM SEAT ANCHORS	PER		9	
9	STEEL MESH CLOSURE				
9a	STEEL MESH (INCLUDING OVERLAP CLIPS)	SF		36700	
9b	STEEL MESH ANCHORS	PER		234	
10	METAL EGRESS CLOSURE				
10a	EGRESS CLOSURE GATE	PER		2	
10b	WASTE ROCK AND MORTAR FRAME	CF		86	
11	ADIT AND STOPE METAL GRATE CLOSURE				
11a	4"X2"X1/4" METAL BEAMS	LF		805	
11b	2"X2"X1/4" CROSS BARS	LF		6102	
11c	4"X4"X1/4" COLUMNS	LF		272	
11d	CONCRETE FOOTING ANCHORS	PER		12	
11e	BEAM SUPPORT ANCHORS	PER		109	
12	METAL BARRIER FENCE	LF		650	
13	CHAIN LINK FENCE REPAIR				
13a	CROSS BAR REPAIR	PER		1	
13b	CHAIN LINK FENCE PATCH	SF		160	
14	SEEDING AND MULCHING				
14a	HYDROSEEDING AND HYDROMULCHING	SF		43560	
14b	HAND SEEDING AND MUCULCHING	SF		43560	

BID ITEM	MATERIAL OR WORK DESCRIPTION	UNIT	UNIT PRICE	ESTIMATED QUANTITY	BID AMOUNT
8	METAL GRATE CLOSURE				
8a	4"X2"X1/4" METAL CROSS BARS AND BEAMS	LF		1484	
8b	BEAM SUPPORT ANCHORS	PER		52	
8c	ALTERNATE CONCRETE BEAM SEAT ANCHORS	PER		9	
9	STEEL MESH CLOSURE				
9a	STEEL MESH (INCLUDING OVERLAP CLIPS)	SF		36700	
9b	STEEL MESH ANCHORS	PER		234	
10	METAL EGRESS CLOSURE				
10a	EGRESS CLOSURE GATE	PER		2	
10b	WASTE ROCK AND MORTAR FRAME	CF		86	
11	ADIT AND STOPE METAL GRATE CLOSURE				
11a	4"X2"X1/4" METAL BEAMS	LF		805	
11b	2"X2"X1/4" CROSS BARS	LF		6102	
11c	4"X4"X1/4" COLUMNS	LF		272	
11d	CONCRETE FOOTING ANCHORS	PER		12	
11e	BEAM SUPPORT ANCHORS	PER		109	
12	METAL BARRIER FENCE	LF		650	
13	CHAIN LINK FENCE REPAIR				
13a	INSTALL CROSS BAR SUPPORTS	PER		1	
13b	CHAIN LINK FENCE PATCH	SF		160	
14	SEEDING AND MULCHING				
14a	HYDROSEEDING AND HYDROMULCHING	SF		43560	

Boston Hill Mine Safeguard Project

Silver City, New Mexico

14b	HAND SEEDING AND MUCLHING	SF		43560	
-----	------------------------------	----	--	-------	--

**TOTAL BASE BID<sup>1</sup> (Do NOT include Gross Receipts Tax (GRT) on this amount. GRT will be added on the invoice submitted to EMNRD at the time of billing for services rendered.)**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(Written Whole Dollars and Zero Cents)

(Amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

I agree to the assurances set out in the Invitation to Bid, all of which are incorporated and included in this Bid Form by reference. I certify that I have the authority to bind the Bidder. The matters stated in this bid are true and accurate to the best of the Bidder's knowledge. This bid is made without collusion or fraud.

**SIGNED:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**BIDDER'S NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**TELEPHONE NO.:** \_\_\_\_\_

**NEW MEXICO CONTRACTOR'S LICENSE NO:** \_\_\_\_\_

**LICENSE CATEGORIES:** \_\_\_\_\_

**CONTRACTOR NM LABOR ENFORCEMENT FUND REGISTRATION NO.:<sup>2</sup>**

**SUBCONTRACTOR LABOR ENFORCEMENT FUND REGISTRATION NO.(S):<sup>1</sup>**

<sup>2</sup> Required for bids and subcontracts valued at more than fifty thousand dollars (\$50,000).

I (we) do hereby acknowledge receipt of the following addenda to the project documents:

**Addendum No.** \_\_\_\_\_ **Dated:** \_\_\_\_\_

**Addendum No.** \_\_\_\_\_ **Dated:** \_\_\_\_\_

**Addendum No.:** \_\_\_\_\_ **Dated:** \_\_\_\_\_

**00400 – SUPPLEMENTS TO BID FORMS****00410 - Bid Security Form**

Bond No. \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS**, that we \_\_\_\_\_

(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and \_\_\_\_\_

(Insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of New Mexico as Surety, hereinafter called the Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Obligee, in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has submitted a bid for the Project.

**NOW, THEREFORE**, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract or give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL (Seal)\_\_\_\_\_  
WITNESS\_\_\_\_\_  
TITLE\_\_\_\_\_  
SURETY (Seal)\_\_\_\_\_  
WITNESS\_\_\_\_\_  
TITLE



This page was intentionally left blank.

**00420 - Bidder's Qualification Forms****CONTRACTOR'S QUALIFICATION STATEMENT**

To be filled out by the Bidder and returned with the responsive Bid.

BIDDER: \_\_\_\_\_

I. Experience

List the relevant construction projects that your organization has completed in the past ten (10) years, giving the name of the project, project owner, contract amount, date of completion, and percentage of the cost of the work performed with your own forces. Do not leave blanks.

I. Project Name: \_\_\_\_\_

Owner: \_\_\_\_\_

Contract Amount: \$ \_\_\_\_\_

Completion Date: \_\_\_\_\_ Percentage: \_\_\_\_\_

II. Project Name: \_\_\_\_\_

Owner: \_\_\_\_\_

Contract Amount: \$ \_\_\_\_\_

Completion Date: \_\_\_\_\_ Percentage: \_\_\_\_\_

III. Project Name: \_\_\_\_\_

Owner: \_\_\_\_\_

Contract Amount: \$ \_\_\_\_\_

Completion Date: \_\_\_\_\_ Percentage: \_\_\_\_\_

IV. Project Name: \_\_\_\_\_

Owner: \_\_\_\_\_

Contract Amount: \$ \_\_\_\_\_

Completion Date: \_\_\_\_\_ Percentage: \_\_\_\_\_

V. Project Name: \_\_\_\_\_

Owner: \_\_\_\_\_

Contract Amount: \$ \_\_\_\_\_

Completion Date: \_\_\_\_\_ Percentage: \_\_\_\_\_

## II. References

List references for the above projects including work performed, contact person, firm represented, mailing address, email address, and phone number with area code. Do not leave blanks.

1. Work Performed: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

2. Work Performed: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_  
Email Address: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

**3. Work Performed:** \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

**4. Work Performed:** \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

**5. Work Performed:** \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (      ) \_\_\_\_\_

**6. Work Performed:** \_\_\_\_\_

\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (      ) \_\_\_\_\_

**7. Work Performed:** \_\_\_\_\_

\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (      ) \_\_\_\_\_

**8. Work Performed:** \_\_\_\_\_

\_\_\_\_\_

Contact Name: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: (      ) \_\_\_\_\_

This page was intentionally left blank

**LIST OF SUBCONTRACTORS AND EQUIPMENT**

To be filled out by the Bidder and returned with the responsive Bid.

**BIDDER:** \_\_\_\_\_**00430 – SUBCONTRACTORS LIST**

Any person submitting a bid shall in this bid set forth the name and location of the place of business of each subcontractor under subcontract to the Contractor who will perform work or labor or render service to the Contractor in or about the construction of the public works construction project and whose total contract will be in excess of five thousand dollars (\$5,000.00) and the nature of the work which will be done by each subcontractor under the New Mexico Subcontractors Fair Practices Act, NMSA 1978, § 13-4-34. The Contractor shall list only one subcontractor for each category as defined by the Contractor in this bid. Do not leave blanks. If no subcontractors, indicate such. The statute does not require listings of second tier subcontractors, material suppliers, and subcontractors whose contracts are less than five thousand dollars (\$5,000.00).

**1. Work:** \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_

**2. Work:** \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_

**3. Work:** \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_

4. Work: \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_

5. Work: \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_

6. Work: \_\_\_\_\_

Public Works Number: \_\_\_\_\_

Firm Represented: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No.: (\_\_\_\_) \_\_\_\_\_ License No.: \_\_\_\_\_



**00450 – EQUIPMENT LIST**

List all pertinent equipment proposed to be employed on the above Project as required by the bidding documents. Attach a list on a separate piece of paper if more space is needed.

**The equipment list will be used to determine eligibility of bidders. All bids must include the Equipment List.**

- A. Equipment Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Capacity: \_\_\_\_\_  
Condition: \_\_\_\_\_
- B. Equipment Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Capacity: \_\_\_\_\_  
Condition: \_\_\_\_\_
- C. Equipment Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Capacity: \_\_\_\_\_  
Condition: \_\_\_\_\_
- D. Equipment Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Capacity: \_\_\_\_\_  
Condition: \_\_\_\_\_
- E. Equipment Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Model: \_\_\_\_\_  
Capacity: \_\_\_\_\_  
Condition: \_\_\_\_\_

**F.** Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Capacity: \_\_\_\_\_

Condition: \_\_\_\_\_

**G.** Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Capacity: \_\_\_\_\_

Condition: \_\_\_\_\_

**H.** Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Capacity: \_\_\_\_\_

Condition: \_\_\_\_\_

**I.** Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Capacity: \_\_\_\_\_

Condition: \_\_\_\_\_

This page was intentionally left blank.

---

**00500 – SAMPLE AGREEMENT FORMS**

---

**SHARE Contract No. 00-52100-20-06006****STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT****CONSTRUCTION SERVICES CONTRACT**

THIS AGREEMENT is made and entered into by and between the State of New Mexico Energy, Minerals and Natural Resources Department (EMNRD), and [REDACTED] (Contractor). EMNRD's Director and staff of the Mining and Minerals Division (MMD) shall supervise and coordinate the work under this Construction Services Contract (Agreement).

***IT IS MUTUALLY AGREED BETWEEN THE PARTIES:*****I. Scope of Work**

A. The Contractor shall perform the work described in the Specifications for the Boston Hill, Mine Safeguard Project, Grant County, New Mexico in the Project Manual which is part of Invitation to Bids (ITB) No. EMNRD-MMD-xxxx. The ITB was solicited by the General Services Department, State Purchasing Division ITB No. [REDACTED]. The Project Manual, Specifications, ITB, and Contractor's completed Bid Response (dated: XXXXX) are all incorporated into and made a part of this Agreement by reference. EMNRD shall have the sole authority to approve any changes to the Scope of Work and the Specifications and to approve the Contractor's final work product.

B. Within thirty (30) calendar days of receiving the written Notice to Proceed (NTP) via certified mail, the Contractor shall mobilize to the site and commence work. Prior to commencement of work, the Contractor shall obtain all necessary permits required for this work.

C. **BEFORE ANY WORK IS INITIATED**, the Contractor shall give notice to all utility companies that provide service to the contract site and inform the utility companies of the work to be performed. In the event that work performed in connection with this Agreement may disturb utilities, Contractor shall coordinate with utility companies to ensure that locations of overhead or buried utilities and appurtenances are marked. Prior to work taking place, Contractor shall provide advance notice to consumers who may be affected by service disruption.

**II. Compensation**

A. EMNRD shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of [REDACTED] (\$xxx,xxx.xx), including New Mexico Gross Receipts Taxes, if applicable.

---

The Contract Sum is determined as follows:

Total Base Bid	\$ _____
Gross Receipts Tax @ 8.2500%	\$ _____
Total Contract Sum	\$ _____

If the state gross receipts tax or local option tax increases the Contractor must submit a request for a change order in order to increase the state gross receipts tax or local option tax on this Agreement (1.4.1.24 NMAC).

Agreements solicited by competitive sealed bids shall require that the bid amount exclude the applicable state gross tax or local option tax but that EMNRD shall be required to pay the tax including any increase in the tax becoming effective after this Agreement is entered into. The tax shall be shown as a separate amount on each billing or requires for payment made under this Agreement.

B. Subject to subparagraph II.A. above, and based on Applications for Payment (invoice), a copy of which is included herein at Section 00900 of the Project Manual, submitted to the EMNRD Project Engineer by the Contractor and Certificates for Payment issued by the EMNRD Project Engineer, EMNRD shall make progress payments on account of the Contract Sum, to the Contractor as provided in the Contract Documents for the period ending the last day of the month as follows: no later than twenty-one (21) days following receipt by EMNRD of the undisputed Application for Payment, one hundred percent (100%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work, and one hundred percent (100%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by EMNRD; and upon Substantial Completion of the entire Work, a sum sufficient to increase the total payments to one hundred percent (100%) of the Contract Sum, less such amounts as the EMNRD Project Engineer shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents, which shall be paid in accordance with this Compensation Section.

C. Prompt Payment Act Compliance: Contractor shall comply with the Prompt Payment Act, NMSA 1978, § 57-28-5(C), in making prompt payments to its subcontractors and suppliers for amounts owed for work performed relating to this Agreement within seven days of receipt of payment from EMNRD.

D. Final Payment: Final payment constituting the entire undisputed and unpaid balance of the Contract Sum shall be paid by EMNRD to the Contractor within ten (10) days after the EMNRD Project Engineer completes a final inspection and the EMNRD Project

Manager notifies the Project Engineer that all incomplete and unacceptable work that was noted during the Final Inspection has been corrected.

III. Term and Liquidated Damage for Inconvenience and Increased Administrative Cost

The Work to be performed under this Agreement shall commence no later than thirty (30) consecutive calendar days after the date of written "Notice to Proceed." Project completion (see Section 00100 of the Project Manual) shall be no later than two hundred forty (240) days, including all Sundays, holidays, and non-work days, after the Contractor receives a written Notice to Proceed, except as hereafter extended by EMNRD by valid written Change Order.

The parties agree that time for the performance of this Agreement is of the essence. Should the Contractor fail to perform the entire project within the Contract Time for project completion, the Contractor agrees to the charge of three hundred dollars (\$300) per calendar day of liquidated damages representing inconvenience and increased administrative cost. Such damages shall begin to accrue on the calendar day following the last day for performance of work under this Agreement. The Contract stipulates that EMNRD may withhold additional payments under this Agreement or attach the performance bond to cover the liquidated damages set forth above or to cover the cost of any duplicative work that is made necessary by Contractor's failure to perform as required by this Agreement. Liquidated damages shall continue until written notice of satisfactory completion is forwarded by the Project Manager to the Project Engineer. This provision is limited to damages for inconvenience and increased administrative cost, and shall not otherwise affect EMNRD's right to seek other remedies including other damages, at law or in equity.

IV. Termination

A. For Reasons Beyond Contractor's Control

1. EMNRD may, by written order, terminate this Agreement or any portion thereof after determining that, for reasons beyond Contractor's control, the Contractor is prevented from proceeding with or completing the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be limited to, executive orders of the President relating to prosecution of war or national defense, acts of God, labor strikes, a national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national, state or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.

2. If EMNRD orders termination of this Agreement effective on a certain date, payment shall be made for the actual number of units or items of work completed at the contract unit price, or as mutually agreed for items of work partially completed.

3. Acceptable materials Contractor obtains for the work but which have not been incorporated therein, may, at EMNRD's option, be purchased from the Contractor at actual cost, delivered to a prescribed location, or otherwise disposed of as mutually agreed.

4. After receipt of EMNRD's notice of termination issued pursuant to this Section IV.A., the Contractor may submit a claim for costs not covered above or elsewhere in the Specifications. Such claim may include such cost items as reasonable idle equipment time, mobilization efforts, overhead expenses attributable to the project terminated, legal and accounting charges involved solely in preparing the claim for costs, subcontractor costs not otherwise paid for, actual idle labor costs if work is stopped in advance of termination date, and guaranteed payments for private land usage as part of the original contract. In no event, however, shall loss of anticipated profits be considered as part of any settlement.

5. The Contractor agrees to make all cost records available upon EMNRD's request.

6. Termination of a contract or portion thereof shall not relieve the Contractor of any contractual responsibilities for the work completed, nor shall it relieve the surety of its obligation for and concerning any just claim arising out of the work performed.

B. For Reasons Within Contractor's Control:

1. If the Contractor:

- a. fails to begin the work under this Agreement within the time specified in the Notice to Proceed;
- b. fails to perform the work with sufficient skilled workers and equipment or with sufficient proper materials to assure the prompt completion of said work;
- c. fails to comply with laws, ordinances, rules, regulations or orders of public authority having jurisdiction;
- d. performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable;
- e. discontinues the prosecution of the work, without EMNRD's prior written approval;
- f. fails to resume work which has been discontinued without EMNRD's prior written approval within a reasonable time after notice to do so;

- g. becomes insolvent or files for bankruptcy or is placed into bankruptcy by creditors, or commits any acts of bankruptcy or insolvency;
- h. allows a final judgment, in a suit filed in connection with this Agreement, to stand against the Contractor unsatisfied for a period of 30 business days;
- i. makes an assignment, in connection with this Agreement, for the benefit of creditors;
- j. fails to carry on the work in an acceptable manner; or
- k. otherwise has committed a material breach of this Agreement.

If EMNRD wishes to terminate this Agreement for any of the above reasons, EMNRD shall give notice in writing to Contractor and the surety of the occurrence(s) upon which EMNRD bases the termination, and the corrective measures to be taken (Default Notice), if any. Failure of EMNRD to provide a default notice or terminate this Agreement shall not operate as a waiver by EMNRD either at the time of such failure or in the future.

If the Contractor or surety, within a period of ten (10) business days after such notice, does not proceed in accordance therewith, then EMNRD shall have full power and authority without violating this Agreement to take possession of the premises and of all materials thereon and finish the work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment for the work that Contractor performed after the date of the Default Notice until the work is finished. EMNRD shall also have all remedies available to it at law and in equity.

#### V. Status of the Contractor

The Contractor and its agents and employees are independent Contractors performing construction services for EMNRD and are not employees of the State of New Mexico. The Contractor and its agents and employees shall not accrue leave, retirement, insurance, bonding, use of state vehicles, or any other benefits afforded to employees of the State of New Mexico as a result of this Agreement.

#### VI. Assignment

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the prior written approval of EMNRD.

#### VII. Subcontracting

The Contractor shall comply fully with the provisions of the New Mexico Subcontractors Fair Practices Act, NMSA 1978, § 13-4-31 through 13-4-42. The Contractor shall not subcontract any portion of the services to be performed under this Agreement or obligate itself in



any manner to any third party, with respect to any rights or responsibilities under this Agreement, without the prior written approval of EMNRD.

#### VIII. Records and Audit

The Contractor shall maintain detailed time and expenditure records that show the date, time, nature and cost of services rendered under this Agreement and retain them for six years from the date of final payment under this Agreement. These records shall be maintained and available within the State of New Mexico if the Contractor has an office within the state; otherwise, Contractor shall make such records available to EMNRD within New Mexico within five business days upon EMNRD's request. The records shall be subject to inspection by EMNRD, DFA, the State Auditor and the U.S. Department of the Interior (DOI). Contractor further agrees to include in all subcontracts hereunder the same right of inspection and audit against all subcontractors. EMNRD shall have the right to audit billings both before and after payment. Payment under this Agreement shall not foreclose EMNRD's right to recover excessive or illegal payments. The periods of inspection and audit may be extended for records, which relate to litigation or settlement of claims arising out of performance of this Agreement and costs and expenses of this Agreement for which exception is under consideration by DOI or any authorized representative and shall continue until all potential litigation, appeals, claims or exceptions have expired or been resolved.

#### IX. Appropriations

The terms of this Agreement are contingent upon sufficient appropriations and authorization being made by the Legislature of New Mexico, the federal Congress, and DOI for the performance of this Agreement. If sufficient appropriations and authorization are not made, this Agreement shall terminate upon written notice being given by EMNRD to the Contractor. EMNRD's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

#### X. Release

The Contractor, upon final payment of the amount due under this Agreement, releases EMNRD, its officers and employees, and the State of New Mexico from all liabilities, claims, and obligations whatsoever arising from or under this Agreement. This release is self-executing upon such final payment. The Contractor agrees not to purport to bind the State of New Mexico to any obligation unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

#### XI. Confidentiality

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of EMNRD.

## XII. Amendment

This Agreement shall not be altered, changed, or amended except by instrument in writing executed by the parties hereto.

## XIII. Scope of Agreement

This Agreement incorporates all the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof, and all such agreements, covenants, and understandings have been merged into this written Agreement. No prior agreements or understandings, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless expressly incorporated into this Agreement.

## XIV. Civil and Criminal Liability Notice

The Procurement Code, NMSA 1978, §§ 13-1-28 through 13-1-199, imposes civil and misdemeanor criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kick-backs.

## XV. Equal Opportunity Compliance

Contractor agrees to abide by all federal and state laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, pertaining to equal employment opportunity. In accordance with all such laws of the State of New Mexico, Contractor assures that no person in the United States shall, on the grounds of race, religion, color, national origin, ancestry, sex, age, physical or mental handicap, or serious medical condition, spousal affiliation, sexual orientation or gender identity, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If Contractor is found not to be in compliance with these requirements during the life of this Agreement, Contractor agrees to take appropriate steps to correct these deficiencies.

## XVI. Applicable Law

This Agreement shall be governed by the laws of the State of New Mexico, without giving effect to its choice of law provisions. In any lawsuit filed that relates to or arises from this Agreement or any obligations hereunder, venue shall be only in the New Mexico State District Court in Santa Fe, New Mexico. By executing this Agreement, Contractor agrees and consents to the personal jurisdiction of the State Court of New Mexico over any and all lawsuits relating to or arising from this Agreement or any obligation hereunder.

**XVII. Waiver**

No waiver of any of the terms or conditions of this Agreement shall be valid or binding unless the waiver request is submitted in writing by the party making the request and then approved and signed by the party granting the waiver.

**XVIII. Notices**

A. Unless EMNRD specifies otherwise in a writing that is delivered pursuant to this Paragraph, notices and all other matters concerning the work to be performed hereunder shall be addressed to EMNRD as follows:

Project Engineer: Steve Needles, P.E.  
Mining and Minerals Division  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
505.476.3417

B. Unless the Contractor shall specify otherwise in a writing that is delivered pursuant to this Paragraph, notices and all other matters concerning the work to be performed hereunder shall be addressed to the Contractor as follows:

NAME OF CONTRACTOR  
ADDRESS  
ADDITIONAL ADDRESS  
CITY, ST, ZIP  
(XXX) XXX-XXXX

C. Any and all notices or other communications required or permitted by this Agreement or by law to be served or given to either party hereto by the other party hereto shall be in writing and shall be deemed duly served and given upon actual receipt by or three (3) business days subsequent to certified mailing to the party to whom it is directed, whichever is earlier.

**XIX. Indemnification**

The Contractor shall defend, indemnify, and hold harmless EMNRD, and its officers, employees, agents and representatives, and the State of New Mexico from all actions, proceedings, claims, demands, costs, damages, attorneys' fees, and all other liabilities and expenses of any kind from any source that may arise out of this Agreement's performance, caused by the negligent or intentional act or failure to act of Contractor, its officers, employees, servants, subcontractors, consultants, clients, or agents, resulting in injury or damage to persons

or property during the time when Contractor, its officers, agents, employees, servants, subcontractors, or consultants has or is performing services pursuant to this Agreement. In the event that any action, suit, or proceeding related to the services performed by Contractor, its officers, agents, employees, servants, subcontractors, clients, consultants under this Agreement is brought against Contractor, or any of its officers, agents, employees, servants, subcontractors or consultants, Contractor shall, as soon as practicable but no later than two days after it receives notice thereof, notify EMNRD's legal counsel and the Risk Management Division of the New Mexico General Services Department by certified mail. Nothing in this Agreement shall be deemed to be a waiver by the State of New Mexico of the provisions of the Tort Claims Act, NMSA 1978, §§ 41-4-1 *et seq.*

XX. Duty to Insure

A. In respect solely to the work occasioned by this Agreement, the Contractor shall obtain and maintain at all times during the term of this Agreement, and any extension thereof, insurance of the kind and in the amounts herein specified. Such insurance shall be provided by insurance companies authorized to do business in New Mexico and shall name the "State of New Mexico, EMNRD, MMD, and its agents and employees thereof" as either additional insured, co-insured, or third-party beneficiaries and shall specifically state the coverage provide under the policy is primary over any other valid and collectible insurance and provide a waiver of subrogation.

1. General Liability. Bodily injury liability and property damage liability insurance in the following minimum amounts: five hundred thousand dollars (\$500,000.00) for damages to or destruction of property arising out of a single occurrence; one million dollars (\$1,000,000.00) to any person for any number of claims arising out of a single occurrence for all damages other than property damages, and one million dollars (\$1,000,000.00) for all claims arising out of a single occurrence.

2. Automobile Liability. Automobile liability insurance covering the ownership, operation, and maintenance of owned, non-owned, and hired vehicles, in the following amounts:

**Bodily injury liability –**

Seven hundred thousand dollars (\$700,000.00) each person

One million dollars (\$1,000,000.00) each occurrence;

**Property damage liability--**

One million dollars (\$1,000,000.00) each occurrence.

3. Workers' Compensation. The Contractor shall comply fully with the provisions of the New Mexico Workers' Compensation Act, NMSA 1978, §§ 52-1-1 through 52-1-70.

B. The Contractor shall furnish EMNRD with certificates of insurance and such other proof of insurance as EMNRD may require, prior to commencing work under this Agreement, and shall not commence any work under this Agreement until the required insurance

coverage is obtained. The insurance coverage shall not be changed, canceled, or allowed to lapse without giving EMNRD thirty (30) business days' prior written notice.

XXI. New Mexico Employees Health Insurance

A. If Contractor has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least twenty (20) hours per week over a six (6) month period during the term of this Agreement, Contractor certifies, by signing this Agreement, to have in place, and agree to maintain for this Agreement's term, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Contractor and the state exceed two hundred fifty thousand (\$250,000).

- B. Contractor agrees to maintain a record of the number of employees who have:
- 1) accepted health insurance;
  - 2) declined health insurance due to other health insurance coverage already in place; or
  - 3) declined health insurance for other reasons.

These records are subject to review and audit by a representative of the state.

C. Contractor agrees to advise all employees of the availability of state publicly-financed health care coverage programs.

XXII. Disputes

Any dispute, other than the Contractor's acts set forth in Section IV, Termination, B., For Reasons Within Contractor's Control, concerning a question of fact arising under this Agreement, not disposed of by agreement, shall, first, be decided by the MMD Director, who shall reduce a decision to writing and furnish a signed copy to the Contractor. Such decision shall be final and conclusive unless, within thirty (30) calendar days from the date of notification of the decision by certified mail, the Contractor mails or otherwise furnishes to the MMD Director, a written appeal, addressed to the EMNRD Secretary, to which MMD may respond in ten (10) business days. The Contractor shall be afforded an opportunity to be heard. The decision of the EMNRD Secretary or the authorized representative thereof, shall be final and conclusive.

XXIII. Suspension of Work

A Suspension of Work Notice may be issued by the Project Manager if the Project Manager believes that any action of the Contractor is contrary to the intent of this Agreement or that any health or safety standard is violated or that a threat to public health or safety exists. No work performed after issuance of a Suspension of Work Notice shall be eligible for payment

while such notice is in effect. No work shall proceed until such notice is vacated, in writing, by the MMD Director.

XXIV. Compliance with the Public Works Minimum Wage Act and Minimum Wage Rate Decision

A. If the Work to be performed under this Agreement is subject to the provisions of the Public Works Minimum Wage Act, NMSA 1978, Section 13-4-11 *et seq.*, Contractor shall comply with such act and applicable state rules. Each Application for Payment submitted to EMNRD shall include a certification by Contractor that it has complied with the provisions of NMSA 1978, Section 13-4-11 and applicable state rules when making wage payments for work performed pursuant to this Agreement.

B. This Agreement is within the scope of the Public Works Minimum Wage Act, NMSA 1978, §§ 13-4-10, *et seq.* The Minimum Wage Rate Decision No. LU-19-2265-H of the New Mexico Labor and Industrial Division (1.505.841.4408) shall be complied with by the Contractor and any subcontractors. A copy of the Decision is included at Section 00830 of the Project Manual.

C. If compensation to be paid under this Agreement is in excess of sixty thousand dollars (\$60,000.00), the minimum wages and fringe benefits to be paid to various classes of laborers and mechanics, shall be based upon the wages and benefits that will be determined by the Director (Director) of the Labor Relations Division (LRD) of the New Mexico Workforce Solutions Department, to be prevailing for the corresponding classes of laborers and mechanics employed on contract work of a similar nature in the state or locality.

D. The Contractor, subcontractor, employer or a person acting as a contractor shall pay all mechanics and laborers employed on the site of the project, unconditionally and not less often than once a week and without subsequent unlawful deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates and fringe benefit rates not less than those determined pursuant to NMSA 1978, Section 13-4-11.B to be the prevailing wage rates and prevailing fringe benefit rates issued for this project.

E. Pursuant to 11.1.2.9.B(6) through (10) NMAC, Public Works Minimum Wage Act Policy Manual, Contractor and all tiers of subcontractors shall submit certified weekly payroll records to EMNRD on a bi-weekly basis, and, to the LRD Director when requested by the Director or an interested party such as contractors, contracting agencies, labor organizations and contractor associations.

1. All payroll records provided to EMNRD must contain the following information in the specified format:

(a) the employee's full name and address need only appear on the first payroll on which the employee's name appears, unless a change of address necessitates an additional submittal to reflect the new address;

(b) the employee's classification (or classifications);

(c) the employee's hourly wage rate (or rates); the employee's hourly fringe benefits; and where applicable, the employee's overtime hourly wage rate (or rates);

(d) the daily and weekly hours worked in each classification, including actual overtime hours worked (not adjusted);

(e) the itemized deductions made;

(f) the net wages paid; and

(g) the number of the wage rate decision issued on the project by the Director.

2. All payrolls shall be numbered, starting with number one for the first payroll at the beginning of the job and continuing in numerical order until the job is completed.

3. Contractor and each of his or her subcontractors shall submit a bi-weekly statement of compliance in the following form:

Date \_\_\_\_\_

I, \_\_\_\_\_, (Name of Signatory Party)  
(Title)

do hereby state:

That I pay or supervise the payment of the persons employed by \_\_\_\_\_  
(contractor or subcontractor) on the \_\_\_\_\_; that (building or work)

During the payroll period commencing on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ (Contractor or subcontractor) from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than deductions permitted by law.

That any payrolls under this Agreement required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates incorporated into the Agreement; that the classifications set forth therein for each laborer or mechanic conform with the work he performed. That any apprentices or trainees employed in the above period are duly registered in a bona fide apprenticeship program registered with a state apprenticeship agency recognized by the office of apprenticeship United States department of labor, or properly enrolled in a bona fide training program approved for application on public works construction projects by the appropriate state or federal agency(ies) if and as required by law and applicable federal regulation.

I, \_\_\_\_\_, being first duly sworn on oath under penalty of perjury, swear that the foregoing information is true and correct.

Notary: Subscribed and sworn to before me at

\_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary public

\_\_\_\_\_  
(SIGNATURE)

\_\_\_\_\_  
(DATE)

My commission expires: \_\_\_\_\_

4. The Contractor and all subcontractors and their tiers shall deliver or mail to EMNRD legible copies of the certified weekly payrolls prepared in accordance with these regulations to the prime contractor and the contracting agency no more than five (5) working days following the close of the second payroll period. Weekly payrolls shall be submitted bi-weekly.

5. The affidavit form must be filed prior to the final payment to a Contractor. Bond monies and retainage will be released only to Contractors who have filed affidavits pursuant to the provisions of 11.1.2. NMAC. Any Contractor or subcontractor who files a false statement or refuses to file any statement or record required to be filed under the provisions of 11.1.2 NMAC shall be considered as non-compliant and shall be subject to debarment proceedings. EMNRD and Contractor shall keep all certified payroll records for four (4) years after the completion of this Agreement.

F. EMNRD shall require wage rate inspections during the period of construction.

G. Contractors and all contracting tiers on projects must file a statement of intent to pay prevailing wages (intent), and an affidavit of wages paid (affidavit). The intent form must be filed with EMNRD within three (3) business days of the award of each respective contract. EMNRD will make no payments to a non-compliant contractor until an intent form is filed.

H. Contractor or subcontractor shall post minimum wage rates in a prominent, easily accessible place at the site of each particular project.

I. The LRD Director shall furnish EMNRD with a poster containing the minimum wage rates. EMNRD shall forward said poster to Contractor for posting at each particular project site.

J. Contractor and subcontractor shall comply with all requirements imposed by the Public Works Minimum Wage Act and 11.1.2 NMAC.

K. Contractor's records shall be subject to inspection by state and federal agencies that have jurisdiction over such matters to determine compliance with the provisions of NMSA 1978, Section 13-4-11 *et seq.*, as provided above or by an applicable federal or state law. If Contractor fails to comply with the provisions of this Section XXVII, EMNRD may terminate this Agreement by giving notice in the manner provided herein.

#### XXV. Required Bond for Public Works Contractor

This Agreement is within the scope of NMSA 1978, §§ 13-4-18 through 13-4-20.  
BEFORE BEGINNING ANY WORK UNDER THIS AGREEMENT, the Contractor shall



furnish a performance bond (see example in Section 00610 of the Project Manual) and a payment bond (see example in Section 00620 of the Project Manual) both executed by the Contractor and issued by a surety authorized to do business in the State of New Mexico in an amount equal to one hundred percent (100%) of the total Agreement price. Agreement price equals bid total plus gross receipts tax. A letter of credit is not acceptable.

The performance bond shall be conditioned upon the Contractor's performance and faithful completion of this Agreement, according to the terms, in compliance with all requirements of law. The payment bond shall guarantee payments of all just claims for the labor performed and for materials and supplies furnished, whether the labor and supplies are furnished to the prime Contractor or any subcontractors. These bonds shall be in the form approved by EMNRD. The surety shall be subject to the approval of EMNRD. The decision of EMNRD shall be accepted by the Contractor as final.

#### XXVI. Compliance with Trafficking Victims Protection Act of 2000

A. Pursuant to 2 C.F.R, Chapter 1, Part 175, § 175, EMNRD may immediately and unilaterally terminate this Agreement without penalty if the Contractor or subcontractor:

- 1) engages in severe forms of trafficking in persons during this Agreement's term;
- 2) procures a commercial sex act during this Agreement's term; or
- 3) uses forced labor in the performance of this Agreement.

B. Contractor shall immediately inform EMNRD of any information Contractor receives from any source alleging a violation of a prohibition in Paragraph A. of this Section 13.28.

C. Contractor shall include the requirements of this Section XXIII in any subcontract which may result from this Agreement.

#### XXVII. Compliance with use of Minority Business Enterprises (MBEs) and Women's Business Enterprises (WBEs)

Contractor shall take affirmative steps to assure that MBEs and WBEs are used when possible as sources of supplies, equipment, construction, and services. The affirmative steps shall include the following:

- a) including qualified MBEs/WBEs on solicitation lists;
- b) assuring that MBEs/WBEs are solicited once they are identified;

- c) when economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum MBE/WBE participation;
- d) where feasible, establishing delivery schedules which will encourage MBE/WBE participation;
- e) encouraging use of the services of the U.S. Department of Commerce's Minority Business Development Agency and the U. S. Small Business Administration to identify MBEs/WBEs, as required; and
- e) if any subcontracts are to be let, requiring the subcontractor to take the affirmative steps listed above.

#### XXIX. Compliance with Federal Laws

- A. Contractor shall comply with 2 C.F.R. Sections 200.318 through 200.326 for procurement conducted pursuant to this Agreement.
- B. If this Agreement is valued at more than one hundred thousand dollars (\$100,000), Contractor shall comply with all applicable standards orders or requirements issued under the federal Clean Air Act (42 U.S.C. §7401 et seq.); Clean Water Act (33 U.S.C. §1251 et seq.); Executive Order 11738 (Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans); and U.S. Environmental Protection Agency regulations.
- C. If this Agreement is valued at more than one hundred thousand dollars (\$100,000), Contractor shall comply with 40 U.S.C §§ 3702 and 3704 of the Contract Work Hours and Safety Standards Act (Act), as supplemented by U.S. Department of Labor regulations (29 C.F.R. Part 5). Under 40 U.S.C. 3702 of the Act, Contractor must compute the wages of every mechanic and laborer on the basis of a standard work week of forty (40) hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and one-half (1 ½) times the basic rate of pay for all hours worked in excess of forty (40) hours in the work week. The requirements of 40 U.S.C § 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements to not apply to the purchases of supplies or materials or articles ordinarily available on the open market.
- D. Contractor shall comply with Section 6002 of the Solid Waste Disposal Act, as amendment by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the items exceeds ten thousand dollars (\$10,000) or the value of the quantity acquired during the preceding fiscal year exceeded ten thousand dollars (\$10,000); procuring solid waste management services in a manner that

maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

E. If the value of this Agreement exceeds one hundred thousand dollars (\$100,000), Contractor shall comply with the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352) regarding the limitations of use of appropriated funds to influence certain federal contracting and financial transactions.

F. Contractor shall comply with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by U.S. Department of Labor regulations (29 C.F.R. Part 3, Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). Contractor and subcontractors are prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. EMNRD shall report all suspected or reported violations to the Office of Surface Mining Reclamation and Enforcement.

G. Contractor shall not award subcontracts to parties listed on the governmentwide exclusions in the System for Award Management (SAM) in accordance with the OMG guidelines at 2 C.F.R. 180 that implement Executive Orders 12549 (3 C.F.R. part 1986 Comp., p. 189) and 12689 (3 C.F.R. part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

**IN WITNESS WHEREOF**, the parties have executed this Agreement as of the date first written below.

**STATE OF NEW MEXICO, ENERGY, MINERALS AND NATURAL RESOURCES  
DEPARTMENT**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Cabinet Secretary or Designee

**CONTRACTOR**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Printed Name and Title

**STATE OF NEW MEXICO, GENERAL SERVICES DEPARTMENT, STATE  
PURCHASING DIVISION**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
State Purchasing Agent

The records of the Taxation and Revenue Department reflect that the Contractor is registered with the Taxation and Revenue Department of the State of New Mexico to pay gross receipts and compensating taxes.

**STATE OF NEW MEXICO  
TAXATION AND REVENUE  
DEPARTMENT**

Contractor Name: \_\_\_\_\_

NM I.D. No.: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

**00600 – BONDS AND CERTIFICATES**

---

**00610 - Performance Bonds**

Bond No. \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS:** that \_\_\_\_\_\_\_\_\_\_  
(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and, \_\_\_\_\_

\_\_\_\_\_  
(Insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Owner, in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, Contractor has by written agreement dated \_\_\_\_\_, 20\_\_, entered into a contract with Owner for the Boston Hill Mine Safeguard Project, Phase I Project No. EMNRD-MMD-xxxx, Grant County, New Mexico, in accordance with the enclosed Drawings and Specifications, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

---

**Performance Bond**

**NOW THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

- 1) Complete the Contract in accordance with its terms and conditions, or
- 2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or

contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators, or successors of the Owner.

---

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
PRINCIPAL (Seal)

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
SURETY (Seal)

\_\_\_\_\_  
TITLE

**00620 - Payment Bonds**

Bond No. \_\_\_\_\_

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

**KNOW ALL MEN BY THESE PRESENTS:** that \_\_\_\_\_

\_\_\_\_\_  
(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and,

\_\_\_\_\_  
(Insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Owner, in the amount of Dollars (\$\_\_\_\_\_), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, Principal has by written agreement dated \_\_\_\_\_, 20\_\_\_\_, entered into a contract with Owner for the Boston Hill Mine Safeguard Project – Phase I, No. EMNRD-MMD-xxxx, Grant County, New Mexico, in accordance with the enclosed Drawings and Specifications, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.



**Labor and Material Payment Bond**

**NOW THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two (2) of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or

for whom the work or labor was done or performed.

Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL (Seal)

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
SURETY (Seal)

\_\_\_\_\_  
WITNESS

---

TITLE

**00650 – CERTIFICATE OF INSURANCE**

This certificate is issued as a matter of information only and confers no rights upon the addressee. It does not amend, extend, or alter the coverage afforded by the policies listed below.

Name and Address of Insured  Covering (Project Name and Location)  Address: <input type="checkbox"/> Mining and Minerals Division Energy, Minerals and Natural Resources Department State of New Mexico 1220 South St. Francis Drive Santa Fe, New Mexico 87505 <input type="checkbox"/>	<b>COMPANIES AFFORDING COVERAGE</b>	
	A	
	B	
	C	
	D	
	E	
	F	

This is to certify that the following described policies, subject to their terms, conditions, and exclusions, have been issued to the above-named insured and are in force at this time.

TYPE OF INSURANCE	CO. CODE	POLICY NUMBER	EXPIRATION DATE	LIMITS OF LIABILITY IN THOUSANDS		
					EACH OCCURRENCE	AGGREGATE
(a) Worker's Compensation				<b>Statutory</b>		
(b) Employer's Liability					\$	<b>Each Accident</b>
Comprehensive General Liability including:				Bodily Injury	\$	\$
<input type="checkbox"/> Premises – Operations <input type="checkbox"/> Independent Contractors <input type="checkbox"/> Products and Completed Operations <input type="checkbox"/> Broad Form Property Damage <input type="checkbox"/> Contractual Liability <input type="checkbox"/> Explosion and Collapse Hazard <input type="checkbox"/> Underground Hazard <input type="checkbox"/> Personal Injury with Employment Exclusion Deleted				Property Damage	\$	\$
				Bodily Injury and Property Damage Combined	\$	\$
				*Applies to Products and Completed Operations Hazard		\$ (Personal Injury)
Comprehensive Automobile Liability				Bodily Injury (Each Person)	\$	
<input type="checkbox"/> Owned <input type="checkbox"/> Hired <input type="checkbox"/> Non-Owned				Bodily Injury (Each Accident)	\$	
				Property Damage	\$	
				Bodily Injury and Property Damage Combined	\$	
Excess Liability				Bodily Injury and Property Damage Combined	\$	\$
<input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other than Umbrella						
Other (Specify)				The State of New Mexico, EMNRD, MMD, and its agents and employees thereof are either additional insured, co-insured, or principal beneficiary.		

1. Products and completed Operations coverage will be maintained for a minimum period of ☐ 1 ☐ 2 year(s) after final payment
2. Has each of the above listed policies been endorsed to reflect the company's obligation to notify the addressee in the event of cancellation or non-renewal?  
☐ Yes ☐ No

**CERTIFICATION**

I hereby certify that I am an authorized representative of each of the insurance companies listed above, and that the coverage's afforded under the policies listed above will not be canceled or allowed to expire unless thirty (30) days written notice has been given to the addressee of this certificate.

\_\_\_\_\_  
Name of Issuing Agency

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Address

\_\_\_\_\_  
Date of Issue

This page was intentionally left blank.

---

**00700 – GENERAL CONDITIONS**

---

**00704 - Differing Site Conditions**

During the progress of work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the Project Engineer will investigate the conditions, and if the Project Engineer determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Project Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

No contract adjustment will be allowed under this clause for any effects caused by unchanged work.

**00713 – Warranty and Guarantee**

The Contractor shall obtain and assign to EMNRD all manufacturers' and producers' guarantees or warranties which are normally provided as customary trade practice for items and materials incorporated into the work. In the absence of a manufacturer's or producer's guarantee, the Contractor warrants that equipment and material incorporated into the work is free from any defects or imperfections in workmanship and material for a period of one year after acceptance by EMNRD. The Contractor shall promptly, without cost to EMNRD, and in accordance with EMNRD's written instructions, either correct such defective work, or, if it has been rejected by EMNRD, remove it from the site and replace it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, EMNRD may have the defective work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by the Contractor.

---

**00720 - Duties, Responsibilities and Limitations of Authority of the Project Manager****A. General**

The Project Manager is the EMNRD employee who monitors construction and who will confer with the Project Engineer regarding project actions. The Project Manager's dealings in matters pertaining to the on-site work shall in general be only with the Project Engineer and the Contractor, and dealings with subcontractors shall only be through or with the full knowledge of the Contractor. Written communication with EMNRD will be through or as directed by the Project Engineer.

**B. Duties and Responsibilities.**

The Project Manager will:

1. Schedules: Review the progress schedule prepared by the Contractor and consult with the Project Engineer concerning acceptability.
2. Conferences: Attend preconstruction conferences, progress meetings, job conferences as required in consultation with the Project Engineer, and other project related meetings.
3. Liaison: Serve as the Project Engineer's liaison with the Contractor, working principally through the Contractor's superintendent and assist the superintendent in understanding the intent of the Contract Documents.
4. Shop Drawings and Samples:
  - a. Receive and record date of receipt of shop drawings and samples, receive samples that are furnished at the site by the Contractor, and notify the Project Engineer of their availability for examination.
  - b. Advise the Project Engineer and the Contractor or its superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the Project Engineer has not accepted the submission.
5. Review of Work, Rejection of Defective Work, Inspections and Tests:
  - a. Conduct on-site observations of the work in progress to assist the Project Engineer in determining if the work is proceeding in accordance with the Contract Documents, and that completed work will conform to the Contract Documents.

- b. Report to the Project Engineer whenever the Project Manager believes that any work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approvals required to be made, or has been damaged prior to final payment; and advise the Project Engineer when the Project Manager believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
  - c. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and that the Contractor maintains adequate records thereof; observe, record and report to the Project Engineer appropriate details relative to the test procedures and startups.
  - d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to the Project Engineer.
- 6. Interpretation of Contract Documents: Transmit to Contractor the Project Engineer's clarifications and interpretations of the Contract Documents.
- 7. Modifications: Consider and evaluate the Contractor's suggestions for modifications in drawings or Specifications and report them with recommendations to the Project Engineer.
- 8. Records:
  - a. Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional drawings issued after the execution of the Contract, the Project Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.
  - b. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to the Project Engineer. Record names, addresses and telephone numbers of all the

Contractors, subcontractors and major suppliers of materials and equipment.

9. Reports:

- a. Furnish the Project Engineer periodic reports as required of progress of the work and the Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.
- b. Consult with the Project Engineer in advance of scheduled major tests, inspections or start of important phases of the work.
- c. Report immediately to the Project Engineer upon the occurrence of any accident.

10. Payment Requisitions: Review Applications for Payment with the Contractor for compliance with the established procedure for their submission and forward them with recommendations to the Project Engineer, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the work.

11. Certificates, Maintenance and Operation Manuals: During the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by the Contractor are applicable to the items installed; and deliver this material to the Project Engineer for review prior to final acceptance of the work.

12. Completion:

- a. Before the Contractor issues written certification to the Project Engineer that the project is complete, submit to the Contractor a pre-final list of observed items requiring completion or correction.
- b. Conduct final inspection in the company of the Project Engineer and the Contractor and prepare a final list of items to be completed or corrected.
- c. Verify that all items on final list have been completed or corrected and make recommendations to the Project Engineer concerning acceptance.

C. Limitations of Authority.

Except upon written instructions of the Project Engineer and notification to the Contractor, the Project Manager:



- a. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
- b. Shall not exceed limitations on the Project Engineer's authority as set forth in the Contract Documents.
- c. Shall not undertake any of the responsibilities of the Contractor, subcontractors or the Contractor's superintendent, or expedite the work.
- d. Shall not issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
- e. Shall not issue directions as to safety precautions and programs regarding the work.
- f. Shall not participate in specialized field or laboratory test, unless such is specifically called for in the Contract Documents.
- g. Shall not receive any materials, supplies, equipment, etc. on behalf of the Contractor.

This page intentionally left blank.

**00800 – SUPPLEMENTARY CONDITIONS****00825 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER  
RESPONSIBILITY MATTERS, DRUG-FREE WORKPLACE REQUIREMENTS AND  
LOBBYING****U.S. DEPARTMENT OF THE INTERIOR  
Office of Surface Mining Reclamation and Enforcement****Certifications Regarding Debarment, Suspension and  
Other Responsibility Matters, Drug-Free Workplace  
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions (See Appendix B of Subpart D of 43 C.F.R. 12).

Certification Regarding Drug-Free Workplace Requirements (Grantees Other Than Individuals) (See Appendix C of Subpart D of 43 C.F.R. 12).

Certification Regarding Lobbying (See 43 C.F.R. 18).

Signature on this form provides for compliance with certification requirements under 43 C.F.R. Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Office of Surface Mining determines to award the covered transaction, grant or cooperative agreement.

**PART A: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions**

— *CHECK IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.*

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**PART B: Certification Regarding Drug Free Workplace Requirements**

— *CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.*

1. The grantee certifies that it will or continue to provide a drug-free workplace by:
  - (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

- (b) Establishing an ongoing drug-free awareness program to inform employees about –
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's policy of maintaining a drug-free workplace;
  - (3) Any available drug counseling, rehabilitation and employee assistance programs; and
  - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

I Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will –
  - (1) Abide by the terms of the statement and
  - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification numbers(s) of each affected grant;

- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted –
  - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
  - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

2. The grantee shall provide below the site(s) of the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

---

---

---

\_\_\_ Check if there are workplaces on file that are not identified here.

**PART C: Certification Regarding Lobbying**

*CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT; SUBCONTRACT OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.*

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

\_\_\_\_\_  
NAME

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE

This form consolidates DI-1953, DI-1954, DI-1955, DI-1956 and DI-1963.

DI-2010 (March 1995)  
Modified for AML Use

This page was intentionally left blank

---

**00826 – APPLICANT/VIOLATOR SYSTEM INFORMATION**

---

**Instructions for Completing the AML Contractor Form OMB #1029-0119**

**Purpose:** The purpose of this form is to allow the Applicant/Violator System (AVS) database office to conduct an eligibility check to make sure that your company is not associated with any violations related to coal mining in accordance with the Surface Mining Control and Reclamation Act (SMCRA). The AVS is a database that maintains relationship information between individuals and companies so when personnel actions (hiring, retiring, etc.) or business actions (name changes, mergers, etc.) happen the system will need to be updated. Through this form you can tell us if your company information in the AVS is correct, needs to be updated, or needs to be created. If you have any questions at any time do not hesitate to contact the AVS Office at 800-643-9748.

**Part A: General Information:** Part A should be completed by the AML Contractor. Please fill in the requested business information in the provided fields. You can find an electronic copy of the form on our website (<http://www.osmre.gov/programs/AVS.shtm>).

**Part B: Obtain an Organizational Family Tree (OFT):** Part B should be completed by the AML Contractor. An Organizational Family Tree (OFT) indicates the relationships individuals and other businesses have with your organization. It lets you know what information we currently have for your company in the AVS.

*If you are new company or this is your first AML bid:* Your business is most likely **not** in the AVS. If your business is not in the AVS you cannot obtain an OFT. You should check to see if you are in the system by following the steps for obtaining an OFT below. If your company does not appear in the AVS search, move on to Part C, check Box 3, and complete Part D of this form so we can add you to the system.

*If your company has worked on previous AML projects or in the coal mining industry:* Your business is most likely in the AVS. If this is the case we need you to obtain your OFT (instructions below) and review it to see if all the information is correct. If you find that your company is not in the AVS follow the instructions for “If you are a new company” above.

You can obtain an OFT two ways:

1. Calling the AVS Office at 800-643-9748 and requesting your company’s OFT.
2. Accessing the AVS from your personal computer: Go to the AVS website (<https://avss.osmre.gov>). Click “Access AVS”, and then “Login as Guest”. Place your cursor on the “Entity” Module and “Click”. Type your business name (or entity number if you know it) in search box and press enter key. If more than one entity record appears, select your company and then “Click” on the “Relationship” tab to display your Entity OFT information. Print the Entity OFT from AVS by right clicking and selecting “Print”. Review the OFT to determine what to do in Part C. Attach the OFT to your AML Contractor Form.

**Part C: Certifying and updating information in the Applicant/Violator System (AVS).** Part C should be completed by the AML Contractor. Please check the box that best describes your situation, sign and date. **Note: signature date must be recent (within thirty (30) days) to be considered.** An explanation

of when each box is appropriate:

Box 1: If information in your OFT is accurate, complete, and up-to-date, please check this box and sign and date. **Attach the OFT printout** that you reviewed to the OMB #1029-0119 form and submit it to the AML Contracting Officer your business is working with.

Box 2: If upon reviewing your OFT, you discover the information contained in AVS is not accurate, complete and up-to-date, then check this box **and complete Part D** to provide missing or corrected information. Sign and date, **attach your OFT printout** to the OMB #1029-0119 form and submit the form and attachment to the AML Contracting Officer your business is working with.

Box 3: If your business does not appear to have any information in the AVS, then check this box **and complete Part D**. Sign and date and submit the OMB #1029-0119 form to the AML Contracting Officer your business is working with.

**Part D: OFT Information.** Part D should be completed by the AML Contractor **only** if you want to make updates to what information is in the AVS or if your company does not have any information in the AVS (Boxes 2 and 3 in Part C). Please use as many pages and necessary. **To reduce the processing time:** please include **all** fields, including the relevant begin and/or end dates for individuals. Providing middle name or initial for individuals can also help reduce processing time so we can more easily distinguish individuals with the same name in the AVS.

**Here are some answers to Part D FAQs:**

*Which employees should be included in Part D?*

There is a list of every position that should be listed at the top of Part D. It is all officers, directors, and the shareholders/members owning more than 10% whether that is an individual or a businesses. For those that own less than 10% reporting the ownership is optional. Many AML Reclamation companies do not have large business structures so use your judgment as to who directs, manages, or controls the project. If, for example, a Professional Engineer has the power to determine how the project is conducted you should include him/her on Part D.

*What address and phone number should I use?*

Use the address and phone number where the person would like to receive business correspondence.

*What are the begin and end dates for?*

**Begin dates** indicate when a person started at that position in your company. If an individual started on 1/1/2001 and still works at the company you can simply fill in the begin date and leave the end date blank or write "N/A". **End dates** are used for indicating that someone no longer works at the company due to retirement, death, etc. You can write the person's name and title and then the end date so we know to update the system to indicate that individual is no longer associated with the company. **If you hold more than one position** or title be sure to note if there are different begin dates for each position. For example if John Smith started as Secretary on 1/1/2001 and continued being Secretary but also became Vice President on 2/2/2004 both of those begin dates would need to be reflected. If he stopped being Secretary when he became Vice President we would need an end date for his role as Secretary.



**REQUEST FOR AN APPLICANT/VIOLATOR SYSTEM (AVS)  
AML CONTRACTOR DATA EVALUATION**

An AVS data evaluation for AML contractors is required under the Federal rules at 30 C.F.R. 874.16.  
Please provide the information requested below and send your request via postal mail, e-mail or FAX to:

Liz Cox  
Office of Surface Mining  
Applicant/Violator System Office  
2679 Regency Road  
Lexington, Kentucky 40503  
Telephone: 800.643.9748 ext.472  
FAX: 859.260.8418  
E-mail: [lcx@osmre.gov](mailto:lcx@osmre.gov)

Date \_\_\_\_\_

Requesting Office \_\_\_\_\_

Contact \_\_\_\_\_

Contact's Telephone \_\_\_\_\_

Preferred response method:

E-MAIL: \_\_\_\_\_

or

FAX: (\_\_\_\_\_) \_\_\_\_\_

**Level of your request: Emergency** \_\_\_\_\_  
(Expect your response within 4 hrs. if received before 3 PM Eastern)

**Non-Emergency** \_\_\_\_\_  
(Expect your response with two business days)

**Note to Evaluator:**

**LABOR RELATIONS DIVISION**

401 Broadway NE  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

226 South Alameda Blvd  
Las Cruces, NM 88005  
Phone: 575-524-6195  
Fax: 575-524-6194

**WWW.DWS.STATE.NM.US**

1596 Pacheco St, Suite 103  
Santa Fe, NM 87505  
Phone: 505-827-6817  
Fax: 505-827-9676

**Wage Decision Approval Summary**

1) Project Title: Cookes Peak West Mine Safeguard Project, Phase IIIB  
Requested Date: 12/11/2019  
Approved Date: 12/13/2019  
Approved Wage Decision Number: LU-19-2265-H

**Wage Decision Expiration Date for Bids: 04/11/2020**

2) Physical Location of Jobsite for Project:  
Job Site Address: North End of Highway A008  
Job Site City: Deming  
Job Site County: Luna

3) Contracting Agency Name (Department or Bureau): NM Energy, Minerals, and Natural Resources Department  
Contracting Agency Contact's Name: Meghan McDonald  
Contracting Agency Contact's Phone: (505) 476-3408 Ext.

4) Estimated Contract Award Date: 02/14/2020

5) Estimated total project cost: \$410,000.00

- a. Are any federal funds involved?: Yes - \$410,000.00  
b. Does this project involve a building?: No  
c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No  
d. Are there any other Public Works Wage Decisions related to this project?: Yes

Wage Decision Number	Project Title	Wage Decision Date	Project Address
LU-18-1230-H	Cookes Peak West Mine Safeguard Project, Phase IIIA	07/19/2018	North End of Highway A008, Luna, NM

e. What is the ultimate purpose or functional use of the construction once it is completed?: This project will safeguard 52 abandoned mine features (shafts, adits, and stopes) in the Cookes Peak mining district by either structurally closing the feature with structural steel gates, steel fencing, rock walls, or by backfilling the features.

6) Classifications of Construction:

Classification Type and Cost Total	Description
<b>Heavy Engineering (H)</b> Cost: \$410,000.00	This project will safeguard 52 abandoned mine features (shafts, adits, and stopes) in the Cookes Peak mining district by either structurally closing the feature with structural steel gates, steel fencing, rock walls, or by backfilling the features.

**LABOR RELATIONS DIVISION**

401 Broadway NE  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

226 South Alameda Blvd  
Las Cruces, NM 88005  
Phone: 575-524-6195  
Fax: 575-524-6194

**WWW.DWS.STATE.NM.US**

1596 Pacheco St, Suite 103  
Santa Fe, NM 87505  
Phone: 505-827-6817  
Fax: 505-827-9676

## **PUBLIC WORKS PROJECT REQUIREMENTS**

As a participant in a Public Works project valued at more than \$60,000 in the state of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

### **Contracting Agency**

- Ensure that all contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.
- All sub-contractors and tiers (excluding professional services) regardless of contract amount must be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.
- Ninety days after project completion please go into the PWAA system and close the project. Only contracting agencies are allowed to close the project. Agents or contractors are not allowed to close projects.

### **General Contractor**

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for all contractors, regardless of amount of work, to the contracting agency within 3 (three) days of award.
- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily accessible place.
- When the project has been completed, make sure the Affidavits of Wages Paid (AWP) are sent to the contracting agency.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

**LABOR RELATIONS DIVISION**

401 Broadway NE  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

226 South Alameda Blvd  
Las Cruces, NM 88005  
Phone: 575-524-6195  
Fax: 575-524-6194

**WWW.DWS.STATE.NM.US**

1596 Pacheco St, Suite 103  
Santa Fe, NM 87505  
Phone: 505-827-6817  
Fax: 505-827-9676

**Subcontractor**

- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

**Additional Information**

Reference material and forms may be found in the New Mexico Department of Workforce Solutions Public Works web pages at: <https://www.dws.state.nm.us/Labor-Relations/Labor-Information/Public-Works>.

**CONTACT INFORMATION**

Contact the Labor Relations Division for any questions relating to Public Works projects by email at [public.works@state.nm.us](mailto:public.works@state.nm.us) or call (505) 841-4400.

**00830 – WAGE DETERMINATION SCHEDULE****TYPE "H" – HEAVY ENGINEERING**

Effective January 1, 2022

Trade Classification	Base Rate	Fringe Rate	Apprenticeship
<b>Asbestos workers/Heat &amp; Frost Insulators</b>	34.51	12.06	0.60
<b>Asbestos workers/Heat &amp; Frost Insulators: Los Alamos County</b>	36.94	12.06	0.60
<b>Boilermaker/blacksmith</b>	34.88	32.28	0.60
<b>Boilermaker/blacksmith: San Juan County</b>	35.83	31.88	0.60
<b>Bricklayer/Block layer/Stonemason</b>	25.54	8.81	0.60
<b>Carpenter/Lather</b>	26.48	12.14	0.60
<b>Carpenter: Los Alamos County</b>	29.24	13.94	0.60
<b>Millwright/pile driver</b>	35.08	27.57	0.60
<b>Cement Mason</b>	22.30	7.41	0.60
<b>Electricians-Outside Classifications: Zone 1</b>			
Ground man	24.57	11.74	0.60
Equipment Operator	35.25	16.06	0.60
Lineman/technician	44.32	18.08	0.60
Cable Splicer	48.75	19.19	0.60
<b>Electricians-Outside Classifications: Zone 2</b>			
Ground man	24.57	11.74	0.60
Equipment Operator	35.25	16.06	0.60
Lineman/technician	44.32	18.08	0.60
Cable Splicer	48.75	19.19	0.60
<b>Electricians-Outside Classifications: Los Alamos</b>			
Ground man	25.27	11.76	0.60
Equipment Operator	36.27	16.09	0.60
Lineman/technician	45.47	18.36	0.60
Cable Splicer	49.59	19.40	0.60

<b>Electricians-Inside Classifications: Zone 1</b>			
Wireman/low voltage technician	35.20	12.21	0.60
Cable Splicer	38.72	12.31	0.60
<b>Electricians-Inside Classifications: Zone 2</b>			
Wireman/low voltage technician	38.37	12.30	0.60
Cable Splicer	41.89	12.41	0.60
<b>Electricians-Inside Classifications: Zone 3</b>			
Wireman/low voltage technician	40.48	12.36	0.60
Cable Splicer	44.00	12.47	0.60
<b>Electricians-Inside Classifications: Zone 4</b>			
Wireman/low voltage technician	44.35	12.48	0.60
Cable Splicer	47.87	12.58	0.60
<b>Electricians – Inside Classifications: Dona Ana, Hidalgo, Luna and Otero Counties</b>			
Wireman/low voltage technician	31.42	8.87	0.60
Cable Splicer	30.77	8.64	0.60
<b>Electricians-Inside Classifications: Los Alamos</b>			
Wireman/low voltage technician	40.48	14.38	0.60
Cable Splicer	44.00	14.67	0.60
<b>Glazier</b>			
Glazier/Fabricator	21.00	6.45	0.60
Delivery Driver	11.50	6.45	0.60
<b>Ironworker</b>	27.70	17.89	0.60
<b>Painter- Industrial</b>	22.00	10.05	0.60
<b>Paperhanger</b>	19.50	10.05	0.60
<b>Drywall Finisher/Taper - Industrial</b>			
Ames tool Operator	27.06	8.00	0.60
Hand finisher/machine texture	26.06	8.00	0.60
<b>Plumber/Pipefitter</b>	36.40	14.25	0.60
<b>Roofer</b>	26.34	9.16	0.60
<b>Sheet metal Worker</b>	34.54	17.92	0.60
<b>Operators</b>			
Group I	21.81	6.74	0.60
Group II	22.01	6.74	0.60

Group III	22.22	6.74	0.60
Group IV	22.36	6.74	0.60
Group V	22.47	6.74	0.60
Group VI	22.67	6.74	0.60
Group VII	22.69	6.74	0.60
Group VIII	24.71	6.74	0.60
Group IX	30.72	6.74	0.60
Group X	34.15	6.74	0.60
<b>Laborers</b>			
Group I-Unskilled	19.18	6.93	0.60
Group II-Semi-Skilled	20.06	6.93	0.60
Group III-Skilled	21.93	6.93	0.60
Group IV-Specialty	22.30	6.93	0.60
<b>Laborers-Underground</b>			
Group I	21.43	6.93	0.60
Group II	21.85	6.93	0.60
Group III	22.26	6.93	0.60
<b>Soft Floor Layer</b>	20.75	8.45	0.60
<b>Truck Drivers</b>			
Group I	17.65	8.72	0.60
Group II	17.65	8.72	0.60
Group III	17.65	8.72	0.60
Group IV	17.65	8.72	0.60
Group V	17.65	8.72	0.60
Group VI	17.65	8.72	0.60
Group VII	17.65	8.72	0.60
Group VIII	17.71	8.72	0.60
Group IX	19.65	8.72	0.60
<b>Maintenance Sub Group IX</b>			
Rate I	20.90	9.00	0.60
Rate II	21.77	9.00	0.60
Rate III	22.24	9.00	0.60

NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the particular trade. Details are located in a PDF attachment at [WWW.DWS.STATE.NM.US](http://WWW.DWS.STATE.NM.US). Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at [www.dws.state.nm.us](http://www.dws.state.nm.us).

This page intentionally left blank.

## Boston Hill Mine Safeguard Project

Silver City, New Mexico

## 00900 – APPLICATION FOR PAYMENT

**APPLICATION FOR PAYMENT**  
**Boston Hill Mine Safeguard Project - Phase I**

## Silver City, New Mexico

EMNRD-MMD-\*\*\*\*\*

**Contract No.** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Billing No.** \_\_\_\_\_ **Billing Date** \_\_\_\_\_ **Terminate** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_ **Billing represents work completed through (date)** \_\_\_\_\_

[illegible]

## Boston Hill Mine Safeguard Project

## Silver City, New Mexico

[illegible]



## Boston Hill Mine Safeguard Project

## Silver City, New Mexico

ITEM NO.	MATERIAL OR WORK DESCRIPTION	BASIS OF EVALUATION	CONTRACT AMOUNT	UNITS OR PERCENT THIS BILLING	AMOUNTS THIS BILLING	UNITS OR PERCENT PREVIOUS BILLINGS	AMOUNTS PREVIOUS BILLINGS	UNITS OR PERCENT REMAINING	AMOUNTS REMAINING
TOTAL CONTRACT	\$ _____								

**CERTIFICATION**

I do hereby certify that the work described herein has been performed and that no previous payment for the Total Amount Due this Statement, as shown above, has been received.

By: \_\_\_\_\_  
Mining and Minerals Division Director

By: \_\_\_\_\_  
Contractor

By: \_\_\_\_\_  
AML Project Engineer

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

---

## SPECIFICATIONS

**Please Note – Use of Brand Name Specifications: Use of any brand name herein is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.**

---

### DIVISION 1 - GENERAL REQUIREMENTS

---

The following sections describe the general requirements of this project.

---

#### 01010 – SUMMARY OF WORK

---

The Boston Hill Mine Safeguard Project area is located one mile South-West of the Town of Silver City, in Grant County, New Mexico. The project area (see Sheets 2 and 3) is on private land; municipal public land managed by the Town of Silver City, NM; and BLM public land managed by the Las Cruces Field Office. Site features are located on rugged, steep terrain.

This project involves the following work:

- Machine backfilling of 59 exploration pit, shaft, and dangerous wall mine features (see Sheets 14-16) using mine waste rock and other nearby native rock, some of which have limited access available and will require backfilling by hand;
- Hand backfilling of 17 exploration pit, shaft, and dangerous wall mine features (see Sheet 14) using mine waste rock and other nearby native rock due to limited access to features;
- Borrow of waste rock material from 106 separate mine waste rock piles (see Sheets 17-19) for use in machine backfill, hand backfill, adit, and shaft closures;
- Import of waste rock material from sources outside of the Phase I area to aid in backfill of several machine backfill features (see Sheet 2);
- Installation of Polyurethane Foam (PUF), Sackrete, and waste rock backfill closures on 15 adit features (See Sheets 20-21);
- Installation of PUF and waste rock backfill on 8 adit features (see Sheets 22-23);
- Installation of PUF and waste rock backfill on 5 vertical features (see Sheet 24);
- On-site construction of 6 horizontal and 3 vertical metal grate closures (see Sheet 27);

- Installation of 36,700 square feet (SF) of cable mesh over two large stope locations, LT-2/3 and LT-101/103 (see Sheet 25). Consider alternate construction of metal barrier fence at these locations;
- On-site construction of 2 metal gate egress adit closures with masonry surrounds (see Sheets 30-32);
- On-site construction of 150ft of metal barrier fencing at the GL-10 and the Okun 65 features, with alternative reclamation installation of 1,380ft of barrier fence at LT-2/3 and LT-101/103 features (see Sheet 26);
- On-site construction of 2,100SF of large adit and stope metal grate closure at 3 locations including GL-1, GL-8, and LT-134 (see Sheet 29);
- Repair of existing chain link fence at 6 locations (see Sheet 33).

Demobilization shall be conducted in such a manner to ensure that the Contractor leaves all project areas in as good or better condition than before disturbance.

#### **01011 – Summary of Project and Construction Access Requirements**

The project site consists of 76 exploration pits, shafts, and dangerous walls; 106 waste rock piles to be used as feature backfill borrow; 26 adits, and 17 open stopes/shafts, all of which are dangerous to the public at large. Mine features to be safeguarded in this project and the methods are summarized in the planset.

The project is located on property owned by several different entities. The principal owner and manager of the area is the Town of Silver City. The Bureau of Land Management also owns a significant portion of the Phase I area. There are several private landowners that hold stake in the Phase I area as well. The project area lies within a well-used public recreation area known as the Boston Hill Open Space. The open space is operated by the Town of Silver City. The Contractor shall be aware that there is heavy public presence within the project area. The Contractor shall take extra precaution around known public areas such as trails.

Ground disturbances during construction shall be limited to a maximum perimeter of 20 feet from each mine feature. The Contractor shall use the access paths as delineated by AML staff and shall avoid any marked archaeological avoidance areas. Equipment trips to the mine features from established roads shall be kept to a minimum and materials shall be hand carried to avoid excessive traffic as directed by the Project Manager. The Contractor shall include surface disturbance minimization measures in the appropriate bid item.

The Contractor shall take care in choosing the proper equipment for the task. Equipment used for machine backfill outside of the Legal Tender and Globe Mine Areas shall be rubber-tired or rubber-tracked and large equipment shall not be allowed. Excavators shall be no more

than 20,000 pounds, and backhoes shall be no more than 15,000 pounds weight. Equipment used for the large backfill areas associated with the Legal Tender and Globe Mine areas may be larger and steel tracked due to the amount of material to be moved in those locations. The Contractor shall take care to stay out of known “thin back” or “thin ceiling” areas near the Legal Tender and Globe Mine Areas. The “thin back areas” are mainly confined to the large, fenced locations associated with the Legal Tender and Globe Mines within the Phase I area. Access to many of the reclamation locations is difficult or near impossible. The Contractor shall take care in selecting the right equipment for the task. Equipment shall be limited to the access routes shown on the plans or as approved by the Project Manager.

All equipment used for excavation and backfill shall have enclosed cabs. Contractor shall provide submittals with equipment specifications prior to mobilizing to the site. All heavy equipment shall be washed with a high pressure washer to remove any possible noxious weed seed prior to arrival in the project area. Written confirmation of washing shall be submitted to the Project Manager prior to mobilizing to the site.

The Contractor shall be responsible for thoroughly investigating site conditions and scheduling equipment, equipment operations, personnel, and safety procedures to prevent accidents and injuries.

**01012 – AVOIDANCE AREAS FOR PRESERVATION OF CULTURAL AND BIOLOGICAL RESOURCES**

The Contractor shall avoid all designated cultural and biological resources including those discovered during construction. The Contractor shall avoid these areas with all equipment, vehicles, foot traffic, and any other ground surface disturbing activities.

Avoidance areas extend up to 50 feet (15 meters) from the designated cultural and biological resources, unless otherwise indicated by the Project Manager. Where it is infeasible to complete construction activities without disturbing the designated avoidance areas, avoidance area distances and access may be adjusted, in coordination with the Project Manager, to accommodate construction activities and ensure resources are not impacted. The Contractor shall also coordinate with the Project Manager for access routes to be taken around designated avoidance areas to construction work sites. Disturbance adjacent to designated avoidance areas shall be minimized as practicable.

The Project Manager or Project Engineer may designate additional avoidance areas as deemed necessary. No construction disturbances including excavation, fill, stockpiling of construction materials, staging, etc. shall take place within designated avoidance areas.

When the Contractor is working near designated avoidance areas and where construction access routes pass next to these locations, the Contractor shall place four-foot high, temporary, high-visibility barrier fencing (Hi-Vis, ADPI, or equivalent) around the features. Barrier fencing shall be removed upon completion of work.

The Contractor shall bear all direct, indirect, and consequential costs of mitigation or repairs due to unauthorized damage caused by the Contractor's operations to cultural or biological resources within designated avoidance areas. These costs shall include but are not limited to fees and charges of engineers, attorneys, and other professionals, made necessary thereby.

The Contractor shall cooperate fully to preserve archaeological and historic artifacts and any threatened or endangered species found within the project area. Moving, removal or collecting of archaeological or historic materials or biological specimens from the project area or vicinity is prohibited. If the Contractor encounters a previously unidentified archaeological site, historic site, artifacts, or species suspected to be listed as or proposed to be listed as threatened or endangered, the Contractor shall terminate all operation in that immediate area (100 foot radius, 30 meters) until the archaeological or biological preservation agencies have been notified and had the opportunity to assess the discovery site. This termination shall not preclude continuation of work in other areas nor shall it entitle the Contractor to additional payment in any form, other than an extension of time, unless the Contractor is substantially precluded from working on the entire project.

**01013 – BACKGROUND AND SITE HISTORY**

The project is located to the South West of Silver City, New Mexico. The proposed mine closures are located within the Boston Hill Open Space Park. The project site includes lands owned or under the jurisdiction of federal (BLM), municipal, and private entities.

Boston Hill is a series of hills that lie on the southeastern section of the Silver City Range. The first mining in the area occurred in the 1870's and was mainly focused on silver prospecting. Silver was never found in significant quantities at Boston Hill. The principle ore produced at Boston Hill was manganiferous iron ore. The ore was mainly used because it contained fluxing agents required in the reduction of richer ores. Much of the ore was shipped to smelters in El Paso, Socorro, and Colorado after the railroad was built in the area. Boston Hill contains hundreds upon hundreds of mining features including large underground mine workings; small to large exploration pits; stopes; shafts; large surface mining features; waste piles; and highwalls.

Mining continued at the Boston Hill area until the early 1970's. Once mining ceased, the railroad spur was also removed. In 1999 the Town of Silver City purchased the majority of the claims associated with the Boston Hill Area. Shortly thereafter, the Town began to develop a non-motorized trail system. The area is heavily used by hiking and biking enthusiasts. The historic nature of the Boston Hill area is of utmost importance to the Town of Silver City. The goal of the Boston Hill safeguarding project is to decrease or eliminate the hazards associated at the site while keeping the historic nature of the site intact.

**01015 – CONTRACTOR'S USE OF THE PREMISES**

The Contractor shall take reasonable measures to avoid traffic conflicts between vehicles of the Contractor's employees and private citizens and to avoid overloading of any driveways, roads and streets. The Contractor shall limit the access of equipment and vehicles to the project site and provide protection for any improvements over which trucks and equipment must pass to reach the job site.

**01025 – MEASUREMENT AND PAYMENT**

The measurement for payment is as defined below. Payment shall be made based on the applicable unit or lump sum price bid therefor in the Bid Form (Section 00300). The estimated quantities of materials and work required to complete the project are approximations only and are given as a basis for calculation upon which the contract award will be determined. All estimated quantities could vary considerably and will depend on the actual conditions encountered at the time the work is performed. AML reserves the right to decrease or increase any or all of the quantities of materials or work as may be deemed necessary during the project.

**01027 – APPLICATIONS FOR PAYMENT**

All Applications for Payment for work performed under this contract shall, whenever practicable, first be reviewed by the Project Engineer before being submitted to:

Steve Needles, P.E.  
Mining and Minerals Division  
Energy, Minerals, and Natural Resources Department  
State of New Mexico  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

All Applications for Payment shall include appropriate backup, such as daily reports, load counts, etc. Contract amount equals total base bid plus gross receipts tax.

**01028 – PRICES**

The following subsections describe the lump sum and unit prices to be paid under this contract.

I. Lump Sum Prices

The basis of payment of lump sum prices as outlined in the Bid Form is as follows:

1. Mobilization

Payment for Mobilization will be made at the lump sum price of the Contractor's bid in the Bid Form but shall not exceed 10% of the total base bid. It is the intent of this specification to provide for the Contractor to receive 100% of the mobilization bid item by the time the Contractor has completed ten percent of the total original contract amount, less mobilization, and upon submitting an Application For Payment. Total original contract amount less mobilization shall mean the total amount bid as compensation for the contract, excluding gross receipts tax, less the amount bid for mobilization. For lesser amounts of work completed (less than 10%), the Contractor shall receive a prorated portion of the mobilization.

In addition, payment for Mobilization will not be made until the Project Engineer's approval of an adequate performance. An "adequate performance" will be satisfied when the Contractor has shown the ability to successfully perform the required tasks of this project as outlined in these Specifications to the satisfaction of the Project Engineer. In case of any weather delays, compensation for additional Mobilization will not be made.

Payment for Mobilization shall include all equipment, fees, fuel, insurance, labor, permits, personnel, supervision and transportation to assemble, drive, operate, place, position, provide security measures for, and transport equipment, field offices, fuel, implements, machinery, materials, and support facilities to and from the job site in conformance with the

Project Manager's directives and these Specifications. This payment also includes all transporting of equipment, materials, or personnel by helicopter to individual mine feature sites. This amount shall include complete Mobilization no matter how often equipment is transported to or from individual sites within the project area.

Mobilization shall also include preparation of an Occupational Safety and Health Administration (OSHA) compliant Health and Safety Plan (HASP) detailing the site-specific hazards and safety precautions associated with site work. The HASP shall include a list of responsible persons, hazard identification, hazard controls and safe practices, emergency and accident response, employee training requirements, chemical safety data sheets (SDS), and communication information and procedures.

Mobilization shall also include preparation of any other required pre-construction submittals as specified in this manual.

## II. Unit Prices

The methods of measurement and the basis of payment of unit prices as outlined in the Bid Form are as follows:

### 2. Machine Placed Waste Rock Backfill

Payment for machine placed backfill to close the specified mine features will be made at the per cubic yard price of the Contractor's bid in the Bid Form. The unit price shall include all work necessary to complete the machine placed backfill in accordance with the specifications. This work shall include the tasks necessary to access the mine feature, including clearing as necessary; salvage and replacement of topsoil materials if applicable; surface disturbance minimization measures; excavation, transportation, and placement of backfill from identified Phase I waste rock borrow sources; and including all equipment, labor, material, and supervision costs necessary to complete installation and mitigate associated land disturbances according to the specifications.

### 3. Hand Placed Waste Rock Backfill

Payment for hand placed backfill to close the specified mine features will be made at the per cubic yard price of the Contractor's bid in the Bid Form. The unit price shall include all work necessary to complete the hand placed backfill in accordance with the specifications. This work shall include the tasks necessary to access the mine feature, including clearing as necessary; salvage and replacement of topsoil materials if applicable; surface disturbance minimization measures; excavation, transportation, and placement of backfill from identified Phase I waste rock borrow sources; and including all equipment, labor, material, and supervision costs necessary to complete installation and mitigate associated land disturbances according to the specifications.



#### 4. Import Waste Rock Backfill

Payment for the import of waste rock backfill to close the specified mine features will be made at the per cubic yard price of the Contractor's bid in the Bid Form. The unit price shall include all work necessary to import waste rock backfill from sources within the Boston Hill area, but outside of the Phase I area in accordance with the specifications. This work shall include the tasks necessary to access the borrow location, including clearing as necessary; surface disturbance minimization measures; excavation, transportation, and off-load of backfill at reclamation task areas from identified off Phase I waste rock borrow sources; and including all equipment, labor, material, and supervision costs necessary to complete the work and mitigate associated land disturbances according to the specifications.

#### 5. Polyurethane Foam, Sackrete and Waste Rock Closure

Payment for this item will be made in accordance with the three separate unit price categories of the Contractor's bid in the Bid Form including:

5a – Polyurethane Foam and Backing: this unit price, measured in cubic yards, shall include all work necessary to complete the installation of the polyurethane foam fill in accordance with the drawings and specifications, including site preparation; placement of vertical cardboard or plywood backing form; mixing and placement of the foam; temporary adit closure provisions during construction for public safety; and all equipment, labor, material and supervision costs necessary to complete installation.

5b – Sackrete and Rebar: this unit price, measured in square feet, shall include all work necessary to complete the installation of the Sackrete (or approved equivalent) and rebar wall closure in accordance with the drawings and specifications, including site preparation; placement of the Sackrete and rebar; incorporation of water into the Sackrete; temporary adit closure provisions during construction for public safety; and all equipment, labor, material and supervision costs necessary to complete installation.

5c – Waste Rock Backfill: this unit price, measured in cubic yards, shall include all work necessary to complete the backfill of each closure in accordance with the drawings and specifications, including site preparation; placement of waste rock cover material; and all equipment, labor, material and supervision costs necessary to complete installation.

#### 6. Polyurethane Foam and Waste Rock Horizontal Closure

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

6a – Polyurethane Foam and Backing: this unit price, measured in cubic yards, shall include all work necessary to complete the installation of the polyurethane foam fill in

accordance with the drawings and specifications, including site preparation; placement of vertical cardboard or plywood backing form; mixing and placement of the foam; temporary adit closure provisions during construction for public safety; and all equipment, labor, material and supervision costs necessary to complete installation.

6b – Waste Rock Backfill: this unit price, measured in cubic yards, shall include all work necessary to complete the backfill of each closure in accordance with the drawings and specifications, including site preparation; placement of waste rock cover material; and all equipment, labor, material and supervision costs necessary to complete installation.

#### 7. Polyurethane Foam and Waste Rock Vertical Closure

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

7a – Polyurethane Foam and Backing: this unit price, measured in cubic yards, shall include all work necessary to complete the installation of the polyurethane foam fill in accordance with the drawings and specifications, including site preparation; placement of horizontal cardboard or plywood backing form; preparation of plug support ledge around perimeter of feature; mixing and placement of the vertical foam plug; temporary adit closure provisions during construction for public safety; and all equipment, labor, material and supervision costs necessary to complete installation.

7b – Waste Rock Backfill: this unit price, measured in cubic yards, shall include all work necessary to complete the backfill of each closure in accordance with the drawings and specifications, including site preparation; placement of waste rock cover material; and all equipment, labor, material and supervision costs necessary to complete installation.

#### 8. Metal Grate Closure

Payment for this item will be made in accordance with the three separate unit price categories of the Contractor's bid in the Bid Form including:

8a – 4"x2"x1/4" Metal Cross Bars and Beams: this unit price, measured in lineal feet of metal tubing installed, shall include all work necessary to complete the installation of metal crossbars (grating) and support beams in accordance with the drawings and specifications, including site preparation; materials (4"x2"x1/4" steel tubing, shapes, plates, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

8b – Beam Support Anchors: this unit price, measured in number of beam support anchors installed, shall include all work necessary to complete the installation of beam support anchors in accordance with the drawings and specifications, including site preparation; materials (steel, steel plate, shapes, bolts, nuts); installation of grout pads; cutting, welding, and grinding as

required; and all equipment, labor, material and supervision costs necessary to complete installation.

8c – Alternate Concrete Beam Seat Anchors: this unit price, measured in number of concrete beam seat anchors installed, shall include all work necessary to complete the installation of concrete beam seat anchors in accordance with the drawings and specifications, including site preparation; materials (concrete, rebar, steel, shapes, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

## 9. Steel Mesh Closure

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

9a – Steel Mesh: this unit price, measured in square feet of steel mesh installed, shall include all work necessary to complete the installation of steel mesh in accordance with the drawings and specifications, including site preparation; materials (steel mesh, overlap clips); cutting, welding, and grinding as required; backfill of materials around perimeter of steel mesh closure; and all equipment, labor, material and supervision costs necessary to complete installation.

9b – Steel Mesh Anchors: this unit price, measured in number of steel mesh anchors installed, shall include all work necessary to complete the installation of steel mesh anchors in accordance with the drawings and specifications, including site preparation; materials (rock anchors, mesh anchors, clips, grout); cutting, welding, and grinding as required; rock drilling as required; and all equipment, labor, material and supervision costs necessary to complete installation.

## 10. Metal Egress Closure

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

10a – Egress Closure Gate: this unit price, measured in square feet of steel mesh installed, shall include all work necessary to complete the installation of steel mesh in accordance with the drawings and specifications, including site preparation; materials (steel mesh, overlap clips); cutting, welding, and grinding as required; backfill of materials around perimeter of steel mesh closure; and all equipment, labor, material and supervision costs necessary to complete installation.

10b – Steel Mesh Anchors: this unit price, measured in number of steel mesh anchors installed, shall include all work necessary to complete the installation of steel mesh anchors in accordance with the drawings and specifications, including site preparation; materials

(rock anchors, mesh anchors, clips, grout); cutting, welding, and grinding as required; rock drilling as required; and all equipment, labor, material and supervision costs necessary to complete installation.

#### 11. Adit and Stope Metal Grate Closure

Payment for this item will be made in accordance with the five separate unit price categories of the Contractor's bid in the Bid Form including:

11a – 4"x2"x1/4" Metal Beams: this unit price, measured in lineal feet of metal tubing installed, shall include all work necessary to complete the installation of metal support beams in accordance with the drawings and specifications, including site preparation; materials (4"x2"x1/4" steel tubing, shapes, plates, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

11b – 2"x2"x1/4" Metal Cross Bars: this unit price, measured in lineal feet of metal tubing installed, shall include all work necessary to complete the installation of metal cross-bars in accordance with the drawings and specifications, including site preparation; materials (2"x2"x1/4" steel tubing, shapes, plates, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

11c – 4"x4"x1/4" Metal Columns: this unit price, measured in lineal feet of metal tubing installed, shall include all work necessary to complete the installation of metal columns in accordance with the drawings and specifications, including site preparation; materials (4"x4"x1/4" steel tubing, shapes, plates, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

11d – Concrete Footing Anchors: this unit price, measured in number of concrete footing anchors installed, shall include all work necessary to complete the installation of concrete footing anchors in accordance with the drawings and specifications, including site preparation; materials (concrete, rebar, steel, shapes, bolts, nuts); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

11e – Beam Support Anchors: this unit price, measured in number of beam support anchors installed, shall include all work necessary to complete the installation of beam support anchors in accordance with the drawings and specifications, including site preparation; materials (steel, steel plate, shapes, bolts, nuts); installation of grout pads; cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

## 12. Metal Barrier Fence

The unit of measurement for payment for metal barrier fence will be per lineal foot of fence installed. Payment for this item will be made at the unit price in the Contractor's bid on the Bid Form multiplied by the number of units installed. This price shall include all work necessary to complete the installation of the steel fence in accordance with the drawings and specifications, including site preparation, drilling, materials (including concrete, steel shapes, plates, bolts, nuts and accessories), cutting, welding and grinding as required and all equipment, labor, material and supervision costs necessary to complete installation.

## 13. Chain Link Fence Repair

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

13a – Install Cross Bar Supports: this unit price, measured in number of chain link cross bar pairs installed, shall include all work necessary to complete the installation of two cross bars in the locations shown on the plans in accordance with the drawings and specifications, including site preparation; materials (cross bars, chain link fence fabric, nuts, bolts, etc.); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

13b – Chain Link Fence Patch: this unit price, measured in square feet of chain link fence patched, shall include all work necessary to complete the installation of chain link fence patches and repairs in accordance with the drawings and specifications, including site preparation; materials (chain link fence fabric, flat stretcher bars, wire ties, and other chain link fence appurtenances); cutting, welding, and grinding as required; and all equipment, labor, material and supervision costs necessary to complete installation.

## 14. Seeding and Mulching

Payment for this item will be made in accordance with the two separate unit price categories of the Contractor's bid in the Bid Form including:

The unit of measurement for payment for seeding will be per acre, as measured in the field, parallel to the seeded surface using methods acceptable to the Project Engineer. Payment for seeding will be made at the unit price of the Contractor's bid on the Bid Form multiplied by the number of units installed. This price shall include soil preparation including raking, topdressing, incorporating specified soil amendments and seeding by broadcasting including all equipment, labor, material and supervision costs necessary to complete installation, of all areas disturbed by construction activities.

Disturbed areas include on-site borrow areas, depressions and mounds at shafts, filled areas at adits, temporary access routes and obliterated roads, areas occupied by the Contractor for

campsites, office, plant sites, equipment parking, closed access trails, stockpile and storage areas, service areas and areas stripped of native covering.

14a – Hydroseeding and Hydromulching: this unit price, measured in square feet of area hydroseeded and hydromulched, shall include all work necessary to hydroseed and hydromulch applicable areas shown on the plans in accordance with the drawings and specifications, including soil preparation; raking; topdressing; incorporating specified soil amendments; broadcast seeding or hydroseeding; and application of hydromulch; and all equipment, labor, material and supervision costs necessary to complete installation.

14b – Hand Seeding and Mulching: this unit price, measured in square feet of area hand seeded and mulched, shall include all work necessary to hand seed and mulch applicable areas shown on the plans in accordance with the drawings and specifications, including soil preparation; raking; topdressing; incorporating specified soil amendments; broadcast seeding; application of mulch; hand crimping; and all equipment, labor, material and supervision costs necessary to complete installation.

Disturbed areas include on-site borrow areas; depressions and mounds at shafts; filled areas at adits and stopes; temporary access routes and obliterated roads; areas occupied by the Contractor for office, plant sites, equipment parking; closed access trails; stockpile and storage areas; service areas; and any other areas stripped of native covering.

---

## **01030 – ALTERNATES**

---

Whenever equipment or materials are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, the Project Engineer may accept equipment or materials of other suppliers if the Contractor submits sufficient information to allow for adequate determination that the equipment or materials proposed are equivalent or equal to that named.

## **01035 – MODIFICATION PROCEDURES**

The following section describes procedures for making modifications to the contract by change orders. Modifications may involve changes in contract sum, contract time, and scope.

## **01036 – CHANGE ORDER PROCEDURES**

The Contractor shall submit a written request for any changes in the work under this contract to the Project Engineer. No changes in work or quantities shown shall be authorized until a properly executed Change Order has been issued by MMD. Any work performed outside

the original quantities or scope of work, before the issuance of a properly executed Change Order, shall be at the Contractor's risk.

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Engineer within fifteen working days of the occurrence of the event causing the claim. The extent of the claim with supporting data shall be included unless the Project Engineer allows additional time to ascertain more accurate data. The Project Engineer shall determine all claims for adjustment in the Contract Time. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order. The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made therefore as provided above. Such delays shall include, but may not be restricted to, acts or neglect beyond the Contractor's control, epidemics, fires, floods, labor disputes, abnormal weather conditions, or acts of nature. In the event that delays in construction occur due to weather, the conditions as outlined above will be in effect. If the Contractor leaves the project area due to a weather delay, the Contractor shall be responsible for assuring that all areas and materials are left in a clean and safe condition as approved and directed by the Project Manager. In case of any weather delays, compensation for additional Mobilization or Demobilization will not be made.

#### **01040 – COORDINATION**

---

The following sections define the parties responsible for coordination of the contract work at the project and job site levels.

##### **01041 - Project Coordination**

The Project Engineer will send the Contractor Notices to Proceed, Change Orders, other contract documents, and approvals on Applications for Payment. The Project Engineer may issue a Suspension of Work Notice if there is reasonable basis to believe that the Contractor is violating any condition or term of the contract or specifications, or that violations of health and safety standards will occur unless such notice is issued. No work shall proceed until the Suspension of Work Notice has been vacated.

##### **01042 – MECHANICAL AND ELECTRICAL COORDINATION**

The Contractor shall be responsible for the coordination of all mechanical and electrical aspects of the contract work. This includes overseeing of the general operation and maintenance of that equipment.

##### **01043 – JOB SITE ADMINISTRATION**

The Contractor shall be responsible for the administration of the contract work at the job site. This includes assuring that all equipment and materials used for the contract work meet the required specifications set forth and that all work is performed in a timely and orderly manner.

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs concerning the work. The Contractor shall designate a full time on-site superintendent or authorized representative who shall be present or can be contacted readily during project working hours. This person shall represent the Contractor in dealing with the Project Manager and shall insure adherence to these specifications and any other directives.

## **01050 – FIELD ENGINEERING**

---

The Contractor shall be responsible for locating and avoiding all underground utilities at the contract work site. If damage to the utilities occurs during the contract work, the damage shall be repaired at the Contractor's expense.

The Contractor shall also be responsible for the proper setting of all construction staking. The Contractor shall provide engineering surveys for construction to establish reference points that are necessary to enable the Work to proceed. The Contractor shall be responsible for surveying and laying out the Work, shall protect and preserve any established reference points, and shall make no changes or relocations without the prior written approval of the Project Engineer. The Contractor shall report to the Project Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. The Contractor shall replace and accurately relocate all reference points so destroyed, lost, or moved. When it becomes necessary in the construction of public works, to remove or obliterate any triangulation station, bench mark, corner monument, stake, witness mark, or other reference mark, it shall be the duty of the Contractor in charge of the work to cause to be established by a New Mexico registered land surveyor one or more permanent reference marks which shall be plainly marked as witness corners or reference marks, as near as practicable to the original mark, and to record a map, field notes, or both, with the county clerk and county surveyor of the county wherein located, showing clearly the position of the marks established with reference to the position of the original work. The surveys or measurements made to connect the reference marks with the original mark shall be of at least the same order of precision as the original survey.

## **01060 – REGULATORY REQUIREMENTS**

---

The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees and shall protect and indemnify the State of New Mexico and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or any employees. The Contractor shall procure all permits and licenses, pay all charges, fees, royalties, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.



---

**01090 – REFERENCES**

---

Reference to standard specifications, manuals, or codes of any technical association, organization, or society, or to laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws, or regulation in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the Contractor.

**01092 - ABBREVIATIONS**

The following is an explanation of the abbreviations that may be used in the contract documents:

- |     |        |  |
|-----|--------|--|
| 1.  | AASHTO | American Association of State Highway and Transportation Officials |
| 2.  | ACI    | American Concrete Institute  |
| 3.  | AML    | Abandoned Mine Land Program of MMD                                 |
| 4.  | ANSI   | American National Standards Institute                              |
| 5.  | ASTM   | American Society for Testing and Materials                         |
| 6.  | AWS    | American Welding Society   |
| 7.  | CRSI   | Concrete Reinforcing Steel Institute                               |
| 8.  | EMNRD  | Energy, Minerals, and Natural Resources Department (state)         |
| 9.  | MMD    | Mining and Minerals Division of EMNRD                              |
| 10. | OSMRE  | Office of Surface Mining, Reclamation, and Enforcement (federal)   |
| 11. | SAE    | Society of Automotive Engineers                                    |

**01094 – DEFINITIONS**

The following is a definition of the terms that may be used in the contract documents (source: A Dictionary of Mining, Mineral, and Related Terms, Paul W. Thrush, Bureau of Mines, Department of the Interior, Washington, D.C., 1968):

- |    |          |  |
|----|----------|--|
| 1. | adit     | A horizontal or nearly horizontal passage driven from the surface for the working or dewatering of a mine. |
| 2. | back     | The roof or upper part in any underground mining cavity.   |
| 3. | cribbing | The close setting of timber supports when shaft sinking through loose ground.                              |

- 
- |     |               |  |
|-----|---------------|--|
| 4.  | collar        | Timbering or concrete around the mouth or top of a shaft; the junction of a mine shaft and the surface.  |
| 5.  | drift         | A horizontal passage underground.  |
| 6.  | entry         | A haulage road, gangway, or airway to the surface.   |
| 7.  | gob pile      | A pile of heap mine refuse on the surface.   |
| 8.  | incline       | A shaft not vertical; usually on the dip of a vein.  |
| 9.  | lagging       | Planks, slabs, or small timbers placed over the caps or behind the posts of the timbering, not to carry the main weight, but to form a ceiling or a wall, preventing fragments or rock from falling through.         |
| 10. | lining        | The brick, concrete, cast iron, or steel casing placed around a tunnel or shaft as a support.  |
| 11. | loading chute | A three-sided tray for loading or for transfer of material from one transport unit to another.   |
| 12. | portal        | Any entrance to a mine.  |
| 13. | red dog       | Material of a reddish color resulting from the combustion of shale and other mine waste dumps on the surface.  |
| 14. | shaft         | An excavation of limited area compared with its depth, made for finding or mining ore or coal, raising water, ore, rock, or coal, hoisting and lowering personnel and material, or ventilating underground workings. |
| 15. | spoil         | The overburden or on-ore material removed in gaining access to the ore or mineral material in surface mining.  |
| 16. | stope         | An excavation in which ore has been excavated in a series of steps.  |

- |     |            |  |
|-----|------------|--|
| 17. | stull      | A timber prop set between the walls of a stope, or supporting the mine roof.   |
| 18. | subsidence | A sinking down of a part of the earth's crust.   |
| 19. | talus      | A heap of coarse rock waste at the foot of a cliff.  |
| 20. | tipple     | Originally the place where the mine cars were tipped and emptied of their coal, and still used in that sense, although now more generally applied to the surface structures of a mine, including the preparation plant and loading tracks. |
| 21. | winze      | Interior mine shaft.   |

---

**01100 – SPECIAL PROJECT PROCEDURES**

---

The following section describes special procedures for work suspension, alteration, preservation, security, hazardous materials, and other types of special project procedures.

**01120 – SUSPENSION OF WORK ON WEEKENDS**

An AML representative shall be on site at all times that work is in progress at any location on site other than the staging areas and designated project roads. An AML representative will arrive at the site at noon on Mondays and leave the project site at noon on Fridays. During weekends, with the approval of the Project Manager or Project Engineer, the Contractor may stage equipment and materials at staging areas and along roads designated by the Project Manager or work on pre-fabrication work at staging areas.

**01135 - HAZARDOUS AND CONFINED AREA PROCEDURES**

This project requires construction work around and over hazardous and unprotected mine shafts, stopes, adits, and other openings which may be open to the surface or hidden from view by vegetation, trash, debris, or thin and unstable layers of surface materials or rock. The Contractor shall be responsible for thoroughly investigating the site conditions and scheduling his equipment, equipment operations, personnel, and safety procedures to prevent accidents and injuries.

The Contractor is fully responsible for thoroughly investigating the site conditions and scheduling equipment, equipment operations, personnel, and safety procedures to prevent accidents and injuries. The Contractor shall follow appropriate procedures in accordance with

OSHA regulations. The Contractor shall designate a site safety officer for each shift. The site safety officer shall be present on-site while work is performed. The site safety officer shall be CPR/First Aid trained and certified and shall conduct daily safety tailgate meetings at the start of each shift. Safety incidents shall be reported to the Project Manager as soon as is practicable.

The Contractor is fully responsible for construction safety and shall keep the Project Manager informed of hazardous area safety procedures. Following is a discussion of some common abandoned mine hazards and appropriate procedures to be followed:

I. Bad Air

Miners use the term "bad air" to describe an atmosphere that will not support life. The poor air circulation in some mine openings can allow carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), methane, hydrogen sulfide (H<sub>2</sub>S), or radon gas to accumulate. These gases are treacherous inside mine openings and even experienced miners have been killed or harmed by entering areas containing them. Carbon monoxide cannot be readily detected and is lethal in very small amounts. The Contractor shall not allow entry of personnel into any mine opening.

II. Adit Cave-ins

Cave-ins are a danger in any abandoned mine. Disturbances such as vibrations caused by walking, speaking, blasting, hammering, percussion drilling, or construction equipment may cause a cave-in inside an inactive mine. The Contractor shall follow appropriate adit cave-in protection procedures, including scaling and barring of loose rock before beginning work in an area, shoring of decayed or weak timber framing, and shoring, jacking, or rock bolting of materials in the back (roof) and sides of the adit entrance.

III. Collar Cave-ins

The collar or top of a shaft, stope or subsidence often contains decomposed rock, decayed timbers, and other conditions that allow for rapid disintegration at the opening. With the additional weight and vibration of construction machinery, workers, and backfilling operations near the mine opening, the area around the collar can slide into the opening, along with nearby machinery and workers. Backfilling operations can tear loose cribbing or lining in a shaft leading to collapse at the collar. The Contractor shall follow appropriate collar cave-in protection procedures.

IV. Falling

Because a shaft or stope has little light, the feeling of height and normal reaction to "pull back" is not evident to most persons. Many abandoned mine shafts, stopes, and winzes are deep enough to insure that anyone that falls down them is badly injured or killed. Rescue operations of a fallen person can also be extremely hazardous.

The Contractor shall follow appropriate hazardous fall protection procedures. This includes proper lighting, barricades, fences, personal fall arrest systems, guardrails, covers, safety net systems, safety monitoring systems, and other protection as suitable for the conditions. Fall protection shall be in accordance with OSHA regulations regarding construction fall protection (OSHA 29 C.F.R. Subpart M). These regulations establish a six-foot threshold for the height at which fall protection is required, require employers to provide training for each employee who might be exposed to a fall hazard, and prohibit the use of body belts for fall protection and the use of non-locking snap hooks.

The Contractor is responsible for ensuring adequate fall protection and tie/off points are maintained at mine features that are not accessible by heavy equipment. Details should be included in the Contractor's health and safety plan.

#### V. Loose Rock

A mine shaft or open stope will weather in much the same way as a cliff. Loose rocks are always found above and behind timbers or on the walls. A small rock that falls a sufficient distance can penetrate a person's skull. The Contractor shall follow appropriate hazardous loose rock protection procedures, including scaling of loose rock, construction of shields, and wearing of head protection.

### **01170 - INDUSTRIAL WASTES AND TOXIC SUBSTANCES**

The Contractor shall comply with all applicable laws and regulations existing or hereafter enacted or promulgated regarding industrial wastes and toxic substances. In any event, the Contractor shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) regarding any toxic substances that are used, generated by or stored at the project site. See 40 C.F.R., Part 702799. Additionally, any release of toxic substances (leaks, spills, etc.) greater than the reportable quantity established by 40 C.F.R., Part 117, shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any federal agency or state government because of a reportable release or spill of any toxic substances shall be furnished to the Project Engineer concurrent with the filing of the reports to the involved federal agency or state government.

The Contractor should be aware that naturally occurring asbestos may exist in the Boston Hill Mining District. This information was provided in a report written by Virginia McLemore of the New Mexico Bureau of Geology and Mineral Resources and in a book written by Stuart Northrop titled *Minerals of New Mexico* (1944, 1959, 1996). Sampling and testing of a limited number of waste rock piles in the Boston Hill area conducted by the AML Program found no detectable amount of asbestos. Further information about the documentation, regulation, sampling, and testing for asbestos can be found in Appendix B.

---

**01200 – PROJECT MEETINGS**

---

The following sections describe the required project meetings that the Contractor is expected to attend.

**01210 - PRECONSTRUCTION CONFERENCES**

Before starting work at the site, a conference will be held to review the construction schedules; to establish procedures for handling documents, drawings, other submissions, and for processing Applications for Payment; and to establish a working understanding between the parties as to the nature of the project. Present at the conference will be the Project Manager, the Project Engineer, the Contractor, the Contractor's superintendent, and other persons as appropriate. The Contractor shall present a progress schedule at the preconstruction conference as specified in Section 01310 below and the fire prevention and awareness plan as specified in Section 01565 below.

**01220 - PROGRESS MEETINGS**

The Project Engineer or Project Manager will lead progress meetings at the beginning of each work week during construction for purposes of scheduling and coordination of work. These meetings shall be attended by the Project Engineer and/or the Project Manager, the Contractor Superintendent and/or the Contractor Owner/ Chief Officer. These meetings will also provide an opportunity to discuss safety issues, weather issues, and any other issues with the project work. Throughout the life of the project, the Contractor shall keep the Project Manager and Project Engineer well informed of the schedule of work.

---

**01300 – SUBMITTALS**

---

The following sections describe the required documents and reports to be submitted by the Contractor during the contract work.

**01310 - CONSTRUCTION SCHEDULE**

The Contractor shall provide a detailed construction schedule to be followed in completing the work. This schedule shall be submitted a minimum of one month before mobilization to the site and shall show the anticipated time required by the Contractor to complete each item of work in the Bid Form. Schedules may be prepared as a horizontal bar chart with a separate bar for each major portion of work or operation, identifying the first workday of each week. Any proposed deviations from the schedule shall be submitted to the Project Engineer in writing for review and approval.

**01320 - PROGRESS REPORTS**

The Contractor shall submit written accurate daily progress reports to the Project Manager. The reports shall include but are not limited to work accomplished, quantities of unit price bid items installed, including load tickets as appropriate, records of any complaints including corrective actions taken, records of visitors to the site, and records of any personal injury or property damage incidents. The Contractor's authorized representative shall meet the Project Manager a minimum of once each week to verify and sign-off on all payable units of work performed during that week. The authorized representatives from both parties shall be designated at the start of the project during the preconstruction conference.

**01330 – HEALTH AND SAFETY PLAN**

The Contractor shall prepare a HASP detailing the site-specific hazards and safety precautions associated with site work. The HASP shall comply with OSHA standards and shall include a list of responsible persons, hazard identification, hazard controls and safe practices, emergency and accident response, employee training requirements, SDS, and communication information and procedures. The Contractor shall submit a draft of the HASP to the Project Engineer for review and comment a minimum of one month before mobilization to the site. The Contractor shall finalize the HASP and submit a final copy to the Project Engineer prior to beginning work on the project site.

**01340 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES**

The Contractor shall submit shop drawings, product data, and samples as required in the specifications. Submittals shall be organized such that each submittal covers items in no more than one specification section. The Contractor shall allow a minimum of 21 calendar days for the Project Engineer's review; shorter periods for Project Engineer's review will not be acceptable. The Contractor shall allow acceptable time for the entire review process including transmittal, initial Project Engineer's review, correction and resubmission, final review, and distribution.

Engineering data and shop drawings covering all equipment and fabricated materials shall be submitted to the Project Engineer for review and comments. These data shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; and performance characteristics and dimensions needed for installation and correlation with other materials and equipment. Data submitted shall include drawings showing essential details of any changes proposed by the Contractor.

It shall be the duty of the Contractor to check all data and shop drawings for completeness before submittal for Project Engineer's review. Each drawing or data sheet shall indicate the proposed use of the item as it pertains to the Work. Catalog cuts, pages, or copies submitted for review shall have items proposed for use in the Work clearly marked and

identified. The current catalog number, date, and revision and drawing number (if applicable) shall be included.

Deviations from the drawings or specifications shall be identified on each submittal and shall be referenced in the Contractor's transmittal letter. The submittal for such deviations shall also include details of changes proposed and modifications required for all affected portions of the Work.

Shop drawings and other review data shall be submitted to the Project Engineer only from the Contractor. Submittals from Subcontractors shall not be allowed.

The Contractor's submittal of shop drawings and other review material shall represent that he or she has reviewed the details and requirements of the Contract Documents, that he or she has coordinated the subject of the submittal with other portions of the Work, and that he or she has verified dimensions, quantities, construction details, materials, and installation criteria, as applicable for the Work. The Contractor shall accept full responsibility for the completeness of each submittal and, for re-submittals, verify that exceptions noted on the previous submittal have been accounted for.

Any requirement for more than one resubmission or delay in obtaining Project Engineer's review of submittals will not entitle the Contractor to an extension of Contract Time unless authorized by Change Order.

The Project Engineer's review of drawings and data submitted by the Contractor will cover only general conformity to the drawings and specifications, external connections, and dimensions that affect the plans and layout. The Project Engineer's disposition of submittals will not constitute a blanket approval of all dimensions, quantities, and details of the material, equipment, or item shown. Regardless of the corrections made in, or disposition given to, such drawings and data by the Project Engineer, the Contractor shall be responsible for the accuracy of such drawings and data and for their conformity and compliance with the contract documents.

No work shall be performed in connection with the fabrication or manufacture of materials and equipment, nor shall any material, accessory, or appurtenance be purchased until the drawings and data therefor have been reviewed and approved.

A copy of each drawing and necessary data shall be submitted to the Project Engineer. Each drawing or data sheet shall be clearly marked as instructed above. Submittals will be accepted only from the Contractor.

When the drawings and data are returned NOT APPROVED or RETURNED FOR CORRECTION, corrections shall be made as noted by the Project Engineer and a corrected copy resubmitted as instructed above.



When drawings and data are returned marked NO EXCEPTIONS NOTED, EXCEPTIONS NOTED, or RECORD COPY, no additional copies need be submitted.

The Project Engineer will return a copy with comments to the Contractor. The Contractor shall send additional copies with the original submittal if the Contractor requires more than two copies.

All drawings and data, after final processing by the Project Engineer, shall become a part of the contract documents and the work shown or described thereby shall be performed in conformity therewith unless otherwise required by the Project Engineer.

### **01380 - CONSTRUCTION PHOTOGRAPHS**

The Contractor may provide routine periodic construction photographs to support Applications for Payment and to supplement Project Record Documents.

### **01400 – QUALITY CONTROL**

---

The following sections outline the duties, responsibilities, and qualifications of inspectors, testing laboratories, and the Contractor's quality control requirements required to perform the contract work.

#### **01405 - CONTRACT QUALITY CONTROL**

The Contractor shall be responsible for the maintenance of quality control throughout the period of the contract work. This includes making periodic tests or spot checks to assure that equipment, materials, and construction quality, meet the contract specifications.

#### **01410 - TESTING LABORATORY SERVICES**

Independent commercial testing laboratories shall perform all tests required by the contract documents to determine compliance with the specifications. The testing laboratories shall be acceptable to the Project Engineer. The laboratories shall be in the regular business of testing services in accordance with the specifications for which tests are required, and shall be staffed with trained and experienced technicians, equipped properly, and fully qualified to perform the specified tests in accordance with reference standards.

All testing services for tests of materials required by the contract documents shall be the responsibility of the Contractor. The Project Engineer shall review all sources of materials before delivery of the materials to the job site. Before the performance of any testing, the Contractor shall obtain the concurrence of the Project Engineer for the laboratory or laboratories selected by the Contractor.

The Contractor shall require the producer or manufacturer of materials, for which the specifications require inspection or testing services during the production or manufacturing process, to arrange for and pay an independent organization to perform the specified services.

The Project Manager will determine the exact time and location of field sampling and testing. The Project Manager or Project Engineer may require additional sampling and testing as necessary to assure that materials conform to the contract documents. The Contractor shall pay the costs of any retesting or re-sampling required when initial tests or samples fail to meet the specified requirements.

Written reports of tests furnished by the Contractor for the Project Engineer's review shall be submitted in conformance to the procedures set forth in Section 01340.

## **01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

---

The following sections specify the types of construction facilities and temporary controls the Contractor shall provide for completion of the contract work.

### **01505 - MOBILIZATION**

The Project Engineer will issue the Notice to Proceed in two stages. The first “Pre-construction” Notice to Proceed will authorize payment for necessary pre-construction items that will not involve ground disturbance or mobilization to the project site. The second “Construction” Notice to Proceed will authorize all remaining construction remaining items.

The Contractor shall furnish and mobilize all specified construction facilities, temporary controls, equipment, labor, materials, power, supervision, and supplies to the site and commence work within thirty calendar days after receipt via certified mail or confirmed email receipt of the “Construction” Notice to Proceed. Mobilization includes everything necessary to complete the required contract work. The Contractor shall inform the Project Engineer of plans and schedules to move all equipment, machinery, and supplies to the job site. The Contractor shall locate and position the staging area including field offices, parking, storage, and support facilities as directed and approved by the Project Manager. All equipment and machinery shall be moved onto the job site in conformance with previously approved plans and schedules. All heavy equipment shall be washed with a high pressure washer to remove any possible noxious weed seed prior to arrival in the project area. It is the Contractor's responsibility to arrange for storage facilities for equipment and materials. City, state, federal, or other public or private property shall not be used as temporary storage or parking areas for any equipment or materials unless written clearance is obtained by the Contractor from the appropriate public officials or private individuals. The Contractor must be prepared to move all necessary equipment to each construction site within the project area. This movement of equipment shall be at the Contractor's expense and should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

**01510 - TEMPORARY UTILITIES**

The following sections describe temporary utilities, controls, facilities, and construction aids required during construction. They include requirements for installation, maintenance, and removal.

**01530 – BARRIERS AND ENCLOSURES**

The Contractor shall provide barricades with blinking markers for all equipment on roadways and pedestrian walkways. The barricades shall be no less than twenty feet from the front and rear of any equipment in the described rights-of-way. Traffic control devices shall be in substantial conformance with the American Traffic Services Association (ATSA) Guide for Work Area Traffic Control. The Contractor shall remove the barricades upon completion of the contract work.

**01533 - TREE, PLANT AND WILDLIFE PROTECTION****I. 01516 - TEMPORARY SANITARY FACILITIES**

- II. The Contractor shall provide temporary sanitation facilities during the contract work. The facility shall be installed on the project site prior to the start of work on mine features in a staging area approved by the Project Manager and Project Engineer. The facility shall be locked to prevent unauthorized access during the times work is not conducted. The facility shall be maintained in a functioning and sanitary condition by the Contractor for the duration of the project. The Contractor shall remove the facility upon completion of the contract work and restore the area.

**III. Tree and Plant Protection**

Environmental disturbance shall be kept to a practical minimum.

In steep areas and around vegetation, the Contractor shall, before beginning work, discuss the planned extent and nature of disturbance with the Project Manager. Existing plants and trees shall be protected from damage or injury resulting from the Contractor's operations. Damaged trees and shrubs shall be trimmed to remove broken limbs where minor damage has occurred. Where any limbs must be removed the Contractor shall cut branches away from the bole to avoid damage to the branch collar.

**II. Wildlife Protection**

All area wildlife, including bats and owls, that may use the mine features are protected, and this hazard abatement effort shall not adversely affect them. Shooting at and chasing wildlife is prohibited.

30 days before mobilization to the site the Contractor shall submit a construction schedule, which includes anticipated dates of closure of specified mine features, in accordance with Section 01310. Based on this schedule the AML Project Manager will review, and if acceptable give authorization to proceed on closure of, the mine features that require netting, tarping, or smoke bombing to exclude animals before closure. It is solely the Contractor's responsibility to obtain this authorization. After approval of the schedule, any need for changes shall be coordinated with the AML Project Manager and appropriate staff a minimum of 48 hours before closure of the features. The Contractor's failure to follow this procedure may result in stoppage of the construction activity at his expense until the biological staff can reschedule netting and tarping of the specified features.

The Contractor shall aid AML staff in using smoke bombs to expel remaining bats or other animals before backfilling or closing a mine feature, in covering the entrances of designated mine features with tarps or other barricades after the animals have exited and in removing the barricades following closure. The Contractor shall provide sufficient numbers and sizes of tarps, polyethylene sheets or other satisfactory covers for this purpose.

All mine openings, except those whose workings can be fully visually checked by the Project Manager and those which are safeguarded by the construction of bat closures, airflow closures or high-strength steel mesh, shall be tarped or netted (one-inch mesh material, e.g., chicken wire, polypropylene or similar material) 72 hours before closure and require agreement on the dates of closure.

During construction of bat closures, the Contractor shall schedule construction activities so the bats can readily pass through the partially completed closures from one hour before sunset until sunrise. In addition, during construction of bat closures at shafts, the Contractor shall take positive measures to reduce the rock and other material that drop into those mine features.

Internal combustion engines, including those used on air compressors, shall be placed such that exhaust from the engine is not drawn into the mine openings.

#### **01535 - PROTECTION OF INSTALLED WORK**

The Contractor shall protect installed work and control traffic in the immediate area to prevent damage from subsequent operations.

**01540 – SECURITY**

---

The Contractor shall act to assure the protection of the contract work and equipment at the contract work site. The Contractor shall furnish, install, and maintain safety fences around any hazardous or high-voltage equipment at the site for the duration of the project. Where appropriate, the Contractor shall restrict access to the project site by barricading access roads during off-hours and by posting "No Admittance" and "Hard Hat Area" signs.

**01550 – ACCESS ROADS, PARKING AREAS AND STAGING AREAS**

Surface disturbance caused by the project's activities shall be minimized to the maximum extent practicable. Unless otherwise indicated, all Contractor personnel and equipment shall enter and leave the project site via existing roads and trails. Upon the regrading, recontouring, or reclamation of any part of the site, further vehicular use shall be limited to that necessary to complete operations. Any access routes that are determined by the Project Manager to be maintained throughout the project duration shall be left in as good or better condition than the condition before the start of the project. Existing roads and trails shall be used whenever possible. The Project Engineer will identify staging and parking areas during the mandatory pre-bid meeting which shall be used by the Contractor for all storage needs. Trips to and from the staging area and work sites shall be minimized to the maximum extent practicable.

Equipment shall be "walked" or operated cross-country to travel to work sites where roads do not exist or where road conditions preclude use of equipment trailers, using a path designated by the Project Manager in consultation with Environmental Compliance staff and the Contractor. No equipment or vehicles shall be operated off the existing roads from the period starting at noon on Friday to noon on Monday unless the Project Manager is present. No new paths shall be bladed or improved.

Overland access routes shall be smoothed by equipment and/or hand tools within 24 hours of completion of construction. Equipment trips to the mine features from established roads shall be kept to an absolute minimum and materials may need to be hand carried to avoid excessive traffic. Equipment shall be rubber-tired or rubber-tracked and large equipment will not be allowed. All unspecified roads, trails, or travel routes shall be regraded to approximate original contours, reclaimed, and revegetated as necessary in conformance with the specifications at no additional cost to EMNRD.

**01560 – TEMPORARY CONTROLS**

---

The Contractor shall take all reasonable steps to reduce any inconvenience and disruption to the public because of this project. The Contractor shall provide the following temporary controls for the duration of the contract work.

**01561 - CONSTRUCTION CLEANING**

The Contractor shall keep the contract work area, equipment, and adjacent areas free from spillages of construction and maintenance materials during the contract work. The Contractor shall also provide for the containment of solid debris created by unpackaging construction materials and waste from meals consumed at the contract work site. The Contractor shall assure the cleanup and removal of all spillages and solid debris to an approved disposal site at the end of each contract workday.

**01562 - DUST CONTROL**

The Contractor shall take all necessary measures to control dust emanations from the construction equipment. The Contractor shall assure that the equipment used in the contract work is fitted with all standard dust control devices. To maintain the health and safety of project personnel, dust control measures at this site shall comply with all local, state, and federal health and safety regulations. The Contractor shall be prepared to begin dust control measures anytime at the request of the Project Manager.

**01564 - NOISE CONTROL**

The Contractor shall assure that all equipment used in the contract work is fitted with standard noise suppression devices.

**01565 - FIRE PREVENTION AND SAFETY AWARENESS**

The Contractor shall develop an emergency plan that will outline precautionary measures and identify initial attack resources and procedures in case of a fire incident. This plan will be submitted to the Project Engineer at the Pre-Construction meeting. The Project Engineer will then provide feedback about the plan. The Contractor shall provide the fire emergency plan to all individuals working on this project.

Examples of precautionary measures might be:

- I. Inspect all motorized and mechanized equipment to insure mufflers and spark arresters are operating properly.
- II. Insure personnel are properly trained on the safe use of welding torches, arc welders, generators, saws, power grinders, chainsaws, and other tools and are also familiar with the potential of this equipment to create hot sparks and ignite fires.
- III. Avoid welding or cutting in areas next to and above flammable materials or during windy conditions. This would pertain to materials inside the mine as well as outside the mine. Welding shall not take place within 25 feet of polyurethane

foam during application. After its application, welding shall not take place above it without first covering the surface with at least 6" of fill material.

Examples of resources and procedures might be:

1. Maintain adequate fire extinguishers, water tanks, sprayers, and other equipment at the work site that would enable personnel to immediately extinguish any accidental ignition.
2. Have personnel observe the work area while welders are operating (welders cannot see where the sparks are falling when under the welding hood).
3. Assign an individual to be responsible for the area being "safe" (no hot sparks, iron is cold) before leaving the work site.
4. Develop an emergency notification procedure in case the fire incident is or appears to be reaching an out-of-control status.

The Contractor shall obey any fire restrictions declared by the landowner(s) (i.e. U.S. Forest Service or Bureau of Land Management).

---

## **01570 – TRAFFIC REGULATION**

---

The Contractor shall take the following measures for regulation of traffic at the contract work site.

### **01572 - Flaggers**

The Contractor shall post flaggers during the off-loading and on-loading of equipment or materials in roadways at or near the contract work site. The flaggers shall halt traffic during the off-loading or on-loading process or direct traffic to an alternate route.

### **01574 - Haul Routes**

The Contractor shall consult with the authority having jurisdiction in establishing public thoroughfares to be used for haul routes and site access.

---

## **01580 – PROJECT IDENTIFICATION AND SIGNS**

---

At least one temporary project sign shall be furnished and erected by the Contractor at the most convenient point of public access to the project site. The project identification sign shall be installed within three days after the Contractor initially mobilizes to the project site. The sign is to be a minimum of four feet by eight feet by three quarter inch (4' x 8' x 3/4") exterior grade plywood or equivalent and is to give the project title, project number, and other data within the box on the Title Page (Section 00001). The lettering shall be a minimum of two inches tall,

Tahoma font, project name in bold font, and with capitalization and word organization as shown on the Title Page. Exterior quality paint in contrasting colors shall be used. The Contractor shall remove sign, framing, supports, and foundations at completion of Project and restore the area. The costs connected to the construction, painting, erection, and later removal of the sign should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

---

**01590 – FIELD OFFICES AND SHEDS**

---

Portable or mobile buildings, or buildings constructed with floors raised above ground, may be provided by the Contractor in locations approved by the Project Engineer and the landowner. At completion of work, the Contractor shall remove all buildings, foundations, utility services, and debris and restore areas.

---

**01600 – MATERIALS AND EQUIPMENT**

---

All materials and equipment required to complete the work shall be as specified. Any substitution to the specified products requires prior approval by the Project Engineer.

---

**01700 – CONTRACT CLOSEOUT**

---

The following sections specify the duties and responsibilities of the Contractor to close out the contract.

**01701 - CONTRACT CLOSEOUT PROCEDURES**

When work is completed, the Contractor shall submit project record documents to the Project Engineer.

**01702 - FINAL INSPECTION**

Upon written notice from the Contractor that the entire Work or an agreed portion thereof is complete, the Project Engineer will make a final inspection with the Project Manager and Contractor and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The Contractor shall immediately take such measures as are necessary to remedy such deficiencies. The final inspection shall occur before construction equipment is mobilized off site.

**01710 - FINAL CLEANING**

After completion of all work, the Contractor shall demobilize and remove all equipment, materials, spills, supplies, and trash from the project site and shall reclaim all areas disturbed by the Contractor's activities. Unless otherwise specified, developed, maintained roads that existed before commencement of the Contractor's activities need not be reclaimed, but must be left in a



condition equal to or better than what existed before the Contractor's activities began. Fences, gates, plants, sod, and other surface materials disrupted by these operations shall be replaced or restored to original or better conditions immediately upon completion of work at the site. Other damage to private or public property shall be immediately repaired. All such cleanup, repair, or replacement work shall be done at the Contractor's expense and to the satisfaction of the Project Manager pending approval of the appropriate public officials and property owners. Payment for Demobilization should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

---

#### **01720 – PROJECT RECORD DOCUMENTS**

---

The Contractor shall prepare final Project Record Documents providing information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination. At Contract closeout, the Contractor shall deliver Project Record Documents and samples under provisions of Section 01701.

#### **END OF DIVISION 1**

This page was intentionally left blank

## **DIVISION 2 – SITEWORK**

The following sections describe the sitework to be performed under this contract.

Before any disturbance of the mine features, the Contractor shall provide tarps and one-inch mesh material (chicken wire, polypropylene, or similar material) and assist AML staff or consultants in excluding animals from the features to be closed. Refer to the requirements in Section 01533.

### **02050 – DEMOLITION**

---

The following section describes selective demolition to be performed under this contract.

#### **02070 - SELECTIVE DEMOLITION**

The mine openings may require the removal of debris such as boards, signs, timbers, wire, etcetera. Salvageable materials shall be neatly stacked on the site, while trash shall be properly disposed of at the Contractor's expense at an appropriate licensed landfill. All fasteners shall be removed from the lumber and timbers. All specified or established avoidance areas shall be avoided and the recommendations of the archaeological report and the State Historic Preservation Office (SHPO) will be followed.

Other debris and timbers that may cause bridging of backfill material or otherwise interfere with construction shall be removed as directed by the Project Manager.

### **02100 – SITE PREPARATION**

---

The following section describes site preparation to be performed under this contract.

#### **02110 - SITE CLEARING**

This work shall consist of clearing, grubbing, trimming, removing and disposing of vegetation and debris in accordance with these specifications, except those items designated to remain. This work shall also include the preservation from damage or defacement of all vegetation and items designated to remain.

Within construction limits for borrowing backfill material, all surface debris, roots, stumps, trees, and other objectionable protruding obstructions shall be cleared with the Project Manager's concurrence.

---

**02200 – EARTHWORK**

---

The following sections describe the earthwork to be performed under this contract.

**02210 - GRADING**

The following sections describe the grading to be performed under this contract.

**02211 - ROUGH GRADING**

Unless otherwise specified or indicated, all cut and fill slopes shall be rough graded so that slopes are not steeper than three horizontal to one vertical (3h:1v) in earth, two horizontal to one vertical (2h:1v) in incompetent rock and very rocky soils, and one half horizontal to one vertical (0.5h:1v) in competent rock. Where specified and as directed by the Project Manager, the Contractor shall grade sites and construct drainage ditches around safeguarded mine features to divert storm water away from those features. Diverted flows shall not be directed onto identified cultural resource or endangered plant areas.

Where cut slopes in competent rock are steeper than one and a half horizontal to one vertical (1.5h:1v), the maximum uninterrupted vertical height of the slopes shall be no more than ten feet. A series of slopes, each at between one-half horizontal to one vertical (0.5h:1v) and one and a half horizontal to one vertical (1.5h:1v), may be constructed in competent rock if horizontal benches or terraces a minimum of six feet wide, with inslopes of at least 4 percent, are built at a vertical spacing of no more than ten feet.

**02212 - DECOMPACTION**

Before construction demobilization and following the need for any construction access to each abandoned mine site, the Contractor shall decompact areas compacted by construction activity, including temporary work areas and access trails, and staging, storage and parking areas. Areas where more than four feet of overburden material has been removed shall also be decompact.

Where bedrock is exposed at the surface, such decompaction will not be required. Decompaction methods shall be effective at reducing soil density to a minimum depth of twelve inches (except where bedrock is closer to the surface) and shall be accomplished without inverting the soil layers. Where practicable, ripping shall be done along the contour. Alternatives to ripping or auguring for decompaction shall be submitted to the Project Engineer for review.

**02218 - LANDSCAPE GRADING**

Following feature closure, backfilling, and rough grading, disturbed sites shall be graded to blend them in with the surrounding landscape and to reduce excessively steep areas as directed by the project manager. Except in areas to be drill seeded, the soil surface shall be finished as

rough as possible, by ripping, using the teeth of an excavator bucket, or similar methods, to slow the velocity of erosive overland flows and to create small pockets and furrows to trap water and create favorable microclimates for plant growth. Where done by hand, this roughening can be done by shovel or mattock, creating many, closely spaced depressions and pits two to six inches deep. Wherever possible chiseling, ripping, and similar operations shall be done along the contour. The actual final topography shall be determined by consulting with and obtaining the approval of the Project Manager.

## **02220 - EXCAVATING, BACKFILLING, AND COMPACTING**

The following sections describe the excavating, backfilling, and compacting to be performed under this contract.

### **02222 - EXCAVATION**

The Contractor shall reopen as necessary the adits that may be partially closed, by mucking out the debris, earth, and rock plugging or partially plugging them. Before removing any backfill or borrow, the Contractor shall discuss with the Project Manager where material shall be excavated and stored, and shall obtain the Project Manager's approval of the excavation plan.

### **02223 - BACKFILLING OF MINE OPENINGS**

This work shall consist of backfilling mine openings with onsite or imported fill materials as designated in the specifications or as directed by the Project Manager.

#### **I. General**

Before backfilling mine openings, the Contractor shall remove cribbing, garbage, wood and other materials as specified and as directed by the Project Manager. All trash and debris shall be hauled to a permitted landfill or transfer station.

Backfill material shall be free of snow, ice, frozen lumps, logs, timbers, significant amounts of woody or vegetative debris, other deleterious materials and materials of such size and shape that they may bridge the opening being filled.

Hand backfilling is an option at sites difficult for equipment access or too steep to operate equipment safely.

#### **II. Adit Backfilling**

Unless otherwise specified, adits shall be backfilled to a minimum depth of fifteen feet back from the adit opening. No spaces shall be left between the top of the fill and the back (roof) of the adit that exceed three inches and no space shall be left between the top of the fill and the back

(roof) of the adit at the entrance of the adit. In certain situations, a tamping device or fabricated ram may be required to place the necessary fill.

Wherever practicable or as directed by the Project Manager, the entire length of backfill shall consist of rocks to reduce the chances of erosion of the material and discourage anyone from digging through the fill.

Where the opening to an adit is recessed into a hill slope, the trench in front of the adit shall be partially backfilled as shown on the Drawings and with no abrupt changes in the slope between the backfilled entry and the surrounding ground.

### III. Shaft, Pit, and Open Stope Backfilling

Shafts, pits, stopes, declines, and trenches shall be backfilled completely from the bottom of the feature to the specified minimum distance above or below the surface.

In shafts and stopes with intact or partially intact cribbing or lining to remain, the maximum size of backfill material shall have no dimension exceeding twelve inches. Care shall be taken during backfilling to reduce damage to the cribbing or lining to prevent bridging of fill materials on collapsed timbers and to minimize potential for collapse of the collar.

Where judged to be feasible by the Project Manager, the Contractor may break collapsed timbers deeper than can practicably be removed by other methods by dropping heavy rock, boulders, or broken concrete during the initial stages of backfill.

Wherever practicable, at least 80 percent by weight of fill material shall be larger than  $\frac{3}{4}$  inch. In shafts, stopes and declines, the coarsest available backfill material shall be used from the bottom of each drift level to a minimum height of five times the diameter or diagonal dimension of the shaft above the drift floor level.

### IV. Slow Backfill

Slow backfill is designated for closure of some features; the purpose is to create enough loud noise, vibration and dust to expel bats and birds that may be in the underground mine workings. Hand backfilling is by definition slow backfill and will not require special procedures unless directed otherwise by the Project Manager.

When using equipment, the following procedure shall be followed. The first one-quarter cubic yard of fill material placed to backfill the shaft or stope shall be slowly placed into the mine opening. Fill operations shall then cease for two minutes to allow time for bats and birds to escape. After three repetitions of quarter-yard fill increments interspersed with waiting periods of two minutes, this procedure shall be repeated using one-half cubic yard increments, again with two-minute pauses between fill operations. To the extent practicable, fill material for the slow backfill process shall be gravel-sized and not larger than  $1\frac{1}{2}$  inches.

The Project Manager may require the Contractor to vary this procedure. Variations may be made depending on the size and depth of the mine opening, the complexity of the underground workings, the availability of properly sized material at the fill site and his or her judgment of the effect of the operation on bats and birds in the openings.

After this initial slow placement of backfill material and with the concurrence of the Project Manager, the Contractor may proceed with normal backfilling operations.

#### V. Final Layer of Fill

Wherever practicable, the final eight- to twelve-inch layer of the fill at mine openings shall be soil of comparable quality to the undisturbed soil surrounding the backfilled feature. Note the topdressing requirements of Section 02921.

### **02224 - BORROW**

Except where otherwise specified or indicated, fill shall come from the areas immediately at and surrounding the mine features or from nearby mine waste piles as the Project Manager directs. Preferentially, mine waste material shall be used. Material may come from other approved areas as required and as directed by the Project Manager.

For indicated mine openings and as required, fill material shall be taken from designated borrow areas as indicated in the drawings. Any other non-designated borrow sources shall be approved before use by the Project Manager in consultation with AML cultural resource staff and, for borrow sites on nearby BLM lands, by the Bureau of Land Management. Topdressing at onsite borrow areas shall be stripped and stockpiled before borrow operations. Haul routes for borrow material shall be approved by the Project Manager before commencement of hauling.

Except as otherwise noted or allowed by the Project Manager, the Contractor shall not use any mine waste material from within avoidance areas, shall avoid undermining the cultural features within avoidance areas during borrow operations, and shall not leave disturbed slopes in the mine waste steeper than two horizontal to one vertical (2h:1v) outside avoidance areas.

### **02229 - COMPACTION**

Material used for fill shall be compacted whenever possible using multiple passes with available heavy equipment. The fill shall obtain a compaction density not less than what the equipment can reasonably obtain to the satisfaction of the Project Manager.

Where vibratory compaction equipment is used, it shall be the Contractor's responsibility to insure that vibrations do not damage nearby structures or underground mine voids.

**02279 – PRECAST STACKABLE CONCRETE UNITS**

Precast stackable concrete units shall have a minimum 28-day compressive strength of 3000 PSI. the concrete shall have adequate freeze/thaw protection with a maximum moisture absorption of 8 percent. Exterior dimensions may vary. Basis of design: Units shall be capable of a convex radius of 25 inches. Construction drawings are based on “Cottage/Country Stone” unites by Rockwood Retaining Walls, Inc. and are authorized manufacturers or distributors.

Units from other manufacturers may be acceptable, following review by the Project Engineer. Any substitution shall have equal quality of construction, similar materials, and the same performance characteristics as that specified. If the Project Engineer Accepts the proposed substitution, the Contractor shall accepted the unqualified responsibility for the performance of the substituted item. Changes or modifications of construction cause by the substitution shall be the responsibility of the Contractor and shall be at his sole expense.

**I. Drainage Aggregate**

Drainage aggregate shall be angular, clean stone or granular fill meeting the following gradation as determined in accordance with ASTM D422.

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
3/4 inch	75-100
No. 4	0-60
No. 40	0-50
No. 200	0-5

Drainage aggregate shall be placed in uncompacted layers of eight inches or less and compacted by slicing with a shovel or vibrating.

**II. Scoria Fill**

Scoria fill shall be clean, crushed scoria (or other approved equivalent lightweight aggregate) with a dry unit weight of no more than 46 pounds per cubic foot and with not less than 95% passing a 1½” sieve and with not less than 90 percent retained on a #4 sieve.

Scoria fill shall be placed in uncompacted layers of eight inches or less and compacted by slicing with a shovel or vibrating.

The Contractor shall excavate to the lines and grades shown on the construction drawings and as required for the footing dimensions. The first course shall be aligned by



using a string line at straight walls sections and each face unit leveled side-to-side and front to back. The first course of units shall be placed side by side so they are touching. Units shall be placed side by side for the full length of the wall. Proper alignment may be achieved with the aid of a string line or offset from a baseline. The clean granular fill behind the units shall be placed and compacted by slicing with a shovel as each course is finished. All excess material shall be swept from the top of units before installing the next course.

Permanent mechanical connection shall be made at the top two courses with construction adhesive. Adhesive shall be applied to the top surface of units below and the upper units then placed into position. All surfaces shall be clean, dry and free of dust, oil, grease, frost, and moisture. Adhesive shall be a one-part, water-resistant, freeze-thaw stable, super strength, flexible, and quick curing industrial adhesive that conforms to ASTM 2339. The adhesive shall be “SB-10 Paver Bond” by Surebond, Inc. (<http://www.surebond.com>)<sup>19</sup>, or approved equivalent.

The Contractor shall follow the manufacturers' installation recommendations for concrete units and adhesive.

---

## **02800 - SITE IMPROVEMENTS**

---

Cattle guards, curbs, fences, gates, gutters, sidewalks, and other road or street improvements destroyed, removed, or damaged during construction shall be replaced with the same type and dimensions of units removed and shall be equal to and consistent with the undisturbed portions of the improvements existing before the project.

### **02820 - FENCES**

Fencing Specifications shall conform to the requirements set forth in AASHTO M181, the New Mexico Standard for Public Works Construction, Section 410 and NMSA 1978, Sections 77-16-1 through 77-16-18, as modified below.

#### **I. GENERAL**

The Contractor shall submit one test certificate each to the Project Engineer certifying that the fencing materials conform to the requirements herein provided. When the locations of manufacturing plants allow, the plants may be inspected for compliance with specified manufacturing methods and material samples will be obtained for laboratory testing for compliance with material quality requirements. This can be the basis for acceptance of manufacturing lots as to quality. All materials will be subject to inspection for acceptance as to condition to check for compliance before or during incorporation of materials in the work. All fences shall be installed in the locations specified and as directed by the Project Manager.

---

## II. WIRE FENCE

This work shall consist of the construction of fence and gates in substantial compliance with the specifications, lines and grades shown on the plans or established by the Project Engineer.

### A. Welded Wire Fabric and Wire

All fences shall consist of welded wire fabric and line wires spaced as indicated.

1. PVC-coated barbed wire shall be manufactured in accordance with ASTM F1665, which requires two strands of 14 gauge (0.080") metallic-coated core wire with four-point 14 gauge (0.080") zinc-coated or aluminum alloy barbs. The PVC coating shall be class 1 extruded or class 2a extruded and adhered. The spacing on the barbs shall be Type 1, 5 inches on center.

2. Welded wire fabric shall be fabricated using 14 gauge (0.080") wires with stay wires (wires running the width or height of the roll) at 2" spacing and line wires (wires running the length of the roll) at 4" spacing. The fabric shall be galvanized after welding and then coated with black PVC. The PVC coating shall be ultraviolet-resistant. Welded wire shall conform to ASTM A185, A370 and A853 and zinc coating to ASTM A90, A123 and A153 and shall be welded wire mesh by Riverdale Mills Corporation, or approved equivalent.

3. Tie wires for fastening welded wire fabric and barbed wire to steel posts shall be not less than thirteen gauge (0.109-inch) coated diameter and galvanized conforming to ASTM A112. Eleven gauge (0.120-inch) coated diameter or heavier wire fasteners or metal clamps may be used instead of tie wires when approved in advance by the Project Engineer.

### B. Brace Panels and Posts

Intermediate brace, gate brace and corner panels shall be prefabricated assemblies, "Easy Fence" by D-C Industries (Coalville, Utah, 435.336.2404) or approved equivalent, which require no concrete footings. They shall be installed following the manufacturer's recommendations.

Line posts shall be metal. All posts shall be of the type, size and length shown on the plans and as herein provided.

Metal posts shall be fabricated from rail, billet, or commercial grade steel conforming to ASTM A702 and shall be galvanized or painted green as required. All metal posts throughout the

project shall be either galvanized or painted the same color green. Galvanizing shall conform to ASTM A123. When painted green, the posts shall be cleaned of all loose scale before finishing and painted with one or more coats of weather resistant, air baking or drying, green paint or enamel.

Metal line posts shall consist of heavy-duty steel spaced sixteen and one half feet apart. Metal line posts shall have a minimum weight of 1.33 pounds per foot exclusive of anchor plates. A minus tolerance not to exceed 5 percent of the minimum weight of each post will be permitted. A plus tolerance of two inches and a minus tolerance of one inch in the length of each post will be permitted. Metal line posts may be I-beam, T-beam, U-beam, Y-beam, or H-column section.

Line posts shall be provided with corrugations, lugs, ribs, or notches spaced approximately one inch on centers to engage the required fence wire in designated spaces. Posts with punched tabs to be crimped around the wire will not be accepted. Anchor plates shall be an area of not less than eighteen square inches, shall weigh not less than 0.67 pound each and shall be securely welded, bradded, swaged, or riveted to each line post in a way that prevents displacement when the posts are driven.

#### C. Fittings

All fittings, hardware and appurtenances for fences shall be commercial quality steel, malleable iron, or wrought iron and shall be galvanized in accordance with the requirements of ASTM A153. Fittings shall be black PVC-coated with ultraviolet-resistant coating.

#### D. Gates

Gate construction shall be as indicated on the Drawings. Posts, gate frame and fencing hardware shall meet requirements of the "Chain Link Fence Manufacturers Institute Product Manual" and ASTM F900.

The base materials of the gate frame shall be round tubular members, welded at all corners or assembled with corner fittings. Gate fabric shall be the same type as used in adjacent fence construction.

The gate frame shall be designed and built so that the outer members do not sag in excess of the lesser of one percent of the gate leaf width or two inches. Hinges shall be structurally capable of supporting the gate leaf and allow the gate to open and close without binding. The hinges shall be so designed to permit the gate to swing a full 180°.

Posts, gate frame, and fencing hardware shall be black PVC-coated. Welded joints shall be top-coated to match the frame color. PVC coating shall be resistant to ultraviolet degradation.

---

### III. CONSTRUCTION

The Contractor shall perform such clearing and grubbing as may be necessary to construct

the fence to the required grade and alignment. At locations where fence runs are completed, appropriate adjustment in post spacing shall be made to conform to the requirements for the type of closure indicated.

The tops of all posts shall be set to the required depth and alignment. Cutting off the tops of posts shall be allowed only with the approval of the Project Manager and under the conditions specified. Wire or fencing of the size and type required shall be firmly attached to the posts and braced in the manner indicated. All wire shall be stretched tautly and shall be installed to the required elevations. At each location where an electric transmission, distribution, or secondary line crosses any of the fences covered by these specifications, the Contractor shall furnish and install a ground conforming to National Electrical Code requirements if conditions warrant such installation.

Wire fences shall be constructed in conformity with the details and at locations shown on the plans or staked by the Project Manager. All posts shall be set plumb and to the depth and spacing shown on the plans. Excavations for footings and anchors shall be to dimensions shown on plans or established by the Project Engineer. Metal line posts may be driven. Posthole backfill shall be placed in thin layers and each layer solidly compacted. Posts set in rock shall be placed as directed by the Project Manager.

Mechanical stretcher or other device designated for such use shall stretch fence wire and welded wire fabric. Stretching by motor vehicle will not be permitted. The length between pull posts shall not exceed nine hundred ninety feet for barbed wire fence.

Intermediate braces shall be placed at intervals not to exceed nine hundred ninety feet and shall be spaced evenly between corner posts.

Corner posts and braces shall be placed at appropriate fence angles or bends.

Fence materials of the same manufacturer, type, or process, conforming with the specifications and details shown on the plans, shall be used throughout the work unless otherwise authorized in writing by the Project Engineer.

## **02831 – CHAIN LINK FENCE AND GATES**

### **I. GENERAL**

This section includes specifications for steel chain link fence and gates. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and other Division - 1 Specification Sections, apply to this Section. The following Sections contain requirements that

relate to this Section: Division 2 Sections for filling and grading work. Division 3 Section 03300  
- Cast-in-Place Concrete

## II. SUBMITTALS

Submit the following in accordance with 01300. Product data in the form of manufacturer's technical data, specifications, and installation instructions for fence and gateposts, fabric, gates and accessories. Shop Drawings showing location of fence, gates, each post, and details of post installation, extension arms, gate swing, hardware, and accessories.

## III. QUALITY ASSURANCE

Single-Source Responsibility: Obtain chain link fences and gates as complete units, including necessary erection accessories, fittings, and fastenings from a single source or manufacturer.

## IV. MANUFACTURERS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following:

### I. Galvanized Steel Fencing and Fabric:

- a. Allied Tube and Conduit Corp.
- b. American Fence Company
- c. Anchor Fence Co, Inc.
- d. Capitol Wire and Fence Co., Inc.
- e. NUCOR
- f. Gregory Industries, Inc.

## V. INSTALLATION

General: Install fence in compliance with ASTM F567. Do not begin installation and erection before final grading is completed, unless otherwise permitted. Apply fabric to outside of framework. Install fencing on boundary lines inside of property line established by survey as required by Division 1. Excavation: Drill or hand-excavate (using post-hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil. Setting Posts: Center and align posts in holes 4-inches above bottom of excavation. Space maximum 10 feet on center, unless otherwise indicated. Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical

and top alignment and hold in position during placement and finishing operations. Unless otherwise indicated, extend concrete footings 2-inches above grade and trowel to a crown to shed water. **Top\_Rails:** Run rail continuously through line post caps, bending to radius for curved runs and at other posts terminating into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer. **Center Rails:** Provide center rails where indicated. Install in one piece between posts and flush with post on fabric side, using rail ends and special offset fittings where necessary. **Brace Assemblies:** Install braces so posts are plumb when diagonal rod is under proper tension. **Bottom Tension Wire:** Install tension wire within 6 inches of bottom of fabric before stretching fabric and tie to each post with not less than same gauge and type of wire. Pull wire taut, without sags. Fasten fabric to tension wire with 11-gauge hog rings of same material and finish as fabric wire, spaced maximum 24-inches on center. **Fabric:** Leave approximately 2 inches between finish grade and bottom selvage unless otherwise indicated. Pull fabric taught and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released. **Tension or Stretcher\_Bars:** Thread through or clamp to fabric 4-inches on center, and secure to end, corner, pull, and gate posts with tension bands spaced not over 15-inches on center. **Tie Wires:** Use U-shaped wire of proper length to secure fabric firmly to posts and rails with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing. **Maximum Spacing:** Tie fabric to line posts 12 inches on center and to rails and braces 24 inches on center. **Fasteners:** Install nuts for tension bands and hardware bolts on side of fence opposite fabric side. Pen ends of bolts or score threads to prevent removal of nuts.

## **02890 - SURVEY MARKERS**

The survey marker shall be installed in a location provided by the Project Manager. The Contractor shall install a survey marker, provided by the Project Manager, into the concrete foundation of all bat gates requiring concrete foundations and into the grouted annulus of the bat gate constructed inside a corrugated metal pipe. Otherwise, a new six-foot long nominal 3½ - inch inside diameter galvanized steel pipe (4.0" O.D., minimum 9.11 lbs./ft.) shall be installed in front of backfilled and safeguarded mine features as indicated in the planset. The lower two feet of pipe shall be set in concrete a minimum of one foot in diameter and the upper twelve inches of pipe shall extend above grade. The Contractor shall grout a survey marker, provided by the Project Manager, into the pipe using a non-shrink grout, such as Quikrete Non-Shrink General Purpose Grout, or approved equivalent. Alternately, where the Project Manager concurs, the Contractor may drill and grout a survey marker into undisturbed, competent rock or concrete immediately next to each specified feature.

## **02900 - LANDSCAPING**

---

The following sections describe revegetation to be performed under this contract.

---

**02920 - SOIL PREPARATION / SURFACE ROUGHENING**

Prior to seedbed preparation, the Contractor shall grade all disturbed areas as described, decompact those areas specified above, and roughen the surface as specified below. Disturbed areas include the mine backfill borrow areas, depressions and mounds at safeguarded shafts, filled areas at adits, temporary access and haul routes, areas stripped of native vegetation and any other surface disturbed areas except as otherwise specified.

On slopes up to 1.5h:1v, the soil surface in areas to be seeded shall be prepared to be continuously rough and hummocky. This shall be accomplished by using an excavator bucket, or other acceptable methods that produce similar results, to create small pockets and furrows to trap water and create favorable microclimates for plant growth.

After roughening, seed shall be broadcast or hydroseeded as specified below. In areas with extremely dry and loose soil, the Project Manager may require the Contractor to wait until the soil has settled before seeding.

Large and small boulders may be left exposed on site prior to seeding, either singly or in groupings that blend with the natural surroundings, as directed by the Project Manager. The Project Manager may require that additional boulders be placed on site to enhance visual variation and provide wildlife habitat.

Unless the soil is severely compacted or as otherwise noted, soil preparation will not be required for discontinuous, isolated areas of disturbance less than 0.05 acres (approximately 2,500 square feet or 50 feet by 50 feet), such as areas around mine portal closures.

The extent of seedbed preparation shall not exceed the area on which the entire seeding operation can be applied to such prepared seedbed before any surfaces crusting or loss of seed and fertilizer due to erosion. If erosion or crusting occurs, the entire area affected shall be reworked beginning with seedbed preparation.

**02921 - TOPDRESSING**

As specified, on construction sites, mined areas, and other critical areas where the existing surface material is either chemically or physically unsuited to support adequate vegetation, the best available soil material as determined by the Project Manager shall be evenly spread on the surface in sufficient depths to maintain plant growth. Available topdressing in all areas to be disturbed shall be set aside prior to deeper soil disturbance for excavation, mine feature backfilling and access road blading.

Topdressing shall be applied generally along the contour, but if hazardous conditions arise, the application may be in another direction. In all cases, placement shall be such that erosion is kept to a minimum. All topdressed slopes shall be prepared by surface roughening before planting to reduce erosion.

**02930 - GRASSES**

The following section describes the seeding to be conducted under this contract.

**02933 - SEEDING**

Following completion of seedbed preparation, the Contractor shall seed areas according to the Specifications and as follows:

Seeding Time

Seeding shall be accomplished between June 15 and August 31 of each year, unless specific permission in writing is issued by the Project Engineer to allow seeding before or after these dates. Seeding shall not be done when the soil is too wet, too dry, or otherwise untillable as determined by the Project Manager.

Seed Species and Mixtures

To assure AML that the seed purchased shall exhibit the characteristics associated with the given variety, and that it is genetically pure, the Contractor shall provide certified seed of named varieties. For the unnamed varieties, the seed shall be obtained by the Contractor from a source adapted to the climate and soil in which it is being planted; that is, a similar land resource area which is not more than approximately three hundred miles south or about two hundred miles east, north, or west. The percentage of each species comprising seed mixtures for application is outlined below. The mixture is to be used for revegetation of areas defined above in Section 02920. Seed species and varieties, which are well adapted to the soil, climate, and topography of the disturbed areas, shall be used in revegetation and are discussed below.

Seeding Methods

A. Broadcasting/Hydroseeding

The seed shall be broadcast or hydroseeded. When broadcast seeding, passes shall be made over the site to be seeded such that an even distribution of seed is obtained. Broadcast seeding shall take place immediately following the completion of final soil preparation. Broadcast seeding shall not be conducted when wind velocities would prohibit an even seed distribution as determined by the Project Manager. Broadcast seeding shall be followed by hand raking, manual use of a drag chain, or sweeping with sturdy tree or shrub branches to cover seed. This shall be done over the entire seeded area but shall not be so extreme as to reduce the extent of soil relief.

Broadcast seeding of large areas shall be done using hand-operated “cyclone-type” mechanical seeders. All seeding equipment used shall be equipped with a metering device and set to the appropriate seeding rate.



Broadcast seeding of small areas of disturbance, less than 0.05 acres (approximately 2500 square feet or 50 feet by 50 feet) may be done by hand scattering. Raking of small areas is not necessary if there is sufficient surface roughness to ensure that seeds will fall in crevices and other micro-topographic depressions such that weather and gravity will cause them to be covered and stay in place.

After completion of the broadcast seeding and seed covering, organic debris such as logs, tree stumps and grubbed vegetation shall be randomly redistributed across the sites. This shall be done at the Project Manager's direction for the purpose of creating visual variation, ground shading, and production of wildlife habitat. Care shall be taken to avoid leveling the soil surface.

#### B. Completion

If the Contractor is scheduled to close the project outside the specified seeding time when seeding is the only incomplete item, the Contractor shall complete only seed bed preparation and 75 percent of the bid price for seeding will be retained. Then the job shall be held open for seeding during the next seeding season with the remainder of the bid price being paid upon completion and acceptance of seeding.

If all of the work required by the contract, except seeding, is completed before seeding is accomplished because of seasonal limitations, partial acceptance of the work will be made with final acceptance delayed until seeding has been accomplished in accordance with these specifications. Liquidated damages will not be assessed against the Contractor during the interim period between the dates of partial acceptance and final acceptance if such delay is the result of seasonal limitations.

#### C. Seeding Rates

Seeding rates are given in Table I. Pure Live Seed (PLS) expresses seed quality. PLS is a percentage of pure, viable seed in a particular lot of seed. PLS is calculated by multiplying the percent total germination by the percent purity and dividing by one hundred (100):

$$\text{Percent PLS} = \frac{\text{Purity} \times \text{Germination}}{100}$$

**Table I – SEED MIX****Boston Hill Mine Safeguard Project – Phase I**

<u>No.</u>	<u>Species</u>	<u>Scientific Name</u>	<u>Bulk Seed/lb.</u>	<u>Percent by Weight of Total Mix</u>	<u>Application Rate Pounds of Seed /Acre</u>
1.	Black grama	<i>Bouteloua eriopoda</i>	1,335,000	6.4%	0.9
2.	Sand dropseed	<i>Sporobolus cryptandrus</i>	5,600,000	0.7%	0.1
3.	Sideoats grama	<i>Bouteloua curtipendula (var. Vaughn)</i>	159,200	87.1%	12.2
4.	Blue grama	<i>Bouteloua gracilis (var. Alma)</i>	135,000	5.7%	0.8
<b>Totals</b>			<b>100%</b>	<b>14.0 lb/ac</b>	

All seed shall comply with NMSA 1978, Sections 76-10-11 through -22 and 21.18.4.NMAC, Seed Standards and Classifications. Invoices or bag labels showing purity and germination for all seed shall be provided to the Project Manager before seeding.

The Contractor shall protect and care for seeded areas until final acceptance of the work, and shall repair all damage to seeded areas caused by pedestrian or vehicular traffic at no additional cost to EMNRD.

**02940 – MULCHING**

The Contractor shall apply mulch to all seedbed areas. Mulching will not be permitted when the wind velocity exceeds fifteen miles per hour. The mulch type shall coarse bark and/or wood chips or chunks, pecan shells, or approved equivalent. Materials shall be wind resistant. No more than 15 percent, by loose volume, shall pass through a 0.25-inch sieve. The mulch shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust or materials with noxious seed or plants will not be acceptable. If shredded yard waste is used, the Contractor shall use thoroughly composted material with no viable noxious weed seeds.

The mulch shall be spread uniformly over the prepared area either by hand or with a mechanical mulch spreader. Mulch shall be applied by the Contractor to all seeded areas immediately after seeds are planted to provide suitable surface litter for improvement of moisture conditions and to reduce the potential for damaging erosion or soil blowing which might occur before or during plant establishment.

---

**02941 – HYDRAULIC MULCHING**

Tackifier shall be a biodegradable organic formulation processed specifically for the adhesive binding of mulch. Organic soil and mulch tackifier for use in hydraulically planting of grass seeds, flowers, or woody tree seeds, or stolon, either alone or in combination with fertilizer, wood fiber mulch, and other approved additives, shall consist of specifically blended compatible hydrocolloids. Starch-based tackifiers will be rejected. The Contractor shall supply soil and mulch tackifier in packages containing 5, 20, or 40 pounds of material having an equilibrium air dry moisture content at time of manufacture of 8% ( $\pm 2\%$ ), and a minimum water holding capacity of 6-1/2 times by weight of dry material or as approved by the Project Engineer.

The tackifier shall uniformly disperse when mixed with water and not be detrimental to the homogeneous properties of the mulch slurry. Organic soil and mulch tackifier shall have the additional characteristics of hydrating and dispersing in circulating water to form a homogeneous slurry and remain in such a state in the hydraulic mulching unit, or adequate equal, with the specified, or other approved materials. When applied, the organic soil and mulch tackifier shall form a loose chain-like protective film, but not a plant inhibiting membrane. This film will allow moisture to percolate into the underlying soil and help "stick" seeds, fertilizer and other specified materials to the soil surface during germination and initial seedling growth, after which the organic soil and mulch tackifier will breakdown by microbial action. Any tackifier which has been damaged by moisture or other means will not be acceptable. Tackifier may be added either during the manufacturing of the mulch or incorporated during mulch application. Dye shall be nontoxic, water-activated, green in color, and pre-packaged in water dissolvable packets in the hydraulic mulch.

**02955 – SALVAGE OF NATIVE PLANTS**

Before any area is disturbed for access, borrow, fill or other construction activities, the Contractor shall thoroughly scout the area with AML compliance staff for native plant species. All significant plants shall be avoided wherever practicable. Of those that need to be disturbed, the Contractor shall salvage those that can be replanted, as the Project Manager directs and as specified below. Species that shall be salvaged include prickly pears (*Opuntia spp.*) and other cactus species, including pincushion types.

Plants to be salvaged shall be dug from the soil before earthmoving operations, preserving as many roots and as much of the soil around the roots as practicable. The south side of the plant and the soil line shall be marked with paint or marking crayons. When transplanted the plant shall be placed in the same orientation it was exposed to before harvesting.

The top half of prickly pear pads shall be cut from the mother plant. Before replanting, cactus roots on the mother plant and the cut prickly pear pads shall be allowed to dry in a shaded, ventilated location for at least two weeks but no more than six weeks. Cactus of other species and other salvaged plants shall be planted as soon as possible but no more than one week after harvest.

Salvaged plants shall be placed into well-drained soil, preferably in areas that have been disturbed by construction activities and along closed access roads. The soil in the planting areas shall be tested before planting by filling a planting hole with water. If the water drains within four hours, the site is suitable.

The cactus plants shall be placed into the planting hole at their original orientation and planting height to avoid sunburn and stem decay. The bottom one-third of the cut prickly pear pads shall be covered with soil, with the pads oriented so that their broad sides face east and west. The planting holes shall be backfilled with native, unamended soil and the air in the soil worked out by gently moving the soil with a rod or pole. The plants shall be watered in at the time of planting; no further watering is required. Larger specimens shall be staked as necessary as determined by the Project Manager.

---

## **02990 SUBMITTALS**

---

Complete data and specifications for the seed, mulch, and accessories shall be submitted in accordance with the procedure set forth in Section 01340. Also submit an excavation plan (Section 02222) and borrow source identification plan (if applicable).

**Table II**  
**PROJECT SUMMARY INCLUDING APPROXIMATE MINE OPENING**  
**DIMENSIONS, MINE FILL VOLUME, AND GATE DIMENSION ESTIMATES**

The approximate mine opening dimensions (Length or Height (L) x Width (W) x Depth (D)) and mine fill volume estimates are provided only for the information of the potential Bidder. The Abandoned Mine Land Program makes absolutely no guarantee of their accuracy or precision. Volume estimates are of the material that may be required to fill the mine cavities and adjacent areas as indicated, including an allowance for shrinkage, irregularities and known underground mine voids. All mine features are irregular in shape. Estimates of mine fill volumes are generally not indicated at structural closures; excavation, fill and other earthmoving activities there are considered incidental to the work. Mine fill volume estimates may be indicated at those structural closures with significant volumes of earthwork required.

See Figures for details on each closure type.

For bat and owl protection, construction at some mine openings is limited to certain periods of the year. **At sites with construction time restrictions, allowable work periods are italicized below. Work outside the specified periods shall take place only with the written permission of the Project Engineer.**

AML FEATURE NUMBER	TYPE OF MINE OPENING	OPENING DIMENSIONS (FEET, LxWxD)	VOLUME (C.Y.)	GATE DIMENSIONS (LXW), CLOSURE TYPE REQUIRED, COMMENTS ( <i>CONSTRUCTION TIMEFRAME IN ITALICS</i> )
--------------------------	----------------------------	--	------------------	---

\*\* Table II  
 saved in  
 excel file for  
 updating.\*\*

AML FEATURE NUMBER	TYPE OF MINE OPENING	OPENING DIMENSIONS (FEET, LxWxD)	VOLUME (C.Y.)	GATE DIMENSIONS (LXW), CLOSURE TYPE REQUIRED, COMMENTS ( <i>CONSTRUCTION TIMEFRAME IN ITALICS</i> )
--------------------------	----------------------------	--	------------------	---

TOTAL

cubic yards to machine backfill  
cubic yards to hand backfill  
cubic yards of grout  
cubic yards of PUF

**END OF DIVISION 2**

---

**DIVISION 3 – CONCRETE AND GROUT**

This work shall consist of sackrete bulkheads for adit closures; column foundation supports for metal grate adit and stope closures; foundations for metal barrier fence; waste rock and mortar surrounds for egress closures; and concrete and grouted anchor supports for horizontal and vertical metal grate closure, as indicated on the drawings. Unless otherwise specified all grouting shall be done with non-shrink grout. This work includes any excavation for base of bulkheads and furnishing and installation of forms.

---

**03001 – GENERAL REQUIREMENTS**

---

All cast-in-place grout shall be accurately and properly placed and finished as indicated on the drawings and as specified in this section.

At least thirty-six (36) hours in advance, the Contractor shall inform the Project Engineer and Project Manager of the times and places at which the Contractor intends to place grout. No grout shall be placed without prior examination by the Project Engineer or Project Manager of the bedrock or anchor conditions.

All grout work shall conform to appropriate requirements of ACI 301, Specifications for Structural Concrete for Buildings, except as modified by the requirements below.

---

**03010 – CONCRETE MATERIALS**

---

**I. Materials****A. Cement**

All cement used in concrete shall be Portland cement conforming to all requirements of ASTM C150, Type II, low alkali. High-early-strength Type III Portland cement may be used in concrete at the Contractor's option. When Portland cement is delivered in packages, the name and brand of the manufacturer and the type shall be plainly identified thereon. When cement is delivered in bulk, the same information shall be contained in the shipping invoices accompanying the shipment. A bag shall contain 94 pounds net weight and will be considered equal to one cubic foot. A barrel shall consist of 376 pounds net weight and will be considered equal to four cubic feet. The Contractor shall obtain from the manufacturer and furnish a certificate of compliance stating that the cement delivered to the work complies with the requirements herein provided. To prevent deterioration after delivery, cement and aggregates shall be stored as to prevent intrusion of foreign matter. Any material that has deteriorated or has been contaminated shall not be used for concrete.

## B. Admixtures

Admixtures shall conform to ASTM C494. Sugar, calcium chloride or admixtures containing chloride from other than impurities from admixture ingredients will not be permitted. Air entraining admixtures shall be required and shall conform to ASTM C260. Water reducing admixtures may be used and shall conform to ASTM C494 or ASTM C1017.

## C Curing Compounds

Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309.

## D. Water

Water for concrete shall be clean and free from harmful amounts of acids, alkalis, oils, organic materials, salts, sand, sewage, or other deleterious substances and shall be furnished by the Contractor. Water shall be potable and shall have a pH value of not less than 4.5 nor more than 8.5 as determined by AASHTO T26 before its use. The sulfate content as SO<sub>4</sub> shall not exceed one thousand parts per million (1,000 ppm).

## E. Fine Aggregate

1. General Characteristics. Fine aggregate shall consist of natural sand, manufactured sand, or a combination thereof, or other accepted inert materials composed of clean, durable, hard, uncoated, well-rounded grains.

2. Grading. Fine aggregate shall be well graded and, when tested by standard laboratory sieves, shall conform to the following:

Sieve (ASTM E11)	Percent Passing by Weight
3/8-in.	100
No. 4	95 to 100

The fine aggregate shall have not more than 45 percent passing any sieve and retained on the next consecutive sieve of those shown above, and its fineness modulus shall be not less than 2.3 nor more than 3.1.

3. Deleterious Substances. The maximum percentage of deleterious substances shall not exceed the following limits:

Clay lumps	3.0% by weight
------------	----------------



Material finer than No. 200 sieve	3.0% by weight
Coal and lignite	1.0% by weight
Other deleterious substances	1.0% by weight

All fine aggregate shall be free from harmful amounts of alkali and organic impurities.

4. Soundness. Fine aggregate shall conform to the requirements of magnesium sulfate soundness of ASTM C33. The maximum loss in five (5) cycles shall not exceed 12 percent by weight.

#### F. Coarse Aggregate

1. General Characteristics. Coarse aggregate shall consist of natural gravel, crushed gravel, crushed stone, or crushed hydraulic-cement concrete, or a combination thereof, or other accepted inert materials having clean durable, hard, strong pieces; free from adherent coatings; and conforming to the requirements of these Specifications. Fifty percent by weight of the minus  $\frac{3}{4}$  inch sieve size particles shall have a minimum of two fractured faces.

2. Grading. Coarse aggregate shall be well graded between the limits specified and shall conform to the following requirements:

Sieve	Percent Passing by Weight
1-in.	100
$\frac{3}{4}$ -in.	95 to 100

3. Deleterious Substances. The maximum allowable percentage of deleterious substances and physical properties shall not exceed the following limits:

Soft fragments	2.0% by weight
Clay lumps	0.25% by weight
Material finer than No. 200 sieve	1.0% by weight
Coal and lignite	0.25% by weight

4. Sampling and Testing. Methods of sampling and testing the coarse and fine aggregate shall be in accordance with ASTM C33.

#### G. Sackrete Bags

1. General Characteristics. Sackrete Bags shall consist of a uniformly blended mixture of stone/gravel, sand, and Portland cement packaged in multi-walled  $\frac{2}{3}$  cubic feet (80 lbs) paper bags. The sackrete concrete mix shall meet or exceed the minimum physical

requirements of ASTM C-387.

#### H. Mortar (Mason's Mix)

1. General Characteristics. Water Resistant Type S Mortar Mix Bags shall consist of a uniformly blended mixture of stone/gravel, sand, and Portland cement packaged in multi-walled 2/3 cubic feet (80 lbs) paper bags. The sakrete mortar mix shall meet or exceed the minimum physical requirements of ASTM C-387. The minimum compressive strength shall be 1,800 psi at 28 days.

### II. Concrete Mix Design

Structural concrete for concrete footings and collars for steel bat cupolas and for other shaft bat compatible and airflow closures shall be made with aggregates and cement conforming to a minimum compressive strength of 3,500 pounds per square inch (psi) after 28 days. The concrete shall contain a minimum of 611 pounds of cement (6.5 bags) per cubic yard and a maximum water/cement ratio of 0.49. Fine aggregate shall be not less than 38 percent or more than 42 percent by weight of the mix.

All other concrete, including concrete for unreinforced cast-in-place plugs and hollow core plugs, shall conform to a minimum of 3,000 psi after 28 days.

All concrete shall have an entrained air content between 4 percent and 8 percent by volume when determined with the requirements of ASTM C231.

### III. Mixing Concrete

If the concrete is mixed on the site, equipment and mixing procedures shall conform to ACI 301. All concrete shall be thoroughly mixed in a batch mixer of an accepted type and capacity for not less than two minutes after all the materials including water have been placed in the drum. During mixing, the drum shall be operated at the speed specified by the manufacturer of the equipment. The entire contents of the mixer shall be discharged before being recharged, and the mixer shall be cleaned frequently. The concrete shall be mixed only in such quantities as are required for immediate use. No retempering of concrete will be permitted. Hand mixed concrete will not be permitted except by special acceptance of the Project Engineer.

### IV. Ready-Mixed Concrete

At the option of the Contractor, ready-mixed concrete may be used instead of concrete mixed at the job site. Ready-mixed concrete shall conform to all requirements of ASTM C94 and these Specifications as to grading of aggregates, strengths, consistency, and so on. The Project Manager shall have free access to the mixing plant at all times. Ready-mixed concrete shall be continuously mixed from the time the water is added until the time of use. Concrete shall be delivered to the site of the work, and discharged from the truck mixer or truck agitator

shall be completed within one hour after the cement contacts the mixing water or with aggregates that are surface wet. The organization supplying ready-mixed concrete shall have sufficient plant and transportation facilities to assure continuous delivery of concrete at the required rate.

V. Proportioning

The proper proportioning of aggregates and cement will be determined by an acceptable independent testing laboratory at the expense of the Contractor. The proportioning of aggregates will be the most suitable combination of aggregates that will give the necessary workability and desired consistency when mixed with water and cement as specified. The ratio of cement to dry, fine aggregate shall be that necessary to provide the maximum amount of density of the mixture when used with the minimum amount of water required to produce the specified slump in the resulting concrete. This determination of the proper ratio shall be made by testing laboratory, at the expense of the Contractor, using representative samples of the aggregates which will be used, and before use shall be reviewed by the Project Engineer. The batch proportions used shall be such that full bags of cement are used in each batch.

VI. Consistency

The consistency for concrete shall be kept uniform for each class of work and shall be checked by means of slump tests. The slump for concrete shall be not less than two inches and not more than four inches. The consistency of the concrete shall be varied as directed by the Project Engineer or Project Manager. If through accident, intention, or error in mixing, any concrete is too wet, such concrete shall not be incorporated in the work, but shall be discarded as waste material at an accepted disposal area.

VII. Placing Concrete

Where indicated, mine openings to be closed with a cast-in-place footings and steel structures and cast-in-place concrete caps shall be excavated to competent bedrock or founded on clean, durable existing concrete. The Contractor is responsible for site inspections, testing or exploration necessary to ensure that the bid adequately reflects excavation conditions including hand trimming and leveling required.

The surface of hardened concrete upon which fresh concrete is to be placed shall be rough, clean, sound, and damp. The hardened surface shall be cleaned of all laitance, foreign substances (including curing compound), washed with clean water, and wetted thoroughly preceding placement of fresh concrete.

Concrete shall be handled from the mixer to the place of final deposit as rapidly as possible by methods that prevent separation or loss of ingredients. It shall be deposited as nearly as practicable in its final position to avoid rehandling. It shall be deposited in continuous layers, the thickness of which generally shall not exceed 12 inches.

The rate of depositing concrete in forms shall be controlled to prevent deflection of the form panels. The concrete shall be thoroughly compacted by means of a suitable mechanical vibrator. Vibrating shall be supplemented with hand spading the concrete around the reinforcing steel.

The Contractor is cautioned that cold weather protection for concrete may be required should concrete be placed in the winter months. If cold weather concreting is done, it shall conform to the requirements of ACI 306R. No concrete shall be placed or be allowed to cure without protection in any weather where the temperature falls below forty degrees Fahrenheit (40° F) at any time during the daily 24-hour period. The period of time such protection shall be maintained shall be not less than seven days. If hot weather concreting is done, it shall conform to the requirements of ACI 305R.

Concrete shall have a temperature of at least 50°F and not more than 80°F at the time of placing. At no time during placement or curing shall the concrete surface temperature be allowed to fall below 40°F. Concrete shall not be placed on frozen ground. Frozen aggregate shall not be used in concrete.

Finishes of concrete work shall be as specified in ACI 301.

#### VIII. Concrete Equipment

All concrete equipment used shall be of a type, capacity, and mechanical condition suitable for accomplishing all requirements of this work and all applicable local, state, and federal codes and regulations, both safety and otherwise. Equipment shall be maintained in first class operating condition at all times. Concrete equipment may include a mixer equipped with a mechanically operated paddle type agitator or equivalent. This may be accomplished by using a single or multiple batch bin system. A water meter shall be installed by the Contractor on water lines to permit accurate measurement of the quantity of water used in making the various mixes. The Contractor shall supply certificates of calibration for all gauges and meters used on this work. Water supply lines for mixing shall be routed for maximum protection and minimum traffic interruption. Facilities shall be provided by the Contractor to measure the proportion of aggregate, cement, sand, water and admixtures required in the design mix. In addition, the Contractor shall devise a system to accurately measure the volume of concrete delivered from the mixing plant or transportation vehicle per unit of time.

#### IX. Tests

For each 10 cubic yards of concrete or portion thereof placed, one sampling for compressive strength, consisting of a minimum of three cylinders shall be taken and paid for by the Contractor. Bagged concrete mix pre-approved by the project engineer is excluded from this requirement. All sample cylinders shall be taken at the same time: one cylinder to be used for a seven-day test and two for a 28-day test following standard lab curing. The Project Manager may

require additional random samples, which will be done at EMNRD's expense.

An independent testing laboratory accepted by the Project Engineer shall make all tests of aggregates, cement, and concrete. Samples of concrete for specimens shall be taken at the mixer, or in the case of ready-mixed concrete, from the transportation vehicle during discharge in accordance with ASTM C172. Test cylinders shall be made and cured in accordance with ASTM C31. The test specimens shall be molded immediately after the sample is taken and then placed in a protected spot and kept under curing conditions similar to the conditions under which the concrete they represent is being cured. They shall be removed to the testing laboratory not sooner than six days after casting.

The testing of cylinders shall be in accordance with ASTM C39. A slump test shall be made of each 25 cubic yards or fraction thereof, of concrete placed, or at the direction of the Project Manager. Slump tests shall be in accordance with ASTM C143 and shall be paid for by the Contractor.

### **03100 - CONCRETE FORMWORK**

---

Concrete structures shall be cast in place with proper formwork. The Contractor shall be fully responsible for reinstallation of concrete structures should forming materials and methods fail to adequately support the concrete. All cast-in-place concrete structures shall meet the tolerances for formed surfaces specified in ACI 301.

### **03200 - CONCRETE REINFORCEMENT**

---

#### **03210 - REINFORCING STEEL**

##### **I. Bars**

Reinforcing steel bars shall be new billet steel conforming to ASTM A615, Grade 60.

##### **II. Placing Reinforcing Steel**

Reinforcing steel, before being placed, shall be thoroughly cleaned of heavy rust, scale or other coatings that will destroy or reduce the bond. A slight coating of rust will not be considered objectionable. Reinforcement shall be carefully formed to the dimensions indicated. It shall not be bent or straightened in a manner that will injure the material, including heating by a torch. Bars with kinks or bends not shown shall not be used. Reinforcing steel shall be accurately placed and secured against displacement by using annealed iron wire of not less than No. 18 gauge or suitable clips. The reinforcing steel shall be supported using bar supports to support the steel the proper distance above the bottom of the footings.

---

**03250 - CONCRETE ACCESSORIES**

---

A survey marker supplied by the Project Manager shall be set in each exposed structure or in the rock adjacent to the structure as approved by the Project Manager. At the location indicated by the Project Manager, the survey marker shall be cast in the structure or grouted by drilling a hole and grouting the cap in place using a non-shrink grout such as Quikrete Non-Shrink General Purpose Grout, or approved equivalent. Alternately the survey marker may be fixed in the concrete structure using epoxy grout. For backfilled features, a pipe monument as specified in Section 02890 and as shown on the drawings shall be installed on those features directed in the planset.

---

**03300 - CAST-IN-PLACE CONCRETE**

---

**03310 - INTEGRALLY COLORED CAST-IN-PLACE CONCRETE**

The Contractor shall submit product data and manufacturer's instructions for pigments and curing compounds to be used at integrally colored cast-in-place concrete. With the submittal shall be included the pigment manufacturer's color chart for color selection by the Project Engineer, indicating pigment number and required dosage rate. Submittals are for general color selection and may vary somewhat from concrete finished in the field according to Specifications.

Delivery, storage and handling of pigments shall comply with manufacturer's instructions. Pigments shall be delivered to the job site or batch plant in original, unopened packaging and shall be stored in dry conditions.

Pigments shall comply with ASTM C979 and shall be Davis Colors manufactured by Davis Colors, or approved equivalent<sup>1</sup>. Dosage rate shall be based on the weight of Portland cement, fly ash, lime and other cementitious materials but not aggregate or sand, and shall not exceed 10 percent of the weight of the cementitious materials content. The pigments shall be mixed in accordance with manufacturer's instructions, until pigments are uniformly dispersed throughout the mixture and disintegrating bags, if used, have disintegrated.

Curing compound for colored concrete shall comply with ASTM C309 and be approved by the pigment manufacturer for use with colored concrete. Curing compound shall be "Color Seal II" tinted to match colored concrete and manufactured by Davis Colors, or approved equivalent<sup>2</sup>.

Formwork for integrally colored concrete shall be as specified above.

---

<sup>1</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

<sup>2</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

Minor variations in the final appearance of colored concrete, which are similar to natural variations in color and appearance of unpigmented concrete, are acceptable.

All efflorescence shall be removed with mild detergent or mild acid cleaners formulated to remove efflorescence, following initial testing on a small area to ensure that the surface will not be etched or discolored. Appropriate skin and eye protection shall be used.

### **03370 - CONCRETE CURING**

All concrete, regardless of temperature, weather, or season, shall be allowed to cure (kept moist) for a period of not less than seven days after the concrete is poured. Curing will not be required longer than 72 hours only if high-early-strength concrete (Type III) is used.

The concrete in structures shall reach a minimum compressive strength of 3,000 psi before attachment of the steel structures or backfilling can occur, except for backfilling shallow edges of concrete caps. Backfill material shall be placed in maximum two-foot lifts and shall be placed in a manner which will prevent damage to the structures and which will allow these structures to assume the load from the fill gradually and uniformly. The material shall be compacted to a density of no less than what the backfill equipment is reasonably capable of obtaining to the satisfaction of the Project Manager.

Note that uneven curing of integrally colored concrete will lead to uneven color. Requirements for curing compounds used at colored concrete are specified above. Discolored concrete cured with plastic membrane sheets or non-approved compounds will be rejected. Concrete temperatures for colored concrete shall be maintained between 65 and 85°F for the first three days after placing.

### **03600 - GROUT**

---

This section specifies grouting as indicated on the drawings.

#### **03610 - GROUT MATERIALS**

Non-shrink grout	Quikrete "Non-Shrink General Purpose Grout", L&M Construction Chemicals "Crystex" or "Premier" or "Duragrout", Master Builders "Masterflow 713 Plus" or "Masterflow 928" or "Set Grout", Euclid "Hi-Flow Grout" or "N-S Grout", "Five Star Grout", or approved equivalent <sup>1</sup> , meeting the requirements of ASTM C1107, Grade C
Water	Clean and free from deleterious substances

---

<sup>1</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

**03620 – NON-SHRINK GROUT**

Non-shrink grout shall be furnished factory premixed so only water is added at the job site. Grout shall be mixed in a mechanical mixer. No more water shall be used than is necessary to produce a flowable grout. The grout shall meet strength requirements of  $f'_c = 5,000$  psi.

Grout shall be placed in strict accordance with the manufacturer's directions so all spaces and cavities are filled without voids. Forms shall be provided where structural components will not confine the grout. The grout shall be finished smooth in all locations where the edge of the grout will be exposed to view after it has reached its initial set.

Non-shrink grout shall be protected against rapid loss of moisture by covering with wet rags or polyethylene sheets. After edge finishing is completed, the grout shall be wet cured for at least seven days.

**03990 - SUBMITTALS**

---

The Contractor shall submit manufacturer's data or catalog information, including placing and finishing recommendations, wet-curing method, and weather protection method for the grout materials and any curing compounds. Submittals shall be made in accordance with the procedure set forth in Section 01340.

**END OF DIVISION 3**



---

## DIVISION 5 - METALS

The following section specifies all items fabricated from metal shapes, plates, sheets, rods, bars, or castings, and all other wrought or cast metal items. Fabricated metal items that are detailed in the contract documents but not mentioned specifically herein shall be fabricated in accordance with the applicable requirements of this section.

---

### 05010 – METAL MATERIALS

---

All materials shall be new and undamaged and shall conform to pertinent ASTM or other industry standard specifications including the following

#### I. STEEL

Shapes, Plates, and Bars  
(including concrete imbedded items  
other than reinforcing steel)

ASTM A588 or ASTM A242 (weathering)

Structural Tubing

ASTM A847 or ASTM A606, Type 4 (weathering)

Grating

A606, Type 4 (weathering) or AISI 304/316  
(stainless steel)

Bolts and Nuts

ASTM F593 and F594, (stainless steel grade 18.8  
or 316) or ASTM A325, Type 3 (weathering) and  
A563, grade C3 or DH3 (weathering)

Flat Washers

ANSI B27.2, of the same material as bolts and nuts

Round Bar for Removable Bars in  
Bat Gates

ASTM A128, Manganese content 12-14%, Carbon  
1.00-1.25%

Bat closures shall be fabricated from high strength ( $F_y=50,000$  psi), self-weathering, low alloy, atmospheric corrosion resistant steel as specified above.

### 05030 - METAL FINISHES

Specified hereunder are shop-applied coatings. It is the intent of these specifications to use atmospheric corrosion resistant structural steel (weathering steel), grating and appurtenances to the fullest extent practicable. This section specifies the required shop coatings for metal services where it is not practicable to use a corrosion resistant material.

**05031- SHOP COATING****I. Materials**

Unless otherwise authorized, shop applied prime coatings shall be:

Zinc-rich Urethane Primer Tnemec "90-97 Tneme-Zinc" or DuPont "Imron 62 ZF", or approved equivalent<sup>6</sup>

For repair of hot-dip galvanized surfaces and to rustproof welds, field applied coatings shall be:

Cold Galvanizing Compound Z.R.C. Cold Galvanizing Compound, or approved equivalent.<sup>7</sup>

**II. Cleaning**

Surfaces shall be dry and of a proper temperature when coated, and free of grease, oil, dirt, dust, grit, rust, loose mill scale, weld flux, slag, weld spatter, or other objectionable substances. Articles to be galvanized shall be pickled before galvanizing. All other ferrous metal surfaces shall be cleaned by high power wire brushing or blasting. Welds shall be scraped, chipped, and brushed as necessary to remove all weld spatter.

**III. Galvanizing**

All galvanizing shall be done after fabrication by the hot-dip process in conformity with requirements of ASTM A123, A153 and A385.

**IV. Steel**

Unless otherwise specified and if such an occasion shall occur, all ungalvanized structural and miscellaneous steel shall be given an anticorrosion prime coat in the shop after fabrication. Steel surfaces shall be prime coated as soon as practicable after cleaning. All painting shall be done in a heated structure if the outside air temperature is below 50 degrees Fahrenheit. Steel shall not be moved or handled until the shop coat is dry and hard.

Plates, shapes, and bars of weathering steel shall not be shop or field primed or painted,

---

<sup>6</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

<sup>7</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

except as noted.

V. Aluminum

All surfaces of aluminum that will be in contact with concrete, mortar, or dissimilar metals shall be given a heavy coat of coal tar paint.

VI. Other Surfaces

No shop coating will be required for zinc-coated steel, stainless steel, or brass surfaces.

VII. Film Thickness

The dry film thickness of the shop coating shall be at least 2.5 mils for the zinc-rich urethane primer.

---

**05500 – METAL FABRICATIONS**

---

Structural steel members shall be fabricated in accordance with drawings that are a part of the contract documents. The Contractor shall verify all dimensions prior to fabrication. All bolt holes shall be drilled. Torch cutting/burning of bolt holes will not be permitted.

Non-corrosion resistant structural steel members shall be cleaned, prepared, and shop primed, unless otherwise specified. Surfaces to be field welded or in contact with concrete shall not be primed.

**05501 - FIELD ERECTION**

Structural steel and miscellaneous metals shall be erected in accordance with drawings that are a part of the contract documents.

Structural steel and miscellaneous metal shall be stored on blocking/dunnage so that no metal touches the ground and water cannot collect thereon. The material shall be protected against bending under its own weight or superimposed loads. Care shall be taken in handling steel and miscellaneous metals to avoid unsightly gouges and scrapes.

The Contractor shall make adequate provisions for all erection loads and for sufficient temporary bracing to maintain the structure safe, plumb and in true alignment until completion of erection and installation of necessary permanent bracing.

Before assembly, surfaces to be in contact with each other shall be thoroughly cleaned. All parts shall be assembled accurately as shown on the drawings. Light drifting will be permitted to draw parts together, but drifting to match unfair holes will not be permitted. Any

enlargement of holes necessary to make connections in the field shall be done by reaming with twist drills. Enlarging holes by burning is absolutely prohibited.

After erection, all welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete, shall be primed, unless the steel is weathering steel. The primer shall be consistent with the shop prime coat.

Weathering steel shall be kept as clean and free as possible from mud, grease, oil, paint, concrete or mortar splatter, and other foreign substances to minimize on-the-job cleaning. Paint or crayon identification marks shall be made in locations not visible on the finished structure; otherwise, these marks must be removed from the visible surfaces during the final cleaning operation. Objectionable substances on weathering steel, especially on highly visible exterior surfaces and including mill scale on the surfaces visible from the mine opening, shall be removed by solvents, high-speed power brushing, scraping, sand or grit blast cleaning, or other suitable methods. Surfaces of welds shall be given special treatment by scraping and wire brushing as necessary to remove all slag and weld spatter. Tools that produce excessive roughness shall not be used.

Welders certified in accordance with American Welding Society (AWS) specifications for the intended work shall do all welding. A copy of certifications shall be furnished to the Project Manager. All welding shall be consistent with the requirements of AWS D1.1, "Structural Welding Code," including adequate edge preparation and preheating and the selection of proper flux (when applicable).

For weathering steel, the use of properly dried, low-hydrogen electrodes and fluxes are specified by the AWS and shall be used. The capping runs of multi-run fillet and butt welds shall have strength, corrosion resistance, and weathered appearance similar to that of the base metal by use of appropriate alloy electrodes for the final two exposed top layers with the weld composition for weathering steel matching the base metal. Conventional electrodes may be used for the body of such welds. Conventional electrodes may also be used for butt welds with a single run each side and for single run fillet welds of up to 5/16-inch leg length.

All joints shall be welded unless otherwise indicated. Weathering steel fabrications shall be welded to eliminate surfaces on which moisture accumulation can occur and joints shall be tight to so that moisture cannot enter between plies of material. All joints in weathering steel, including fillet welds, shall be continuously welded to avoid moisture and corrosion traps such as crevices.

An oxygen meter shall be used to test air before and during field erection and welding of metal fabrications or any other work more than 10 feet inside mine openings. The oxygen meter shall be a National Mine Service (NMS) OX231 oxygen meter or equivalent. The oxygen meter shall continuously monitor oxygen levels and have an audible warning. If the oxygen level falls below 19 percent, all personnel shall withdraw from the working area in the mine until the

oxygen content increases to safe levels.

Any remedy for increasing oxygen content of the working area or providing ventilation from the surface shall be determined in consultation with the Project Manager.

#### **05530 – GRATING**

Specified hereunder is all steel grating, including accessories.

#### **05531 - FABRICATION**

The Contractor shall verify all dimensions that affect grating prior to fabrication. Serrated grating shall be provided for all exterior applications and plain grating for all interior applications, unless otherwise noted on the drawings.

Unless otherwise noted on the drawings, grating shall be of the welded or pressure locked steel type with bearing bars at 13/16 inches on center and cross bars spaced at 4 inches on center. Bearing bars shall be at least 3/16 inch thick. Bearing bar depth shall be as noted on the drawings. All grating shall be full depth banded, and bands shall be 3/16 inch thick. Bands shall be welded to first, last, and every fourth intermediate bar. All grating shall be fabricated from weathering steel (i.e. Corten).

Cross bars and edge bars of adjacent grating panels shall align. Grating shall be fabricated to fit with no more than 1/4-inch clearance between panels. All bearing bars shall be parallel. All grating shall be fabricated to lie flat with no tendency to rock. Poorly fitting or damaged grating will be rejected.

#### **05532 - INSTALLATION**

Metal grating units and accessories shall be installed in accordance with specifications, drawings that are a part of the contract documents and shop drawings reviewed by the Project Engineer.

Grating shall be positioned on supports and the final positions adjusted and accurately aligned before being permanently fastened by welding. Grating units shall be placed flat and square and secured to supports without warp or deflection or tendency to rock after installation. No more than 1/4-inch clearance between panels will be permitted. The first, last, and every fourth bearing bar shall be welded to the supports with a 3/16-inch fillet weld 3/4-inch long. All field welds and repairs to hot-dip galvanized surfaces shall be painted with a minimum of two coats of cold galvanizing compound. Slag shall be chipped or wire brushed and completely removed prior to paint application.

Weathering steel frames shall not be painted but shall be cleaned as specified above for weathering steel.

**05990 – SUBMITTALS**

Complete data, detailed drawings, and setting or erection drawings covering all structural and miscellaneous metal items, including security bolts and nuts, shall be submitted in accordance with the procedure set forth in Section 01340.

**END OF DIVISION 5**

---

**DIVISION 13 – SPECIAL CONSTRUCTION**

---

The following sections describe the special construction to be performed under this contract.

---

**13050 - POLYURETHANE FOAM CLOSURES**

---

The following section describes the polyurethane foam (PUF) closures to be installed in the specified mine features. The work consists of installing a bottom form, installing PUF to specifications, backfilling over the PUF to the specified level, and, where required, installing corrugated steel riser pipes with steel grates and ventilation/drainage pipes.

The Contractor shall inform the Project Engineer and Project Manager of the times and places at which PUF is to be placed at least three working days in advance.

**13051 - MATERIALS AND EQUIPMENT**

Unless otherwise specified, polyurethane foam (PUF) shall have a minimum installed density of 1.85 pounds per cubic foot (pcf). Machine-applied or poured-in-place PUF shall be equivalent to SWD Urethane Co. "SWD 425," North Carolina Foam Inc. "NCFI-811," Foam Concepts LLC, "EFS Equipment-less Foam Sealant", Mine Seal, LLC, "PUF-Seal" or Urethane Contractors Supply and Consulting "SES III 2.0 Pour." Bagged PUF shall be equivalent to Foam Concepts Inc. "EFS Equipment-less Foam Sealant" or Mine Seal, LLC "PUF-Seal,"<sup>1</sup> or approved equal.

PUF characteristics shall conform to the following standards:

<b>PUF CHARACTERISTIC</b>	<b>STANDARD</b>	<b>SPECIFICATION</b>
Density	As specified	ASTM D1622
Closed Cell Content	>85%	ASTM D6226
Compressive Strength	25 psi minimum	ASTM D1621
Water Absorption	0.2 lbs./sq. ft. maximum	ASTM D2842
Exothermic Reaction Rate	Low	-
Fire Resistance	High	-

PUF used in mine closures shall not contain chlorinated fluorocarbons (CFC's) or hydro-chlorofluorocarbons (HCFC's).

The proportioning unit shall be capable of attaining a minimum temperature of 125°F and shall be a Gusmer Model H-11 or equivalent. For remote project locations, or with the approval

---

<sup>1</sup> Use of brand names is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

of the Project Manager, smaller capacity proportioners will be acceptable. In this event the proportioner shall be the Gusmer FF or equivalent.

Minimum heated hose length from proportioner to gun shall be 80 feet. The hose shall maintain or increase component temperature from the proportioner. Longer heated hose lengths may be required depending upon the distance from the proportioning unit to the reclamation site. Approval of the Project Manager is required for the use of any length of unheated hose on a PUF closure.

The application gun shall be capable of mixing plural components in the proper ratio at the minimum acceptable output of four pounds per minute. The gun shall be a Gusmer AR mechanically self-cleaning design or equivalent. Application guns constructed by individuals or manufacturers not typically used in the PUF industry may be used if warranted by the PUF supplier or manufacturer.

For poured foam, separate component measuring and mixing containers shall be used. Each component shall be assigned a specific measuring container, each marked with a predetermined volume level corresponding to the required mix ratio. The components shall always be measured in the same quantities, the components added in a separate container, and thoroughly mixed using an appropriate mixing device. In all cases, measuring and mixing of poured PUF shall be done in strict accordance with manufacturer's recommendations, including maintenance of recommended temperatures of the components for mixing and placement. The Contractor shall supply a proper thermometer and use it to check each mixed batch.

The manufacturer shall package bagged foam with pre-measured amounts of each component. Foam shall be used prior to the end of the manufacturer's designated shelf life.

### **13052 - MATERIAL SAFETY, HANDLING AND TRANSPORT**

Materials shall be stored in accordance with the manufacturer's recommendations. All safety precautions outlined by the Polyurethane Division of the Society of Plastics Industries, NFPA, OSHA, EPA, and the manufacturer's Material Safety Data Sheets (MSDS) shall be observed. MSDS and technical data sheet shall be on-site and available at all times.

There shall be no welding, smoking, or open flames within 25 feet of PUF application. A minimum 15-pound, class ABC, fire extinguisher shall be on site during foam application.

Workers wearing organic respirator masks and safety glasses or goggles shall apply PUF. State or federal regulations requiring additional safety equipment shall supersede these requirements.



The Contractor shall follow all applicable state and local regulations for the transport and use of PUF and chemicals required for cleanup. The Contractor shall obtain any required permits for transportation. In the event of a component leak or spill, the Contractor shall notify the appropriate agencies and jurisdictions.

An oxygen meter shall be used to test air before and during installation of the bottom forms or any other work more than 10 feet inside a mine opening. The oxygen meter shall be a National Mine Service (NMS) OX231 oxygen meter or equivalent. The oxygen meter shall continuously monitor oxygen levels and have an audible warning. If the oxygen level falls below 19 percent, all personnel shall withdraw from the working area in the mine until the oxygen content increases to safe levels.

Any remedy for increasing oxygen content of the working area or providing ventilation from the surface shall be determined in consultation with the Project Manager.

### **13055 - EXECUTION**

Debris, dirt, and loose rock in the mine opening shall be cleared wherever PUF will be installed. Historic debris shall be placed neatly to the side of the completed opening. Trash shall be taken to permitted landfill or transfer station. No mine equipment such as skips or carts shall be embedded in PUF.

#### **I. Formwork**

The bottom form and cross members may consist of any commonly available building materials capable of sustaining an initial lift of two to four feet of PUF. Acceptable cross member materials include, but are not limited to, reinforcing steel, 2x4's, dowels, cardboard tubes, and fabric air-inflated plugs. Acceptable bottom form materials include, but are not limited to, plywood, cardboard, paneling, and carpeting. Any combination of the above materials will be acceptable. Alternate bottom forms shall be reviewed with the Project Engineer prior to use.

The formwork shall be installed at that level specified in the closure drawings or as directed by the Project Engineer following uncovering by the Contractor of the existing conditions within the mine opening. Unless otherwise indicated, cross members may be placed at an angle no greater than 20 degrees from the horizontal as long as both ends are seated in competent rock. The bottom form shall be set over the cross members.

All bottom forms shall be completed prior to the application of any polyurethane foam. The Contractor shall provide the Project Manager with a list of installed depth to bottom forms for polyurethane foam closures. Any breach in the bottom form caused by rock fall or other reason shall be repaired prior to the arrival of PUF applicators at that site. The Contractor shall be responsible for the integrity of the bottom form and the loss of any polyurethane should it fail.

## II. Polyurethane Foam (PUF)

The depth of polyurethane foam installed to plug a shaft or stope opening shall be as specified or indicated in the contract documents or as directed by the Project Engineer.

In large pours, PUF can get hot enough to actually melt and even burn. This may leave a hollowed out plug or “eggshell” that has very little strength. The remaining foam will be cracked and discolored, very similar to severe UV damage.

Polyurethane foam shall be installed in lifts with a maximum rise of 18 inches. The lifts shall be installed no sooner than 20 minutes apart (and no sooner than 30 minutes apart for ambient air temperatures above 84°F) and have a maximum lift height of three vertical feet per hour. Installed PUF lifts shall pass through the tack free stage before applying the next lift. At no time shall sprayed or poured PUF cut into the rising foam. The PUF shall be applied in such a manner that the entire void is filled, that shadow zones or voids are not created during PUF application, and that temperatures are not raised to unsafe levels.

The Project Manager may use an infrared non-contact thermometer to monitor exothermic generation. If the ambient air temperature is below 60°F, extra time will be required to allow the PUF to fully expand and may prevent each lift from reaching a full height of 18 inches. Every degree of ambient air temperature over 65°F adds at least two degrees to the temperature of the rising foam. Ambient air temperatures above 90°F can cause problems with PUF formation. PUF application shall cease if heating or off-ratio foam is observed. The Contractor shall remedy off-ratio foam and demonstrate proper quality PUF to the Project Manager before application resumes. The surface temperature should reach a plateau and start to drop before resuming foam installation. If using bulk foam, reduce the quantity per bucket as the day heats up.

Bagged or poured-in-place polyurethane foam shall be placed in strict accordance with the manufacturer's recommendations, including the need for thorough mixing of components. If required by the Project Engineer, the manufacturer of bagged or poured-in-place polyurethane foam shall provide a certified representative experienced in the placement of their product for a minimum of one eight-hour day. This representative will direct field operations and instruct the Contractor in the proper mixing, placement, and safety procedures for bagged or poured-in-place PUF.

The surfaces of the void to be filled shall be as free as possible of grease and standing water. PUF shall not be applied to surfaces with running water. Remedial action for such situations shall be reviewed with the Project Manager. Polyurethane foam shall not be applied directly to a debris plug, but shall be applied to a bottom form of known physical and chemical properties. PUF shall not be applied during rain unless the foam is fully protected from interaction with water by a physical barrier.

If off-ratio PUF is observed, the applicator must stop, correct the imbalance, and continue application with the proper ratio PUF. Correction and determination of the foam ratio shall be done on a plastic sheet away from the work area. Any lift of off-ratio PUF comprising over two percent of the intended PUF column heights shall be removed. An amount of off-ratio PUF less than two percent of the specified volume may remain if allowed to cool and if the outer perimeter of off-ratio PUF is removed. If off-ratio foam comprises more than 10 % of the specified PUF volume, five percent of the price bid for the site will be deducted as a penalty.

The Contractor shall be responsible for lost or damaged equipment. Damages or claims arising from PUF overspray shall be the responsibility of the Contractor. Under no circumstances shall foreign material be placed in the PUF material unless specifically specified or authorized by the Project Manager. Non-PUF materials shall be non-toxic and non-hazardous and shall not compromise the strength or water saturation characteristics of the PUF.

Upon reaching the specified grade level for application of PUF, the Contractor shall undertake cleanup of PUF operations.

### III. Field Quality Control

The Project Manager will make periodic checks of the quality of PUF applied. The principal check on quality will be visual. Acceptable PUF shall be tan-white to buff in color with no vesicles and a smooth to coarse orange peel surface. Any one of the following conditions shall cause PUF application to cease and efforts to correct the off-ratio condition begun.

<u>Condition</u>	<u>Possible Cause</u>
Dark PUF color Smooth and Glassy Friable or Brittle PUF Improper Density	Excess A Component
Light in Color to White Bad Cell Structure Mottled Appearance Blowholes or Pinholes	Excess B Component
Slow Rise Poor Cell Structure Frequent Equipment Clogging Slow Curing Poor Physical Properties	Bad Material

<u>Condition</u>	<u>Possible Cause</u>
Air Bubbles on Surface	Pouring Too Fast Between Lifts
Tension Cracks on Surface	
Excessive Air Bubbles	

At any time during PUF application the Project Manager may call for a density test. The Contractor shall provide and fill a container for this purpose and the sample will be tested for density. The density of the sample shall be within the range of 1.85 to 3.00 pounds per cubic foot. Density tests indicating that PUF installed is not within the minimum specified range shall cause corrective action resulting in PUF within the acceptable nominal range, less deviation due to barometric pressure changes from Standard Temperature and Pressure.

The Contractor shall conduct density tests of PUF at no additional expense to EMNRD. At the discretion of the Project Manager, density tests showing PUF in the acceptable range will be taken in the center of the cavity to which PUF is being applied. A sampling box constructed of sheet aluminum and lined with polyethylene shall be lowered into the cavity to take a representative sample of PUF just above the level of installed polyurethane.

At the option of the Project Manager, up to three one-cubic-foot samples of PUF may be taken from the job site for density analysis at the Contractor's expense. In addition, at the option of the Project Manager, up to three samples of up to 100 cubic inches in volume may be taken for on-site tensile strength testing at the Contractor's expense. PUF shall be provided for the samples at no additional cost to EMNRD.

#### IV. Sackrete Bulkhead

Using Sackrete and rebar, construct a two (2) feet thick, minimum, bulkhead as shown on the planset and as directed by the Project Manager. There will be no voids between the bulkhead and the adit floor, back or ribs. Note: bulkhead will be keyed into the adit floor a minimum of 8 inches (if applicable). Also note that water shall be added and mixed into the Sackrete bags or the closure shall not be accepted.

As the Sackrete bulkhead is erected, PUF will be installed behind the bulkhead and in front of the back form, as approved by the Project Manager. PUF shall be installed such that no voids exist along the adit floor, back or ribs. Upon completion of the Sackrete bulkhead, backfill will be palced on the outside to completely cover the Sackrete bulkhead.

#### V. Backfilling

To protect the PUF from vandalism if the site is to be left unattended, two to six inches of fill shall be uniformly shoveled over the foam as soon as possible after the last layer of PUF has solidified. No sooner than 96 hours after PUF application, the remaining void above the PUF plug shall be backfilled. The first two-foot lift of fill shall be placed by hand, bucket, or chute to

lower the velocity of impact against the PUF. With approval of the Project Manager, this fill may be placed by streaming from heavy equipment such as a loader bucket. The depths and types of fill over the PUF shall be as indicated or specified in the contract documents or as directed by the Project Manager. Unless otherwise indicated, the minimum cover shall be 18 inches of common fill.

Unless otherwise specified or directed by the Project Manager, common fill above polyurethane foam closures shall be nearby cohesionless mine waste material or other nearby cohesionless material with no pieces larger than six inches in diameter, free of debris or trash, and containing no materials classified as toxic or hazardous.

Fill above the polyurethane foam closures shall be placed in a manner that will prevent damage to the polyurethane foam plug and riser pipes and will allow these structures to assume the load from the fill gradually and uniformly.

The use of riding vibratory compaction equipment shall be prohibited above polyurethane foam closures and vibrations due to other construction equipment operations shall be kept to a minimum in these areas. With care and for the minimum acceptable period of time, small walk-behind compaction equipment, such as rammer tampers, may be used in these areas.

#### VI. Survey Markers

As described in Division 2, a steel pipe with grouted survey cap shall be installed near the ventilation/drainage pipe. Where the PUF/interface is less than five feet below finish grade, the pipe shall be set in a concrete footing, which shall be at least one foot in diameter and extend from the PUF/fill interface to a height of two feet. The upper six inches to one foot of pipe shall extend above grade. Where the PUF/fill interface is more than five feet below the finish grade, a six-foot long pipe shall be used. The lower two feet of pipe shall be set in concrete a minimum of one foot in diameter and the upper six inches to one foot of pipe shall extend above grade.

Alternately, the Contractor may drill and grout the cap in undisturbed, competent rock or concrete at or immediately adjacent to the feature.

#### VII. Cleanup

The Contractor shall clean the site of all PUF fragments and overspray. PUF overspray greater than 1/8-inch thick on timbers or historic materials shall be scraped or ablated to 1/8 inch minus to permit ultraviolet degradation of oversprayed polyurethane. Tools and equipment shall be cleaned in such a manner as to avoid injury to vegetation or wildlife. Handling of chemicals used in cleanup shall comply with all applicable local, State and Federal regulations.

**13137 – HIGH-STRENGTH STEEL MESH**General

The work consists of furnishing, transporting and constructing high-strength steel mesh closures over mine openings in accordance with the contract documents and the manufacturer's standards and requirements. The mesh shall be installed at the locations shown on the plans as directed by the Project Manager or Project Engineer.

Rock anchors shall be installed at the closure location in sufficient numbers to insure that unauthorized visitors cannot circumvent the mesh to gain entrance to the mine. Rock anchor spacing shall not exceed ten feet between adjacent anchors, unless otherwise directed by the Project Engineer.

**I. Materials**

In order for the Contractor to identify the components easily to minimize installation time, the manufacturer shall properly mark all materials.

**A. *Mesh***

The high-tensile steel mesh for use on features F166, F182, F305, F364, and F405 shall be SPIDER S4-130 high-tensile spiral rope net by Geobrugg ([www.geobrugg.com](http://www.geobrugg.com), 505.771.4080) or approved equivalent. The mesh shall be woven construction and shall be rhomboid or diamond shaped. The mesh shall be made with three strands of woven 4-millimeter diameter wire and the ends of each wire formed into a loop and knotted. The size of the mesh opening shall be 180 millimeters by 300 millimeters (+/-5%). The mesh shall have 3.3 meshes per meter across the mesh and 5.6 meshes per meter down the mesh. The mesh opening shall have an inside circular diameter (mesh width) of 130 millimeters (+/- 5%).

The high-tensile steel mesh for use on all other features requiring steel mesh closures shall be TECCO G80/4 high-tensile steel wire mesh by Geobrugg ([www.geobrugg.com](http://www.geobrugg.com), 505.771.4080) or approved equivalent. The mesh shall be woven construction and shall be rhomboid or diamond shaped. The mesh shall be made with one strand of woven 4-millimeter diameter wire and the ends of each wire formed into a loop and knotted. The size of the mesh opening shall be 102 millimeters by 177 millimeter (+/-3%). The mesh shall have 5.6 meshes per meter across the mesh and 9.8 meshes per meter down the mesh. The mesh opening shall have an inside circular diameter (mesh width) of 80 millimeters (+/- 3%).

For both types of steel mesh the wire shall be galvanized with a zinc/aluminum coating with a minimum weight of 150 g/m<sup>2</sup>. The coating shall be 95% zinc and 5% aluminum. The wire shall be alloyed high-strength carbon steel wire with a tensile strength greater than or equal to 1,770 N/mm<sup>2</sup>. The loops of the wire mesh shall be fastened together to prevent unraveling of the mesh.

*B. Force-locked Shackles*

Force-locked shackles (3/8" or larger) shall be used to secure mesh panels to each other.

*C. Spike Plates*

The plate shall be made from 7-millimeter thick steel plate and be hot dipped galvanized to a minimum layer thickness of 55 microns. The plate shall be Type P33 SPIDER system spike plate or as otherwise recommended by the mesh manufacturer.

*D. Rock and Soil Anchors*

The Contractor shall acquire complete installation instructions from the manufacturer for all rock and soil anchors. The Contractor shall be responsible for the proper installation of all rock and soil anchors. If guidance from the manufacturer is different than the specifications given in this manual, the Project Engineer shall be contacted for pre-approval before any actions are taken by the Contractor.

*E. Mechanical Rock Anchors*

Anchors installed directly into competent rock, as determined by the Project Engineer, shall be 1" diameter R1H Hollow-Core Spin-Lock Rock Bolts by Williams Form Engineering, Inc. or an approved equivalent. The anchor depth into the rock shall be a minimum of 30 inches.

The Contractor shall have the option to use this type of anchor at waste pile locations if competent rock is located under a waste pile and/or overburden greater than three feet in depth and the rock anchor is secured at least 14 inches into the rock. Total rock anchor length shall not be less than 36 inches.

*F. Grout Bonded Rock and Soil Anchors*

Anchors installed in any substratum that is not competent rock shall be grout-bonded anchors with spherical nuts and grade 75 ksi all-threaded bars, by Williams Form Engineering, Inc. or equivalent. Bars shall meet the requirements of ASTM A615 and have a nominal thread diameter of one inch (bar designation #8). Fasteners shall be epoxy coated galvanized in accordance with ASTM A153 to a thickness between 30 and 40 mils. Bars shall be rated for Multiple Corrosion Protection I (MCP I) and shall be epoxy coated with a sleeve over the bar in the free-stressing zone and grout fill inside the sleeve after tensioning to lock in the pre-stress. The embedment depth for grout bonded anchors shall be at least five feet.

The anchor deformation pattern shall comply with ASTM A615. Drill hole and rock anchor installation and grouting procedures shall be as recommended by the manufacturer. All units shall be centered in the drill hole grout with centralizers to assure a grout cover of approximately one inch around the bar.

Epoxy coated bars and fasteners shall be done in accordance with ASTM A775. Prior to installation of each anchor, the Contractor shall repair any scratches and other coating defects on the epoxy-coated bars using an epoxy field patch kit provided by the anchor manufacturer. In addition, the end hardware for epoxy-coated bars, including plates and nuts, shall be field coated with the manufacturer-supplied epoxy. The anchor head shall be galvanized or otherwise treated for corrosion protection according to the recommendations of the anchor manufacturer.

The Contractor shall pump cementitious grout (conforming to ASTM C845, Williams “Wil-X-Cement” grout, or approved equivalent) to completely fill the annular space between the bar and the drill hole wall.

*G. Miscellaneous Materials*

The vendor of the wire mesh system shall supply all miscellaneous materials associated with the system. All miscellaneous material associated with the wire mesh system such as clips, thimbles, etc., shall be hot dipped galvanized.

**II. System Installation**

The Contractor shall dress the slope, removing all brush, debris and loose rock in accordance with the contract documents.

The Contractor shall locate the anchors on the slope as shown on the contract drawings. The anchors shall be installed in accordance with the anchor manufacturer’s instructions.

The Contractor shall install the anchors in depressions and low points in order to pull the mesh into them and against the ground, and as indicated on the contract drawings. Alternately, the mesh may be laid on the slope first, followed by anchor installation, depending on site conditions.

After the anchors are installed, set and load tested, the Contractor shall form hollows of four to twelve inches deep at each anchor if placed on waste piles.

The mesh shall be laid on the slope by unrolling down the slope. The rolls can be shortened or lengthened as necessary by removing or adding sections, respectively. The mesh panels shall be overlapped by minimum of one mesh. The overlapped mesh panels shall be fastened with force-locked shackles (3/8” or larger) as directed by the mesh manufacturer.

At obstructions that cannot be moved and will obstruct proper mesh installation, the mesh shall be cut and the mesh pieces bent back and secured in place with aluminum clamps.

The spike plates shall be placed onto the anchors. Using a hydraulic wrench, the nuts shall be tightened and the spike plates and mesh pushed into the hollows in order to tension the



mesh between 1,125 and 4,500 pounds (5kN and 20kN). The nuts shall be torqued to an anchor pre-stress force of 1,675 pounds (7.5kN) and a tightening torque of 125 foot-pounds (0.17 kN\*m).

Once the Project Engineer inspects the installation and agrees that the anchors and mesh are installed correctly, the Contractor shall cut the exposed bolt about an inch above the nut and anchor plate and strip the threads of the exposed anchor bar or take other measures approved by the Project Manager to prevent the spike plate from being removed.

The edges of the steel mesh overlapping the horizontal, or nearly horizontal, edges of mine features should be covered with 3 to 6 inches of rock.

#### IV. Field Installation Supervision

The manufacturer shall include at no extra cost to EMNRD one day of eight hours installation supervision by a qualified field engineer. Travel and living expenses shall be borne by the manufacturer. All costs for the field supervision shall be included in the unit bid price.

---

### **13990 - SUBMITTALS**

---

Complete data covering polyurethane foam, epoxy grout, rock anchors and accessories shall be submitted in accordance with the procedure set forth in Section 01340.

### **END OF DIVISION 13**

**APPENDIX B**

**Naturally Occurring Asbestos Potential, Regulations, and Testing**

Included Documents:

1. NMAMLP Investigation of Natural Occurring Asbestos Presence at Abandoned Mine Sites at Cookes Peak in Luna County, NM (Pederson and Needles, June 2018)
2. Asbestos Minerals in New Mexico (McLemore, 2010)
3. OSHA Safety and Health Regulations for Construction – Asbestos, C.F.R. 1926.1101