



INCORPORATED COUNTY OF LOS ALAMOS

101 Camino Entrada, Building 3
Los Alamos, New Mexico 87544 (505) 663-3507
Procurement Division

August 15, 2024

TO ALL HOLDERS OF SOLICITATION DOCUMENTS FOR:

Invitation for Bids No. IFB25-08
IFB Name: Jemez Mountain Fire Protection Phase I Project

Addendum No. 3

This Addendum No. 3 forms a part of the Solicitation Documents and modifies, as noted below, the original Solicitation Documents identified above. This Addendum as well as all documentation associated with it shall be made available at the following link:

<https://lacnm.com/bids>

1. It appears that Specification Section 31 3205 "Rock and Boulder Excavation" is missing from the documents. Can/Will the County please provide this specification?

Response: Contractor shall follow NMDOT standard specifications, 2019 Edition, for classification of rock. See section 203.2.1.1 for definition of rock material.

2. Should the vaults shown on Sheet E8 adhere to Specification 401, 2.9 for Precast Pull Boxes or 2.10 Precast Concrete Vaults? The construction notes appear to be for the concrete vaults. Note 1 mentions live loads.

Response: All vaults should be concrete and rated for traffic

3. Is the Contractor allowed to utilize blasting to handle the rock in the trenches?

Response: In accordance with special use authorization for the Los Alamos County Master Permit for Water System Facilities, ESP104206, Issued to LOS ALAMOS COUNTY on March 15, 2022, Amendment No. 1 issued December 13, 2023, Section B-29. Storage and Use of Explosives and Magazine Security, bidders must adhere to the following:

B-29. Storage and Use of Explosives and Magazine Security.

M. Storage and Use of Explosives and Magazine Security.

1. Applicable Legal Framework.

The purchase, storage, and handling of explosives by the holder under this permit are regulated by United States Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), under Title 27 Code of Federal Regulations, Part 555—Commerce in Explosives (27 CFR part 555). Inspections of magazines authorized by this permit are subject to all ATF inspection requirements at 27 CFR part 555 and shall be conducted by ATF. Property records and inventories of these magazines shall be reconciled by ATF in accordance with ATF requirements at 27 CFR part 555 during ATF's routine periodic inspections.

2. Documentation of Inspections. All required inspections, including inspections required every seven days, shall be documented in a log. The log shall indicate the inspection type, date of inspection, and the date all deficiencies identified in any inspection report were corrected. A current copy of the log; corresponding inspection reports, if any; and a copy of the holder's current ATF-issued federal explosives license or federal explosives permit, if applicable, shall be included annually in the operating plan for review by the authorized officer.

3. Loss or Theft of Explosive Material. Any loss or theft of explosive material shall be reported to ATF or the Department of the Army (DOA), as appropriate, local law enforcement authorities, and the Forest Service within 24 hours of discovery.

4. Minimum Standards for Locks and Keys.

(a) ATF Requirements. Locks and keys for authorized magazines and key security shall meet ATF requirements at 27 CFR Part 555.

(b) Replacement and Documentation. Locks and keys shall be replaced periodically at least every ten years. In the case of deterioration or a potential breach in security, such as lost keys, any affected keys and locks shall be replaced immediately. Periodic lock and key replacement shall be documented in a log. The log shall include the date of the most recent replacement. A current copy of the log shall be included annually in the operating plan for review by the authorized officer.

(c) Key Control for Magazines Containing Explosives Not Purchased From DOA. Key control for magazines authorized by this permit containing explosives not purchased from DOA shall at a minimum provide for appointment of a custodian, maintenance of a list of personnel authorized to use and issue keys, a locked container for key storage, and documentation of locks and keys on a key control register and inventory.

Additionally, bidders must adhere to the requirements of NMDOT Standard Specifications for Highway and Bridge Construction Section 2019 edition, Section 203.3.3.1 as follows:

203.3.3.1 Blasting Requirements

The Contractor shall use controlled blasting to establish a specified backslope with minimal blast damage, and production blasting to facilitate excavation. Before the start of blasting, the Contractor shall notify adjacent property owners, occupants and utility owners.

203.3.3.1.1 Definitions

Blasting Operations. Activities related to blasting including, but not limited to the following:

1. Collaring and drilling blast holes;
2. Preparing, fixing, loading, and firing explosive charges;
3. Assessing the blast after detonation; and
4. Handling misfires.

Buffer Row. The first row of production blast holes immediately adjacent and drilled in a plane parallel to the controlled blast line. The explosive load in the buffer row should be reduced from standard production loads to minimize damage to the backslope of the final excavation.

Controlled Blasting. The controlled use of explosives and blasting accessories in carefully spaced and aligned blast holes to provide a free surface or shear plane in the rock

along the specified backslope, and to limit fly rock, permanent ground displacement, air concussion, and overbreak. Controlled blasting methods include pre-splitting and cushion blasting.

Cushion Blasting (Trim Blasting). The simultaneous detonation of one (1) line of blast holes along a specified excavation backslope after the main excavation is complete. This method is performed to trim the excavation to the final backslope.

Final Line (Controlled Blast Line). Refers to the row of controlled blast holes drilled in the plane of a specified excavation backslope. The controlled blast holes drilled in this plane constitute the basis for payment under the Controlled Blasting pay item. The Department considers the blast holes drilled in front of the final line blast holes to be production blast holes, which are Incidental to the Rock Excavation pay item.

Pre-Splitting. The simultaneous detonation of one (1) line of blast holes drilled along a specified excavation backslope before production blast holes are fired.

Production Blasting. Fragmentation blasting in the main excavation area.

203.3.3.1.2 Submittals

203.3.3.1.2.1 Blaster in Charge

The Contractor shall not begin drilling or blasting Work until the Project Manager approves of the Blaster in Charge. The Contractor shall submit the name and qualifications of the proposed Blaster in Charge to the Project Manager for approval at least 30 Days before the delivery of explosive Material to the Project. The Contractor shall provide the following information:

1. Proof of a license by the applicable State and/or local regulatory agencies to possess, transport, and use explosives; and
2. A list of, and references, for at least three (3) blasting Projects, of similar complexity, successfully completed within the previous five (5) years.

The Blaster in Charge must be on site during blasting operations.

203.3.3.1.2.2 Blasting Plans

The Contractor shall submit a General Blasting Plan to the Project Manager for each cut that requires blasting, at least two (2) weeks before the start of drilling and blasting operations on a specified cut. The Contractor shall provide the following information in the General Blasting Plan:

1. Description of the proposed blasting operation;
2. Preliminary design criteria for production and controlled blasting, including blast hole depths and patterns; and
3. Details regarding the proposed explosives and blasting accessories.

The Contractor shall submit a Detailed Blasting Plan at least 48 H before an individual blast. The Contractor shall provide the following information in the Detailed Blasting Plan:

1. Station limits of the proposed location of the blast, including the bench elevation, if applicable;
2. Date and time the blasting will occur;

3. Required removal of overburden, if applicable;
4. Plan and cross section diagrams of proposed drill pattern for controlled and production blast holes, including buffer rows, free face, burden, blast hole spacing, blast hole diameters, blast hole angles, lift height, and subdrill depth. Draw these Plans and cross sections to scale;
5. Loading diagram showing the type and amount of explosives, primers, and initiators; and the location, depth, and type of stemming;
6. Initiation sequence of controlled and production blast holes, including Delay times and the Delay system; and
7. Manufacturer's data sheets for the explosives, primers, and initiators to be used.

The Contractor shall submit the blasting Plans to the Project Manager for review and Acceptance. The Project Manager will review and provide comments to the Contractor. The Contractor shall submit revisions to the blasting Plans for final review and Acceptance. The Contractor shall not proceed with drilling and blasting operations related to a General Blasting Plan or loading of blast holes associated with a Detailed Blasting Plan without written notice.

The Contractor shall cease blasting operations and submit revised blasting Plans if the Department determines that the blasting operations are causing property damage in and beyond the Right of Way.

203.3.3.1.2.3 Blasting Records

The Contractor shall prepare and submit to the Department a Blasting Record for each blast, on the Day of the blast. The Contractor shall provide the following information in a

Blasting Record:

1. Actual dimensions of the shot, including blast hole diameters and depths, burden, spacing, subdrilling depths, stemming, powder loads, powder factors, and timing;
2. A drawing or sketch showing the direction of the face and the physical shot layout;
3. The location of the blast in relation to Project stationing and elevation;
4. The date and time of loading and detonation;
5. The name and signature of the person responsible for loading and firing;
6. Comments by Blaster in Charge regarding misfires, fly rock occurrences, unusual results or effects; and damage to existing facilities, adjacent property, or completed Work;
7. Vibration and blast monitoring results; and
8. Any complaints received due to the blasting.

203.3.3.1.3 Explosives

The Contractor shall transport, store, handle, and use explosives in accordance with applicable federal, State, and local laws and regulations. The Contractor shall purchase explosives and accessory devices from industry recognized Suppliers and manufactures. The Contractor shall use explosives and accessory devices in accordance with manufacturer instructions. The Contractor shall not use expired products.

The CFR specifies responsibility for the following federal agencies regarding the administration of regulations involving explosive Materials:

1. Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). Storage and accountability of record keeping and security in accordance with 27 CFR part 555;
2. OSHA. Transportation, worker safety, and health in accordance with title 29 CFR; storage and safe blasting practices in handling and use in accordance with 29 CFR part 1926.900 et seq; and
3. Federal Department of Transportation (USDOT). Transportation and public safety,

49 CFR.

The fire marshal, sheriff, or other local officials, may have additional regulations for explosive Materials.

203.3.3.1.4 Safety

The Contractor shall follow safe practices, including the following:

1. Federal, State, and local regulations pertaining to the transportation, storage, and use of explosives must be strictly followed;
2. When required, the Blaster in Charge must obtain a blasting permit from the local regulatory agency before blasting;
3. Only persons authorized and qualified based on training and experience will handle and use explosives;
4. No person will smoke; carry matches or other flame producing devices; or carry firearms or loaded cartridges while in or near a motor vehicle that is transporting explosives;
5. Keep track of explosives at all times. Explosives must be stored and locked in an approved magazine facility in accordance with the applicable provisions of the Department, ATF, and OSHA until used in blasting;
6. Post appropriate signs in the required areas and vehicles in accordance with federal regulations;
7. Safely station the necessary guards or flag persons on Highways during blasting to control Highway traffic; and
8. Before starting Work in the cut, observe the entire blast area for at least five (5) minutes after each blast. Remove potentially dangerous rocks or other Material located beyond the excavation limits. Cease blasting operations if the required slopes are not stable, or if the safety and convenience of the public are being jeopardized.

203.3.3.1.5 Vibration Risk Survey

For each cut that requires blasting, the Contractor shall perform a vibration risk survey of nearby buildings, Structures, utilities, water supplies, or environmentally sensitive areas that may be at risk of blasting or construction damage. The Contractor shall perform the vibration risk survey in accordance with Section 617, "Vibration Monitoring and Video Taping." The Contractor shall obtain written approval for the vibration risk survey from the Project Manager before drilling blast holes.

203.3.3.1.6 Blasting Test Sections

The Contractor shall demonstrate the adequacy of proposed Blasting Plan with a blasting test section(s) for Material of different geologic characteristics. For Projects involving multiple cuts in similar geologic Materials, the Project Manager may reduce the requirement for a blasting test section in each cut. Blasting test sections include drilling, blasting, and excavating cut sections approximately 100 Ft long to determine the optimal combination of method, blast hole spacing, and charge. When field conditions warrant, the Project Manager may direct the Contractor to use test section lengths less than 100 Ft long.

Blasting test section requirements include the following:

1. The Contractor shall perform the blasting test section in accordance with Section 203.3.3.1, "Blasting Requirements." The Contractor shall prepare and submit a Detailed Blasting Plan for the test section to the Project Manager at least 48 H before the planned time of the blast. The Contractor shall not start blasting the test section until the Project Manager Accepts the Detailed Blasting Plan;
2. Unless the Contractor's Detailed Blasting Plan indicates otherwise, the Contractor

- shall begin the tests with the controlled blast holes spaced at 30 inches; and
3. After blasting, the Contractor shall remove a sufficient amount of Material from the test section to determine if the blast hole diameter, blast hole spacing, and amount of explosives are adequate to provide the required backslope. The Contractor shall not continue drilling of the test section area until the test section is excavated and the Department evaluates the results.

If, at any time during the progress of the main blasting operation, the methods of drilling and blasting do not produce the desired results, the Contractor shall revise and retest the blasting techniques until a technique produces the required results. The Department will consider the results to be unsatisfactory if:

1. There is an excessive amount of breakage beyond the indicated lines and grade;
2. There is excessive flyrock;
3. The final backslope within the specified tolerances is not uniform or overhangs are created;
4. Ground vibration and air blast levels exceed limits as stated in Section 617, "Vibration Monitoring and Video Taping;"
5. There are violations of other requirements of the Specifications;
6. The slopes are unstable;
7. The safety of the public is jeopardized; and
8. Property or natural features are endangered.

203.3.3.1.7 Blasting Execution

203.3.3.1.7.1 Notification and Schedule

The following requirements will apply to the notification and scheduling of blasting procedures:

1. The Contractor shall coordinate blasting operations with the Project Manager and notify the Project Manager a minimum of 1.5 H before the blast. The Contractor shall provide a one (1) hour timeframe for the blast. For example, if the Contractor notifies the Project Manager by 9:00 a.m. the blast may occur between 10:30 a.m. and 11:30 a.m.;
2. The Contractor shall provide notice to the required federal, State, and local agencies before each blast, as required by the blasting permits;
3. The Contractor shall notify occupants of buildings and owners of Structures and utilities of the blast time and location at least 48 H before the start of drilling or blasting; and
4. The Contractor shall detonate blasts at the planned time, unless approved otherwise by the Project Manager.

203.3.3.1.7.2 General Requirements

The Contractor shall cover the blast area with blasting mats, soil, or another equally serviceable Material, before firing blasts in areas where flying rock may result in personal injury or damage to property or the Work.

203.3.3.1.7.3 Controlled Blasting Requirements

The Contractor shall perform controlled blasting in accordance with the Detailed Blasting Plans that produced Acceptable results in blasting test sections. The Contractor shall perform control blasting using either pre-splitting or cushion blasting in accordance with the following requirements:

1. If the overburden does not support the drill holes, completely remove the overburden soil and loose rock along the top of the cut to expose the rock surface

- before drilling the controlled blast holes;
2. Mechanically monitor the blast hole angles;
 3. Drill and space blast holes with a nominal diameter from two (2) inch to three (3) inch, in accordance with the blasting test sections or the results achieved in similar geologic Materials. Do not exceed three (3) Ft;
 4. Use proper Equipment and technique to ensure that no blast holes deviate from the plane of the backslope shown in the Plans by more than eight (8) inches, parallel or normal to the slope. The Department will not pay for blast holes exceeding these limits unless the Project Manager approves the obtained slopes;
 5. Drill the controlled blast holes at the required slope inclination, to the full depth of the cut, or to a pre-determined stage elevation. The maximum drill depth is 30 Ft. Use shallower holes if the directional control is inadequate. If more than five percent (5%) of the controlled blast holes are misaligned in any one (1) lift, reduce the height of the lifts until the eight (8) inch tolerance is met. The length of controlled blast holes may be incrementally increased once satisfactory directional control and blast results are demonstrated;
 6. Drill unloaded and un-stemmed guide holes to the same diameter, in the same plane, and to the same tolerance as the controlled blast holes;
 7. The Department will allow a maximum offset of 24 inches from the bottom of each lift to allow for drill Equipment clearances, when the cut requires more than one (1) lift. Begin drilling the control blast hole at a point that allows the necessary offsets, and adjust at the start of lower lifts as necessary to compensate for drift in the upper lifts;
 8. Do not use horizontal blast holes for controlled blasting;
 9. Use explosive charges, detonating cord, and other items necessary for the blasting operation in accordance with the manufacturer's recommendations and instructions;
 10. Before placing charges, ensure the hole is free of obstructions. Use casing if necessary to prevent the walls of the hole from collapsing;
 11. Use only standard explosives manufactured especially for the type of controlled blasting (cushion or pre-splitting). Do not load ammonium nitrate and fuel oil in the controlled blast holes. Use explosives and blasting accessories appropriate for the conditions of the blast hole (including water in the holes) and necessary to achieve satisfactory results;
 12. Assemble and affix continuous column cartridge-type explosives to the detonating cord in accordance with the explosive manufacturer's instructions;
 13. The bottom charge in a blast hole may be larger than the charges above, but not large enough to cause overbreak. Place the top charge far enough below the collar and sufficiently reduced in size to avoid over breaking or heaving; and
 14. Use a dry, angular, and granular Material that passes a 3/8 inch sieve to stem the controlled blast holes, from the top charge to the hole collar.

203.3.3.1.7.4 Pre-Split Blasting

The Contractor shall perform pre-split blasting in accordance with Section 203.3.3.1.7.3, "Controlled Blasting Requirements," and the following requirements:

1. Detonate the pre-split blast holes before drilling for production blasting; or fire the pre-split blast holes at least 75 Ms before the production holes if detonated in the same blast;
2. Fire pre-split blast holes simultaneously, unless ground vibrations, noise, or air blast are excessive. Fire pre-split holes in delayed sections and reduce the charge weight per delay to mitigate excessive effects;
3. The line of pre-split blast holes will extend beyond the limits of the production blast

- holes to be detonated. The minimum length of this extension will be 30 Ft or to the end of the cut, but will not be greater than one-half of the distance of the expected blast advance; and
4. Do not perform pre-split blasting if the distance between the controlled blast line and free face is less than 20 Ft or less than three (3) times the blast hole depth, whichever is greater.

203.3.3.1.7.5 Cushion Blasting

The Contractor shall perform cushion blasting in accordance with item No. 3 of Section 203.3.3.1.7.3, "Controlled Blasting Requirements," and the following requirements:

1. Perform cushion blasting as part of the final shot after other blasting is finished;
2. If the final shot includes production blast holes, detonate the cushion blast no more than 75 Ms or less than 25 Ms after the production blast; and
3. Fire cushion blast holes simultaneously, unless ground vibrations, noise, or air blast are excessive. Fire cushion blast holes in delayed sections and reduce the charge weight per delay to mitigate excessive effects.

203.3.3.1.7.6 Production Blasting

The Contractor shall perform production blasting in accordance with the Blasting Plan that produced Acceptable results in blasting test sections and the following requirements:

1. Minimize blast damage to the final excavation backslope;
2. Drill buffer rows of production blast holes on a plane approximately parallel to the controlled blast line;
3. Place the buffer row of production blast holes no closer than six (6) Ft to the controlled blast line unless the Contractor can prove the final excavation backslope will not be damaged by the production blast;
4. Where necessary to minimize damage to the excavation backslope, load blast holes in the buffer row lighter than other production holes;
5. Ensure the bottoms of production blast holes are not lower than the bottom of controlled blast holes, except in the lowest lift;
6. Ensure the diameter of production blast holes does not exceed six (6) inches, unless approved by the Project Manager;
7. Before placing charges, ensure the hole is free of obstructions. Use casing, if necessary, to prevent the walls of the hole from collapsing;
8. Use a dry, angular, and granular Material that passes a 3/8 inch sieve to stem the holes, from the top charge to the hole collar;
9. Detonate production blast holes in a controlled delay sequence toward a free face;
10. Do not use horizontal holes for production blasting, except for Equipment access; and
11. Use explosives and blasting accessories appropriate for wet or dry blast hole conditions as necessary to achieve satisfactory results.

203.3.3.1.7.7 Scaling and Stabilization of Slopes Established by Controlled Blasting

The Contractor shall perform scaling and stabilization of slopes established by controlled blasting in accordance with the following requirements:

1. Observe the entire blast area following a blast before starting Work in the cut. If any rocks are loose, hanging, or potentially dangerous within a blast area, the Contractor shall remove them. Scale slopes by hand using a standard steel mine scaling rod. Use other methods to supplement or in lieu of hand scaling, such as, machine scaling, hydraulic splitters, or light blasting, if approved by the Project

- Manager;
2. Slopes shall be scaled and stabilized before further construction activities take place. Scale slopes throughout the span of the Contract and as often as necessary to keep the slopes free of hazardous loose rock or overhangs; and
 3. Cease blasting operations if the following conditions exist:
 - 3.1. There is an excessive amount of breakage beyond the specified lines and grade;
 - 3.2. There is excessive flyrock;
 - 3.3. The final backslope within the specified tolerances is not uniform;
 - 3.4. Ground vibration and air blast levels exceed limits specified in Section 617, "Vibration Monitoring and Video Taping;"
 - 3.5. There are violations of other requirements of the Specifications;
 - 3.6. The slopes are unstable;
 - 3.7. The safety of the public is jeopardized; and
 - 3.8. Property or natural features are endangered

Basis of Payment for CONTRACT BID TAB ITEM NO. 11- ROCK REMOVAL PER CUYD shall be in accordance with **203.3.3.1 BASIS OF PAYMENT**

4. General Note #7 on the plan sheets references that there's an ARV detail on sheet Cu-502 but there is no detail on that sheet. Can you please provide a detail for the ARV assemblies on the project?

Response: Please see attached CAV Detail for ARV assemblies.

5. Would Georg-Fischer LOKX System ductile iron fittings be an acceptable alternate to fusible HDPE fittings on the project? I have attached a brochure for reference and can provide a contact with the manufacturer's representative who can provide more information if needed.

Response: No, these fittings are not acceptable for this project. These fittings are not listed for use on HDPE pipe.

6. Are the bid tabulations for Water Line Design and Electric Distribution Phase I, as referenced on Addendum No. 1, separate bids or is should they be combined for the project?

BIDDERS SHOULD NOTE THIS IS A COMBINED PROJECT AND BID TABULATIONS FOR BOTH WATER LINE DESIGN AND ELECTRIC DISTRIBUTION PHASE I, AS REFERENCED IN ADDENDUM NO. 1, MUST BE SUBMITTED AS FOLLOWS:

TOTAL BASE BID (Water Line Design & Electric Distribution Phase I)	\$
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Total Bid Amount written in words:

Dollars

Note: The bid amount shall exclude state gross receipts tax or local option tax, but shall include all other costs of doing business, including but not limited to bonds, insurance and profit. The Incorporated County of Los Alamos is required to pay the applicable tax including any increase in the applicable tax becoming effective after the date the contract is entered into. The applicable gross receipts tax or local option tax shall be shown as a separate amount on each billing or request for payment under contract. The Incorporated County of Los Alamos reserves the right to reduce or add quantities.

All other provisions of the Solicitation Documents shall remain unchanged. This Addendum No. 3 is hereby made a part of the Solicitation Documents to the same extent as those provisions contained in the original documents and all itemized listings thereof.

Each Bidder is requested to acknowledge receipt of this Addendum No. 3 with the Bid Forms.

I hereby acknowledge receipt of this Addendum No. 3.

Signed	Print Name	Date
Title	Company	