

**SANTA FE COUNTY
PUBLIC WORKS DEPARTMENT**

INVITATION FOR BID



IFB NO. 2019-0028-PW/MM

CN S100560

**CONSTRUCTION SERVICES FOR THE
ARROYO HONDO TRAIL SEGMENT 4**

FEBRUARY 2019

SANTA FE COUNTY

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SANTA FE COUNTY INVITATION FOR BIDS

Construction Services for the Arroyo Hondo Segment 4 (Rancho Viejo Fire Station Trailhead to Old Dinosaur Trail)

**IFB NO. 2019-0028-PW/MM
CN S100560**

The Santa Fe County Public Works Department is requesting bids from qualified and licensed contractors for construction services for the Arroyo Hondo Trail located in Santa Fe County funded by the Federal Highway Administration (FHWA). The work consists of the construction of a 1.52 mile long concrete multi-use trail connecting the exiting Rancho Viejo Fire Station Trailhead to the existing La Pradera Trail, and to the existing trail at the I-25 / NM 14 Interchange in Santa Fe County. The State Disadvantaged Business Enterprise (DBE) Goal on this project is established at 0%. At this time NMDOT will meet State DBE Goal on Federally assisted projects through a combination of race-neutral and race-conscious measures. The stipulated construction duration for this contract is 180 working days to commence as directed by Santa Fe County. A working day is defined in Section 101.4 – Terms and Definitions of the NMDOT Standard Specifications. Bids may be held for ninety (90) days subject to action by the County. By submitting a bid for the requested materials and/or services each bidder is certifying that its bid is in compliance with regulations and requirements stated within the Invitation for Bid package. Santa Fe County reserves the right to reject any and all bids in part or whole. A completed bid package shall be submitted in a sealed envelope indicating the bid title and number along with the bidding firm's name and address clearly marked on the outside of the container. Bids are due no later than **2:00PM Tuesday, March 26, 2019**, and delivered to the Santa Fe County Purchasing Division located at 142 W. Palace (Second Floor), Santa Fe 87501.

A Pre-Bid Conference & Site Visit will be held on Wednesday, March 6, 2019 at 2:00 PM at the Projects, Facilities & Open Space Division located at 901 W. Alameda, Suite 20-C, Santa Fe, N.M. 87501. Attendance at the Pre-Bid Conference & Site Visit is MANDATORY. Bidders must be in attendance and on time in order to submit a bid.

EQUAL OPPORTUNITY EMPLOYMENT: All qualified bidders will receive consideration of contract(s) without regard to race, color, religion, sex, national origin, ancestry, age, physical and mental handicap, serious mental condition, disability, spousal affiliation, sexual orientation or gender identity.

Information on Invitation for Bid Documents including plans and specifications will be available by contacting Maricela Martinez, Santa Fe County Purchasing Division, by telephone at (505) 992-9864 or by email at mcmartinez@santafecountynm.gov or by accessing our website at https://www.santafecountynm.gov/asd/current_bid_solicitations.

BIDS RECEIVED AFTER THE DATE AND TIME SPECIFIED ABOVE WILL NOT BE ACCEPTED.

Publish: Dates February 17, 18, 24, 25, 2019 & March 3 & 4, 2019

INSTRUCTIONS FOR BIDDERS

Bids are requested by Santa Fe County from qualified, licensed construction companies for the construction of the Arroyo Hondo Trail Segment 4.

1. **LOCATION AND DESCRIPTION OF WORK:** The work consists of the construction of a 1.52 mile long concrete multi-use trail connecting the exiting Rancho Viejo Fire Station Trailhead to the existing multi-use trail at the I-25 / NM 14 Interchange, and the existing La Pradera Trail in Santa Fe County.

The work includes concrete sidewalk 6" (colored), earthwork, erosion control, rock gravity walls, two prefabricated steel truss bridges including drilled shaft foundations, seeding, and trail signs.

The Contractor shall supply all labor, materials and equipment necessary to complete the work in accordance with the construction plans and specifications.

The bids shall be in the form of unit pricing as per items listed on the bid sheets.

The bid shall include all permits, fees, tie-in fees for all utilities, overhead and profit and incidental costs in the bid amounts. All applicable taxes shall not be included in the bid amounts.

All applicable laws and ordinances and the rules and regulations of all authorities having jurisdiction over the project shall apply to the contractor and all agreements between the contractor and the County.

2. **TIME AND PLACE OF RECEIVING AND OPENING BIDS:** This information will be found in the "Advertisement for Bids". A bid received after the specified time will not be considered and will be returned to the bidder unopened.
3. **SPECIFICATIONS:** The construction of this project will be in accordance with the New Mexico Department of Transportation Standard Specifications and Supplemental Specifications for Highway and Bridge Construction 2014 Edition, Special Provisions and the engineering drawings which are included in this bid package except as otherwise specified herein or in the contract.

The Standard Specifications can be found at the following internet link:
http://dot.state.nm.us/content/dam/nmdot/Plans_Specs_Estimates/2014_Specs_For_Highway_And_Bridge_Construction.pdf

4. **CONTRACT TIME:** The number of days for the completion of work (the contract time) is 180 working days upon receipt of the Notice to Proceed.
5. **COPIES OF BIDDING DOCUMENTS:** Bidders may obtain complete sets of the Bidding Documents by accessing our website at https://santafecountynm.gov/asd/current_bid_solicitations. Bidders shall use complete sets of Bidding Documents in preparing bids; neither the owner nor engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. No license or grant of use of the Bidding Documents is conferred by issuance of copies of the bidding documents.

6. **BIDDER'S REPRESENTATION:** By submitting a bid the bidder represents that: a) the bidder has read and understands the Bid Documents and Contract Documents; b) the bid is made in compliance with the Bid Documents and Contract Documents; c) The bidder has visited the site and has become familiar with local conditions under which the Work is to be performed, and has correlated the bidder's personal observations with the requirements of the proposed Contract Documents; d) the bidder has familiarized itself with federal, state and local laws, ordinances, rules, and regulations affecting performance of the Work; and e) the bid is based upon the materials, equipment and systems required by the Bid Documents without exception; and f) the County shall rely on these representations.
7. **INTERPRETATIONS/ADDENDA:** All questions about the meaning or intent of the contract documents shall be submitted to the Procurement Manager in writing. Any contact with other County Staff regarding this solicitation may be grounds for disqualification/rejection of bid. Replies will be issued by written addenda mailed or delivered to all parties recorded by the printer, as having received the bidding documents at least five (5) calendar days before the scheduled bid opening date. Questions received less than seven (7) calendar days prior to 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 legal effect. Written questions or inquiries in relation to the Invitation for Bid will be directed to:

Maricela Martinez, Procurement Planner Analyst
Santa Fe County Purchasing Division
142 W. Palace Avenue (Second Floor)
Santa Fe, NM 87501
Ph. (505) 992-9864
Fax (505) 989-3243
Email – mcmartinez@santafecountynm.gov

Addenda will be transmitted to all bidders that are listed on the Bid Holder's List at the printer(s) who have received a complete set of Bid Documents.

Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose. Each addendum shall be part of the contract documents as specified in the written contract, attached to these specifications.

Addenda will be issued no later than five (5) working days prior to the date for receipt of bids except an addendum withdrawing the request for bids or one which includes postponement of the date for receipt of bids.

Each bidder shall ascertain prior to submitting a bid that the bidder has received all addenda and the bidder shall acknowledge receipt in the bid.

8. **SUBSTITUTIONS:** The materials, products, and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitution will be considered prior to receipt of bids.
9. **WAGE RATES/REGISTRATION OF BIDDER AND SUBCONTRACTORS WITH THE NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS:** The Contractor shall be required to fully comply with the Davis-Bacon Act and Related Acts in accordance with 40 USC § 276a; 29 CFR Parts 1, 3, 5, 6, and 7 and the Public Works Minimum Wage Act, NMSA 1978, 13-4-11 thru 13-4-17. The higher wage rate will prevail and both wage

determination information will be posted at the construction site. If the minimum wage rate determination for the project is not included in the initial Bid Documents, it will be furnished in an Addendum.

Pursuant to 13-4-13.1 NMSA 1978, Public Works Contracts, Registration of Bidders and Subcontractors, Bidders submitting bid pricing for more than \$60,000 shall be registered with the New Mexico Department of Workforce Solutions prior to submitting a bid to Santa Fe County. The Contractor shall provide its registration number where indicated on the Bid Proposal Form. If a Bidder is not registered at the time of Bid opening, their Bid shall be considered non-responsive Bid and will be rejected. Bidder's subcontractors shall also be registered. The registration number of each subcontractor shall be listed on the designated space on the Subcontractor Listing Form. If a Bidder's Bid includes any subcontractor that is not registered their Bid may be considered for award following substitution of a registered subcontractor for any unregistered subcontractor in accordance with Section 13-4-36 NMSA 1978. Bidders may find additional information on the registration requirements and forms at the website: <http://www.dws.state.nm.us/LaborRelations/LaborInformation/PublicWorks>

It shall be the successful bidder's responsibility to inform itself thoroughly of all state, federal and local laws and statutes pertaining to the employment of labor, the freedom of organization and the conditions of employment and shall strictly adhere to such laws and regulations as are applicable. There shall be no discrimination because of race, creed, color, national origin or legal political affiliation in the employment of persons qualified by training and experience for work under this contract.

10. BID PREPARATION:

- A. Submit the Bid as provided in the Bid Package, and complete the blank spaces in the Required Documents for Bid Submittal. For each Bid Item, the Bidders shall state in numerals, either in ink or digital form, the Bid Item Unit Price for which the Bidder proposes to perform each Bid Item;
- B. Specify a Bid Item Unit Price for each Bid Item, except when a Bid Item Unit Price is established by the County. The Bid Item Unit Price will be conclusively presumed to include any insurance or overhead expenses necessary to complete that Bid Item;
- C. Show the Bid Item Prices by multiplying the respective Bid Item Unit Prices and quantities, and also show the Total Bid Amount in the space provided on the Bid Schedule. The Total Bid Amount will be the sum obtained by adding the Bid Item Prices;
- D. Make changes to any entry on the Required Documents for Bid Submittal by marking through the entry in ink and making the correct entry adjacent thereto in ink. Initial the change in ink;
- E. Show the amounts for the respective Bid Item Unit Prices to a maximum of three decimal places. Truncate additional decimal places in excess of three;
- F. Exclude the applicable state GRT and local option tax. The Department will pay the applicable tax.
- G. Exclude any Indian business tax, TERO tax, and other tax imposed by a tribal government. The Department will pay the tax or will exercise its prerogative to challenge the tribal government's authority to impose the tax. If the Department exercises its prerogative to challenge the tribal government's authority to impose the tax, the Department will reimburse the Contractor for such tax only if a court of competent jurisdiction rules the tribe has authority to impose the tax. The Department will reimburse the Contractor only if the final decision of the litigation, or other final disposition of the litigation, results in a determination that the tribe has jurisdiction to

impose the tax. The Department shall be subrogated to the rights of the Contractor to claim a refund of, or to contest, any such tax imposed on the Work to the extent any alleged obligation of the Contractor or the Department to pay such taxes arises under this section or through the Contractor's performance of this Contract;

H. Submit Required Documents for Bid Submittal signed by the president, vice presidents, owner, or other representative of the Bidder authorized in writing to bind the Bidder.

11. **BID SECURITY:** Each individual bid shall be accompanied by bid security equal to 5% of the amount of the bid. Such bid security shall be in the form of a certified or cashier's check made payable to the County or a surety bond issued by a surety authorized to conduct business in the State of New Mexico and who is approved in federal circular 570 as published by the U.S. Treasury Department.

By submitting the bid and providing the bid security, the bidder pledges to enter into a binding contract with the County and will furnish bonds covering the faithful performance of the contract and payment of all obligations arising hereunder.

The County will have the right to retain the bid security of bidders to whom an award is being considered until either the contract has been executed and bonds, if required, have been furnished or the specified time has elapsed so that bids may be withdrawn or all bids have been rejected.

12. **POWER OF ATTORNEY:** Attorneys in fact who sign bonds must attach certified effective copies of their Power of Attorney to all bonds.
13. **SUBMISSION OF BIDS:** Bids shall be submitted at the time and place indicated in the "Advertisement for Bids" on page 3 of this IFB and shall be enclosed in an opaque sealed envelope, marked with the project title, name and address of the bidder, and accompanied by the list of subcontractors and other required documents. All blanks must be filled in. Conditional bids will not be considered. The envelope shall be addressed to:

Maricela Martinez, Procurement Planner Analyst
Santa Fe County Purchasing Division
142 W. Palace Avenue (Second Floor)
Santa Fe, NM 87501

14. **MODIFICATION AND WITHDRAWAL OF BIDS:** A bid may not be modified, withdrawn or canceled by the bidder following the time and date designated for the receipt of bids, and each bidder so agrees to these conditions by submitting a bid.

Prior to the time and date designated for receipt of bids, a bid submitted may be modified or withdrawn by notice to the County at the address designated for receipt of bids. Such notice shall be in writing and signed by the bidder.

Upon receipt such written confirmation shall be date and time stamped by the County on or before the date and time set for receipt of bids. A modification of a bid shall be worded as not to reveal the amount of the original bid.

15. **GROSS RECEIPTS TAXES:** The amount of the bid shall exclude applicable New Mexico Gross Receipts Taxes or applicable local option taxes. The applicable gross

11. receipts tax or applicable local option taxes shall be computed and shown as a separate amount on each request for payment made under the contract.
12. **CONSIDERATION OF BIDS:** Bids received on time will be opened publicly and will be read aloud, and an abstract of the amounts of the base bids and alternates or bid items, if any, will be made available to the bidders. Each bid shall be open to public inspection.
13. **BID OPENING PROCEDURE:** The person or persons opening the bids shall verify that the requirements of the Instruction to Bidders have been fulfilled, and shall read aloud the name of each apparently responsive bidder and the bid amount(s). If any requirements have not been met, the bid shall be deemed non-responsive and disqualified. Each bid shall be reviewed for the following:
 - A. Cover Sheet
 - B. Index
 - C. Bid Form
 - D. Bid Schedule
 - E. Bid Bond
 - F. Bidder's List of Quoters
 - G. Disadvantaged Business Enterprise (DBE) Goal Form A-585
 - H. Non-Debarment Certification
 - I. Pay Equity Acknowledgement
 - J. Disadvantaged Business Enterprise (DBE) Program Race Conscious Measures (A-644)
 - K. Non-Collusion Affidavit of Prime Bidder
 - L. Certification of Non-Segregated Facilities
 - M. Campaign Contribution Disclosure Form

IF ANY OF THESE REQUIREMENTS HAVE NOT BEEN MET, THE BID MAY BE DISQUALIFIED AND CONSIDERED NON-RESPONSIVE.

14. **BIDS TO REMAIN OPEN:** All bids shall remain open for ninety (90) days after the day of the bid opening.
15. **AWARD OF CONTRACT:**
 - A. The County reserves the right to reject any and all bids and waive any and all informalities or technicalities and the right to disregard all nonconforming or conditional bids or counter proposals.
 - B. If a contract is to be awarded, it will be awarded to the lowest responsible bidder submitting the lowest bid amount.
 - C. If the lowest responsible bidder has otherwise qualified, the lowest bidder may negotiate with the County for a lower bid if the lowest bid is within **ten percent** over budgeted project funds in order to prevent all bids from being rejected. No change in the original scope and/or terms and conditions will be allowed.

Negotiations may be permitted with product, materials, and equipment alternatives as determined to be in the best interest of the County.

- D. Except described in 2014 NMDOT Standard Specification for Highway and Bridge Construction 2014 Edition, Section 103.3, "Bidding Dispute Resolution Procedures," the County will award the contract within 30 days after opening of bids to the lowest responsive bidder.
 - E. The awarded contractor must register all active subcontractors on the State of New Mexico Workforce Solutions website upon approval of Notice of Award entered by Santa Fe County.
- 20. **LIQUIDATED DAMAGES:** Liquidated damages in the amount of two thousand dollars (\$2,000.00) per each calendar day shall be assessed after the completion date (as adjusted by change orders) until the issuance of a Certificate of Substantial Completion for the entire project.
 - 21. **PREFERENCE FOR DOMESTIC MATERIALS:** The contractor shall provide Materials in accordance with the Buy America Requirements (23 CFR § 635.410) on federal-aid Projects.
 - 22. **LICENSE OR ROYALTY FEES:** Licenses and/or royalty fees for products or for processes must be paid for directly by the contractor.
 - 23. **PERMITS:** It is the responsibility of the contractor and each subcontractor to obtain permits and inspections required by the County and/or the State of New Mexico or any other entity that may have jurisdiction over the construction.
 - 24. **COLLUSION:** No bidder shall be interested in more than one bid. Collusion among bidders or the submission of more than one bid under different names by any firms or individual shall be cause for rejection of all bids in question without consideration.
 - 25. **QUANTITIES:** The quantities set forth in the bid proposal are estimated quantities on which bids will be compared and which will be the basis for award of contract. Payment will be made for work actually performed.
 - 26. **PROTEST PROCEDURE:** Any bidder who is aggrieved in connection with procurement may protest to the County Purchasing Manager as set forth in Resolution No. 2006-60 by the Board of County Commissioners. A copy of Resolution No. 2006-60 is available upon request. The protest must be in writing and be submitted within twelve (12) days after the facts or occurrences. The complete procedures and requirements regarding protests and resolution of protests are available from the Santa Fe County Purchasing Division upon request.
 - 27. **CONTRACTOR'S QUALIFICATION STATEMENT:** A bidder to whom award of a contract is under consideration shall submit, upon request, information and data to prove that its financial resources, production or service facilities, personnel, and service reputation and experience are adequate to make satisfactory delivery of the services, construction, or items of personal property described in the Bidding Documents.

28. **BOND REQUIREMENTS – PERFORMANCE BOND AND PAYMENT BOND:** If awarded the contract, a bidder shall furnish bonds covering the faithful performance of the contract and payment of all obligations arising thereunder. The amount of the bonds, performance and payment, shall each be equal to 100% of the contract sum. Bonds shall be issued by a surety authorized to conduct business in the State of New Mexico and who is approved in federal circular 570 as published by the U.S. Treasury Department. The cost of the bonds shall be included in the bid.
29. **TIME OF DELIVERY AND FORM OF BONDS.** The bidder shall deliver the required bonds to the County no later than fifteen (15) days following the date of execution of the contract. If the Work is to be commenced prior thereto in response to a letter of intent, the bidder shall, prior to commencement of the Work, submit evidence satisfactory to the County that such bonds will be furnished and delivered in accordance with this section.

The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.
30. **WARRANTY:** The contractor shall furnish a written warranty of workmanship to the Procurement Manager for a period of one (1) year following the completion date in addition to all other warranties required by the Contract Documents.
31. **NOTICE OF AWARD:** A written Notice of Award shall be issued by the County after review and approval of the bid and related documents.
32. **IDENTICAL BIDS:** If two or more identical low bids are received, the County will apply the process described at Section 13.1.110 NMSA 1978, of the State Procurement Code.
33. **CANCELLATION OF AWARD:** When in the best interest of the public, the County may cancel the award of any contract at any time before the execution of said contract by all parties without any liability against the County.
34. **NOTICE TO PROCEED:** The County will issue a written Notice to Proceed and a purchase order to the contractor stipulating the date from which contract time will be charged and the date contract time is to expire.
35. **FAILURE TO EXECUTE CONTRACT:** Failure to return the signed contract with acceptable contract bonds and certificate of insurance within fifteen (15) calendar days after the date of the Notice of Award shall be just cause for the cancellation of the award. The award may then be made to the next lowest responsible bidder, or the work may be re-advertised and constructed under contract or otherwise, as the owner may decide.
36. **INSURANCE REQUIREMENTS:** For this project that involves construction within fifty (50) feet of a railroad track special insurance requirements apply. At a minimum upon execution of the contract between the County and the contractor, the contractor shall furnish to the County, Certificates of Insurance that list New Mexico Department of Transportation (NMDOT), Santa Fe Southern Railroad (SFSR), and Santa Fe County as additional insured.

Contractor shall have a certificate of insurance submitted to NMDOT, SFSR, and Santa Fe County. Severability of Interest and NMDOT, SFSR, and Santa Fe County as additional insured shall be indicated on the certificates of insurance.

A. General Conditions. The Contractor shall submit evidence of insurance as is required herein. Policies of insurance shall be written by companies authorized to write such insurance in New Mexico.

B. General Liability Insurance, Including Automobile. The Contractor shall procure and maintain during the life of this Agreement a comprehensive commercial general liability insurance with limits of \$2,000,000 each occurrence and \$6,000,000 in the aggregate.

Business automobile insurance policy with liability limits in amounts for personal and bodily injury liability: \$1,000,000 each person; \$2,000,000 each occurrence; (annual aggregate; and, property damage liability: \$2,000,000 each occurrence; (annual aggregate). Said policies of insurance shall include coverage for all operations performed for County by Contractor; coverage for the use of all owned, non-owned, hired automobiles, vehicles and other equipment, both on and off work; and contractual liability coverage under which this Agreement is an insured contract.

C. Workers' Compensation and Employers Liability Insurance. The Contractor shall procure and maintain during the life of this Agreement Worker's Compensation and Employers Liability Insurance with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, and \$500,000 by disease each employee.

D. Worker's Compensation Insurance. The Contractor shall carry worker's compensation insurance and otherwise fully comply with the New Mexico Worker's Compensation Act (NMSA 1978, § 52-1-1 et. seq.) and the New Mexico Occupational Disease Disablement Law (NMSA 1978, § 52-3-1 et. seq.).

E. Increased Limits. If, during the life of this Agreement, the Legislature of the State of New Mexico increases the maximum limits of liability under the Tort Claims Act (NMSA 1978, Sections 41-4-1 through 41-4-29, as amended), the PR shall increase the maximum limits of any insurance required herein.

37. **CLARIFICATION OF NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR, AND CERTIFICATION OF SUBCONTRACTOR REGARDING EQUAL EMPLOYMENT OPPORTUNITY:** The general contractor is not required to present completed "Non-Collusion Affidavit of Subcontractor" and "Certification of Subcontractor Regarding Equal Employment Opportunity" forms from their subcontractors at the time of bid submittal; however, once the contract is awarded, the general contractor is responsible for providing these forms along with the bonds and certificate of insurance.

38. **SUBCONTRACTOR PERFORMANCE AND PAYMENT BOND.** A subcontractor whose work to be performed on a public works building project is one hundred thousand twenty five dollars (\$125,000) or more shall submit a performance and payment bond in the amount of the work they are to perform on the project. These bonds will be submitted within the stated (10) calendar days after the date of the Notice to Award.
39. **OPERATIONS AND MAINTENANCE MANUALS:** At the completion of the project but prior to the Substantial Completion certificate approved by the engineer, the contractor shall submit to the architect two (2) copies of a three ring binder with all maintenance and operations instructions for all systems and items within this phase of construction, if applicable.
40. **NOTICE:** The Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978, 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.
41. **SUFFICIENT APPROPRIATION:** Any contract awarded as a result of this IFB process may be terminated if sufficient appropriations or authorizations do not exist. Such termination will be effected by sending written notice to the contractor. The County's decision as to whether sufficient appropriations and authorizations are available will be accepted by the contractor as final.
42. **NUMBER OF BIDS ACCEPTED.** Bidders shall submit only one (1) bid in response to this IFB.
43. **DOUBLE-SIDED DOCUMENTS.** All submitted bids shall be double-sided, pursuant to Santa Fe County Resolution 2013-7, Adopting Sustainable Resource Management Principles, Section 2. A. Waste Reduction and Reuse..."all documents are to be double-sided, including those that are generated by outside entities using County funds and by consultants and contractors doing business with the County".

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SANTA FE COUNTY

**PURCHASING DIVISION
142 W. PALACE AVENUE
SANTA FE, NM 87501**

**REQUIRED DOCUMENTS
FOR
BID SUBMITTAL**

BID NUMBER: 2019-0028-PW/MM

Control Number (“CN”): S100560

Bidder: _____

SANTA FE COUNTY

**PURCHASING DIVISION
142 W. PALACE AVENUE
SANTA FE, NM 87501**

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OF
REQUIRED DOCUMENTS
FOR
BID SUBMITTAL**

BID NUMBER: 2019-0028-PW/MM

Control Number (“CN”): S100560

Bidder: _____

Cover Sheet

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Bid Bond

Bidder’s List of Quoters

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Non-Debarment Certification

Pay Equity Acknowledgement

Disadvantaged Business Enterprise (DBE) Program Race Conscious Measures (A-644)

Non-Collusion Affidavit of Prime Bidder

Certification of Non-Segregated Facilities

Campaign Contribution Disclosure Form

**SANTA FE COUNTY
BID FORM**

FROM: _____

_____ hereinafter called "Bidder".

TO: Santa Fe County
142 West Palace Avenue
Santa Fe, New Mexico 87501

hereinafter called "CONTRACTING AGENCY",

BID FOR:	IFB NO. 2019-0028-PW/MM
PROJECT:	CONSTRUCTION SERVICES FOR THE SANTA FE ARROYO HONDO SEGMENT 4
CONTROL NUMBER ("CN"):	S100560

Purchasing Division:

The bidder has familiarized itself with the existing conditions on the project area affecting the cost of the work and with the contract documents which includes:

- A. Advertisement for Bids
- B. Instructions for Bidders
- C. Bid Form and other required bid forms as listed herein
- D. Form of Agreement
- E. Form of Performance Bond
- F. Form of Labor and Material Payment Bond
- G. Technical Specifications
- H. All information provided in the Project Manual and Drawings

Therefore, the Bidder hereby proposes to furnish all supervision, technical personnel, labor, materials, tools appurtenances, equipment, and services (including all utility and transportation services) required to complete the construction services for the Arroyo Hondo Segment 4, in accordance with the above listed documents.

(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern). Bidder has provided unit prices for the scope of work.

In submitting this bid, the Bidder understands that the right is reserved by Santa Fe County to reject any irregular or all bids, waive any technicalities in the bids, and accept the bid deemed to be in the best interest of the public and that Santa Fe County intends to award one contract (if at all) for the items bid. If written notice of the acceptance of this bid is mailed, telegraphed or otherwise delivered to the undersigned within ninety (90) days after the opening thereof or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver the agreement in the prescribed form within ten (10) days after the agreement is presented to it for signature.

All Addenda pertaining to this Project shall be acknowledged by the Bidder in the spaces provided below:

Addendum		Acknowledged by	Date
No.	Date	Bidder or Its Authorized Representative	Acknowledged
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Failure to acknowledge receipt, as provided above, may be considered sufficient grounds for disqualification of the bidder and rejection of his proposal. It shall be the bidder's responsibility to become fully advised of all Addenda prior to submitting his bid.

The Bidder agrees to commence work under this Contract within fifteen (15) days after, a date to be specified in a written "Notice to Proceed" from Santa Fe County or its authorized agents. Bidder further agrees to pay liquidated damages as provided in the Contract Documents.

This Bid Proposal contains the following:

- A. Cover Sheet
- B. Index
- C. Bid Form
- D. Bid Schedule
- E. Bid Bond
- F. Bidder's List of Quoters
- G. Disadvantaged Business Enterprise (DBE) Goal Form A-585
- H. Non-Debarment Certification
- I. Pay Equity Acknowledgement
- J. Disadvantaged Business Enterprise (DBE) Program Race Conscious Measures (A-644)
- K. Non-Collusion Affidavit of Prime Bidder
- L. Certification of Non-Segregated Facilities
- M. Campaign Contribution Disclosure Form

Failure to include any of the above listed documents in the bid submittal may be considered sufficient grounds for disqualification of the bidder and rejection of its bid.

Respectfully submitted:

Name of Bidder:

Official Address:

By: _____
(Signature)

Title: _____

Date: _____

Telephone No.: _____

Email: _____

New Mexico Contractor's License Number and Types: _____

United States Treasury Number: _____

Department of Workforce Solutions Registration No.: _____

**SANTA FE COUNTY
BID SCHEDULE**

BID NUMBER: 2019-0028-PW/MM

CN S100560

THE CONTRACTOR MUST BID ON ALL ITEMS, ENTER ALL UNIT PRICES,
MAKE ALL EXTENSIONS AND TOTAL THE BID FOR UNIT I AND UNIT II.

CONTRACTOR: _____

TOTAL AMOUNT BID \$_____

**SANTA FE COUNTY
BID SCHEDULE**

**PROJECT NO. 2019-0028-PW/MM Construction Services for the
Arroyo Hondo Trail Segment 4 CN S100560**

UNIT I					
ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE ----- DOLLARS / CENTS	BID AMOUNT ----- DOLLARS / CENTS
201000	Clearing & Grubbing	LS	1		
203000	Unclassified Excavation	CY	1,567		
206000	Unsuitable Material Excavation	CY	38		
206100	Select Backfill Material	CY	26		
502024	Drilled Shaft Foundation 24" Diameter	LF	104		
511300	Structural Concrete, Class A	CY	24		
512003	High Performance Concrete (HPD)	CY	43		
540060	Reinforcing Bars Grade 60	LBS	5,391		
540160	Epoxy Coated Reinforcing Bars Grade 60	LBS	4,560		
541405	Prefab Pedestrian Bridge (35FT)	LS	1		
541406	Prefab Pedestrian Bridge (110FT)	LS	1		
570018	18" Culvert Pipe	LF	76		

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE ----- DOLLARS / CENTS	BID AMOUNT ----- DOLLARS / CENTS
601000	Removal of Structures and Obstructions	LS	1		
602010	Riprap Class B	CY	105		
602020	Riprap Class C	CY	170		
603150	Soil Retention Blanket	SY	94		
603260	Culvert Protection	SY	40		
603262	Composted Mulch Sock	LF	450		
603281	SWPPP Plan Preparation and Maintenance	LS	1		
607900	Wire Fence	LF	558		
608006	Concrete Sidewalk 6" (Colored)	SY	8,200		
608108	Drive Pad 8" (Colored)	SY	361		
621000	Mobilization	LS	1		
632000	Class A Seeding	AC	3.73		
632030	Class D Seeding	AC	0.07		
667206	Landscape Boulders	EA	16		

ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE ----- DOLLARS / CENTS	BID AMOUNT ----- DOLLARS / CENTS
667219	Gravity Wall	SF	825		
667225	Rubble Masonry Veneer	SF	416		
667500	Bollard	EA	2		
667515	Litter Receptacle	EA	1		
701000	Panel Signs	SF	68		
701101	Multi-Directional Slip Base Post for Aluminum Panel Signs	EA	4		
701960	Steel Posts for Trail Signs	LF	48		
701961	Vehicular Monument Sign	EA	1		
701962	Kiosk Sign – Primary	EA	1		
701963	Kiosk Sign – Secondary	EA	1		
701964	Orientation Map Sign	EA	1		
701965	Directional Sign – 1 Flag	EA	1		
701967	Directional Sign – 3 Flag	EA	2		
701968	Marker Signs	EA	2		
702810	Traffic Control Devices for Construction	LS	1		

704000	Retroreflectorized Pavement Markings 4"	LF	732		
704224	Retroreflectorized Plastic Pavement Stripe 24"	LF	50		
801000	Construction Staking by the Contractor	LS	1		
TOTAL BID AMOUNT UNIT I WRITTEN IN NUMBERS:		\$ _____			
TOTAL BID AMOUNT UNIT I WRITTEN IN WORDS:					
PROJECT NO. 2019-0028-PW/MM Construction Services for the Arroyo Hondo Trail Segment 4 CN S100560					
UNIT II					
ITEM NO	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE ----- DOLLARS / CENTS	BID AMOUNT ----- DOLLARS / CENTS
201000	Clearing & Grubbing	LS	1		
603281	SWPPP Plan Preparation and Maintenance	LS	1		
608006	Concrete Sidewalk 6" (Colored)	SY	63		
621000	Mobilization	LS	1		
632000	Class A Seeding	AC	0.03		
701963	Kiosk Sign – Secondary	EA	1		
701967	Directional Sign – 3 Flag	EA	1		
801000	Construction Staking by the Contractor	LS	1		
TOTAL BID AMOUNT UNIT II WRITTEN IN NUMBERS:		\$ _____			
TOTAL BID AMOUNT UNIT II WRITTEN IN WORDS:					

**SANTA FE COUNTY
BID BOND**

Control Number ("CN"): S100560

BIDDER: _____ TELEPHONE: () _____

ADDRESS: _____

SURETY: _____

SURETY BUSINESS ADDRESS: _____

KNOWN ALL MEN by these presents that the Surety having its registered office at the above address are bound unto the SANTA FE COUNTY in the sum of five percent (5%) of the Total Bid Amount as shown on the Project Bid Schedule for which payment well and truly to be made to the Santa Fe County the Surety binds itself, its successors and assigns by these presents.

The Surety undertakes to pay Santa Fe County up to the above amount upon receipt of Santa Fe County's first written demand, without the Santa Fe County having to substantiate its demand, provided that in its demand the Santa Fe County will note that the amount claimed by the Santa Fe County is due to the Bidder failing to return the signed Contract and Contract Bonds within fifteen (15) Days of receiving the Contract. The Guaranty will remain in force up to 30 Days after Bid Opening or as it may be extended by the Santa Fe County, notice of which extension(s) to the Surety is hereby waived.

New Mexico Department of Transportation ("NMDOT")
Bidder's List of Quoters for the Disadvantaged Business Enterprise ("DBE") Program

Control Number ("CN"): S100560

BIDDER: _____ TELEPHONE () _____
ADDRESS: _____

The NMDOT establishes the New Mexico DBE goal using the mechanism of a Bidder's list per 49 C.F.R. § 26.45 (2014). The Bidder's list shall contain all quotes, from both DBE and non-DBE quoters, received by the Bidder and shall be submitted with the Bid. The term "quoter" shall include Subcontractors and Suppliers.

Failure of the Bidder to comply with this Bidder's List of Quoters shall render the Bid non-responsive and the Bid shall be rejected.

[illegible]

New Mexico Department of Transportation (“NMDOT”)
Disadvantaged Business Enterprise (“DBE”) Goal Form A-585

Control Number (“CN”): S100560

BIDDER: _____ TELEPHONE: () _____
ADDRESS: _____

Contractor’s DBE Liaison Officer: _____

Total Bid Amount \$ _____

Contractors DBE Participation _____

Dollar Estimate and Participation: \$ _____ or _____ % of line 3.

For this Project the DBE participation goal is in the Advertisement. If the Bidder can meet the DBE goal it shall complete this form and submit the same before Bid Opening. If the Bidder intends to meet the goal by self- performing the Work, it shall list itself and complete the input fields in the DBE Goal Form A-585.

If the Bidder is unable to meet the goal it shall submit evidence of its good faith efforts taken to meet the goal by 4:30 PM, local prevailing time, seven (7) Days after Bid Opening per 49 C.F.R. § 26.53 (b)(3) (2014). Bidders shall submit the same to the NMDOT Construction and Civil Rights Bureau located at 1570 Pacheco Street, Building A, Santa Fe, NM 87505.

Good faith efforts require that the Bidder show that it took all necessary and reasonable steps to achieve this Project’s DBE goal. The necessary and reasonable steps are expected, by their scope, intensity, and appropriateness to the objective of meeting this Projects DBE goal, to obtain sufficient DBE participation. Good faith efforts include, but are not limited to, those described in the Federal Requirements Notice to Contractors and 49 C.F.R. Pt. 26, Appendix A (2014).

If the NMDOT determines that the Bidder has failed to make good faith efforts to meet the DBE goal the Bidder is entitled to seek administrative reconsideration per 49 C.F.R. § 26.53 (d).

Name of Certified DBE Contractor, Subcontractor or Supplier	Address	NAICS Code for DBE	Description of Work	Proposed Amount (round to nearest dollar)

Bidders shall use certified DBEs contained in the DBE directory required by 49 C.F.R. § 26.81(g) (2011). Bidders shall confirm that the DBE is certified at the following link:

<https://nmdot.dbesystem.com/FrontEnd/VendorSearchPublic.asp?TN=nmdot&XID=4599>

The submission of the Bid with the digital id is the Bidder's assurance that it will either meet the DBE goal or provide its good faith efforts.

Failure to comply with the requirements of the DBE Goal Form A-585 shall render the Bid non-responsive and the Bid shall be rejected.

NOTICE TO CONTRACTORS

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

RACE CONSCIOUS MEASURES

FORM NO. A-644

May 14, 2015

CN S100560

This Project is subject to race-conscious measures. The established DBE Goal for this project is 0%.

Within five (5) working days after the bid opening, ALL BIDDERS shall submit written confirmation from each DBE listed on their Form A-585, DBE A-1 that it is participating in the contract. All Bidders shall provide the required information as indicated on Form No. A- 644.

There forms shall be submitted to Construction – Civil Rights Bureau (CCRB) located at 1570 Pacheco Street, Building A, Santa Fe NM 87505. CCRB can be contacted at Telephone No. 1-800.544.0936 or 505.476.0974 and FAX No. 505.476.0910. Forms will be accepted until 4:00 PM within five (5) working days after the bid opening.

FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL RENDER A BID NON-RESPONSIVE AND THE BID SHALL BE REJECTED.

New Mexico Department of Transportation ("NMDOT")
Non-Debarment Certification

Control Number ("CN"): S100560

BIDDER: _____ TELEPHONE () _____
ADDRESS: _____

The Federal Highway Administration suspends or debar contractors to protect taxpayer dollars and the NMDOT is required to Award Contracts to responsible Bidders. The submission of the Bid is the Bidder's certification that neither it nor its principals are presently suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this Project by any federal department or agency. The Bidder further agrees that if it is the lowest Responsible Bidder and awarded the Contract then it shall comply with the following:

1. The Contractor shall verify through the SAM.gov website at <https://www.sam.gov/portal/SAM/##11> that its Subcontractor(s), at any tie s), is not presently suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this Project. The result of this verification shall be provided in the NMDOT's permission to subcontract request form number A - 1086 and A-1087; and
2. If circumstances change to render this certification inaccurate then the Contractor shall provide the changed circumstances immediately in writing to the Project Manager.

If the Contractor knowingly makes a false certification the NMDOT may take any available actions under the Contract.

Failure to acknowledge the terms and conditions above shall render the Bid non-responsive and the Bid shall be rejected.

I acknowledge

New Mexico Department of Transportation ("NMDOT")
Pay Equity Reporting Acknowledgement
New Mexico Executive Order 2009-049

Control Number ("CN"): S100560

BIDDER: _____ TELEPHONE () _____
ADDRESS: _____

Pre-Award

The State of New Mexico requires the lowest Responsible Bidder to, in order to contract with Executive Branch Agencies, including the NMDOT, comply with Executive Order 2009-049. To comply with the Executive Order, after receipt of the notice of preliminary award of contract the lowest Responsible Bidder shall submit per the notice of preliminary award of contract either form PE10-249 or PE250 depending on its number of employees at the time it receives the notice of preliminary award of contract.

Failure of the lowest Responsible Bidder to comply with this Pay Equity Reporting Acknowledgement may constitute just cause for cancellation of the Award and the forfeiture of the Bid Guaranty.

Exemptions exist regarding compliance with the Executive Order. The Executive Order and required forms can be obtained from the following link:

http://www.generalservices.state.nm.us/statepurchasing/Pay_Equity.aspx

Post-Award

If Contract Time extends beyond one (1) year from the date in the Notice to Proceed, then within ten Days of the annual anniversary date of the Notice to Proceed, the Contractor shall submit to the Project Manager an updated form PE 10-249 or PE250 depending on the number of employees it has at that time.

If at the expiration of Contract Time, more than 180 Days has elapsed since submittal of the last PE 10-249 or PE250, the Contractor shall submit to the Project Manager an updated form PE 10-249 or PE250.

If a Subcontractor, at any tier, performs ten percent or more of the Total Original Contract Amount and has ten or more employees or eight (8) employees in the same job classification then the Contractor shall submit to the Project Manager the PE 10-249 or PE250. The Contractor shall submit the appropriate form with the permission to subcontract package forms A-1086 or A-1087.

If a Subcontractor, at any tier, performs ten percent or more of the Total Original Contract Amount and during the performance of this Work grows to have ten or more employees or eight (8) employees in the same job classification then the Contractor shall immediately submit form PE 10-249 or PE250.

Subsequent form PE 10-249 or PE250 submittals, by the Contractor for its Subcontractors, at any tier, shall be due yearly on the anniversary date of the Project Manager's approval of the permission to subcontract package.

Failure of the Contractor to comply with this Pay Equity Reporting Acknowledgement shall result in the NMDOT exercising its remedies under the Contract.

I acknowledge

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF NEW MEXICO

COUNTY OF _____

_____ being first duly sworn, deposes and says that:

- (1) They are the _____ of _____ the Bidder that has submitted the attached Bid Proposal;
- (2) They are fully informed respecting the preparation and contents of the attached Bid Proposal and of all pertinent circumstances respecting such bid;
- (3) Such bid is genuine and is not a collusive or sham bid;
- (4) Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communications or conference with any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Contracting Agency or any person interested in the proposed contract; and
- (5) The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(SIGNED) _____

TITLE _____

SUBSCRIBED AND SWORN to before me this ____ day of _____ 2019.

NOTARY PUBLIC

My Commission Expires _____

CERTIFICATION OF NON-SEGREGATED FACILITIES

(Applicable to construction contracts and related subcontracts exceeding \$10,000, which are not exempt from the Equal Opportunity Clause).

The construction contractor certifies that it does not maintain or provide for its employees any segregated facility at any of its establishments, and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The construction contractor certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract. As used in this certification, the term "segregated facilities" means any waiting room, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clock, locker rooms and other storage or dressing areas, parking lots, drinking foundations, recreating or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. The construction contractor agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed SUBCONTRACTORS prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that it will retain such certifications in its files.

SIGNED: _____

TITLE: _____

SUBSCRIBED AND SWORN to before me this ____ day of _____, 2019.

NOTARY PUBLIC

My Commission Expires: _____

CAMPAIGN CONTRIBUTION DISCLOSURE

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, any prospective contractor seeking to enter into a contract with any state agency or local public body **for professional services, a design and build project delivery system, or the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body may cancel a solicitation or proposed award for a proposed contract pursuant to Section 13-1-181 NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section 13-1-182 NMSA 1978 of the Procurement Code if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE INVITATION FOR BID AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official's behalf for the purpose of electing the official to statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee,

nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Family member” means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) a prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the invitation for bid and ending with the award of the contract or the cancellation of the invitation for bid.

“Prospective contractor” means a person or business that is subject to the competitive invitation for bid process set forth in the Procurement Code or is not required to submit a competitive bid because that person or business qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

Name(s) of Applicable Public Official(s) if any: _____
(Completed by State Agency or Local Public Body)

DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:

Contribution Made By: _____

Relation to Prospective Contractor: _____

Date Contribution(s) Made: _____

Amount(s) of Contribution(s) _____

Nature of Contribution(s) _____

Purpose of Contribution(s) _____

(Attach extra pages if necessary)

Signature

Date

Title (position)

--OR--

NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.

Signature

Date

Title (Position)

**END OF REQUIRED DOCUMENTS
FOR BID SUBMITTAL**

PERFORMANCE BOND

A. KNOW ALL MEN BY THESE PRESENT, THAT WE _____, as PRINCIPAL hereinafter called the "CONTRACTOR" and _____,

_____ as SURETY hereinafter called the "SURETY", are held and firmly bound unto OBLIGEE Santa Fe County, a Political Subdivision of the State of New Mexico, hereinafter called the "COUNTY", in the sum 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.

B. WHEREAS, the CONTRACTOR has a written contract dated _____, 2019, with the COUNTY for the Construction Services for the Arroyo Hondo Trail Segment 4 in Santa Fe County, N.M. in accordance with drawings and specifications which contract is referenced made part hereof, and is hereinafter referred to as the "Contract."

C. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform said Contract (including any amendment thereto), then this obligation shall be null and void; otherwise it shall remain in full force and effect until the COUNTY shall by written instrument notify the SURETY that the obligation is discharged, except that the obligation shall continue for at least three (3) months following the expiration of the term of the Contract.

1. The SURETY hereby waives notice of any alteration or extension of the Contract time made by the COUNTY.
2. Whenever CONTRACTOR shall be, and is declared by the COUNTY to be in default under the Contract, the COUNTY having performed the COUNTY'S obligations thereunder, the SURETY must promptly remedy the default and shall promptly:

(1) Complete the Contract in accordance with its terms and conditions, or

(2) Obtain a bid or bids for submission to the COUNTY for completing the Contract in accordance with its terms and conditions, and upon determination by the COUNTY and SURETY of the lowest responsible bidder, arrange for a contract between such bidder and Santa Fe County, and make available as work progresses (even though there should be a default or a secession 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 the COUNTY to CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by the COUNTY to CONTRACTOR.

D. No right of action shall accrue on this Performance Bond to or for the use of any person or corporation other than Santa Fe County named herein or the heirs, executors, administrators, or successors of Santa Fe County.

E. This Bond shall be enforceable without the need to have recourse to any judicial or arbitral proceedings.

SIGNED AND SEALED THIS _____ DAY OF _____, 2019.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY (signature)

(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY'S Authorized New Mexico Agent

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT, THAT WE _____

_____ as PRINCIPAL hereinafter called the "PRINCIPAL" and
_____ as SURETY hereinafter called the "SURETY", are held and firmly
bound unto Santa Fe County, a Political Subdivision of the State of New Mexico as OBLIGEE hereinafter
called the "COUNTY", for the use and benefit of any claimants as herein below defined, 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, the PRINCIPAL has a written contract dated _____, 2019, with the COUNTY
for the Construction Services for the Arroyo Hondo Trail Segment 4 in Santa Fe County, New Mexico, which
must be constructed in accordance with drawings and specifications which contract is referenced and made a
part hereof, and is hereinafter referred to as the "Contract."

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 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 but not be limited to that part of water, gas, power, light, heat, oil, gasoline, telephone services or rental of equipment directly applicable to the Contract.
2. The above named PRINCIPAL and SURETY hereby jointly and severally agree with the COUNTY 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, prosecute a suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereof. The COUNTY shall not be liable for payment of any cost or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant, or other than one having a direct contract with the PRINCIPAL, shall have written notice in the form of an sworn statement to the COUNTY and any one or both of the following: the PRINCIPAL or SURETY above named, within ninety (90) days after such said claim is made or suit filed, 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.
 - b. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the COUNTY, PRINCIPAL or SURETY, at any place where an office is regularly maintained by said COUNTY, PRINCIPAL or SURETY 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.
4. Any suit under this Labor and Material Bond must be instituted in accordance with the statute of limitation under Section 37-1-3 NMSA 1978.

5. No right of action shall accrue on this Bond to or for the use of any person or corporation other than subcontractors or sub-subcontractors of the said Contract between PRINCIPAL and Santa Fe County named herein.

SIGNED AND SEALED THIS _____ DAY OF _____, 2019.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

_____ (seal)
NOTARY PUBLIC

My Commission expires: _____

SURETY (signature)

(Printed name and title)

_____ (seal)
NOTARY PUBLIC

My Commission expires: _____

SURETY'S Authorized New Mexico Agent

ACKNOWLEDGEMENT OF RECEIPT OF INVITATION FOR BID FORM

**IFB NO. 2019-0028-PW/MM
CONSTRUCTION SERVICES FOR THE ARROYO HONDO TRAIL SEGMENT 4
CN S100560**

In acknowledgement of receipt of this Invitation for Bids the undersigned agrees that he/she has received a complete copy, beginning with the title page, and ending with the contractual documents. Completed forms must be submitted to **Maricela Martinez** no later than **Wednesday, March 6, 2019** to receive any addenda for this solicitation.

Only Bidders that return this form in a timely manner will receive copies of addenda to this IFB.

FIRM: _____
REPRESENTED BY: _____
TITLE: _____
PHONE NO.: _____
FAX NO.: _____
E-MAIL ADDRESS: _____
MAILING ADDRESS: _____

DELIVERY ADDRESS: _____

By: _____ Date: _____
(Signature)
Name: _____
(Printed)
Title: _____

This name and address will be used for all correspondence related to the Invitation For Bids.

Maricela Martinez
Santa Fe County
Purchasing Division
142 W. Palace Avenue
Santa Fe, NM 87504
Phone: (505) 992-9864 Fax: (505) 989-3243
E-mail: mcmartinez@santafecountynm.gov

INDEX OF PROJECT SPECIFIC NOTICE(s) to CONTRACTORS

ADA Construction Inspection Procedure

Additional Named Insured

Cooperation with Utilities - No Anticipated Impacts

Mandatory Pre-Bid Conference

Ramp-Up Time

Referee Testing

Schedule Format

CCRB
May 12, 2017

NOTICE TO CONTRACTORS

ADA Construction Inspection Procedure

CN S100560

General Comments

NMDOT is recognized as a Title II public entity under the Americans with Disabilities Act of 1990 (Public Law 101-336) (the “ADA”). The ADA provides protections to individuals with disabilities that are at least equal to those provided by the nondiscrimination provisions of title V of the Rehabilitation Act of 1973. The ADA extends the prohibition of discrimination in federally assisted programs, established by section 504 of the Rehabilitation Act, to all activities of State and local government, irrespective of the funding source for the program. As a Title II entity NMDOT must comply with the ADA to make public facilities accessible so as to prohibit discrimination against any “qualified individual with a disability”

Meeting ADA compliance is an ongoing NMDOT obligation, which requires commitment and diligence on multiple levels from project planning through construction of a public right-of-way (PROW) facility.

For this project, to ensure ADA compliance is met, the Contractor shall implement the NMDOT ADA Construction Inspection Policy and Procedure. This Work shall be considered incidental to the completion of the Project and no additional payment shall be made. Failure to comply with this Notice to Contractors may be deemed a Nonconformance in accordance with Specification Section 101.4 “Terms and Definitions” and subject the Contractor to Specification Section 108.9 “Default of Contract”.

ADA Construction Compliance Requirement:

All constructed ADA facilities meet the *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)*, July 26, 2011, which may be accessed through the State Construction Bureau webpage (<http://dot.state.nm.us/en/Construction.html>).

Construction Inspection Procedure

The ADA Curb Ramp Documentation forms attached to this Notice to Contractors will be used for the inspection process to ensure compliance with both PROWAG guidelines and NMDOT construction Plan design. The ADA Curb Ramp documentation forms and this procedure will be discussed at the mandatory Pre-Bid Meeting, if one is held, and the Pre-Construction Conference.

Procedure: The following procedure describes the use of the NMDOT ADA Curb Ramp Documentation form and the inspection process.

ADA Construction Inspection Procedure

CN S100560

Page 2

1) The Contractor must provide notice to the Project Manager in accordance with Standards Specification 105.10 “Inspection of Work”.

- The Contractor shall use only a 24 inch electronic digital (“Smart”) level with 0.1% slope accuracy shall be permitted for ADA construction and inspection Acceptance.
- The Contractor and the NMDOT shall calibrate each Smart level prior to performing the next step.
- The Contractor and NMDOT shall select which curb ramp form best aligns with the type to be inspected.
- Before scheduling delivery of concrete and with an NMDOT inspector present, the Contractor shall complete the Pre-Pour Inspection Form verifying that the concrete formwork is constructed to dimensions and grades shown on plans and meets PROWAG, 2011 technical design criteria and NMDOT Construction Plans.
- The NMDOT inspector will verify that the measurements on the Pre-Pour Form meet the requirements or require correction of all discrepancies in accordance with Standard Specification 105.11 “Removal of Unacceptable and Unauthorized Work”, before scheduling of concrete to ensure the finished concrete Work will meet PROWAG and NMDOT Construction Plans.
- When all measurements meet the Contract requirements then the NMDOT inspector will permit the concrete pour.
- The Contractor shall repeat the procedure using the Constructed Inspection Form after the concrete pour to ensure the curb ramp(s) meets PROWAG compliance and NMDOT Construction Plan design criteria.
- The NMDOT inspector will verify measurements on the Constructed Inspection Form. Once the NMDOT inspector has verified the measurements the Work will be eligible for payment. Unacceptable Work will be subject to Standard Specification 105.11 “Removal of Unacceptable and Unauthorized Work”.

The Contractor shall prepare the final documentation to include all applicable field measurements documented on the ADA Curb Ramp Documentation inspection forms; verification of measurements by the inspector; and a minimum of two (2) pictures of the constructed curb ramp(s). The Contractor shall submit the completed forms to the NMDOT Project Manager, before the next Progress Payment. Payment for ADA Curb Ramps will not occur until all documents have been submitted and accepted by the Project Manager.

The Contractor shall protect and maintain the constructed ADA facilities until such time that Final Acceptance of the ADA facility occurs. Final Acceptance occurs in accordance with Standards Specification section 109.10 “Project Closure”.

NOTICE TO CONTRACTORS

Additional Named Insured

CN S100560

Per the 2014 Edition of the New Mexico Department of Transportation Standard Specifications Section 107.25.4 – “Department as Additional Insured” the successful Bidder shall name Santa Fe County as an additional named insured on the comprehensive general liability form or commercial general liability form and return the same with the return of the Contract documents listed in the timeframe required in the notice of preliminary Award of Contract letter.

Pursuant to Section 103.8 – “Failure to Execute Contract”, failure by the successful Bidder to comply with this Notice to Contractors may constitute just cause for cancellation of the Award and the forfeiture of the Bid Guaranty.

**ROW
July 5, 2016**

Notice to Contractors

Cooperation with Utilities - No Anticipated Impacts

CN S100560

Utility Relocation

Utility relocation is not anticipated for this Project and there are no known utility impacts within the Project limits. If utilities are discovered within the Project limits the Contractor shall take the necessary precautions to protect the utility from damage caused by the Work. If any such utility is damaged, the Contractor shall bear the cost of the repair to the satisfaction of the utility owner. The Contractor shall be responsible for all associated repair costs and no additional Contract Time will be granted for repairs.

Although there are no known utility impacts, for construction purposes the Notice to Contractors ("NTC") does not supersede or alter the obligations in the 2014 Edition of the New Mexico Department of Transportation ("NMDOT") Standard Specifications for Highway and Bridge Construction, ("Standard Specifications") Section 105.6 – "Cooperation with Utilities" should a utility or utility facility be encountered during the work.

If utilities or utility facilities are encountered during the Work the Contractor shall preserve line location markings or provide an offset mark before obliterating a locate mark. Restrictions exist regarding the use of emergency line locates. An emergency is defined as an excavation that must be performed due to circumstance beyond the control of the Contractor and that affects public health, safety or welfare. Emergency locate request shall not be used to circumvent poor job planning economic consequences.

NMDOT Owned Facility Infrastructure

If a Contractor's or Subcontractor's activities at any tier, destroys, obliterates, covers or in any way alters utility markings put in place by the NMDOT, the Contractor shall ensure that those line markings are reestablished or provide offset markings before the Contractor or the Subcontractor or any tier begins Work in the affected area. The Contractor shall both photo document the remarked utility alignment or the offset markings to ensure accuracy to the original markings. Photos will clearly identify distances and/or recognizable features to ensure re-markings or offset marks are accurate.

If the Contractor or Subcontractor at any tier fails to accurately reestablish previously placed line markings and damage occurs to any NMDOT owned facilities infrastructure the Contractor shall be responsible for all associated repair costs and no additional Contract Time will be granted for repairs. If any NMDOT owned facility is damaged, the Contractor shall bear the cost of repair to the satisfaction of the NMDOT. NMDOT incurred costs related to damage to NMDOT owned facility infrastructure may be recovered from the Contractor by Progress Payment offset or the

Cooperation with Utilities - No Anticipated Impacts

CN S100560

Page 2 of 2

Contract's Project performance bond. All damaged infrastructure will be repaired as an emergency repair (within 24-hours), and shall be in accordance with the Standard Specifications.

Non-NMDOT Owned Utility Infrastructure

Utilities shown on the Plans, which will not be relocated, shall require the Contractor to take the necessary precautions to protect the utility from damage caused by the Work. If any such utility is damaged, the Contractor shall bear the cost of repair to the satisfaction of the utility owner. The Contractor shall be responsible for all associated repair costs and no additional Contract Time will be granted for repairs.

Office of General Counsel
May 3, 2015

NOTICE TO CONTRACTORS

Mandatory Pre-Bid Conference

CN S100560

As a condition to submitting a Bid, prospective Bidders must attend a Mandatory Pre-Bid Conference. The Mandatory Pre-Bid Conference will be held on **Wednesday, March 6, 2019** beginning promptly at **2:00 PM** local prevailing time. At 2:00 PM, the start of the Mandatory Pre-Bid Conference will be announced. Any individuals who arrive after 2:00 PM and are not physically present when the start of the Mandatory Pre-Bid Conference is announced and who do not physically remain for the entirety of the Mandatory Pre-Bid Conference will not be compliant with this Notice to Contractors ("NTC"). Attendance at the Mandatory Pre-Bid Conference will be evidenced by the sign-in sheet.

The purpose of the Mandatory Pre-Bid Conference is to discuss:

1. General Overview of Project
2. Other issues related to the project

The Mandatory Pre-Bid Conference will be held at:

Santa Fe County Projects Division conference room
901 W. Alameda, Suite 20-C, Santa Fe, N.M.

Project related questions raised before or after the Mandatory Pre-Bid Conference shall be directed Maricela Martinez, Procurement Planner Analyst at (505) 992-9864 or at mcmartinez@santafecountynm.gov.

The Bidder will not be compliant with this NTC and its Bid shall be rejected as non-responsive if the Bidder or Bidders representative does not attend this Mandatory Pre-Bid Conference on time and remain for its entirety.

**Chief Engineer
March 7, 2016**

**NOTICE TO CONTRACTORS
Ramp-Up Time
CN S100560**

Ramp-up time for this Project is fifteen (15) Working Days.

Contract Work shall begin no later than the latest start date in the Notice to Proceed plus the ramp-up time.

At the end of ramp-up time, Contract Time shall automatically commence.

If the Contractor elects to commence Work before the end of the ramp-up time, the Contractor shall provide the Project Manager 48 hour written notice of the date elected to commence Project Work.

The Contractor shall not impact traffic within the Project's limits during ramp-up time.

No Progress Payments shall be made to the Contractor during ramp-up time unless for stockpile Bid Items designated in the Notice to Contractors for Stockpile.

**Materials
May 3, 2015**

**NOTICE TO CONTRACTORS
Referee Testing
CN S100560**

This Notice to Contractors hereby incorporates by reference the requirements of the Referee Testing Policy (Policy) applicable at the time of Advertisement for this Project. The Policy is available at the hyperlink below:

http://dot.state.nm.us/content/dam/nmdot/Construction/NMDOT_Referee_Testing_Policy.pdf

Chief Engineer
May 3, 2015

NOTICE TO CONTRACTORS
Schedule Format
CN S100560

In lieu of a critical path method Baseline Schedule format the schedule format for this Project shall be a bar graph Baseline Schedule.

The Baseline Schedule shall conform to the 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction, Section 108.3.2.2 - "Bar Graph Baseline Schedule".

INDEX OF STANDARD NOTICE(s) to CONTRACTORS

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November 15, 2016

NOTICE TO CONTRACTORS

Approved Products List

Products used on New Mexico Department of Transportation (“NMDOT”) Projects must be approved by the NMDOT’s product evaluation program and listed on the NMDOT’s approved products list (“APL”).

The Bidder’s Bid Item Unit Price for the Project shall be deemed to rely on the use of the products listed on the APL. The Contractor shall comply with all APL procedures required by the hyperlink below:

<http://dot.state.nm.us/content/nmdot/en/APL.html>

As used in this Notice to Contractors, “product” means any manufactured item, Material, traffic operational device or other feature used in the maintenance or construction of a NMDOT Project. All products must meet requirements in accordance with the 2014 Edition of the NMDOT’s Standard Specifications for Highway and Bridge Construction.

Products defined in NMDOT Administrative Directive (“AD”) 206, 4.08 (a-g) are not required to be on the APL. The product evaluation engineer makes the determination on which products meet the criteria in AD 206 4.08 (a-g).

Approval to use a non-APL product may be granted by the Project Manager on a Project specific basis only. For products not on the APL and not exempted by AD 206 4.08 (a-g), the Contractor shall submit an application to be evaluated consistent with the processes described in the above hyperlink.

If a non-APL product is used by the Contractor without approval of the Project Manager, the Contractor shall remove any non-APL product. Removal and replacement will be made at the sole expense of the Contractor if a non-APL Product is used. Any disruption to the Project schedule related to the Contractor’s use of a non-APL Product is solely the Contractor’s responsibility and no additional Contract Time will be granted.

CCRB
April 6, 2016

NOTICE TO CONTRACTORS

Buy America

The following clarifies the 2014 Edition of the New Mexico Department of Transportation's (NMDOT) Standard Specifications for Highway and Bridge Construction Section 106.12 - "Preference for Domestic Materials" which requires the Contractor to provide Materials that comply with the Buy America requirements in 23 CFR § 635.410.

Previous interpretations of the Buy America requirements allowed exclusions for certain steel and iron manufactured products that contained less than 90% steel or iron components. Previous interpretations also allowed exclusions for miscellaneous steel and iron components, subcomponents and hardware. These exclusions no longer apply.

Since these exclusions no longer apply, the Contractor shall provide certification proving that all steel or iron Materials were manufactured in the United States before performing Work that uses steel or iron Materials. Additionally, the Contractor shall provide certification that all coatings on the steel or iron Materials were applied in the United States. If these certifications are not provided, the NMDOT may take any remedies available under the Contract.

Other exclusions to the Buy America requirements remain in effect, including but not limited to, minimal use of foreign steel and iron Materials. The exclusion allows the Contractor to use foreign steel or iron Material that does not exceed one-tenth of one percent (0.1%) of the Total Bid Amount or that does not exceed \$2,500.00 whichever is greater. To comply with the minimal use exclusion, the Contractor shall provide to the NMDOT Project Manager invoices showing the cost of the foreign steel or iron Material that cannot be certified as delivered to the Project.

Chief Engineer
May 3, 2015

NOTICE TO CONTRACTORS

Chief Engineer

Requests for Contract interpretation shall be directed in writing to the Chief Engineer in accordance with the 2014 Edition of the New Mexico Department of Transportation's Standard Specifications for Highway and Bridge Construction, Section 102.7 - "Examination of Contract, Plans, Specifications, Special Provisions, and Site of Work".

The contact information for the Chief Engineer is as follows:

chief.engineer@state.nm.us

Chief Engineer
January 27, 2017

NOTICE TO CONTRACTORS

Electronic Data Files

The New Mexico Department of Transportation ("NMDOT") will only provide electronic data files in the format and software version in which the files were produced and subject to the conditions set out in this Notice to Contractors ("NTC").

Providing electronic data files under this NTC does not alter the Bidder's obligations found in the NMDOT's 2014 Edition of the Standard Specifications for Highway and Bridge Construction ("Standard Specifications"), Section 102.7 - "Examination of Contract, Plans, Specifications, Special Provisions, and Site of Work".

The NMDOT will make available the following electronic data files for this Project:

A) Survey Data, in accordance with the Standard Specifications Section 801.1.2 - "Department-Supplied Documents and Services":

1. Existing Computer Aided Design Drafting ("CADD") survey files; and,
2. Existing Digital Terrain Model ("DTM") files.

B) Design Files, subject to the terms and conditions below:

1. Centerline Alignment Files ("CAF"), including horizontal and vertical alignment files for all alignments referenced in the plans.

The electronic data provided in sub-section "B" is for information purposes only. The data is furnished in an "as is" condition without any warranty as to fitness for a particular use beyond information purposes. The Contractor accepts all risks associated with the use of the data provided in sub-section "B" as modifications may have been made to the official hard copy Contract which do not appear in the electronic data files. The Contractor is solely responsible for confirming, conforming and correlating the accuracy and completeness of the electronic data files to the official Contract.

This NTC does not alter the definition of the Contract nor modify the order of importance of the documents as specified in the Standard Specifications, Section 105.4 - "Coordination of Contract Documents".

The electronic data referenced in sub-sections "A" and "B" will be available to the requestor on discs and will be available at the Plans Specifications & Estimate Bureau, located at 1120 Cerrillos Road, Santa Fe, NM 87504, Room 223.

NOTICE TO CONTRACTORS

Environmental and Archaeological Approvals for Pit Areas

In addition to the requirements contained in the 2014 Edition of the New Mexico Department of Transportation ("NMDOT") Standard Specifications for Highway and Bridge Construction Section 107.14.1 – "Environmental and Cultural Resource Studies and Approvals" the Contractor shall coordinate pit activity with the NMDOT in order to facilitate government-to-government tribal consultation, excluding commercial pits with affected tribes. The listing of affected tribes can be obtained from the following link:

<http://nmhistoricpreservation.org/outreach/native-american-consultations.html>

The Contractor shall initiate tribal consultation in writing through the NMDOT Project Manager ("PM"). The Contractor shall include, in the request to initiate tribal consultation, its scope of Work and clearly delineate plan view location of the Contractor located activity on a United State Geological Service 7.5' map. This process takes approximately 45 Days from the PM's receipt of the Contractor's written request to initiate tribal consultation. If concerns are expressed by the affected tribes this process will exceed 45 Days.

Maintenance
May 3, 2015

NOTICE TO CONTRACTORS

ET-PLUS & ET-31 Removed from Approved Products List

The New Mexico Department of Transportation, removed the ET-Plus and ET-31 guardrail end terminal sections, manufactured by Trinity Highway Products, LLC from the approved products list ("APL"). These products shall not be installed on New Mexico roadways.

The Bidder's Bid Item Unit Price for the Project shall be deemed to rely on the use of the alternate products listed on the APL.

CCRB
July 5, 2016

NOTICE TO CONTRACTORS

Federal Requirements

- I. TITLE VI
- II. DISADVANTAGED BUSINESS ENTERPRISE (DBE)
- III. SUBCONTRACTOR PROMPT PAYMENT PROVISIONS
- IV. REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS AND SUPPLEMENTS
- V. SUPPLEMENTAL EEO REQUIREMENTS
- VI. INDIAN PREFERENCE
- VII. NMDOT ON THE JOB TRAINING/SUPPORTIVE SERVICES ("OJT/SS") PROGRAM
- VIII. WAGE RATES
- IX. LABOR REPORTING AND SUBMISSION OF WEEKLY PAYROLLS
- X. TITLE VI ASSURANCES APPENDIX A AND APPENDIX E

References made to the New Mexico Department of Transportation ("NMDOT") web page can be accessed through the following link: <http://dot.state.nm.us/en.html>.

I. TITLE VI

The text United States Department of Transportation (USDOT) Order No. 1050.2A has been excerpted for this section with minimal modification by the NMDOT.

The Contractor (herein referred to as the "Recipient"), HEREBY AGREES THAT, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the NMDOT, is subject to and will comply with the following:

Statutory/Regulatory Authorities

Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); 49 C.F.R. Part 21 (entitled Nondiscrimination In Federally-Assisted Programs Of The Department Of Transportation—Effectuation Of Title VI Of The Civil Rights Act Of 1964); 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity," for which the Recipient receives Federal financial assistance from DOT, including NMDOT.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Nondiscrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these nondiscrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

“The NMDOT, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively insure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award”.

The NMDOT's Title VI Assurances, Appendices A and E are included in Section X at the end of this Notice to Contractors (“NTC”).

For further information, contact the Title VI coordinator for the NMDOT through the following link: <http://dot.state.nm.us/en/OEOP.html#f>.

II. DISADVANTAGED BUSINESS ENTERPRISE (“DBE”)

Per 49 C.F.R. § 26.13(b) (2014), the Contract NMDOT signs with the Contractor (and each Subcontract the Contractor signs with a Subcontractor) must include the following assurance:

“The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) withholding of monthly progress payments;
- (2) assessing sanctions;
- (3) liquidated damages; and/or
- (4) disqualifying the contractor from future bidding as non-responsible.”

For the purposes of the assurance, DOT-assisted Contracts means Contracts that receive federal funding and recipient means the NMDOT.

Terms and Definitions

Terms and Definitions contained in 49 C.F.R. § 26.5 are incorporated in this NTC by reference. Terms and definitions in the same control over terms that conflict with the terms and definitions in the 2014 Edition of the NMDOT Standard Specifications for Highway and Bridge Construction (“Standard Specifications”) Section – 101.4 “Terms and Definitions”.

Pre-Award Procedures

Projects that have DBE goals established in the Advertisement are subject to race-conscious measures. When a DBE goal is established the following DBE form and NTC, or evidence of the Bidder's good faith efforts, are required in order for the Bid to be considered responsive:

1. Disadvantaged Business Enterprise Goal Form A-585 (“A-585”); and

2. NTC Disadvantaged Business Enterprise (DBE) Bidder's Commitment and DBE's Confirmation Form A-644 ("A-644").

In the event the Bidder is also a certified DBE Contractor, and intends to self-perform a portion of the Work, the Bidder shall list itself and any other DBE it will use on Form A-585. Failure to comply with this requirement shall render the Bid non-responsive.

Pre-Award Bidder's Good Faith Efforts

When a Project has an established DBE goal, a Bidder may meet the requirements even if it doesn't meet the goal through documenting adequate good faith efforts. This means that the Bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful. The documentation of good faith efforts shall include, but is not limited to, copies of each DBE and non-DBE quote submitted to the Bidder when a non-DBE was selected over a DBE for Work on the Contract.

Per 49 C.F.R. § 26.53 (b)(3) (2014) and 49 C.F.R. § 26 Appendix A the NMDOT has the responsibility to make a fair and reasonable judgment as to whether a Bidder, that did not meet the goal, made adequate good faith efforts.

The below contains a list of types of actions, which the NMDOT may consider as part of the Bidder's good faith efforts to obtain DBE participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive, as other factors or types of efforts may be relevant in appropriate cases. The following is a list of the type of actions, and documentation, which the NMDOT will consider as part of the Bidder's good faith efforts to obtain DBE participation:

- 1) The Bidder's copies of each DBE and non-DBE subcontractor quote submitted to the Bidder when a non-DBE subcontractor was selected over a DBE for Work on the Contract to review whether DBE prices were substantially high; and the NMDOT may contact the DBEs listed on a the Bidder's List of Quoters submitted by the Bidder to inquire whether DBE primes were contacted by the Bidder. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under this NTC or rule;
- 2) The Bidder's solicitation of the interest of DBEs as early in the acquisition process as possible and as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the Subcontract. The Bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow-up initial solicitations;
- 3) The Bidder's selection of portions of the Work to be performed by the DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Contract Work items into economically feasible units to facilitate DBE participation even when the Bidder might otherwise prefer to perform these Work items with its own forces;
- 4) The Bidder's negotiations in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the Work available to DBE subcontractors, sub-consultants and Suppliers and to select those portions of the Work or material needs consistent with the available DBE subcontractors, sub-consultants and Suppliers, so as to facilitate DBE participation. Evidence of such negotiations includes the names, addresses and telephone numbers of DBEs that were considered, a description of the information provided regarding the construction plans and

specifications for the Work selected for subcontracting or requirements of Work, and evidence as to why additional agreements could not be reached for DBEs to perform the Work; and,

- 5) The Bidder's rejection of DBEs as being unqualified. The Bidder shall not reject a DBE as being unqualified without sound reasons based on a thorough investigation of their capabilities. The DBE's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Bids in the Bidder's efforts to meet the Project goal. Another practice considered insufficient good faith effort is the rejection of the DBE because its quotations for Work were not the lowest received. However, nothing in this paragraph will be considered to require the Bidder to accept unreasonable quotes to satisfy the Contract goal.

If the NMDOT determines that the Bidder has failed to make adequate good faith efforts to meet the DBE goal requirements, the NMDOT shall reject the Bid as non-responsive. The Bidder may dispute this determination and rejection of the Bid through the procedures in Standard Specification Section - 103.3 "Bidding Dispute Resolution Procedures".

Post-Award

Counting DBE Participation Toward Goals

This section in no way alters the obligations in Standard Specification Section - 108.1 "Subcontracting" and is only used to determine DBE participation levels for each Bidder. The Contractor must still comply with Standard Specification Section - 108.1 and perform with its own organization at least 40% of the Work based on the Total Bid Amount.

Only the value of the Work actually performed by the DBE will be counted towards DBE Project goals. DBE participation shall be credited as follows:

1. Count the entire amount of that portion of the Contract Work that is performed by the DBE's own forces. Include the cost of supplies and Materials obtained by the DBE for the Work including supplies purchased or equipment leased by the DBE. Supplies and equipment purchased or leased by a DBE from a prime contractor shall not be counted toward the DBE Project goal.
2. Count the entire amount of fees or commissions charged by a DBE for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required of the performance of the Contract, toward DBE goals, provided NMDOT determines the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.
3. When a DBE subcontracts part of its Work to another firm, the value of the subcontracted Work may be counted toward DBE goals only if the DBE's Subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE does not count toward DBE goals.

When a DBE performs as a participant in a joint venture, count the portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work of the Contract that the DBE performs with own forces toward DBE goals.

The NMDOT counts expenditures to a DBE toward DBE goals only if the DBE is performing a commercially useful function ("CUF") on the Contract.

1. A DBE performs a CUF when it is responsible for execution of the Work of the Contract and is carrying out its responsibilities by actually performing, managing, and supervising the Work involved. To perform a CUF, the DBE must also be responsible, with respect to Materials and supplies used on the Contract, for negotiating price, determining quality and quantity, ordering the Material and installing (where applicable) and paying for the Material itself.
2. A DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, Contract, or Project through which funds are passed in order to obtain the appearance of DBE participation.
3. If a DBE Contractor, Subcontractor, at any tier, or Supplier does not perform or exercise responsibility for at least 30% of the total cost of its Contract with its own forces, or the DBE subcontracts a greater portion of the Work of a Contract than would be expected on the basis of normal industry practice for the type of Work involved, it will be presumed that the DBE is not performing a CUF.
4. When a DBE is presumed not to be performing a CUF as provided in paragraph 3 of this section, the DBE may present evidence to rebut this presumption.
5. Decisions concerning CUF matters are not administratively appealable to USDOT.

DBE Trucking

Per the Standard Specification Section 108.1 "Subcontracting"... "A Trucker is not a Subcontractor unless the Contractor is using the Trucker to meet the DBE requirement associated with the Project". The following factors shall be used to determine whether DBE trucking Subcontractors are performing a CUF:

1. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular Contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
2. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Contract.
3. The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.
4. The DBE may lease trucks from another DBE, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.
5. The DBE may also lease trucks from a non-DBE, including from an owner-operator. The DBE that leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the

value of transportation services on the Contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement.

6. The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.
7. For purposes of this DBE trucking section a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

DBE Supplying Materials

1. If the Materials or supplies are obtained from a DBE manufacturer, count 100 % of the cost of the Materials or supplies toward the DBE goal. A DBE manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises the Materials, supplies, articles, or Equipment required under the Contract.
2. If the Materials or supplies are purchased from a DBE regular dealer, count 60 % of the cost of the Materials or supplies toward DBE goals. A DBE regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the Materials, supplies, articles or Equipment required under the Contract are bought, kept in stock and regularly sold or leased to the public in the usual course of business. The DBE regular dealer, must be an established regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

A DBE may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as required in paragraph 1 of this section if the DBE both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on ad hoc or contract-by-contract basis.

Packagers, brokers, manufacturers' representatives, or other person who arrange or expedite transactions are not regular dealers for the purpose of paragraph 2 of this section.

3. With respect to Materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees and commissions charged for assistance in the procurement of the Materials and supplies, or fees or transportation charges for the delivery of Materials and supplies required on a job site, toward DBE goals, provided the NMDOT determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the Materials or supplies themselves is not creditable toward DBE goals.

Credit for Work performed shall not be counted toward the DBE project goal until the amount committed has been paid to the DBE.

Pre-Award Substitution/Replacement and Post-Award Termination of DBE for Projects Having a DBE Goal

The Contractor shall use the DBE listed on the A-585 and confirmed on the A-644 to perform the specific Work identified. The Contractor shall not substitute, replace or terminate a DBE listed on the A-585 and confirmed on the A-644 (or an approved substitute DBE) without the prior written consent of NMDOT. The NMDOT considers it an improper DBE substitution, replacement or termination when a Contractor performs Work originally designated for a DBE with its own forces or those of an affiliate, or with a non-DBE, or with a substitute DBE. Unless NMDOT consent is provided, the Contractor shall not be entitled to any payment for Work or Materials unless it is performed by the listed DBE.

NMDOT will provide written consent to the termination request only if NMDOT agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate the DBE. For purposes of this paragraph, good cause includes the following circumstances:

1. The listed DBE fails or refuses to execute a written Contract;
2. The listed DBE fails or refuses to perform the Work consistent with normal industry standards, provided, however, that good cause does not exist if the failure or refusal to perform results from the bad faith or discriminatory action of the Contractor;
3. The listed DBE fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
4. The listed DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;
5. The listed DBE is ineligible to Work on public works projects because of suspension or debarment proceedings pursuant to 26 CFR Parts 180, 215 or 1200 or applicable state law;
6. The listed DBE is not a responsible Contractor;
7. The listed DBE voluntarily withdraws from the Project and provides to NMDOT written notice of its withdrawal;
8. The listed DBE is ineligible to receive DBE goal credit for the type of Work required;
9. A DBE owner dies or becomes disabled with the result that the listed DBE is unable to complete its Work on the Project; or
10. Other documented good cause that NMDOT determines compels the termination of the DBE. Provided that good cause does not exist if the Contractor seeks to terminate a DBE it relied on to obtain the Contract so that the Contractor can self-perform the Work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE after Contract Award.

Before seeking concurrence from the NMDOT to substitute, replace or terminate a DBE (or an approved substitute DBE) the Contractor must provide the DBE written notice including the reason of its intent to substitute, replace or terminate and give the DBE 5 Days to respond to the Contractor's notice. If required in a particular case as a matter of public necessity the NMDOT may allow a response period shorter than 5 Days. The DBE in response to the notice may provide the Contractor and NMDOT with the reasons, if any, why it objects to the proposed substitution, replacement or termination and why NMDOT should not approve the Contractor's request.

After receipt and review of the DBE response the NMDOT will provide a written response to the Contractor's request. NMDOT's decision is not appealable to USDOT.

After an approved termination of a DBE the Contractor shall make good faith efforts to subcontract with a substitute DBE which can perform the same type of work on the Project as the substituted, replaced or terminated DBE or to subcontract with a replacement DBE which can perform other types of work remaining on the Project. The good faith efforts shall be documented by the Contractor. The NMDOT may request a copy of the documented good faith efforts and the Contractor shall submit the same in 7 Days, which may be extended to an additional 7 Days at the request of the Contractor. The NMDOT will provide a written determination stating whether or not good faith efforts have been demonstrated. The Contractor may refer to Appendix A of 49 C.F.R. § 26 for guidance on good faith efforts.

NMDOT may allow a DBE contract goal waiver, adjust the DBE goal, or assess construction contract liquidated damages or design contract liquidated damages as may be appropriate, depending on the individual project's overall circumstances. NMDOT's decision to waive or adjust the contract goal is not appealable to USDOT.

Record Keeping Requirements

The Contractor shall keep such records as necessary to ensure compliance with its DBE utilization obligations, in accordance with Standard Specification Section - 107.28 "Contractor Records".

Compliance Procedures

The Contractor is solely responsible and obligated to ensure DBE compliance at all tiers until the final payment is made in accordance with Standard Specification Section - 109.10 "Project Closure".

If it is found that the Contractor or Subcontractor at any tier is not in compliance with this NTC and DBE program, NMDOT will notify the non-compliant party in writing. Failure to be compliant is a material breach of the Contract and may result including, but not limited to, the NMDOT exercising the remedies below. The NMDOT may conduct a compliance conference with the non-compliant party or parties to discuss the area(s) of non-compliance. In the event that the non-compliant party or parties fails or refuses to perform in compliance the NMDOT will send the non-compliant party or parties a "Notice of Non-Compliance" containing a deadline for the compliance. If the non-compliant party becomes compliant after the "Notice of Non-Compliance" the NMDOT will rescind the "Notice of Non-Compliance" and notify the party or parties. If the deficiencies are not corrected, NMDOT will initiate administrative action against the non-compliant party or parties, which may include but not be limited to:

1. Termination of the Contract;

2. Withholding of monthly progress payments;
3. Initiation of appropriate suspension or debarment proceedings;
4. Referral of any unlawful actions to the appropriate enforcement agencies; or
5. Other actions as appropriate, at the discretion of NMDOT.

III. SUBCONTRACTOR PROMPT PAYMENT PROVISIONS

This NTC does not alter the sole discretion of the NMDOT to make good cause determinations concerning Contractor prompt payment matters.

To ensure that all obligations to promptly pay Subcontractors are met Contractors shall pay all Subcontractors, Suppliers and Fabricators their respective Subcontract amount by electronic transfer, if available, for NMDOT undisputed Accepted Work within the timeframes specified in the Standard Specification Section 108.1 - "Subcontracting".

The Contractor is solely responsible and obligated to ensure prompt payment obligations and compliance reporting through all tiers until the final payment is made in accordance with Standard Specification Section 109.10 - "Project Closure". Contractors, Subcontractors or Suppliers, at all tiers, shall be required to submit payment information, as provided for in the B2GNow supporting software system, indicating when payments are made to any Subcontractor, Supplier and or Fabricator, regardless of DBE status. The Subcontractor, Supplier or Fabricator shall in B2GNow timely select whether payment was or was not received for the undisputed and Accepted Work. The NMDOT may recognize supporting documentation of such payment(s) in one or more of the following forms:

1. Proof of the timely deposit of funds into the Subcontractor, Supplier and or Fabricator bank account;
2. Proof of timely hand delivery of payment to the Subcontractor, Supplier and or Fabricator; or
3. Proof of timely mailing payment to the Subcontractor, Supplier and or Fabricator.

The Contractor shall notify the NMDOT in all situations when it will not make full prompt payment to its Subcontractor, Supplier or Fabricator before the payment becomes due. The Contractor shall also notify the Subcontractor, Supplier or Fabricator in all situations when it will not make full prompt payment before the payment becomes due. A Contractor will be required to fully document any alleged disputes with its Subcontractors, Suppliers and or Fabricators and provide the documentation to the NMDOT upon request.

The Contractor shall have good cause for any failure to fully or partially provide prompt payment for Accepted Work. The NMDOT determines good cause. Good cause recognized by the NMDOT to excuse a failure to promptly pay includes, but is not limited to, a claim concerning the Subcontractor's or Supplier's Work, failure to provide certified payrolls, and other required Project documentation. The amount withheld cannot exceed the amount in dispute between the Contractor and Subcontractor or Supplier. The

Contractor has the burden to support the Contractor's assertion of good cause. If the failure to fully or partially provide prompt payment is based on a claim, the Contractor shall submit a verifiable explanation and/or proof of the claim between the parties to the Project Manager.

Retainage

The NMDOT will require Contractors to pay all retainage owed to the Subcontractor, Supplier or Fabricator within 30 Days of the Progress Payment indicating Acceptance of the completed Subcontract Work, even if the NMDOT continues to withhold retainage from the Contractor. The Subcontract Work is completed when all the tasks called for in the Subcontract have been accomplished, documented and Accepted by the NMDOT. The Contractor may request partial acceptance in accordance with Standard Specifications Section - 105.18.1 "Partial Acceptance" upon satisfactory completion of the Subcontract Work. Good cause recognized by the NMDOT to excuse a failure to promptly release retainage includes, but is not limited to, a claim concerning the Subcontractor's or Supplier's Work, failure to provide certified payrolls, and other required Project documentation. The amount withheld cannot exceed the amount in dispute between the Contractor and Subcontractor or Supplier. The Contractor has the burden to support the Contractor's assertion of good cause for the failure to promptly release retainage. If the failure to promptly release retainage is based on a claim, the Contractor shall submit verifiable explanation and/or proof of the claim between the parties to the Project Manager.

Cross-Project Offsets

The NMDOT will not recognize cross-Project offsets as "good cause" excusing untimely payment for Accepted Work. The Contractor's Contract with Subcontractors or Suppliers shall not contain any provision that allows the Contractor to withhold payment from the Subcontractor or Supplier as a result of the Subcontractor's or Supplier's performance on separate Contract(s). Any such provision will be without effect, and shall not be recognized as good cause excusing a failure to make prompt payment.

IV. REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS AND SUPPLEMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act

- X. Compliance with Government-wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
 - b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."
2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved

in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
 - c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.
 - d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.
 - b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
 - c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.
5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and

increasing the skills of minorities and women so that they may qualify for higher paying employment.

- b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.
8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. Assurance Required by 49 CFR 26.13(b):
- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

- b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
- a. The records kept by the contractor shall document the following:
 - (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
 - (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
 - b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

- a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided; That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b.
 - (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is utilized in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.

(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of

Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

- d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

- 5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- 6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- 7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- 8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. Certification of eligibility.
 - a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime

contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
 - a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
 - (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;
 - (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
 - b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII.FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
 - h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
 - i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
 - j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:
- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
 - (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered

transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

- 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 participating in covered transactions 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.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. 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 any Federal agency, a Member of Congress, an 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.

- b. 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 Federal 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.
2. 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 31 U.S.C. 1352. 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.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

V. SUPPLEMENTAL EEO REQUIREMENTS

Incorporated in this Contract, by reference, are supplemental requirements to the Department of Labor, Office of Federal Contract Compliance Programs ("OFCCP") Equal Employment Opportunity Program ("EEO"). The supplemental requirements are:

1. Exec. Order No. 11246, 30 FR 12319 (September 24, 1965);
2. 41 C.F.R. § 60-4.1 through 60-4.9 (2015);
3. Exec. Order No. 13665 Non-Retaliation for Disclosure of Compensation Information (April 8, 2014); and
4. Further Amendments to Exec. Order No. 11478, Equal Employment Opportunity in the Federal Government and Exec. Order No. 11246, Equal Employment Opportunity (July 21, 2014).

Per 41 C.F.R. § 60-4.2 all federally-assisted Contracts shall include (information has been interlineated applicable to this Contract as required):

"(a) All Federal contracting officers and all applicants shall include the notice set forth in paragraph (d) of this section and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth in § 60-4.3 of this part in all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of the part. Administering agencies shall require the inclusion of the notice set forth in paragraph (d) of this section and the specifications set forth in § 60-4.3 of this part as a condition of any grant, contract, subcontract, loan, insurance or guarantee involving federally assisted construction covered by this part 60-4.

(b) All non-construction contractors covered by Executive Order 11246 and the implementing regulations shall include the notice in paragraph (d) of this section in all construction agreements which are necessary in whole or in part to the performance of the covered non-construction contract.

(c) Contracting officers, applicants and non-construction contractors shall give written notice to the Director within 10 working days of award of a contract subject to these provisions. The notification shall include the name, address and telephone number of the contractor; employer identification number; dollar amount of the contract, estimated starting and completion dates of the contract; the contract number; and geographical area in which the contract is to be performed.

(d) The following notice shall be included in, and shall be a part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60–4.6 of this part (see 41 CFR 60–4.2(a)):

Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

The most current participation goals for minorities and females can be found at http://www.dol.gov/ofccp/TAguides/TAC_FedContractors_JRF_QA_508c.pdf and are:

New Mexico:

160 Albuquerque, NM:

SMSA Counties.

0200 Albuquerque, NM-38.3%

NM Bernalillo; NM Sandoval.

Non-SMSA Counties-45.9%

NM Catron. NM Colfax; NM De Baca; NM Guadalupe; NM San Juan; NM San Miguel; NM Santa Fe; NM Socorro; NM Taos; NM Torrance; NM Valencia.

Goals for females:

Nationwide goal-6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60–4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations

required by the specifications set forth in 41 CFR 60–4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60–4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

The most current OFFCP staffing can be found at <http://www.dol.gov/ofccp/contacts/regkey.htm> and are:

SOUTHWEST and ROCKY MOUNTAIN REGION

Covered States/Territories: Arkansas, Colorado, Louisiana, Montana, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming

Regional Director: Melissa L. Speer

Deputy Regional Director: Aida Collins

Regional Outreach Coordinator: E. Michelle Hernandez

Contact Information:

U.S. Department of Labor for OFCCP
Federal Building, Room 840
525 South Griffin St.
Dallas, TX 75202
(972) 850-2550
(972) 850-2552 (Fax)
(877) 889-5627 (TTY-National Office)
Pre-Award Email Address: OFCCP-SW-PreAward@dol.gov
For Complaints: OFCCP-SW-CC4@dol.gov

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is in the Advertisement.”

VI. INDIAN PREFERENCE

This Contract preference requirement is an expansion of the provisions of the equal employment opportunity responsibilities for Contractors contained elsewhere in this NTC and the provisions contained under FHWA-1273.

If the Project is located on or near a reservation the Contractor, or its Subcontractor at any tier, may be required to extend a publically announced preference in employment to Indians living on or near an Indian reservation in connection with employment opportunities on or near an Indian reservation. The word “near” includes all areas where a person seeking employment could reasonably expected to commute in the course of a work day. Contractors or Subcontractors, at any tier, shall not discriminate among Indians on the basis of religion, sex, tribal affiliation, and the use of such a preference shall not excuse compliance with the remaining EEO provisions of this NTC.

If the Contractor extends an Indian preference, then this NTC requires that Contractors shall afford preference to initial hiring, reassignment, transfer, competitive promotion, reappointment, reinstatement, or any personnel action to fill a vacant position to qualified and enrolled members of federally recognized Indian tribe. The extended preference shall extend to Indians and not extend to a specific tribe or tribal affiliation. There may be tribal laws and regulations that the Contractor is required to follow if an Indian preference is extended. Contractors shall make themselves aware of any labor requirements, taxes, fees, licenses, permits or conditions that may be imposed by the affected tribes for the Project work performed in the area. In order to be apprised of the tribal law or regulation requirements, the Contractor shall establish a liaison with local tribe employment offices and provide this individual’s name and contact information to the Project Manager at the Pre-Construction Conference per Standard Specification Section 108.2 “Notice to Proceed and Pre-Construction Conference”. The tribe’s employment office may then assist the Contractor in identifying qualified and tribally enrolled individuals and assist in guidance related to applicable tribal laws or regulations. Verification of available, qualified and enrolled individuals will be provided to the Contractor by the tribe’s employment office. A list of contacts to facilitate the Contractor’s coordination with the tribal liaison is at:

http://dot.state.nm.us/content/dam/nmdot/planning/Tribal_Contact_Listing.pdf

VII. NMDOT ON THE JOB TRAINING/SUPPORTIVE SERVICES (“OJT/SS”) PROGRAM

The primary objective of the Special Provisions referenced in the below-link is to address the underrepresentation of minority and female workers in the construction trades through the assignment of OJT goals. To that end, the primary objective of the OJT program is the training and upgrading of minorities and females to journeyman status on NMDOT state lead, federal-aid contracts. Accordingly, the Contractor shall make every effort to enroll minority, women and economically disadvantaged persons to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and will not be used to discriminate against any applicant for training, whether or not he/she is a member of a minority group.

If Federal-aid funding is available and the NMDOT elects that the Project will be subject to the OJT/SS requirements then the Contractor or Subcontractor, at any tier, shall comply with the procedures outlined in Appendix B to Subpart A of 230 C.F.R. § 230. The OJT/SS program implemented by the Contractor or Subcontractor, at any tier, must be formally approved by the NMDOT before use of the program. In lieu of the use of a formally approved OJT/SS program the Contractor, or Subcontractor at any tier, may submit its own individual OJT/SS program for NMDOT consideration and approval. Until formal approval is received from the NMDOT CCRB through ACNM the individual Contractor or Subcontractor OJT/SS program cannot be used.

<http://dot.state.nm.us/en/OEOPFormsManuals.html#OTJforms>.

Contractors meeting the selection criteria for implementation of an OJT/SSS program, and who have a formally approved OJT/SSS program will be notified by the NMDOT's CCRB of its training assignment at the beginning of the reporting year, typically commencing with the calendar year beginning in January through December. The reporting year and the training assignment will be identified in the notification from the NMDOT's CCRB.

The Contractor shall fulfill all of the requirements of the OJT training program including the maintenance of records and submittal of periodic reports documenting program performance. The requirements and reports related to the OJT/SSS program shall include the Contractor's use of forms A-2201, A-2202, A-2203. The forms are incorporated herein by reference. The Contractor shall submit Form A-2202 by the tenth (10th) of each month of the reporting period or as indicated on the form itself.

The Contractor has the option to pay its trainees either the full prevailing wage for the trainee's job classification or at least 60% of the minimum prevailing wage for the trainee's job classification for the first half of the training period, 75% for the third quarter, and 90% for the last quarter respectively. Prevailing wages are those specific to this Contract.

For federally-funded Projects, and if requested the Contractor may be reimbursed \$0.80 per training hour by the NMDOT. Requests for reimbursement shall be submitted by the Contractor to the Project Manager in writing and after Substantial Completion for the Project is declared. Reimbursement is not available for 100% state-funded Projects.

Noncompliance with the responsibilities and requirements of this section, including being a non-responsive participant in the program, may be cause for the NMDOT to issue a show cause notice and other action as deemed necessary by the NMDOT.

VIII. WAGE RATES

The higher wage rates shall govern in the event of a discrepancy between the minimum wage rates in the Wage Decision of the DWS and the U.S. Department of Labor Wage Decision applicable to this Contract.

IX. LABOR REPORTING AND SUBMISSION OF WEEKLY PAYROLLS

Contractors and Subcontractors must pay employees weekly. Certified Payrolls and Statements of Compliance on federally funded Projects are due to the NMDOT seven (7) Days after date that the actual payment is processed by Contractor or Subcontractor, at any tier, to its employee.

The date that the actual payment is processed to the employee may be different than the payroll end date in some situations. Notwithstanding the difference between a payroll end date and actual payment date, the Contractor or Subcontractor at any tier shall make actual full payment to the employee no later than seven (7) Days after the payroll end date. And then shall submit the Certified Payrolls and Statements of Compliance no later than seven (7) Days after the actual payment date.

The Contractor and Subcontractors at all tiers Working on federal-aid Projects shall use the following EEO Software Programs to report specific EEO, Labor Compliance and DBE information as required by the Contract and as specified by this NTC. The two software programs are:

- B2GNow software
- LCPtracker software

Use of B2GNow and LCPtracker software programs is required and shall be considered Incidental. Failure of a Contractor or Subcontractor to use the required software programs to report specific EEO, Labor Compliance and DBE information may result in the issuance of a Non-Conformance per Standard Specification Section – 109.8.2 “Non-Conformance” or other Contract remedies.

B2GNow - (Business to Government Now), is a web-based software program used to collect, verify and manage payment information for Contractors and Subcontractors working on federal-aid Projects. Additionally, the software is used to collect and report DBE participation and utilization on federal-aid Projects. Information related to the use of the software is available at <https://nmdot.dbesystem.com/>.

The Contractor shall upload the fully executed contract between the Contractor and Subcontractor at any tier, the completed permission to subcontract form and associated attachments, and subcontract checklist to B2GNow.

LCPtracker - (Labor Compliance Program Tracker) is a web-based software program used to collect, verify and manage prevailing wage certified payrolls and related labor compliance documentation for Contractors and Subcontractors on federal-aid Projects. Information related to the use of the software is available at <https://lcpprod.lcptracker.net/>.

On all Projects, the Contractor shall submit and shall ensure all Subcontractors submit weekly payroll information into the LCPtracker software program.

To adequately track timely submission of weekly payrolls the Contractor shall enter the actual payment date in the field on the weekly Certified Payroll reporting form in LCPtracker titled “payment date”.

Information on access to the software programs, log-on information, use of the programs, available training, user manuals, etc. can be obtained by accessing the web page referenced in this NTC.

X. TITLE VI Assurances Appendix A and E

Appendix A of the Title VI Assurances
49 C.F.R. § Pt. 21, App. A

Appendix A of the Title VI Assurances

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time-to-time, (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate either directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of the 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the New Mexico Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the New Mexico Department of Transportation (NMDOT), or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of the contractor's non-compliance with the nondiscrimination provisions of this contract, the New Mexico Department of Transportation (NMDOT) will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating or suspending the contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the NMDOT or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the NMDOT to enter into any litigation to protect the interests of the NMDOT. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Appendix E of the Title VI Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (29 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the program or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your program (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (U.S.C. 1681 *et seq.*)

Procurement
May 3, 2015

NOTICE TO CONTRACTORS

Gross Receipts Tax

The New Mexico Procurement Code, NMSA 1978, § 13-1-108 (1984) requires the New Mexico Department of Transportation ("NMDOT") to exclude the applicable state gross receipts tax, or applicable local option tax, from Bids received for this Project. The NMDOT will pay the applicable tax including any increase in the applicable tax effective after the Contract is executed by the NMDOT. The applicable gross receipts tax or applicable local option tax will be shown as a separate amount on each Progress Payment.

NOTICE TO CONTRACTORS

New Mexico Employees Health Coverage

If the Bidder has, or grows to, six (6) or more employees who Work, or who are expected to Work, an average of at least 20 hours per week over a six (6) month period during the term of this Contract, the Bidder certifies by the submission of its Bid and if Awarded the Contract agrees to have in place, and agrees to maintain for the term of the Contract, health insurance for those employees and to offer that health insurance to those employees if the expected annual value in the aggregate of any and all Contracts between the Bidder and the New Mexico Department of Transportation ("NMDOT") exceeds \$250,000.00.

The Bidder agrees to maintain a record of the number of employees who have:

- A. Accepted health insurance;
- B. Declined health insurance due to other health insurance coverage already in place; or
- C. Declined health insurance for other reasons.

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

The Bidder agrees to advise all employees of the availability of State publicly financed health care coverage programs by providing each employee with, as a minimum, the following web site link to additional information: <http://www.insurennewmexico.state.nm.us/>.

For all Contracts exceeding \$250,000, the Bidder Awarded the Contract will be required to provide a letter stating that they currently offer health insurance to its New Mexico employees.

Office of Inspector General
March 7, 2016

NOTICE TO CONTRACTORS

Office of Inspector General

The New Mexico Department of Transportation ("NMDOT") Office of Inspector General ("OIG") has the authority to carry out all duties required to collect information, conduct audits, special studies and investigations. The duties of the NMDOT's OIG also arise from the responsibility all state Departments of Transportation have for ensuring that all Projects are carried out in accordance with federal or state requirements.

The NMDOT's OIG shall be provided access to all documents associated with the Project per the 2014 Edition of the NMDOT's Standard Specifications for Highway and Bridge Construction, Section 107.28 - "Contractor Records".

To Report Fraud, Waste & Abuse

1-800-671-STOP
(1-800-671-7867)

The NMDOT OIG has established the above toll free number for reports of fraud, waste, abuse or similar illegal or unethical activity affecting the cost, completion or correct and safe construction of a Project. All information will be treated confidentially and caller anonymity will be respected.

The New Mexico Fraud Against Taxpayers Act:

The New Mexico Fraud Against Taxpayers Act, NMSA 1978, §§ 44-9-1 to -14 (2007, as amended through 2015) provides civil penalties for submitting a claim to a state agency based on false, fraudulent or misleading information. The Act also includes a financial incentive for parties with knowledge of such a claim to come forward.

To Report Bid Rigging Activities

1-800-424-9071

The U.S. Department of Transportation, Office of Inspector General has established the above toll free number for reports of Bid rigging, Bidder collusion, or other similar illegal or unethical activity affecting the cost, completion or correct and safe construction of a Project. All information will be treated confidentially and caller anonymity will be respected.

Materials
May 3, 2015

NOTICE TO CONTRACTORS

Patents On Milling Equipment and Milling Operations

Milling equipment and processes intended for use by the Bidder to perform any milling Work required under this Contract may be subject to United States patents. It is the responsibility of the Bidder to investigate the applicability of such patents to the milling Work, and pay royalties and other lawfully imposed charges by the patent holders. Royalties and other lawfully imposed charges are incidental and shall be factored into the Project Bid Item Unit Price for milling.

Chief Engineer
May 3, 2015

NOTICE TO CONTRACTORS

Professional Services

The following has been added to the 2014 Edition of the New Mexico Department of Transportation's Standard Specifications for Highway and Bridge Construction Section 101.4 - "Terms and Definitions".

A Professional Service provider is considered a Subcontractor when Work is performed within the Project limits and shall be prequalified in accordance with 18.27.5 NMAC (12/07/2000, as amended through 01/01/2015).

**Traffic
May 3, 2015**

NOTICE TO CONTRACTORS

Quality Standards for Traffic Control Devices

The Contractor shall comply with quality standards for traffic control devices in the Intra-Departmental Design Directive ("IDD") 2009-05 and incorporated herein by reference. The IDD adopts quality standards in accordance with 23 C.F.R. § 630 (2007) Subpart K-Temporary Traffic Control Devices.

PSE
January 13, 2016

NOTICE TO CONTRACTORS

Return of Contract Documents

In accordance with the 2014 Edition of the New Mexico Department of Transportation's Standard Specifications for Highway and Bridge Construction, Section 103.7 - "Execution and Approval of Contract", the successful Bidder shall return the documents listed in the notice of preliminary award of contract letter within fifteen (15) Days of the date on the letter.

Pursuant to Section 103.8 - "Failure to Execute Contract", failure by the successful Bidder to comply with this Notice to Contractors may constitute just cause for cancellation of the Award and the forfeiture of the Bid Guaranty.

NOTICE TO CONTRACTORS

Return of Lobbying Disclosure

Pre-Award

This Project is Federal-aid funded. Per 49 C.F.R. § 20.105 and 31 U.S.C. 1352 the Bidder is prohibited from using Federal-aid funds for certain lobbying activities. In addition to this prohibition, the Bidder is required to certify that no Federal-aid funds have been or will be used for such lobbying activities. The Bidder makes this certification through the submission of its Bid with its digital id. The terms and conditions of the certification appear in the Notice to Contractors ("NTC") titled "Federal Requirements" in the section called "Required Contract Provisions Federal-aid Construction Contracts and Supplements (FHWA-1273)" in subsection "XI Certification Regarding Use of Contract Funds for Lobbying".

In addition to the certification above, if any funds other than Federal-aid funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Project the attached form titled "Disclosure of Lobbying Activities" ("Disclosure") shall be submitted. After receipt of the notice of preliminary award of contract letter the successful Bidder shall complete and return the Disclosure with the documents in the notice of preliminary award of contract letter.

Failure by the successful Bidder to comply with this Notice to Contractors may constitute just cause for cancellation of the Award and the forfeiture of the Bid Guaranty.

Post-Award

At the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any Disclosure previously submitted the Contractor shall immediately submit an updated Disclosure to the Project Manager.

In addition, for subcontracts at any tier over \$100,000.00, the Contractor as a recipient of Federal-aid funds is required to:

1. Add the NTC titled "Federal Requirements" in all subcontracts at any tier. The inclusion of the NTC ensures that the terms and conditions of the certification are incorporated into the Subcontract at any tier;
2. If any funds other than Federal-aid funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Project require its Subcontractors at any tier to complete and return the Disclosure with its permission to subcontract request form A-1086; and
3. Require its Subcontractors at any tier to submit an updated Disclosure to the Contractor at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any Disclosure previously submitted by the Subcontractor. The Contractor shall immediately submit the same to the Project Manager.

Per 31 U.S.C.A. § 1352 (d)(1)(A)(C)(2) exclusions exist regarding the requirements of this lobbying certification and completion of Disclosure. Some of the applicable exclusions are:

1. Payment of a reasonable compensation made to employed officers or employees of a person requesting or receiving Federal-aid funds.
2. A request of or receipt of a Contract that does not exceed \$100,000.00.

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

0348-0046

(See reverse for public burden disclosure.)

[illegible]

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity 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 a covered Federal action. Use the SF-LLLA Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLLA Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

Chief Engineer
May 3, 2015

NOTICE TO CONTRACTORS

Specialty Items

To clarify the definition of Specialty Items in the 2014 Edition of the New Mexico Department of Transportation's Standard Specifications for Highway and Bridge Construction ("Standard Specifications"), Section 101.4 - "Terms and Definitions":

All Technician Training and Certification Program requirements for testing of Materials are Specialty Items.

Specialty Item Work will not be counted towards the Contractor's obligation to perform 40% of the Work with its own forces as noted in Standard Specifications, Section 108.1 – "Subcontracting".

The Contractor shall obtain the Project Manager's approval to Subcontract Specialty Items prior to starting Work.

Subcontractors performing Specialty Item Work are not required to be prequalified.

SUBCONTRACTOR LIST

Wage Decision No.: _____

Control No.: _____

Prime Contractor _____

LIST ALL SUBCONTRACTORS AT ALL TIERS THAT ARE SUBJECT TO THE APPLICABLE WAGE DECISION(S). DO NOT LIST SUPPLIERS OR PROFESSIONAL SERVICES. PROVIDE ALL REQUESTED INFORMATION. MAKE ADDITIONAL COPIES OF THIS FORM AS NECESSARY.

Subcontractor Company Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Email Address: _____ Phone: _____ Fax: _____

Contractor License No: _____ NMDWS Registration No: _____

☐ 1st Tier Sub ☐ 2nd Tier Sub to: _____ ☐ 3rd Tier Sub to: _____

Work to be performed: _____ Amount (\$): _____

Start Date: _____

Subcontractor Company Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Email Address: _____ Phone: _____ Fax: _____

Contractor License No: _____ NMDWS Registration No: _____

☐ 1st Tier Sub ☐ 2nd Tier Sub to: _____ ☐ 3rd Tier Sub to: _____

Work to be performed: _____ Amount (\$): _____

Start Date: _____

Subcontractor Company Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Email Address: _____ Phone: _____ Fax: _____

Contractor License No: _____ NMDWS Registration No: _____

☐ 1st Tier Sub ☐ 2nd Tier Sub to: _____ ☐ 3rd Tier Sub to: _____

Work to be performed: _____ Amount (\$): _____

Start Date: _____

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.
- Submit weekly certified payroll bi-weekly to the Contracting Agency.
- 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.
- Make sure, when a project has been completed, the Affidavits of Wages Paid (AWP) are sent to the Contracting Agency.

- All Subcontractors 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.

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.
- Submit weekly certified payroll bi-weekly to the General Contractor(s).
- 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 be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.

Additional Information

Reference material and forms may be found at 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 or call (505) 841-4400.

TYPE "A" - STREET, HIGHWAY, UTILITY & LIGHT ENGINEERING**Effective January 1, 2019**

Trade Classification	Base Rate	Fringe Rate
Bricklayer/Blocklayer/Stonemason	23.78	9.08
Carpenter/Lather	24.08	10.84
Cement Mason	17.42	6.61
Ironworker	26.50	16.20
Painter (Brush/Roller/Spray)	17.00	6.78
Plumber/Pipefitter	29.45	12.37
Electricians (outside)		
Groundman	22.81	11.93
Equipment Operator	32.73	14.51
Lineman/Wireman or Tech	38.51	16.02
Cable Splicer	42.36	17.01
Laborers		
Group I	11.81	5.88
Group II	12.11	5.88
Group III	12.51	5.88
Group IV	12.76	5.88
Operators		
Group I	18.60	5.94
Group II	19.52	5.94
Group III	19.62	5.94
Group IV	19.73	5.94
Group V	19.83	5.94
Group VI	20.01	5.94
Group VII	20.17	5.94
Group VIII	20.46	5.94
Group IX	27.88	5.94
Group X	31.10	5.94
Truck Drivers		
Group I	16.15	7.52
Group II	16.15	7.52
Group III	16.15	7.52
Group IV	16.15	7.52
Group V	16.15	7.52
Group VI	16.15	7.52
Group VII	16.15	7.52
Group VIII	16.21	7.52
Group IX	18.15	7.52

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. Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.

General Decision Number: NM190034 01/04/2019 NM34

Superseded General Decision Number: NM20180048

State: New Mexico

Construction Type: Highway

County: Santa Fe County in New Mexico.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019

* ELEC0611-003 07/01/2014

	Rates	Fringes
ELECTRICIAN (Boom Operator).....	\$ 29.79	12.74

SUNM2011-002 08/25/2011

	Rates	Fringes
CARPENTER (Includes Form Work)...	\$ 13.88	0.44
CEMENT MASON/CONCRETE FINISHER...	\$ 14.60	0.26
ELECTRICIAN (Includes Traffic Signalization and Installation).....	\$ 25.06	8.56

HIGHWAY/PARKING LOT STRIPING:

Includes Highway Line/Parking

Lot Line Striping and Line

Striping Truck Driver.....\$ 14.75 0.35

IRONWORKER, REINFORCING.....\$ 22.44 5.85

LABORER

Common or General.....\$ 11.21 0.35

Flagger/Cone Setter.....\$ 13.55 0.35

Mason Tender-

Cement/Concrete.....\$ 10.25 0.35

Pipelayer.....\$ 17.13 5.04

POWER EQUIPMENT OPERATOR:

Backhoe/Excavator/Trackhoe..\$ 17.20 0.26

Bobcat/Skid Loader.....\$ 12.00 0.26

Broom/Sweeper.....\$ 16.67 1.57

Grader/Blade.....\$ 17.64 1.51

Loader (Front End).....\$ 16.43 0.26

Mechanic.....\$ 23.24 1.51

Oiler.....\$ 22.08 8.72

Piledriver.....\$ 15.73 0.26

Roller (Asphalt and Dirt)...\$ 16.27 1.51

Trencher.....\$ 15.22 0.26

TRUCK DRIVER

Dump Truck.....\$ 15.04 0.26

Flatbed Truck.....\$ 13.51 0.26

Pickup Truck.....\$ 12.95 0.26

Water Truck.....\$ 12.96 0.26

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification

and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SPECIAL PROVISIONS

SC1 DESCRIPTION OF WORK

The work to be performed includes the construction of a 1.52 mile long concrete trail connecting the existing Rancho Viejo Fire Station Trailhead to the existing multi-use trail at the I-25 / NM 14 Interchange, and to the existing La Pradera Trail in Santa Fe County. The project will also include two (2) Prefabricated Steel Pedestrian Bridges. The work includes grading, base preparation, concrete placement, gravity rock wall construction, prefabricated steel pedestrian bridge fabrication and installation, drainage features, slope protection, site restoration and signage. The Contractor shall supply all labor, materials and equipment necessary to complete the work in accordance with the contract plans and specifications.

SC2 LOCATION OF WORK

The location of work to be completed under this contract is generally south of I25, east of NM 14 (Cerrillos Rd) and north of Rancho Viejo Blvd, south of the City of Santa Fe, in Santa Fe County.

SC3 CONTRACT TIME

- A. The work shall be commenced not later than fourteen (14) calendar days from and including the date of the Notice to Proceed and shall be fully completed in a satisfactory and acceptable manner within 180 working days of the Notice to Proceed. Prior to the commencement of work, the Contractor shall submit to the Project Manager, for approval, a schedule showing the time of commencement and proposed progress of the work.
- B. A pre-construction conference and job walk will be scheduled at time of bid award. No work will be allowed to take place prior to a written Notice to Proceed without the written authorization of the Owner's Representative.
- C. Any requests for extension of time due to conditions outside of the Contractor's control shall be made in writing to the Owner's Representative within 48 hours of the cause of the delay. Weather days shall be documented each day by calling the Project Manager to obtain an agreement of weather day conditions on the day of weather event. Delays due to permits, if submitted in a timely manner, will be allowable as additional days to the contract.

SC4 INCIDENTAL WORK

Work not specifically called out, but which is necessary to complete the work required under this contract, shall be considered incidental and a part of this contract and shall be performed by the contractor at no additional cost. Incidental items shall include but not be limited to, project coordination, dust control, quality control testing, traffic control, barricades, clean-up and restoration of any disturbed areas outside the construction limits.

Restoration shall include fine grading, reseeding, and mulching. Restoration within the limits shown in the plans will be paid for as Revegetation (AC).

SC5 SITE ACCESS / DISTURBANCE

- A. The contractor shall use the proposed trail alignment for the transport of materials and equipment during construction to the greatest extent possible. Any area disturbed outside of the finished trail tread must be restored to preconstruction conditions at no additional cost to the project.

SC6 CONSTRUCTION LIMITS

Construction will be limited at all times to the Construction Limits as designated on the plans.

SC7 FEES AND PERMITS

- A. The Contractor and any necessary subcontractors will be required to have or obtain a current CID License and all applicable building permits, which will be obtained at the contractor's expense and will not be paid for separately. The Santa Fe County Projects Division has obtained the required Santa Fe Country Development Permit.
- B. The Contractor is responsible for providing a traffic control plan and obtaining a Santa Fe County Right-of-Way Excavation/Restoration Permit. Contact: Johnny P. Baca, Traffic Manager, Santa Fe County Public Works Department, (505) 992-3020, jpbaca@santafecountynm.gov.
- C. The Contractor must apply for coverage under the EPA Construction General Permit (CGP). As part of the application and for compliance with the CGP, the Contractor must develop and maintain a Storm Water Pollution Prevention Plan (SWPPP). Development of the SWPPP should be based on the relevant construction plans, Contractor phasing, and approved revisions to the Plans. Application fees are to be paid for by the contractor. Contractor to provide documentation of coverage under the CGP prior to project mobilization. The contractor is required to conduct SWPPP bi-weekly and storm event inspections using certified Storm Water Management construction inspectors and keeping a full record of all inspections on-site for County review upon request. A copy of the SWPPP inspector's certification is required prior to project commencement. The Contractor is responsible for all final stabilization called out on the Plan Set TЕСP Sheets, and installation of all revegetation called for. Once this work is complete and accepted by the County, the Contractor should file their CGP NOT. The County will not assume the Contractor's CGP Permit coverage or responsibilities. A copy of the closed permit is needed prior to Final Acceptance of the project. The contractor shall provide an Erosion Control Supervisor (ECS) to assure compliance with the Permit.
- D. The Contractor shall obtain all other necessary permits required to complete the contract.

SC8 WORK HOURS

Work shall be limited to the hours between 7:00 a.m. and 6:00 p.m.

SC9 ACCESS TO THE SITE

Construction access to the site is from Rancho Viejo Blvd and Old Dinosaur Trail along the trail alignment. No other project access points will be provided by Santa Fe County. Other construction easements desired by the contractor (if any) are the responsibility of the contractor to obtain.

Other construction easements desired by the contractor are the responsibility of the contractor to obtain. Provide written verification of the construction access / staging allowed on private property to the Project Manager.

SC10 STAGING AND STORAGE SITES

The Contractor may stage and store materials at the Rancho Viejo Trailhead.

For all storage sites for materials and equipment proposed and used by the Contractor, the Contractor shall be responsible for the following:

- A. Keeping stockpiles and equipment confined within areas designated to be disturbed as shown in the plans. An agreement as to storage area size and location to be made between Owner and Contractor prior to work. Minimizing the size of the storage area is preferred.
- B. Providing security for his material and equipment and for public safety at the site.
- C. Restoring the site to its original or better condition as determined by the Project Manager.
- D. Containment of storage site per SWPPP requirements.

SC11 USE OF STREETS BY TRUCKS AND COMMERCIAL VEHICLES

The Contractor shall comply with the all Santa Fe County ordinances with regard to Truck Routes and overweight vehicles.

SC12 SWEEPING AND CLEANING DURING CONSTRUCTION

- A. The Contractor will be responsible for the daily removal of mud and construction debris whether caused directly by the Contractor's construction operation, or that of his subcontractors and/or material suppliers, or indirectly due to the work site conditions in general, from all public streets, private driveways, parking lots, sidewalks and bike paths within or adjacent to the project area. This will be rigidly enforced. The removal of dirt or debris from any concrete surface with metal edged blades is not allowed.
- B. The Contractor will be responsible for any damage caused due to his maintenance and/or cleaning operations.

- C. No separate payment will be made for this work and all costs in connection therewith shall be considered incidental to the contract.

SC13 PROTECTION OF CONSTRUCTION

- A. The Contractor shall be responsible for making a reasonable effort to protect the work from vandalism. The Contractor shall be responsible for barricading the work in a manner, which will protect it from vehicular and pedestrian traffic when necessary.
- B. The Contractor shall bring any significant vandalism to the attention of the Project Manager.
- C. Construction activities to be evaluated for potential safety hazards and vandalism at the end of each week and prior to Holidays and be secured appropriately.

SC14 WATER FOR CONSTRUCTION

Contractor will be responsible for providing their own source of water.

SC15 HEAVY CONSTRUCTION ON SURFACES WHERE VEGETATION OR OTHER DISTURBANCE MUST BE MINIMIZED

- A. Minimize disruption to only those areas necessary for completion of construction or existing disturbed areas that are intended to be restored. Maintain access in and out on areas scheduled for the future trail, existing maintenance road to remain or to be restored.
- B. No damage to asphalt, concrete or crusher fines paved surfaces due to heavy equipment or other construction work is to be allowed. Repair to those surfaces if damage does occur shall be done at the contractor's own expense.

SC16 CLEANING OF CONCRETE TRUCKS

The cleaning of concrete trucks or site mixing equipment within the project limits is to be strictly limited to the proposed designated areas. All concrete wash is to be removed prior to final grading – complete off-site disposal of contaminants is required. A single concrete wash out area is to be designated on the site, plastic lined and enclosed by straw bales and signed for ease of identification, or portable wash eco-pans shall be used if several locations are desired. No concrete wash is to contaminate any other areas including landscape areas, ground water or wetland areas at any time. No burial is allowed.

SC17 GEOTECHNICAL INVESTIGATION

A geo-technical investigation has been completed for this project. The report is provided as part of these Contract Documents for informational purposes as Attachment 1.

SC18 INSPECTIONS

Santa Fe County Project Manager, consultants, County personnel, as appropriate, shall observe work during construction. All inspection work is to be coordinated through the Project Manager. Questions or problems should be directed to the Project Manager, who will be responsible for contacting the appropriate personnel, unless specifically directed otherwise. Directions from individuals other than the designated Project Managers should not be considered final, and no additional payment will be allowed, unless verified and allowed by the Project Manager.

SC19 EXISTING CONDITIONS

Some utilities exist within the project limits and are to be protected. Protection of existing utility services, piping, sleeving and other equipment shall be the responsibility of the Contractor upon project commencement.

PNM – The trail encroaches on the PNM easement for an overhead power line in seven locations along the trail alignment. PNM also owns buried cable along the southeast side of Dinosaur Trail at the connection to the I-25/NM 14 Interchange multi-use trail and at the trail connection to La Pradera Subdivision. No impacts to these utilities are expected.

Century Link – Century Link owns buried cable along the southeast side of Dinosaur Trail at the connection to the I-25/NM 14 Interchange multi-use trail and at the trail connection to La Pradera Subdivision. No impacts to this utility are expected.

Comcast – Comcast owns underground utilities in the vicinity of the trail connection to the La Pradera Subdivision. No impacts to these utilities are expected.

Santa Fe County Utilities – Santa Fe County owns a water line along the southeast side of Dinosaur Trail at the connection to the I-25/NM 14 Interchange multi-use trail and at the trail connection to La Pradera Subdivision. No impacts to this utility are expected.

SC20 - TEMPORARY POWER / FACILITIES

Temporary power is not available at the site. Providing a generator for this purpose will be the responsibility of the Contractor.

SC21 MATERIAL TESTING

The Contractor is responsible for Quality Control testing in accordance with Standard Specification Section 901. The Contractor must coordinate the Quality Control testing with the County's Quality Assurance (Acceptance) testing and Independent Assurance testing.

SC22 SURVEY

All project survey including construction staking, verifying existing grades, re-staking as needed, verification for as-built drawing requirements, slope, layout and other survey

information necessary to complete the project as designed, shall be the responsibility of the Contractor and will be included in the Lump Sum payment for Construction Staking.

SC23 INSURANCE

Refer to Instructions to Bidders, Paragraph 38. See Notice to Contractors for further information on Railroad Protective Liability Insurance.

SC24 LIQUIDATED DAMAGES

Liquidated damages will be assessed on this project if the contractor is not substantially complete with the project within the specified contract time. Two thousand dollars (\$2,000) per calendar day will be assessed for delays that have not been approved through a time change order to the contract.

SC 25 PROJECT SCHEDULE

A critical path method (CPM) project schedule, in Accordance with Standard Specification Section 108.3.1.1 is required from the contractor at the time of the pre-construction meeting. Monthly updates to the schedule (at a minimum) are required.

SC 26 PROJECT MAINTENANCE

The County will assume maintenance of the project upon Construction Acceptance except as noted in Seeding specification, in which case the Contractor will continue maintenance until Final Acceptance.

SC 27 CONTRACTOR QUALIFICATIONS

Contractors are to be fully qualified for work requested under this bid.

STANDARD SPECIFICATIONS

The construction of this project will be in accordance with the New Mexico Department of Transportation (NMDOT) Standard Specifications and Special Provisions to 2014 NMDOT Standard Specifications for Highway and Bridge Construction 2014 Edition, except as otherwise specified herein or in the contract.

Where a conflict occurs between NMDOT Standard Specifications, Special Provisions to 2014 NMDOT Standard Specifications, Special Provisions and Santa Fe County's Instructions to Bidders and the Sample Agreement, the County's Instructions to Bidders, Special Provisions, Special Provisions to 2014 NMDOT Standard Specifications and Sample Agreement shall prevail.

New Mexico Department of Transportation Standard Specifications, Special Provisions, and Special Provisions to 2014 NMDOT Standard Specifications shall be interpreted using the following list. References listed to the right are to replace those on the left where those on the left appear in the text.

<u>REFERENCE:</u>	<u>REPLACE WITH:</u>
Commission, Department, District, District Engineer, The State Highway Commission or Department Cabinet Secretary or Secretary	Santa Fe County except where such reference is to rules, codes, or regulations, or pre-qualification of bidders of the New Mexico Department of Transportation
Department	Santa Fe County or its Designated Representative
Engineer	Santa Fe County acting through his duly authorized representative who is normally the Project Engineer, Project Manager or Consulting Engineer
Project Manager	The individual designated by the Engineer who is responsible for observing construction and the administration of the project
State	County or Owner

**SPECIAL PROVISIONS
TO NMDOT 2014 STANDARD SPECIFICATIONS**

The following revisions and/or additions to the Technical Specifications of the Standard Specifications are hereby made a part of the Contract Document.

Supplemental Technical Specifications to Standard Specifications:

<u>Section</u>	<u>Description</u>	<u>Page #</u>
201	Clearing and Grubbing	1-4
510	Portland Cement Concrete	5
511	Concrete Structures	6-29
512	Superstructure Concrete	30
533	Concrete Structure Repair	31-37
541	Steel Structures	38-52
541-A	Prefab Pedestrian Bridge	53-56
545	Protective Coating of Miscellaneous Structural Steel	57-68
602	Slope and Erosion Protection Structures	69-70
607	Fence	71-73
632	Revegetation	74-88
667a	Gravity Wall	89-91
667b	Rubble Masonry Veneer	92-94
701	Trail Signs and Sign Structures	95-102
901	Quality Control Quality Assurance	103-106

SECTION 201 CLEARING AND GRUBBING

201.1 DESCRIPTION: Add the following to this section:

This Work includes protecting vegetation **NOT** specifically identified for removal. The project manager must approve the removal of any vegetation that is not specifically identified for removal. Clearing and grubbing shall be limited to the grading limits shown in the plans unless otherwise approved.

201.3.1 GENERAL: Add the following to this section:

Remove low-hanging branches from trees or shrubs not designated for removal in accordance with the clearing limits shown on the plans. Trim overhanging tree branches to provide a clearance 10 ft above the trail surface. All cuts should be made as close as possible with less than ¼ inch above the main branch or trunk. All cuts should be cleanly executed with little to no ragged edges or tearing. All tools and equipment should be in good general condition, clean, and free of disease and pests.

June 28, 2017

SPECIAL PROVISIONS MODIFYING SECTION 201 CLEARING AND GRUBBING

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete **Section 201: CLEARING AND GRUBBING** in its entirety and replace with the following:

201.1 DESCRIPTION

This Work consists of clearing, grubbing, scalping, removing, and disposing of vegetation and debris. This Work includes protecting vegetation designated to remain and removal or control of all State-listed noxious weed species identified in the Contract. Scalping includes the removal of material such as brush, roots, sod, stumps, and the residue of agricultural crops.

201.2 MATERIALS

201.3 CONSTRUCTION REQUIREMENTS

201.3.1 General

The Department will establish Right of Way lines, construction limits, and designate trees, shrubs, plants, and other items to remain. The Contractor shall comply with Section 620, "Selective/Non-Selective Herbicide Application" for herbicide application.

The Contractor shall remove and dispose of all refuse and non-organic material from within the Project limits. Surface debris, trees, stumps, roots, organic matter, and other obstructions that can be chipped or broken down to an appropriate size and readily blended into the topsoil during final stabilization may remain within the Project limits. When approved by the Project Manager, the Contractor may leave undisturbed stumps and other solid objects within the Roadway Prism that do not extend more than six (6) inches above existing ground and will be at least four (4) ft below the finished Subgrade elevation. The Contractor shall backfill and compact material placed in stump holes and other holes in accordance with Section 203.3.5, "Embankments."

The Contractor shall prune low-hanging branches from trees or shrubs designated to remain and prune overhanging tree branches to provide a clearance 20 ft above the Roadway surface. Pruning of trees and shrubs shall be performed in accordance with American National Standards Institute (ANSI) A300 Standard Part 1 Pruning.

The Contractor shall confine operations including dragging, piling, and burning of debris to Department approved areas.

The Contractor shall remove or control all State-listed Class A noxious weed species within the Right of

Way Project limits as identified in the Contract in a manner that prevents their re-growth and spread. Herbicide use shall comply with all applicable Federal, State, County and Municipal regulations and ordinances.” The Contractor shall comply with Section 620, “Selective/Non-Selective Herbicide Application” of the current New Mexico State Department of Transportation Standard Specifications for Highway and Bridge Construction for herbicide application.

The current New Mexico Noxious Weed List is available at:
<http://plants.usda.gov/java/noxious?rptType=State&statefips=35> .

201.3.2 Salvageable Timber

The Contractor shall fell and cut timber (to the specified length) in accordance with the Contract. The Contractor shall stack cut logs as directed by the Project Manager.

201.3.3 Scalping

The Contractor shall scalp before excavation or placement of Embankment and remove organic material under pipe Culvert bedding, regardless of Embankment height.

201.3.4 Removal and Disposal of Material

The Contractor shall remove from the Right of Way, Materials that cannot be safely and properly disposed (burned or chipped) of within the Project, and dispose at locations outside the Project.

The Contractor shall obtain written permission from the owners of property used for debris material disposal.

The Contractor shall burn Materials:

1. In accordance with applicable laws and regulations;
2. Under the constant care of competent watchmen; and
3. Without damage to items designated to remain on the Right of Way, surrounding property, or vegetative cover.

The Roadway and adjacent areas shall have a neat and finished appearance after any removal and disposal of material. The Contractor shall not accumulate flammable Materials on or adjacent to the Right of Way.

201.4 METHOD OF MEASUREMENT

Clearing and grubbing will be measured as a Lump sum unit.

201.5 BASIS OF PAYMENT

Pay Item

Clearing and Grubbing

Pay Unit

Lump Sum

201.5.1 Work Included in Payment

The Department will consider the following Work as included in the payment for Clearing and Grubbing and no separate payment will be made:

1. Obtaining disposal locations and in making the disposal;
2. When clearing and grubbing is not established as a pay item;
3. Herbicide applied for noxious weed control; and
4. Delivery to storage site if required of salvageable timber.

Selective / Non-Selective Herbicide Application will be paid only if the Plans list this item in the Estimated Quantities table.

April 25, 2017

SPECIAL PROVISIONS MODIFYING SECTION 510: PORTLAND CEMENT CONCRETE

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete Subsection **510.3.4.3.2 Continuous Concrete Placements** in its entirety and replace with the following:

510.3.4.3.2 Continuous Concrete Placements

It is common practice to place and test concrete at the same time, therefor:

As concrete is being placed and tested, concrete tests which are outside the allowable concrete test ranges may be encountered and are to be immediately reported to the Project Manager. Concrete that has already been placed shall be removed if the slump is more than one (1) inch over the specified limits or air is more than $\frac{1}{2}\%$ below the minimum air specified. The Project Manager then can determine to place or halt the placement of the remaining concrete. The Project Manager can determine if the placed concrete needs to be removed or if it can remain. In the event that two (2) consecutive trucks or any two (2) out of six (6) trucks are outside the allowable testing ranges, concrete shall not be placed in the structure until the concrete testing is performed prior to the placement operation and the allowable concrete test ranges are shown to be in the allowable range. If concrete from five (5) consecutive trucks are delivered within allowable concrete testing parameters, then the placement and testing of concrete can once again be performed concurrently.

Payment of concrete that deviated from required parameters will receive a 50% pay reduction in addition to the outcome of the final pay factors for the concrete.

April 25, 2018

SPECIAL PROVISIONS MODIFYING

SECTION 511: CONCRETE STRUCTURES

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete **Section 511 CONCRETE STRUCTURES** in its entirety and replace with the following:

511.1 DESCRIPTION

This Work consists of constructing concrete box Culverts, headwalls, retaining walls, abutments, bents, piers, slabs, girders, and Incidental Structures requiring the use of concrete, except pre-stressed members.

511.2 MATERIALS

When waterproofing is required by the Contract but a type is not specified, either fluid-applied waterproofing or sheet membrane waterproofing shall be used.

511.2.1 Portland Cement Concrete

The Contractor shall use concrete mixes that have been designed in accordance with Section 509, "Portland Cement Concrete Mix Designs" and approved for use on NMDOT Projects by the State Materials Bureau for the freeze/thaw risk zone in which the Project is located. A higher risk zone concrete may be substituted.

511.2.1.1 Concrete Surface Finishing Materials

For Class 2 Surface Finish, the Contractor may use a thin mortar composed of one (1) part cement and four (4) parts sand passing the No. 16 sieve. The cement used in the thin mortar shall be of the same type and source as that used in freshly placed concrete.

Alternatively, the Contractor may use a prepackaged, polymer modified mortar, designed specifically for concrete surface finishing with a minimum 28 day compressive strength of 2,000 psi per ASTM C109.

511.2.2 Steel Reinforcing

The contractor shall provide steel reinforcement in accordance with Section 540. "Steel Reinforcement"

511.2.3 Bonding Agent

The Contractor shall use a bonding agent that meets the requirements of ASTM C1059, Type II or C-881 Type V.

511.2.4 Form Release Agent

The Contractor may use form release agents at their discretion. Compatibility must be confirmed in a letter from the Manufacturer of subsequent surface treatments including but not limited to penetrating water repellent treatment, stains, and/or paints. If compatibility cannot be confirmed, form release residue shall be removed per the surface preparation recommendations of the manufacturer of the subsequent product.

When integrally colored concrete is used, the Contractor shall use form release agents that are non-staining and minimize surface imperfections of concrete.

511.2.5 Liquid Applied Evaporation Reducers

Unless otherwise specified in the Contract Documents, the Contractor may utilize liquid-applied evaporation reducers to reduce the effects of excessive rate of evaporation at the surface of plastic concrete. Evaporation reducers shall be commercially available water-based compounds that are specifically designed to form a thin monomolecular film to reduce rapid moisture loss from the concrete surface prior to curing. The product shall be certified to have no adverse effects on the cement hydration process or the concrete and that it reduces surface moisture evaporation from the concrete when performing concrete operations in direct sun, wind, high temperatures, and/or low relative humidity.

511.2.6 Curing Materials

511.2.6.1 Liquid Membrane Forming Compounds

The Contractor shall use Type 1-D or Type 2 liquid membrane-forming concrete curing compounds that comply with ASTM C 309.

When integrally colored concrete is used, the Contractor shall use only curing compounds specifically recommended for use with colored concrete and in accordance with ASTM C309 Type 1.

511.2.6.2 Linseed Oil Emulsion

The Contractor shall not use linseed oil emulsion-curing agent.

511.2.6.3 Sheet Materials for Curing Concrete

The Contractor shall use concrete curing sheet Materials in accordance with AASHTO M 171. The Department will only allow the white reflective type.

511.2.7 Joint Materials

The Contractor shall provide joint filler material in accordance with AASHTO M213 or AASHTO M153

Type I or IV (no cork).

The Contractor shall provide liquid-applied joint sealant in accordance with Section 452, "Sealing and Resealing Concrete Pavement Joints" at non-Bridge joint locations.

511.2.8 Extruded Polystyrene

The Contractor shall provide extruded polystyrene that complies with ASTM C578 Types X or XII (15 psi), Type IV (25 psi), or Type VII (60 psi). If strength is not shown in contract documents, use Type IV (25 psi). Extruded or expanded polystyrene may be used interchangeably.

511.2.9 Tear-Web Waterstop

Waterstop at the joint between abutment cap and abutment diaphragm shall be tear-web waterstop. The Contractor shall provide a product that meets the requirements of Table 511.2.8:1.

TABLE 511.2.9:1

Typical Properties	ASTM Method	Minimum Value
Water Absorption	D-570	0.10%
Tear Resistance, lb/in	D-624	225
Specific Gravity, (+/- 0.05)	D-792	1.38
Hardness, Shore A (+/-5, 10 sec. delay)	D-2240	80
Tensile, psi	D-638, Type IV	2000
Elongation %	D-638, Type IV	350
Low Temperature Brittleness @ -35° F	D-746	No Failure
Stiffness in Flexure, psi	D-747	600
Accelerated Extraction, USACE CRD-C572		
Tensile, psi	D-638, Type IV	1600

Elongation, %	D-638, Type IV	300
Effect of Alkali, USACE CRD-C572		
Weight Change, %	-----	+0.25%, - 0.10%
Change in Hardness, Shore A	D-2240	+/-5 points

511.2.10 Sheet Membrane Waterproofing

When specified in the Contract Documents, the Contractor shall install waterproof membrane materials. For this application, the Contractor shall provide flexible, sheet membrane waterproofing material that is a minimum 50 mil thickness. Compatible surface primers, adhesives and flashings shall be used as recommended by the manufacturer's application instruction. The material shall meet the requirements of Table 511.2.10:1.

TABLE 511.2.10:1

Typical Properties	ASTM Method	Value
water vapor permeance	ASTM E96	0.05 perms max
Elongation	ASTM D412	300% min
tensile strength	ASTM D412	300 psi min
peel strength	ASTM D903	8 lbs/in min
puncture resistance	ASTM E154	45 lbf min

511.2.11 Fluid-Applied Waterproofing

When specified in the Contract Documents, the Contractor shall install cold, fluid-applied waterproof membrane materials on concrete walls prior to backfill. For this application, the Contractor shall provide seamless rubberized asphalt membrane at a minimum thickness of 30 mils. Compatible surface primers, and joint, crack, and corner treatments shall be used as recommended by the manufacturer's application instruction. The material shall meet the requirements of Table 511.2.11:2.

TABLE 511.2.11:2

Typical Properties	ASTM Method	Value
solids by weight	ASTM D1644	60% min
Elongation	ASTM D412	300% min

water vapor permeance	ASTM E96	0.1 perms max
Hardness	ASTM C661	60 max

511.2.12 Swellable Hydrophilic Waterstop

Swellable hydrophilic waterstop shall meet the requirements of ASTM D-71, ASTM D-6, and ASTM D-217.

1. Properties:
 - a. Specific gravity — ASTM D71: 1.35
 - b. Hydrocarbon content — ASTM D4: 47%
 - c. Volatile matter — ASTM D6: 1%
 - d. Penetration cone in accordance with ASTM D217 at 77 degrees F (25 degrees C): 40 mm
 - f. Service temperature range: -30 to 180 degrees F (-34 to 82 degrees C)

511.3 CONSTRUCTION REQUIREMENTS

511.3.1 Concrete Placement

Concrete shall be placed and tested for compliance with the Project Specifications in accordance with Section 510.

511.3.2 Temporary Works and Falsework

511.3.2.1 Temporary Works

The Contractor shall perform temporary works in accordance with the current edition of the AASHTO Guide Design Specification for Bridge Temporary Works and the AASHTO Construction Handbook for Bridge Temporary Works.

Although the document contains "Guide Design Specifications," consider them to have the same importance and standing as a code or a specification. If the content of the collaboration documents appears permissive with words such as "should," "could," "may," etc., consider the content to be a requirement unless otherwise approved by the State Bridge Engineer.

In the event of a conflict between a referenced code and this specification, this specification will take precedence.

511.3.2.2 Falsework and Falsework Foundations

The Contractor shall construct Structure in accordance with Section 511, "Concrete Structures," and Section 512, "Superstructure Concrete", as applicable.

The Contractor shall design, construct, and maintain falsework and falsework foundation to provide the required strength and rigidity, and to support loads without settlement. The Contractor shall have a

professional Engineer licensed in the State of New Mexico design the falsework and its foundation. The design of the falsework and foundation will be required if one (1) or more of the following conditions apply:

1. If the height of the Structure is greater than ten (10) ft, (excluding concrete Culverts with bottom slabs);
2. Where the supported span is greater than 15 ft.;
3. Where traffic, other than workmen involved in constructing the Structure, will travel under the falsework.

The Contractor shall place the falsework on an adequate foundation. The maximum foundation bearing pressure is 2,000 pounds per square foot unless a Geotechnical investigation indicates a higher value can be used. The Contractor shall provide methods for measuring settlement or movement of falsework and forms under load. If falsework shows settlement greater than 3/8 inch at the vertical supports, the Contractor shall stop the Work and correct the settlement or movement.

If pilings are used for falsework, the Contractor shall pull or cut off falsework pilings. The Contractor shall ensure the cut-off elevations are one (1) ft below the low water level, natural ground, or bottom of proposed channel.

If required, the Contractor shall submit Plans for falsework to the State Bridge Engineer for approval. The Contractor shall submit proposed changes to existing Structures required for maintenance of traffic to the Project Manager for approval. 30 Days shall be allowed for the initial review. 15 additional Days shall be allowed for each resubmittal.

511.3.3 Form Construction

The Contractor shall make forms mortar tight and sufficiently rigid to prevent deformation due to the pressure of the concrete and other loads incidental to the construction operations, including vibration. The Contractor shall construct and maintain forms to prevent the joints from opening. The Contractor shall construct and maintain forms used on surfaces in public view such that the finished concrete surface will be smooth and of uniform color and texture.

The Contractor shall remove loose dirt, laitance and miscellaneous debris from the bottom of the forms before placing concrete.

The Contractor shall fillet forms and chamfer them 3/4 inch, unless required otherwise in the Contract, and give them a bevel or draft for easy removal of projections such as girders and copings.

511.3.3.1 Form Lumber

The Contractor shall use lumber that is planed on at least one (1) side and the two (2) edges for exposed concrete surfaces. The Contractor shall place the planed face so that it will be the formed surface for the concrete being placed.

511.3.3.2 Metal Ties

The Contractor shall construct metal ties and anchorages within the forms to permit the removal of a portion of the tie connections without damaging the concrete, and provide at least 1/2 inch depth of cover from the concrete surface.

511.3.3.3 Surface Treatment of Forms

The Contractor shall ensure that forms have been properly wetted before placing concrete.

The Contractor shall use form release agents at their discretion before placing reinforcing steel. The Contractor shall not use form release agents that adhere to or discolor the concrete.

511.3.3.4 Metal Forms

The Contractor shall provide metal forms thick enough to prevent bending and maintain their shape. The Contractor shall use countersunk bolts and rivet heads. The Contractor shall use clamps, pins, and other connecting devices designed to hold forms rigidly together and for removal without damaging the concrete. The Contractor shall use metal forms that have a smooth surface and line up properly.

The Contractor may use metal forms that remain part of the Structure in accordance with the Contract or as approved by the State Bridge Engineer. The Contractor shall use permanent steel Bridge deck forms in accordance with Section 512.3.4.1, "Permanent Steel Deck Forms."

511.3.3.5 Reuse of Forms

The Contractor shall continuously maintain the shape, strength, rigidity, water tightness, and surface smoothness of reused forms. The Contractor shall resize warped or bulged lumber before reusing it.

511.3.4 Temperature and Weather Limitations

The Contractor shall keep the concrete mixture temperature between 50°F to 90°F at the time of placement.

511.3.4.1 Cold Weather Concrete

The Contractor shall place cold weather concrete in accordance with ACI 306, *Cold Weather Concreting*.

If air temperatures are likely to fall below 40°F during the placement or curing periods, the Contractor shall submit a cold weather concreting and curing plan to the Project Manager for approval by the State Concrete Engineer before concrete placement. The Contractor shall allow 14 Days for review. The Contractor shall ensure that the plan details the methods and Equipment to maintain the required concrete temperatures over the entire concrete pour area.

Information submitted will include, but not be limited to:

- Whether or not outside heating sources will be used (and how the exhaust will be vented away from the fresh concrete);
- Whether or not the rate of surface evaporation is expected to exceed the limitations detailed in 511.3.4.3, "Rate of Evaporation Limitations" and measures to be taken
- What the target mix temperature will be;
- How the concrete will be protected from the ambient conditions;

- Curing methods to be used during and following the protection period;
- How soon after the placement the protection from the ambient conditions will be implemented;
- Who will be responsible for insuring that the proper protection from the environment is properly implemented;
- How the actual temperature of the concrete will be monitored;
- How often will this be checked;
- Who will do the checking;
- What actions will be taken if the temperatures fall below the target points;
- Who will be responsible for taking the necessary actions;
- Who the contact will be if Department Personnel need to transmit notices or information about the cold weather conditions.

Review and acceptance of the Cold Weather Concreting and Curing Plan shall not relieve the Contractor from its obligation to perform the Work and provide Materials in strict conformance with the Contract.

The Contractor shall not place concrete directly onto any surface that is less than 40°F unless otherwise approved by the Project Manager. The Contractor shall not place concrete on frozen ground.

If placing concrete at or below air temperatures of 35°F, the Contractor shall provide suitable enclosures and heating devices. The Contractor shall vent exhaust from combustion type heating devices outside the placing area so that the exhaust fumes cannot come in contact with the freshly placed concrete.

The Contractor shall ensure the concrete surface temperatures never fall below 45°F during placement and the first three (3) Days after placing. The Contractor shall not let the surface temperature fall below 40°F during the next four (4) Days after the initial 3 Day curing period, or until the in-place strength determined by the *Maturity Method*, in accordance with Section 510.3.5.2, "In-Place Concrete Strength Measurements" indicates that 75% of the design strength is achieved.

The Contractor shall monitor the minimum concrete temperatures at various locations including edges and corners of slabs or other Structures, and check immediately before placing insulating material over the concrete.

If heating the aggregates or water, the Contractor shall use heating methods and Equipment that can heat the Material uniformly. The Contractor shall not heat the Materials to more than 110°F. During the heating or mixing process, the Contractor shall not add cement to water and aggregate combinations that are hotter than 90°F.

511.3.4.2 Hot Weather Concrete

The Contractor shall place hot weather concrete in accordance with ACI 305, *Hot Weather Concreting*.

Hot weather is any combination of the following conditions that tends to impair the quality of freshly mixed or hardened concrete by accelerating the rate of moisture loss and rate of cement hydration or otherwise causing detrimental results: high ambient temperature; high concrete temperature; low relative humidity; wind speed; solar radiation.

The Contractor shall estimate the rate of evaporation at the surface of the concrete per 511.3.4.3,

“Rate of Evaporation Limitations”. If the rate of evaporation is anticipated to be greater than 0.2 lb per sq ft per hour, the Contractor shall submit a hot weather concreting and curing plan to the Project Manager for approval by the State Concrete Engineer before concrete placement. The Contractor shall allow 14 Days for review.

The Contractor’s Hot Weather Concreting and Curing Plan shall include measures that shall be taken by the Contractor at their expense and maintained to the satisfaction of the Project Manager to reduce the rate of evaporation during initial cure to within the specified rate. The methods can include but not be limited to following

1. Erect windbreaks to reduce the wind velocity over the concrete surface;
2. Place concrete during nighttime or early morning hours;
3. Use cool aggregate and mixing water to lower the fresh concrete temperature;
4. Increase the relative humidity at the site with a fog spray; and/or
5. Apply a liquid-applied evaporation reducer

Review and acceptance of the Hot Weather Concreting and Curing Plan shall not relieve the Contractor from its obligation to perform the Work and provide Materials in strict conformance with the Contract.

511.3.4.3 Rate of Evaporation Limitations

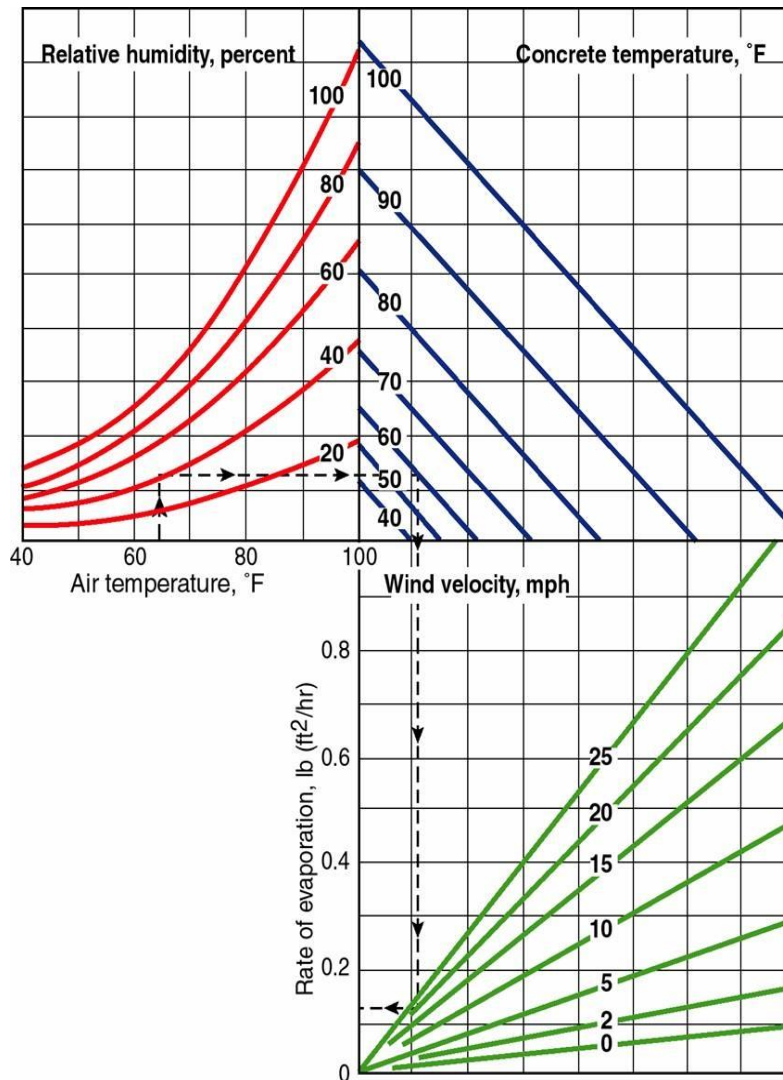
The “Rate of Evaporation Limitations” are detailed in ACI 305 – Hot Weather Concrete. These procedures lessen the potential of plastic-shrinkage cracking in concrete. The “Rate of Evaporation Limitations” apply to Bridge decks, approach slabs, CBC (top and bottom slabs), slipped formed concrete Structures, all PCCP and structural shotcrete. ACI 308 – Guide to Curing Concrete emphasizes that the rate of evaporation limitations can be exceeded in both cold and hot weather and must be addressed in both conditions.

The Contractor shall determine the anticipated rate of evaporation of surface moisture from the concrete by utilizing Figure 511.3.4.3:1 – “Surface Evaporation from Concrete”. The Contractor shall not place concrete if the anticipated rate of evaporation exceeds 0.20 lb. per square foot per hour at the site over any ten (10) minute period, unless measures are taken to prevent excessive moisture loss from the surface of the concrete during initial curing. See 511.3.4.2 for acceptable measures. These measures must be detailed in the Cold Weather Concrete Plan per 511.3.4.1 or the Hot Weather Concrete Plan per 511.3.4.2.

During the concrete placement, the wind speed, relative humidity and ambient air temperature shall be collected via a computerized weather station that shall be provided and retained by the Contractor. The weather station shall be an automated system that does not require any human support or effort after its initial set-up. The Contractor shall record readings at minimum five (5) minute intervals until the final curing system has been physically applied. Copies of these readings shall be submitted to the Project Manager within 24 hours of the placement. Measurements to determine the Surface Evaporation from the Concrete shall be taken at a height of approximately five (5) feet above the deck for relative humidity and ambient air temperature, and between a height of 20 inches and five (5) feet for wind speed.

For concrete placements that are smaller than 10 cubic yards, a handheld anemometer may be used in lieu of a weather station. The handheld anemometer shall be capable of measuring wind speed, humidity and air temperature; and shall be supplied and retained by the Contractor.

Figure 511.3.4.3:1
Surface Evaporation from Concrete (reference ACI 305)



To use this chart:

1. Enter with air temperature, move up to relative humidity
2. Move right to concrete temperature
3. Move down to wind velocity
4. Move left; Read approximate rate of evaporation

511.3.4.3.1 Wind Break

If a wind break is used, the wind break shall be a minimum height of eight (8) ft.- 0 inches protecting the Bridge deck, approach slabs, sleeper footings and/or transition slabs (if applicable). All areas of the freshly placed concrete must be protected by the wind break. The nature and type of windbreak to be used shall be approved by the Project Manager prior to placement of any Superstructure concrete.

511.3.4.3.2 Fogging System

If a fogging system is used, a water fog shall be continuously applied over the surface of the freshly placed concrete in such a manner that the entire surface is kept at a relative humidity of 90% or greater and the surface of concrete is kept at an evaporation potential of 0.15 pound/square foot/hour or less, as determined from Figure 511.3.4.3:1. The evaporation potential shall be determined prior to fogging and outside the wind protection, and continuously monitored with evaporation potential measurements taken and recorded at least once every five (5) min throughout the entire placement, and continuing until the concrete curing system has been completely installed. If a wind break and/or fogging are being used, the Contractor shall obtain these readings from the protected area at a height of approximately five (5) feet above the protected concrete.

The area to be fogged shall be the entire area of the freshly placed concrete, which has not had the final finish applied. This fog shall be delivered through a network of nozzles, which are properly spaced to provide a uniform fog at the surface of the concrete. The nozzles used shall be of the type, which atomizes the water so that there are no visually discernible droplets of water. The area of coverage from each nozzle shall overlap all adjacent nozzle coverage by at least one (1) ft. It shall be demonstrated prior to the placement of the concrete that the intended system is capable of delivering the required fogging environment for at least twice the anticipated required time. The Contractor shall not finish or otherwise mix any of the fogging water into the fresh concrete.

The intended system must be properly field tested, and approved by the State Materials Bureau before being used on any Superstructure concrete. Fogging shall continue until the surface is treated with an approved curing method.

511.3.4.3.3 Liquid Applied Evaporation Reducers

If a liquid-applied evaporation reducer is used, it shall be selected from the Departments Approved Products list and must be applied in strict accordance with manufacturer's application instructions.

Liquid applied evaporation reducers are not curing compounds and are not finishing aids. Liquid applied evaporation reducers are to be used to reduce surface evaporation during the initial cure of concrete. Initial cure of concrete typically occurs up to and including bull-floating. Multiple applications of liquid applied evaporation reducer may be required, reference manufacturer's application instructions.

Upon commencing surface finishing (beyond bull-floating), further application of liquid evaporation reducers shall not be allowed (liquid evaporation reducers cannot be used as finishing-aids). Cure concrete after surface finishing in accordance with 511.3.9 – Curing.

511.3.5 Concrete Placement

Concrete shall be placed and tested for compliance with the Project Specifications in accordance with Section 510, "Portland Cement Concrete".

The Contractor shall not place concrete until the Project Manager approves the reinforcing steel and forms. The Contractor shall ensure that forms are clean and free of rust, grease, and other Deleterious Material immediately before placing the concrete. The Contractor shall remove wooden form spacers immediately before placing concrete in that area.

The Contractor shall vibrate the concrete during placement to force the coarse aggregate from external surfaces and to bring mortar against the forms to produce a smooth finish significantly free of water, air pockets, and honeycombs.

The Contractor shall place concrete in girders, walls, and other similar Structures in horizontal layers. The Contractor shall ensure that the concrete is not too thick for the vibrator to consolidate and merge it with the previous layer. The Contractor shall not pour concrete layers deeper than two (2) ft.

The Contractor shall not place concrete faster than the rate used for the design of the forms. The Contractor shall adjust the rate for the temperature of the concrete being placed.

511.3.5.1 Chutes and Troughs

The Contractor shall avoid segregation of the Materials and the displacement of the reinforcement when placing the concrete. The Contractor shall use metal or metal-lined open troughs and chutes; do not use aluminum. All tools used for the moving and/or spreading of the concrete shall be square pointed tools. The Contractor shall not use round nose shovels and spreading tools.

Where the Contract requires steep slopes, the Contractor shall equip the chutes with baffle boards or use short lengths that reverse the direction of movement.

The Contractor shall keep chutes, troughs, and pipes clean and free of hardened concrete by thoroughly flushing with water after each pour. The Contractor shall discharge the water used for flushing away from the placed concrete.

The Contractor shall not allow concrete to free fall for more than three (3) ft. For CBC walls and retaining walls that are less than or equal to ten (10) inches thick, maximum free fall heights shall not apply. For CBC walls and retaining walls greater than ten (10) inch thick, concrete may have a free fall of less than nine (9) ft.

The Contractor shall fill each part of the form by placing the concrete as close to the final position as possible. The Contractor shall vibrate the concrete during placement to force the coarse aggregate back from the forms and around the reinforcement without displacing the bars. After the concrete's initial set, the Contractor shall not jar the forms or place strain on the ends of projecting reinforcement.

511.3.5.2 Concrete Pumping

If placing concrete by pumping, the Contractor shall install pumping Equipment so that vibrations

resulting from the operation do not damage the concrete being placed. The Contractor shall obtain Project Manager approval before using concrete pumping Equipment.

Before placing the concrete, the Contractor shall clean the Equipment thoroughly. The Contractor shall operate the Equipment so that it pumps a continuous flow of concrete without air pockets and without an appreciable loss of slump or entrained air.

The Contractor shall control the loss of entrained air by one (1) or more of the following methods:

1. Tie the end of the pump hose so that the discharge end is pointing upward, forming a “J” at the end of the hose;
2. Install a series of four (4) consecutive elbows to form a 360° loop;
3. Reduce the diameter of the end of the pump line; or
4. Limit the enclosed angle of the boom arms to an angle of 135° or more.

The Contractor shall make sure that the discharge of the concrete from the pump is as close as possible to the bottom of the structure being placed, but in no case shall it be allowed to drop a distance greater than four (4) feet with the exception of CBC walls where the walls equal to or less than ten (10) inch thick, concrete may have a free fall of less than nine (9) ft.

The Contractor shall not use aluminum pipe. The Contractor shall not add water to the concrete during pumping. If water is added at the pump hopper to clear a clogged pump, the Contractor shall dispose of the concrete in the hopper and the line.

511.3.5.3 Conveyers and Belts

The Contractor may use conveyor belts to transport the concrete from the point of delivery to the point of placement. If using multiple belts, the Contractor shall ensure that the drop from one (1) belt to the next is no greater than 18 inches. At the end of the last belt, the Contractor shall not allow the concrete to free-fall more than four (4) ft. The Contractor shall ensure that the concrete coming off the end of any belt is not being segregated. If segregation occurs, the Contractor shall slow down the speed of the belt until segregation no longer occurs.

511.3.5.4 Placing Concrete Under Water

If placing concrete under water, the Contractor shall submit a mix design and procedure plan to the Project Manager. The Project Manager may require up to 30 Days to approve them. The Contractor shall allow time in the schedule to accommodate this approval process.

511.3.5.5 Vibrating/Consolidation

Unless otherwise directed by the Project Manager, and excluding drilled shafts, the Contractor shall consolidate concrete with suitable mechanical vibrators operating within the concrete. During concrete placement, the Contractor shall keep enough personnel, vibrators, and other tools available to assure adequate consolidation. If necessary, the Contractor shall supplement vibrating with hand spading with suitable tools to assure proper consolidation. If using vibrators, the Contractor shall use procedures in accordance with ACI 309 – Consolidation of Concrete.

The Contractor shall not use a “jitterbug” or any other flat tool that could cause concrete segregation.

The Contractor shall use vibrators that have each been certified within the last 90 Days to provide 8,500 to 12,500 vpm.

The Contractor shall operate vibrators to consolidate the concrete thoroughly around the reinforcement and embedded fixtures and into corners and angles of the forms. The Contractor shall not use vibrators to make concrete flow or run. The Contractor shall vibrate long enough to accomplish consolidation, but do not vibrate so long to cause segregation or air bubbles. The Contractor shall insert the vibrators vertically into the concrete, and immediately withdraw upward along the same line with the opposite motion. The Contractor shall not drag the vibrator horizontally across the placing area.

When operating vibrators, the Contractor shall avoid contact with reinforcing bars, particularly epoxy coated reinforcing bars or bars that extend into concrete that has taken an initial set. If vibrating concrete in areas reinforced with epoxy-coated bars, the Contractor shall cover the vibrators with nonmetallic sleeves to prevent damage to the epoxy coating.

511.3.5.6 Sequence of Placement and Application of Load

The Contractor shall not place superimposed loads on or against load carrying members, floor slabs, or retaining walls until the concrete reaches 75% of specified design compressive strength but no less than 2,500 psi, determined in accordance with Section 510.3.5.2, “In-Place Concrete Strength Measurements.” Concrete Box Culverts and CBC wingwalls shall not be backfilled until specified design compressive strength has been achieved.

The Contractor shall submit a concrete placement schedule to the Project Manager upon request. The Contractor shall plan and schedule concrete placement to prevent damage to previously placed concrete or to the curing or protection systems of previously placed concrete.

The following applies to concrete placement scheduling:

1. 1. The Contractor may erect reinforcement and formwork for walls, columns, and pier caps 24 h after placement of footings or floor slab concrete. Unless otherwise provided, the Contractor may place concrete columns, walls, and pier caps, 48 h after placement of footing or floor slab concrete;
2. Do not set beams or girders, or place Superstructure concrete until Substructure forms have been stripped sufficiently to determine the quality of the concrete;
3. Do not place the load of the Superstructure on the Substructure until the Substructure concrete has been in place for at least 14 Days or until in-place strength measured by the *Maturity Method* indicates that the concrete has attained 75% of the design strength;
4. Ensure that the concrete has achieved sufficient strength as determined by the *Maturity Method* in accordance with the form design before placing concrete for integral horizontal members, such as pier caps or top slabs;
5. Place the vertical members at least seven (7) Days before mounting friction collars or falsework brackets that will support the weight of horizontal members. Ensure that the vertical members have attained the specified strength before applying loads, unless the Department approves otherwise;
6. Limit monolithic casting of walls and deck slabs of concrete box Culverts to Culverts that are six (6) ft. high or less. Construct box Culvert walls higher than six (6) ft. in accordance with this subsection;
7. If the concrete is not gaining strength as expected, the Assistant District Engineer of Construction may

extend the waiting periods. Conduct construction operations in a manner that does not damage the previously placed concrete.

511.3.5.7 Supplementary Lighting

The Contractor shall not mix, place, or finish concrete when the natural light is insufficient without using an adequate artificial lighting system, approved by the Project Manager. The Contractor shall test the lighting system at least one (1) Day before placing the concrete to assure that the system will provide sufficient light, without shadows or dark areas for placing, testing and finishing concrete. The Contractor shall ensure that the lights do not create a hazard for traffic on adjacent Roadways or Detours.

511.3.6 Removal of Forms

The Contractor shall not remove the forms until the concrete is strong enough to avoid damage by removing the forms.

If in-place strength tests in accordance with Section 510.3.5.2, "In-Place Concrete Strength Measurements," are not used to control field operations, remove forms in accordance with Table 511.3.6:1, "Timetable for Removal of Forms," not counting those Days when the temperature is below 40°F.

Table 511.3.6:1
Timetable for Removal of Forms

Structural component	Minimum time for removal
Bottom of beams	14 Days
Bridge decks ^a	seven (7) Days
Floor slabs	seven (7) Days
CBC Floors	seven (7) Days
CBC Top Slab	seven (7) Days
Walls	24 h
Columns	48 h
Sides of beams	24 h
All other parts	24 h
^a Additional requirements of Section 512, "Superstructure Concrete," shall apply.	

If one (1) of the test methods in Section 510.3.5.2, "In-Place Concrete Strength Measurements," is used to control the field operations, the Contractor may remove forms from the bottom of beams and floor slabs when the concrete reaches 75% of the design compressive strength.

511.3.7 Joints

The Contractor shall make construction joints in concrete Structures in accordance with the Plans, unless otherwise directed or approved by the Project Manager.

If the concrete placement is interrupted and additional construction joints are required, the Contractor shall place the additional joints in planes perpendicular to the principal lines of stress, and at points of minimum shear, as approved by the Project Manager.

511.3.7.1 Keyed Joints

The Contractor shall mechanically bond construction joints with keys formed by beveled strips embedded in the surface of the concrete. The Contractor shall make the keys from 1 3/8 inch to 1 1/2 inch deep. The Contractor shall place the keys centrally within the thickness of the joint. The Contractor shall ensure that the keys have a width that is one-third of the depth of the smallest dimension of the joint. The keys do not need to exceed the clear distance between reinforcing mats, or be greater than eight (8) inches. The Contractor shall provide raised keys in accordance with the Plans.

511.3.7.2 Bonding New Concrete to Existing

If bonding new and existing concrete, the Contractor shall retighten the forms before depositing new concrete on or against the hardened concrete. The Contractor shall roughen the surface of the hardened concrete without loosening the aggregate or damaging the concrete on the surface. The Contractor shall thoroughly clean the surface of foreign matter and laitance.

The Contractor shall utilize a bonding method at the interface between the hardened and fresh concrete by covering the cleaned and saturated surfaces with a coating of enriched mortar (reference Section 533 for enriched mortar specifications or a bonding agent from the Approved Product List. The

Contractor shall place the new concrete before the enriched mortar reaches an initial set. If using a bonding agent, the Contractor shall follow the manufacturer's application instructions. The Contractor shall place the concrete continuously from joint to joint, and finish the face edges of exposed joints in accordance with the Plans.

511.3.7.3 Water Stops and Flashings

The Contractor shall provide and place water stops, and flashings per the Contract documents. The Contractor shall splice or solder water stops and flashings to form continuous watertight joints.

Swellable hydrophilic waterstop shall be installed with 2" minimum concrete cover. Materials shall be installed per manufacturer's installation instructions.

511.3.7.4 Joint Sealing Materials

The Contractor shall install joint sealers in accordance with the manufacturer's recommendations, including surface preparation and the use of primers and backer-rod as required.

511.3.8 Miscellaneous Construction

511.3.8.1 Setting of Bearings

The Contractor shall ensure the surfaces on which metal masonry plates and elastomeric bearing pads will rest are flat and on level planes. If using elastomeric bearing pads, the Contractor shall finish the Bridge seats slightly high and grind to the correct elevation.

If it is necessary to adjust the elevation of a bearing upward, the Contractor shall make the adjustment by placing full size shim plates. If it is necessary to adjust the elevation of a bearing downward, the Contractor shall make the adjustment by diamond grinding to a level plane-bearing surface. The Contractor shall not use grout to level or adjust elevation.

If placing a bearing surface below the level of adjacent concrete, the Contractor shall ensure water drains away from the masonry plate or elastomeric bearing pad.

The Contractor shall finish sections of Bridge seats on abutments or piers on both sides of bearing assemblies to drain, with a slope of from 1/16 inch to 1/8 inch per foot. The Contractor shall correct depressions that retain water.

511.3.7.2 Waterproofing

If required in the Contract, the Contractor shall protect the backsides of abutment backwalls and wingwalls by waterproofing. The Contract shall define the vertical and horizontal limits of the waterproofing. The material shall be installed in conformance with the manufacturer's application instructions.

511.3.8 Finishing

The Contractor shall perform finishing after removing forms in accordance with the Contract.

511.3.8.1 Exposed Surfaces

The Department considers “exposed surfaces” as surfaces that are not buried in the ground or permanently covered by the fill, or against which the fill is not permanently placed. However, the Department does not consider the inside surfaces of concrete box drainage Culverts and concrete box girders, and the bottom side of concrete Bridge decks as “exposed surfaces.”

511.3.8.2 Class 1, Ordinary Surface Finish

The Contractor shall apply a Class 1 finish to exposed surfaces as a final finish or before a Class 2, Rubbed Surface Finish, or a Class 4, Special Surface Finish.

A Class 1 finish includes the removal of rods, bolts, or other form ties to at least 1/2 inch deep from the face of the concrete. The Contractor shall fill tie holes and honeycombs with mortar composed of one (1) part cement and two (2) parts sand; use the same brand and type of cement as used in the concrete.

The Contractor shall remove objectionable fins, bulges, and projections by rubbing with carborundum bricks or by other methods approved by the Project Manager. If necessary, the Contractor shall clean the entire surface. The Contractor shall keep such surfaces in an acceptable condition until final Acceptance of the Work.

The Contractor shall apply a Class 1 finish to surfaces buried in the ground or permanently against the fill, except that form ties may be cut off even with the concrete surface, and fins, minor bulges, projections, stains, and discolorations do not need to be removed.

Unless specified otherwise in the Contract, the Contractor shall apply a Class 1 finish to the front faces of backwalls of abutments, the top surfaces of Bridge seats on piers and abutments, and concrete curtain walls between pier pilings.

The Contractor shall apply a Class 1 finish to the inside surfaces of concrete box drainage Culverts, except as noted in Section 511.3.8.3, “Class 2, Rubbed Surface Finish.”

511.3.8.3 Class 2, Rubbed Surface Finish

The Contractor shall apply a Class 2 finish to concrete surfaces generally exposed to public view.

The Contract may specify a Class 4, Special Surface Finish with selected colors, for various components or parts of components. If the Contract specifies a Class 4, Special Surface Finish, the Contractor shall apply a Class 2 finish first, unless otherwise approved by the Project Manager.

A Class 2 finish consists of a Class 1 finish, then thoroughly wetting the surface and applying a mortar.

The Contractor shall apply a thin mortar in accordance with Section 511.2.1.1 – Concrete Surface Finishing Materials, and rub it into holes and pockets in the surface of the concrete. The Contractor shall allow the mortar to remain until it has set sufficiently to prevent removal by subsequent rubbing operations. The Contractor shall rub the surface with a No. 25 to No. 30 carborundum brick, then, rub with burlap to

remove excess mortar. If the completed rubbed surface does not look uniform, the Contractor shall make a final finish by wet rubbing with a No. 30 carborundum brick.

The Contractor shall apply Class 2 finish to the following:

1. Outside vertical surfaces of Bridge decks;
2. Outside surfaces of exterior girders, curb and rail posts seen in elevation view;
3. Curb tops, post tops, inside faces of curbs, and faces of hand rails;
4. Exposed surfaces of pier columns and caps;
5. Abutment wingwalls and Bridge seats one (1) ft. below final grade;
6. Bridge rehabilitation Projects with existing slope paving;
7. Top surface of slope paving (tops of Bridge seats require only a Class 1 finish);
8. Exposed surfaces of barrier railings on Bridges or concrete box Culverts;
9. Exposed surfaces of miscellaneous concrete Structures extending above Shoulder line grade and inside walls of concrete underpass Structures.
10. Concrete box Culverts used for drainage, on the soffit and streamside faces of headwalls and wingwalls, and for six (6) inches down the back side of wingwalls; and
11. The interiors of sidewalls to one (1) ft back from the face of the Culvert at the tops of the sidewalls, and extending on a 45 line downward and inward.

511.3.8.4 Class 3, Float Finish

The Contractor shall apply a Class 3 finish to upper surfaces not formed, such as tops of walls, headwall, tops of slabs and bottom slabs of box Culverts, copings and Bridge seats, except tops of Bridge decks, Sidewalks, or curbs.

A Class 3 finish consists of placing an excess amount of concrete in the forms and striking off this excess concrete with a template, forcing the coarse aggregate below the surface. After striking off the concrete, the Contractor shall thoroughly work the surface with a wooden, cork, or canvas float without adding water or cement. Before the final finish has set, the Contractor shall use a fine brush to remove surface film and to produce a fine grain, smooth, sanded texture.

511.3.8.5 Class 4, Special Surface Finish

When specified in the Contract documents, the Contractor shall apply a Class 4, Special Surface Finish. The Class 4, Special Surface Finish shall be applied in accordance with Specification Section 548 - Concrete Coatings.

The Contractor shall apply the Class 4 finish over the Class 2 finish, unless directed otherwise by the Project Manager.

The Contractor shall apply the Class 4 finish consistent with the location requirements of 511.3.8.3 Class 2, Rubbed Surface Finish. If repairing existing Structures, apply a Class 4 finish to the entire surface of the repaired components.

511.3.9 Curing

The Contractor shall cure all concrete in accordance with ACI 308 – Guide to Curing Concrete. All

concrete shall receive a minimum of seven (7) Days of curing treatment. The Contractor shall use curing methods in accordance with Table 511.3.10:1, "Curing of Concrete Structures," unless the Contract specifies otherwise.

If the Department allows the Contractor to choose the curing method, the Contractor shall obtain the approval of the Project Manager before beginning curing operations.

Table 511.3.10:1
Curing of Concrete Structures

Method designation	Curing method description
Method 1	Water curing
Method 2	Curing compound
Method 3	Form curing
Method 4	Combination of Method 1 and Method 2
Structure description	Curing methods
Top surfaces of:	
Bridge decks ^a	4
Approach slabs	4
Concrete curbs, gutters and Sidewalks	1 or 2
Pier caps, abutment Bridge seats	1 or 2
Wingwalls and parapet walls	1 or 2
All vertical concrete surfaces that begin in contact with form materials, including but not limited to:	
Barrier walls, barrier railing, wingwalls, parapet walls, abutments, box culverts, decks, slabs, curbs, gutters, sidewalks, construction joints	3
Elevated horizontal surfaces on the underside of structural elements that begin in contact with temporary form materials including but not limited to:	3
pier caps, girders, structural slabs	
Slip Formed Concrete elements including but not limited to:	2
concrete wall barriers, curb, gutter	
All other concrete ^b	1, 2, or 3
^a See Section 512.3.10.1, "Curing," for additional curing requirements for Bridge decks.	
^b Unless the Contract specifies otherwise.	

511.3.9.1 Method 1, Water Curing

The Contractor shall keep the concrete thoroughly and continuously wet and covered for at least seven (7) Days. The Contractor shall place and anchor covers, mats, and sheeting to ensure continuous contact with the concrete surfaces.

The Contractor shall cover concrete slabs as soon as possible with a double layer of clean, wet burlap or cotton mats, or other moisture retaining Material approved by the Project Manager. The Contractor shall ensure that the moisture retaining Materials lay flat with no wrinkles and that adjacent strips of moisture retaining materials overlap at least 12 inches. After installation, the Contractor shall soak the moisture retaining material and add moisture as required to ensure that it is not allowed to become dry for the duration of the specified curing period. The Project Manager will determine the suitability of the moisture retaining material for reuse, based on the cleanliness and absorptive ability of the Materials.

In addition to the moisture absorptive material, the Contractor shall install plastic sheeting over the moisture absorptive material. If the slabs are on grade, the Contractor shall extend the cover materials at least twice the slab's thickness beyond the edges of the slab, and make sure that the entire exposed surface of the concrete is protected. If the slab is a Bridge deck, the Contractor shall place the cover materials to fully protect exposed edges and unformed surfaces of the concrete.

The Contractor may temporarily remove the cover from surfaces that require a rubbed finish for finishing, but shall restore the cover as soon as possible.

511.3.9.2 Method 2, Curing Compound

Application of curing compound shall be in accordance with manufacturer's application recommendations.

For slabs, Bridge decks and other flatwork, the Contractor shall apply the curing compound to the fresh concrete as soon after finishing as allowed by the manufacturer.

The Contractor shall thoroughly mix the membrane forming curing compound per the manufacturer's recommendations.

The Contractor shall not apply the curing compound in rainy conditions. The Contractor shall adhere to the thermal limitations as specified by the manufacturer – typically, the product when stored should not be allowed to freeze and should not be applied when the air or concrete temperature is less than 40 degrees Fahrenheit.

The Contractor shall apply the curing compound under pressure with an atomizing-type spray nozzle. The Contractor shall uniformly cover the entire surface area at the rate recommended by the manufacturer or at a rate of at least one (1) gal per 175 ft² whichever rate is greater. The Contractor shall use spray Equipment with enough pressure to force the curing compound to leave the nozzle as a fine mist. If the nozzle becomes plugged, the Contractor shall immediately clear the nozzle before continuing the application. The Contractor shall not continue to spray curing compound through a nozzle that has become plugged or obstructed.

The Contractor shall apply the curing compound by first spraying back and forth in one (1) direction

until a uniform covering has been achieved. Then, the Contractor shall spray back and forth in a direction perpendicular to the first application until a second, uniform covering has been achieved. The Contractor shall ensure that the entire curing surface has been uniformly covered with two (2) coatings of curing compound. The Contractor shall not apply the curing compound to exposed reinforcing steel.

The Contractor shall protect all surfaces covered with curing compound for seven (7) Days after application. The Contractor shall provide walkways and mats for workmen, Material, and Equipment.

The Contractor shall not use a curing compound that exhibits separation, segregation, or skimming.

The Contractor shall not apply curing compound to surfaces that will receive a Class 2 or Class 4 finish, unless the Contractor thoroughly cleans the surfaces per the recommendations of the manufacturer of the Class 2 or Class 4 finish product.

511.3.9.3 Method 3, Form Curing

The Contractor shall leave forms in place in accordance with 511.3.6. The Contractor shall keep wood forms moist during the curing period and replenish the system with water to maintain a continuously moist condition. The Contractor shall cure exposed surfaces with Methods 1 or 2.

Form removal shall be in accordance with 511.3.6 "Removal of Forms". Should forms be removed prior to the specified seven (7) day curing period, the Contractor shall immediately resume curing by Method 2.

For Structures with formed surfaces that require the application of a finish per 511.3.8 "Finishing" such as barrier walls, barrier railings on Bridges, wingwalls, or parapets on Bridges or box Culverts, the Contractor shall remove the forms in accordance with 511.3.6 "Form Removal", finish the concrete in accordance with 511.3.8 "Finishing", and resume curing with Method 2 for the duration of the curing period. The Contractor shall not pause curing for more than two (2) hours.

511.3.9.4 Method 4, Combination of Curing Compound and Water Curing

The Contractor shall apply Method 2 curing compound as soon after finishing as is allowed by the manufacturer.

When the concrete is hard enough that placement loads and burlap or cotton mats can be applied without marring the concrete surface or deformation of structural elements, the Contractor shall apply Method 1 curing directly over the curing compound coated surface.

511.3.9.5 EquipmentError! Bookmark not defined. and Personnel Readiness

The Contractor shall show the Project Manager that curing Material and Equipment (including backup sprayers and mixers) are in working order, at least one (1) Day before concrete placement.

511.3.9.6 Temperature Requirements for Storage and Application

The Contractor shall store curing compounds in protected areas away from weather and extreme

temperatures and per the manufacturer's recommendations. The Contractor shall dispose of compounds that have been frozen in storage. The Contractor shall apply curing compounds when the temperature of the compound is between 50°F and 95°F.

511.3.10 Penetrating Water Repellent Treatment Solution

The Contractor shall saturate the exposed surfaces of the following concrete Structures with a penetrating water repellent treatment in accordance with Section 532, "Penetrating Water Repellent Treatment;"

1. Bridge wingwalls;
2. Front and side faces of abutment Bridge seats;
3. Front faces of abutments, backwalls and diaphragms;
4. Top surfaces of Bridge seats on piers and abutments;
5. Pier columns, stem walls and vertical surfaces of pier caps;
6. Top and vertical side surfaces of Bridge decks, except in the areas where using epoxy Bridge deck overlays;
7. Top surfaces of concrete approach slabs;
8. Concrete barrier railings;
9. Concrete wall barriers; and
10. Sidewalks, curbs and gutters on Structures.

The Contractor shall extend treatment to at least one (1) ft. below the final groundline.

The Contractor shall not treat the underside of pier caps, or side and end surfaces of concrete approach slabs.

511.4 METHOD OF MEASUREMENT

The Department will measure all pay items using the dimensions shown in the Contract or approved modifications.

511.5 BASIS OF PAYMENT

Pay Item

Structural Concrete, Class _____

Structural Concrete, Class _____, _____ inch

Substructure Concrete, Class _____

Pay Unit

Cubic Yard

Square Yard

Cubic Yard

511.5.1 Work Included in Payment

The following Work and items will be considered as included in the payment for the main item(s) and will not be measured or paid for separately:

1. Waterstops and flashings;
2. Waterproofing;
3. Premolded and preformed joint fillers;

4. Concrete required to fill overbreakage in excavation when footings or walls are cast against vertical or horizontal faces of excavation;
5. Installation of drains and weep holes;
6. Extruded polystyrene;
7. Means and methods associated with placement of concrete in hot and cold weather conditions, including but not limited to wind break, fogging systems, and temporary heat.

February 2, 2015

**SPECIAL PROVISIONS
MODIFYING
SECTION 512: SUPERSTRUCTURE CONCRETE**

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

512.3 CONSTRUCTION REQUIREMENTS

Delete Subsection 512.3.7.3 Rate of Evaporation Limitations and substitute with the following:

Comply with Section 511.3.4.5 Rate of Evaporation Limitations.

512.3.10 Final Operations

Delete Subsection 512.3.10.1 Curing and substitute with the following:

Unless otherwise specified in the Contract, cure Bridge decks and approach slabs in accordance with Section 511.3.10, "Curing." Ensure forms supporting Bridge decks remain in place for at least seven (7) Days.

April 25, 2018

SPECIAL PROVISIONS MODIFYING

SECTION 533: CONCRETE STRUCTURE REPAIR

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete **SECTION 533: CONCRETE STRUCTURE REPAIR** in its entirety and replace with the following:

533.1 DESCRIPTION

This Work consists of the following:

1. Establishing repair areas;
2. Removing loose, unsound, and deteriorated concrete;
3. Preparing and cleaning concrete surfaces;
4. Removing and replacing or supplementing compromised reinforcing bars;
5. Furnishing, placing, finishing, and curing concrete repair Materials;

533.2 MATERIALS

533.2.1 Concrete Repair Material (referred to as “Concrete” or “Repair Material”)

The Contractor shall use enriched mortar where the repair depth is less than one (1) inch, and use enriched concrete where the repair depth is one (1) inch or greater, unless otherwise directed by the manufacturer. If the repair depth is four (4) inches or greater, the Contractor shall use enriched concrete or the appropriate class concrete per Section 509 – Portland Cement Concrete Mix Designs. Concrete repair Material may optionally be pre-packaged rapid-hardening cementitious Materials or two-part epoxy and aggregate repair material.

When using enriched mortar, enriched concrete, or rapid-hardening cementitious Material, the Contractor may use concrete mixtures developed and approved in accordance with Section 509 -Portland Cement Concrete Mix Designs or pre-packaged, pre-blended cementitious materials in accordance with this Section, that are combined with water at the site.

Manufacturer’s certified strength tests shall be accepted instead of tests by the State Materials Bureau. Testing may be performed by the State Materials Bureau at any time. Tests by the State Materials Bureau shall supersede manufacturer’s certified tests.

533.2.1.1 Enriched Mortar

The Contractor shall provide enriched mortar that consists of a blended patching Material and water. The Contractor shall provide enriched mortar with physical properties in accordance with Table 533.2.1.1:1, “Enriched Mortar Physical Property Requirements.”

Table 533.2.1.1:1
Enriched Mortar Physical Property Requirements

Property	ASTM Test	Requirements
Compressive strength, minimum	C-109	1 Day: 2,700 psi seven (7) Days: 3,200 psi 28 Days: 4,500 psi
Bond strength, minimum	C-882	1 Day: 1,000 psi seven (7) Days: 2,000 psi 28 Days: 3,000 psi
Linear length change, Maximum	C-157	28 Days wet: +0.05 % ^a 28 Days dry: -0.05 %
Coefficient of thermal expansion (in/in/°F)	C-531	3.9×10^{-6} to 7.1×10^{-6}
Freeze/thaw resistance @ 300 cycles, minimum	C-666	Per Section 509.2.8.4.2, Note 3

^aThe maximum allowable expansion is 0.4% if the locations where enriched mortar is used can tolerate such expansions without exceeding the elastic limit.

533.2.1.2 Enriched Concrete

The Contractor shall provide enriched concrete consisting of enriched mortar extended with recommended amounts of coarse aggregate. The Contractor shall provide enriched concrete with physical properties in accordance with Table 533.2.1.2:1, "Enriched Concrete Physical Property Requirements."

Table 533.2.1.2:1
Enriched Concrete Physical Property Requirements

Property	ASTM Test	Requirements
Compressive strength, minimum	C-39	1 Day: 2,500 psi seven (7) Days: 3,000 psi 28 Days: 4,000 psi
Bond strength, minimum	C-882	1 Day: 900 psi seven (7) Days: 1,800 psi 28 Days: 2,200 psi
Linear length change (%), maximum	C-157	28 Days wet: +0.04 % ^a 28 Days dry: -0.04 %
Coefficient of thermal expansion (in/in/°F)	C-531	3.9×10^{-6} to 7.1×10^{-6}
Freeze/thaw resistance @ 300 cycles, minimum	C-666	Per Section 509.2.8.4.2, Note 3

^aThe maximum allowable expansion can be 0.4% as long as the locations where enriched concrete is used can tolerate such expansions without exceeding the elastic limit.

533.2.1.3 Rapid-Hardening Cementitious Material

If rapid-hardening cementitious Material is used, it shall comply with all the fresh and hardened properties of the specified concrete, with the additional requirement that the product meet the requirements of ASTM C 928 R3 Standard Specifications for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repair (3,000 psi at 3 hours, 5,000 psi at 1 Day, 5,000 psi at 7 Days). The structure may be opened to traffic when it has achieved 75% of the design strength. The in-place concrete strength shall be determined in accordance with Section 510.3.5.2 "In-Place Concrete Strength Measurement."

533.2.1.4 Water

The Contractor shall provide water in accordance with Section 509.2.6, "Water."

533.2.1.5 Epoxy Repair Materials

533.2.1.5.1 Epoxy Repair Materials – Traffic Bearing Surfaces

Epoxy used in bonding skid-resistant materials to hardened concrete and as a binder in epoxy mortars or epoxy concretes used on traffic bearing surfaces (or surfaces subject to thermal or mechanical movements) shall conform to ASTM C881 – Type III.

533.2.1.5.2 Epoxy Repair Materials – Load Bearing Applications

Epoxy used in load bearing applications for bonding hardened concrete to hardened concrete and other materials and as a binder for epoxy mortars and concretes shall conform to ASTM C881 – Type IV.

533.2.2 Steel Reinforcement

The Contractor shall provide reinforcing steel in accordance with Section 540 – Steel Reinforcement.

533.2.3 Submittals

The Contractor shall submit manufacturer's product data sheets at least 14 Days before the start of concrete repair Work that describe the product's intended use in Structure repair to the Project Manager. The submittal shall include mixing, application, and curing instructions.

533.3 CONSTRUCTION REQUIREMENTS

Care shall be taken during all repair and removal operations to prevent damage to structural components and reinforcing steel being retained.

533.3.1 Establishment of Repair Areas

The Contract will specify approximate repair locations and quantities. The Contractor shall field verify, locate and mark the precise areas of delamination and repair. The Contractor shall obtain Project Manager's concurrence of established repair areas and establish estimated pay quantities.

533.3.2 Unsound Concrete Removal

The Contractor shall saw cut all boundaries to 3/4" inch depth, and remove concrete with hand-operated devices, chipping hammers, or pavement breakers to a uniform depth within each concrete Structure repair area. The Contractor shall only use removal Equipment that has been approved by the Project Manager.

The following restrictions apply to concrete removal tools:

1. It is acceptable to use pavement breakers of the 60 lb class for full depth removal and for initial removal of deteriorated concrete located above the top mat of rebar. Do not use pavement breakers of the 60 lb class over girders. Maximum 30 lb class shall be used for all else. If, in the opinion of the Project Manager, the use of such devices is detrimental to the integrity of the adjacent concrete structure, the Contractor shall discontinue the use of pavement breakers. Requests to use 90 lb class pavement breakers may be submitted to the State Bridge Engineer for consideration.
2. Do not use chipping hammers heavier than the 15 lb class.
3. Hydro-demolition may be used upon approval by the Project Manager. A plan must be submitted by the Contractor for review and acceptance.

If removal exceeds 50% of the depth of the deck, the Contractor shall perform a full depth repair.

The Contractor shall obtain approval from the Project Manager after completing concrete removal before proceeding with surface preparation.

533.3.3 Concrete Surface Preparation and Cleaning

The Contractor shall prepare the surface in conformance with the manufacturer's application instructions. If the manufacturer does not specify surface preparation, cleaning or bonding, the Contractor shall conform to the following:

1. Mechanically roughen the existing surface using Equipment such as chipping hammers and remove loose debris generated by roughening.
2. Abrasive blast all concrete Structure repair bond surfaces.
3. Ensure the surface substrate is clean, sound, and dry. Remove substances that may prevent a bond between existing and new concrete. If using acid etchers, concrete cleaners, or degreasers to clean the existing surface, remove them completely after cleaning. Before placing repair Materials, clean repair areas with oil-free compressed air or clean pressurized water. The Contractor shall place a four (4) inch piece of duct tape every square yard to test for cleanliness. The Department will not allow concrete placement if more than 25% of the tape surface shows dust coverage.
4. Moisten the substrate with clean water in accordance with Section 509.2.6 "Water" and remove excess water to achieve a saturated surface dry condition.
5. Use a bonding method per Section 511.3.7.2 – Bonding New Concrete to Existing.

The Contractor shall verify that both the existing substrate and the existing concrete around the perimeter of the concrete Structure repair area is sound in the presence of the Project Manager. If any unsound concrete is detected, remove that concrete per Section 533.3.2 "Unsound Concrete Removal."

533.3.4 Furnishing, Placing, Curing, and Finishing Concrete Structure Repair Material

The Contractor shall place, finish and cure the repair Material in conformance with the manufacturer's application instructions. If the manufacturer does not specify placement, finishing and curing of the repair material, Section 511 – Concrete Structures, and 512 – Superstructure Concrete shall apply as applicable. Epoxy repair materials shall be used in strict conformance with the Manufacturer's instructions.

With regard to forms, the Contractor shall conform to Section 511 – Concrete Structures and the following:

1. For full depth replacement, the Contractor shall provide forms to adequately support concrete placed in the full depth repair areas.
2. When stay-in-place forms are present and intact:
 - a. The Project Manager may acceptable the utilization of the stay-in-place forms in lieu of temporary forms.
 - b. The Contractor shall be responsible for determining the structural adequacy of the stay-in-place forms.
 - c. If the stay-in-place forms are damaged beyond acceptability for re-use during demolition, the Contractor shall remove the unacceptable stay-in-place form and utilize temporary forms.
3. Any form bulges and/or failures will be cause for rejection and shall be addressed to the satisfaction of the Project Manager at no additional cost to the Department.
4. All concrete Structure repair forming shall be constructed so that final finishes match the lines and grades of the surrounding concrete and/or the proposed new lines and grade per the Contract Documents.
5. The Contractor shall not mix repair Materials within the repair area.
6. The Contractor shall place mortar or concrete in a continuous operation for each repair area.
7. For vertical surfaces, the Contractor shall start the Work at the bottom of the patch and continue upwards, and from one edge to the other to prevent the entrapment of air pockets.
8. If the repair area abuts or crosses a working joint, the Contractor shall place a temporary strip of waxed wood or pre-molded filler in the joint before placing repair Material. The Contractor shall remove the strips before the concrete sets. The Contractor may also repair areas that occur on both sides of a joint by patching the entire cavity and restoring the joint by saw cutting immediately after the repair Material has set, instead of using a temporary vertical insert strip.

If specified in the Contract Documents, the Contractor shall Finish exposed surfaces of piers, abutments, edges of decks and barrier railings, and other specified locations to a Class 4 finish in accordance with Section 511.3.8.5, "Class 4, Special Surface Finish," and Section 548 "Coating of Concrete" after repairs and curing are complete.

The Contractor shall apply penetrating Water Repellent Treatment in accordance with Section 532, "Penetrating Water Repellent Treatment."

533.3.5 Reinforcing Steel

All standard placement and construction requirements shall apply. Reference Section 540 "Reinforcing Steel," and the following:

1. If the Contractor exposes corroded reinforcing steel during concrete removal, the Contractor shall preserve existing reinforcing steel exposed during concrete removal.

2. The Contractor shall use only hand tools such as hammers and chisels to remove the final concrete particles from reinforcing bars.
3. On decks, if the rebar is exposed, the Contractor shall always chip at least 3/4 inch deep into the adjacent concrete around the entire bar.
4. On anything other than decks, if the bond between exposed bars and adjacent concrete breaks; the Contractor shall chip at least 3/4 inch deep into the adjacent concrete around the entire bar.
5. The Contractor shall remove and replace reinforcing steel displaying deep pitting or loss of more than 20% of cross-sectional area as directed by the Project Manager. Any rebar that is abandoned in place shall be prepared in the same manner as the adjacent rebar prior to embedment.
6. The Contractor shall strengthen corroded or damaged existing #5 or smaller bars by splicing an equal sized bar at least two (2) ft. longer than the corroded or damaged length. The minimum splice length shall be one (1) ft. on each end. The State Bridge Engineer will determine the length of lap for larger reinforcing bars.
7. Any reinforcing steel damaged during concrete removal operations by the Contractor shall be supplemented or removed and replaced by the Contractor at no additional cost to the Department.
8. Mechanical couplers may be used in accordance with Section 540.3.1.4 "Splicing".
9. The Contractor shall prepare the surface of the reinforcing steel in conformance with the recommendations of the repair Material manufacturer. In the absence of direction from the patch Material supplier, the Contractor shall use abrasive grit blasting or wire brushing to bare metal.
10. The Contractor may leave tight "flash" rust occurring after blast cleaning if acceptable to the repair Material manufacturer.
11. When epoxy coated bar is present, the Contractor shall repair any damage to the epoxy coating prior to embedment.
12. When galvanic anodes are utilized and epoxy coated rebar is present, repair of epoxy coating is not required.
13. The Contractor shall ensure that minimum concrete cover is maintained. Minimum concrete cover shall match the original design or shall be a minimum of two inches or shall be as noted in the Contract.
14. Reinforcing bars shall be replaced and/or supplemented with the same bar type as is existing unless otherwise noted in the Contract. All reinforcing bar types, including epoxy coated, shall be paid as "Replacement Reinforcing Bars."

533.3.6 Acceptance

The Project Manager will examine repaired areas after the curing period is completed to ensure soundness of the repairs and complete bonding with the existing surface. The Contractor shall remove and replace unacceptable areas at no additional cost to the Department.

533.3.7 Acceptance for 509 Approved Concrete Mixtures

Concrete mixtures that have been approved in accordance with Section 509, "Portland Cement Concrete Mix Designs" shall be tested and accepted in accordance with Sections 510, "Portland Cement Concrete," 511, "Concrete Structures," and 512, "Superstructure Concrete" as applicable.

533.3.7.1 Acceptance for Prepackaged, Preblended Cementitious Materials

Frequency of testing shall be determined by the Project Manager. If testing is required by the Project Manager, three (3) concrete cylinders for 24 hour compressive strength shall be made by the Department.

It is recommended that testing be performed on the first batch and every third batch thereafter. The water to cement ratio of the tested batch(s) shall be consistent with all other batches.

533.4 METHOD OF MEASUREMENT

If the repair depth does not exceed four (4) inches, the Department will measure and pay for the Work by the square yard. For girder bridges, if the repair depth exceeds four (4) inches, the Department will pay for the deck repair on a prorated rate of 25% of the Bid Item Unit Price for Repair of Concrete Structures per inch deeper than four (4) inches. For concrete slab bridges, if the repair depth exceeds four (4) inches, the Department will pay for the deck repair on a prorated rate of 10% of the Bid Item Unit Price for Repair of Concrete Structures per inch deeper than four (4) inches. The Department will measure exposed surfaces before the application of the special surface finish.

533.5 BASIS OF PAYMENT

Pay Item	Pay Unit
<i>Repair of Concrete Structures</i>	Square Yard
<i>Replacement Reinforcing Bars</i>	Pound

533.5.2 Work Included in Payment

The following Work and items will be considered as included in the payment for the main item(s) and will not be measured or paid for separately:

1. Sounding;
2. Removal of unsound concrete;
3. Removal and replacement of compromised reinforcing steel to include epoxy anchoring if required;
4. Disposal of old concrete and debris;
5. Surface preparation of concrete and reinforcing bar surfaces;
6. Any additional costs associated with rapid-hardening concrete;
7. Saw cutting operations;
8. Placement and removal of forms;
9. Compliance with manufacturer's instructions;
10. Penetrating water repellent treatment of repaired concrete surfaces;
11. Bonding agent.

April 25, 2018

SPECIAL PROVISIONS MODIFYING

SECTION 541: STEEL STRUCTURES

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete **Section 541 STEEL STRUCTURES** in its entirety and replace with the following:

541.1 DESCRIPTION

This Work consists of providing, fabricating, erecting, and coating Structural Steel.

Structural Steel includes forged or cast steel, bolts, tie rods, other ferrous or nonferrous Materials, and miscellaneous steel. Steel shall be divided into the following categories:

Tier 1 – rolled steel beams, plate girders, diaphragms and cross frames for steel bridges, and overhead sign structures.

Tier 2 – metal bridge barrier rails, diaphragms for concrete bridges, and steel bearing components.

Tier 3 – drop inlets, safety grates, cattle and game guards, pedestrian rails, gates, access panels, and other miscellaneous steel.

For welding of driven pile splices, see 541.3.6.4.

541.2 MATERIALS

541.2.1 Structural Steel

The Contractor shall provide Structural Steel in accordance with AASHTO M270, Grade 50, unless otherwise designated in the Contract. The Contractor shall provide steel for anchor bolts, sole plates, minor bridge components, inlet grates, and cattle guards in accordance with AASHTO M270, Grade 36 or Grade 50.

541.2.1.1 Impact Testing Requirements for Non-Fracture-Critical Structures

For Materials requiring impact testing, the Contractor shall not weld repair the base metal at the producing mill. The Department will consider Structures to be non-fracture-critical, unless otherwise designated in the Contract. The Contractor shall fabricate the following in accordance with AASHTO M270, Table 10 when subject to tensile stresses:

1. Wide flange beams used as main load carrying members;
2. Flanges and web plates used in plate girders;

3. Flange cover plates;
4. Flange and web splice plates; and
5. Other components designated in the Contract.

The Contractor shall conduct Charpy V-notch (CVN) impact “H” or “P” frequency testing in accordance with AASHTO T243.

The Contractor shall ensure that Structural Steel meets requirements for minimum service temperatures as described for Zone 2 of the AASHTO’s *Standard Specifications for Highway Bridges* (–1°F–30°F).

The Contractor shall conduct plate-frequency testing instead of hat-lot testing for plate Material thicker than 1-1/2inch.

541.2.1.2 Impact Testing Requirements for Fracture-Critical Bridge Components

The Contract will specify the CVN requirements for fracture-critical bridge components.

541.2.2 Shear Connector Studs

The Contractor shall provide shear connector studs fabricated from cold-drawn bars, grades 1015, 1018, or 1020, either semi-killed or fully-killed in accordance with AASHTO M169.

If using flux-retaining caps, the Contractor shall use the low carbon grade steel for the caps that is suitable for welding and in accordance with ASTM A109. The Contractor shall produce the finish by cold drawing, cold rolling, or machining.

The Contractor shall ensure stud tensile properties are in accordance with Table 541.2.2:1, “Tensile Properties of Shear Connector Studs,” as determined by tests of bar stock (after drawing) or finished studs, in accordance with ASTM A370.

Table 541.2.2:1	
Tensile Properties of Shear Connector Studs	
Property	Minimum requirement
Tensile strength	60,000 psi
Yield strength @ 0.2% offset	50,000 psi
Elongation in two (2) inch	20%
Reduction of area	50%

The Contractor shall weld studs with automatic stud welding guns that shall be used to weld studs to girders. The operator shall be qualified per AWS D1.5 Subsection 7.7.4. The base metal where the stud is to be welded shall be ground to bright metal immediately prior to the weld being made. Manual welding will not be allowed except to make repairs. Repairs shall be in accordance with AWS D1.5 Subsection 12.6. Repair fillet size shall be a minimum of 5/16 inch.

541.2.3 Aluminum

The Contractor shall provide aluminum and aluminum alloy Materials in accordance with ASTM aluminum alloy designation and in accordance with the Plans.

541.2.4 Bolts

The Contractor shall provide high-strength bolts in accordance with Section 542, "High-Strength Bolts." The Contractor shall provide other bolts in accordance with ASTM A307, Grade A.

541.2.4.1 Unfinished Bolts

The Contractor shall provide unfinished ASTM A307 bolts. The Contractor shall provide thread bolts so that not more than two (2) threads are within the grip of the connected parts. The Contractor shall use bolts that will extend beyond the nut at least two (2) threads, but not more than 1/2 inch.

541.2.5 Structural Steel Coating

The Contractor shall provide coated Structural Steel in accordance with Table 541.2.5:1, "Coating of Structural Steel."

Table 541.2.5:1
Coating of Structural Steel

Item	Coating requirement
Galvanizing, Hot-Dip Galvanizing, or Zinc Coating	Section 541.2.5.1
Structural Steel for Steel Bridges	Section 544, "Protective Coating of New Structural Steel"
Structural Steel for Concrete Bridges	Section 544, "Protective Coating of New Structural Steel"
Structural Steel for Miscellaneous Structures	Section 545, "Protective Coating of Miscellaneous Structural Steel"
Metal Bridge Railing	Section 545, "Protective Coating of Miscellaneous Structural Steel"
New Exposed Steel Bridge Piling and Similar Applications	Section 545, "Protective Coating of Miscellaneous Structural Steel"
Recoating Bridges	Section 546, "Recoating Structures"

541.2.5.1 Galvanizing or Zinc Coating

If the Contract requires a galvanized coating, the Contractor shall coat steel after fabrication in accordance with AASHTO M111.

Bolts, washers, nuts, and position dowels used in the assembly and erection of galvanized railing and posts or where specified, shall be galvanized in accordance with AASHTO M232 Class C or shall be zinc coated in accordance with ASTM B695.

After erecting the steel, the Contractor shall coat the galvanized hardware with a product meeting ASTM A780, Type 2.

541.2.5.1.1 Quality Control and Repair of Galvanizing

Uncleaned slag lines, bare spots, blisters, flux spots or inclusions, dross, acid, or black spots that exceed 1 square inch or occur on more than 5 percent of the exposed surface area shall be cause for rejection of the lot. The Materials may be stripped, regalvanized, and again submitted for inspection; otherwise the entire lot shall be rejected.

Pieces with damage to less than 5 percent of the exposed surface area may, with the approval of the Project Manager, be repaired in accordance with ASTM A780 Type 1 - zinc-based solders which includes low melting point zinc alloy repair rods or powders or Type 3 - metallizing.

With the approval of the Project Manager, on areas that are concealed from direct weathering and on areas that are not aesthetically visible to the travelling public, ASTM A780 Type 2 (paints containing zinc dust, commonly referred to as "cold galvanizing") may be used on areas less than one square inch and less than 5 percent of the exposed surface area. The dried film must contain no less than 90% pure zinc. Surface preparation and application shall be in accordance with the manufacturer's requirements.

In any case, galvanizing repair shall not compromise the aesthetic acceptability of the project as determined by the Project Manager.

541.3 CONSTRUCTION REQUIREMENTS

541.3.1 Applicable Codes and Documents

The Contractor shall fabricate and erect steel Structures in accordance with the current edition of the following codes and documents:

1. AASHTO/AWS D1.5 – *Bridge Welding Code*;
2. AASHTO/AWS D1.1 – *Structural Welding Code*;
3. AWS D1.4 – *Structural Welding Code – Reinforcing Steel*;
4. AISC 204 – AISC Certification Program for Bridge and Highway Metal Component Manufacturers
5. The following AASHTO/NSBA Steel Collaboration documents:
 - 5.1. S2.1 *Steel Bridge Fabrication Guide Specification*
 - 5.2. S 4.1 *Steel Bridge Fabrication QC/QA Guide Specification*
 - 5.3. S10.1 *Steel Bridge Erection Guide Specification*
 - 5.4. G 1.1 *Shop Detail Drawing Review / Approval Guidelines*
 - 5.5. G 1.3 *Shop Detail Drawing Presentation Guidelines*
 - 5.6. G12.1 *Guidelines to Design for Constructability*

Although the AASHTO/AWS Steel Collaboration documents are titled “Guidelines” or “Guide Specifications,” consider them to have the same importance and standing as a code or a specification. If the content of the collaboration documents appears permissive with words such as “should,” “could,” “may,” etc., consider the content to be a requirement unless otherwise approved by the State Bridge Engineer.

In the event of a conflict between a referenced code and this specification, this specification will take precedence.

In AASHTO/NSBA Steel Bridge Collaboration S 4.1, all references to Quality Assurance Inspector (QAI) shall be equivalent to referencing the Project Manager.

541.3.2 Quality Control and Quality Assurance (Contractor)

Quality Control and Quality Assurance shall be in accordance with the following:

Tier 1 – AASHTO/NSBA Steel Bridge Collaboration, S 4.1 Steel Bridge Fabrication QC/QA Guide Specification.

Tier 2 – NMDOT Approval of fabrication shop is required, AISC Certification Program for Bridge and Highway Metal Component Manufacturers (AISC 204) current edition shall be used as the basis for approval (AISC Certification is not required)

Tier 3 – NMDOT Approval of fabrication shop is required, AISC Certification Program for Bridge and Highway Metal Component Manufacturers (AISC 204) current edition shall be used as the basis for approval (AISC Certification is not required)

Fabricators shall contact the State Bridge Engineer to request shop inspection and approval.

541.3.2.1 Qualification of QA Inspector (NMDOT Representative)

Tier 1 – AASHTO/NSBA Steel Bridge Collaboration, S 4.1 Steel Bridge Fabrication QC/QA Guide Specification, Part C is superseded by the following requirement: current AWS Welding Inspector Certification

Tier 2 – Licensed Professional Engineer or a certified AWS Welding Inspector

Tier 3 – Project Manager or a certified AWS Welding Inspector

The individual qualified for steel inspection shall also perform coating inspections with no further qualification with the exception of Tier 2 which may be performed by the Project Manager or certified AWS Welding Inspector. AASHTO/NSBA Steel Bridge Collaboration, S 4.1 Steel Bridge Fabrication QC/QA Guide Specification 3.2 and 8.1.2 shall not apply to the QAI inspector of coatings.

541.3.3 Submittals

For Tier 1, prior to installation, the Contractor shall provide all submittals in accordance with Section

106, "Control of Materials." Additional required submittals follow but are not limited to:

1. Structural Steel Mill Test Reports (MTRs);
2. Certificates of Compliance and other documentation for the protective coating;
3. The manufacturer's Certificate of Compliance for welding consumables;
4. QC inspection reports; and
5. A general Certificate of Compliance for the fabricated product.

The Contractor shall submit Certificates of Compliance instead of MTRs for Materials subjected to minimal stress levels, such as sole plates, shoe plates, anchor bolts, and fill plates.

541.3.3.1 Working Drawings

The Contractor shall allow 30 Days for review and Acceptance of Working Drawings and calculations. Any re-submittals will require an additional 14 Days for review. The Working Drawing submittal process must be complete prior to the Pre-Fabrication conference (541.3.5.1).

The Contractor shall prepare Working Drawings in accordance with AASHTO/NSBA G 1.3, Shop Detail Drawing Presentation Guidelines. The Department will review Working Drawings for Acceptance in accordance with AASHTO/NSBA G 1.1, Shop Detail Drawing Review / Approval Guidelines. The Working Drawing submittal shall include a detailed bill-of-material in accordance with AASHTO/NSBA Steel Bridge Collaboration G 1.1 with the letter of intent to fabricate. The Contractor shall submit Working Drawings electronically in PDF format to the Project Manager.

The Contractor shall not make any changes to accepted Working Drawings. If changes are made, the Contractor shall re-submit the Working Drawings for acceptance.

The Contractor shall include the submittal and review time for its shop drawings and schedule for fabrication of the specialized structural steel components as a milestone per 108.3.1.1 (5) "CPM Baseline Schedule".

541.3.3.2 Working Drawings for Structural Steel Items Detailed on Standard Drawings

The Contractor may submit standardized Working Drawings instead of Project-specific drawings for Structural Steel items such as cattle guard grills and drop inlet grates.

The Contractor shall include the Fabricator's name and address, drawing title, drawing number, drawing date, revision dates, and Standard Drawing number on Working Drawings.

541.3.3.3 Erection Plan

The Contractor shall submit an erection plan for Tier 1 steel. Erection plans are not required for OH Sign Structures.

The Contractor shall submit an Erection Plan conforming to Section 2 of the AASHTO/NSBA Steel Bridge Erection Guide Specification S10.1, 2014 Edition and the following Department requirements:

1. The Erection Plan shall be prepared by a Professional Engineer licensed in the State of New Mexico and shall be accompanied by calculations verifying the safety of all aspects of erection.
2. The Erection Plan shall consider the load-bearing capacities of any temporary or permanent structures used in the erection of the new bridge, including any need for shoring.
3. The Erection Plan shall be submitted no less than thirty (30) Days prior to any steel erection operations.
4. All costs for the Erection Plan and shoring of any temporary or permanent structure used for the erection of the new bridge shall be considered included in Bid Item 541100 – Structural Steel for Steel Bridges.

The Contractor shall allow 30 Days for review and acceptance of the erection plan. Any re-submittals will require an additional 14 Days for review. The erection plan submittal process must be complete prior to the start of erection.

The Contractor shall include the submittal and review time for its erection plan and schedule for erection of the specialized structural steel components as a milestone per 108.3.1.1 (5) “CPM Baseline Schedule”.

541.3.4 Rolled Girders and Plate Girders

The Contractor shall provide girders to the full length shown in the Plans. Bolted or welded girder splices will not be permitted unless noted otherwise in the Plans.

541.3.5 Fabrication

The Contractor shall ensure that the fabrication shop for Tier 1 steel is certified in accordance with AASHTO/NSBA *Steel Collaboration S2.1, Steel Bridge Fabrication Guide Specification*. The Department will not require AISC certification for fabrication shops fabricating Tier 2 and Tier 3 steel items, but the Department must inspect and approve these shops before fabrication.

Steel will be fabricated in the shop unless otherwise approved by the Project Manager.

Tier 1 – AASHTO/NSBA Steel Bridge Collaboration, S2.1 Steel Bridge Fabrication Guide Specification.

Tier 2 – AISC Certification Program for Bridge and Highway Metal Component Manufacturers (AISC 204) current edition.

Tier 3 – AISC Certification Program for Bridge and Highway Metal Component Manufacturers (AISC 204) current edition.

541.3.5.1 Pre-Fabrication Conference

A Prefabrication Conference is required for Tier 1 steel (a Prefabrication Conference is not required for OH Sign Structures). The Prefabrication Conference shall be held in conjunction with the Preconstruction Conference. The Prefabrication Conference may be held on an alternate date at the discretion of the Project Manager. The agenda for the Prefabrication Conference shall be based upon S2.1, “Steel Bridge

Fabrication Guide Specification.”

541.3.5.2 Attachment and Fit of Gussets and Stiffeners

Where welding of gusset plates, stiffeners or other secondary attachments to main structural members would otherwise result in intersections of welds, the Contractor shall clip back the corners of the attachments 1-1/4 inch minimum from the corner in each direction to avoid such intersections.

The Contractor shall terminate welds attaching secondary components to main members 1/4 inch short of the end of the attachments.

If the Plans require bearing stiffeners “finished to bear,” the Contractor shall mill or grind the ends and obtain an even bearing against the flange the stiffeners will bear on.

If the Plans require “tight fit” stiffeners, the Contractor shall fit the stiffeners tight against the flange to exclude water after being coated.

541.3.5.3 Straightening of Flanges

At pier bearings, abutment bearings and splices, the Contractor shall straighten girder or beam flanges perpendicular to the webs. At bearings, the Contractor shall straighten flanges before fitting stiffeners. At splices, the Contractor shall straighten flanges before coating and shipment. The Contractor shall not cold bend.

541.3.5.4 Bearing Plates, Pins, and Rollers

541.3.5.4.1 Sole, Masonry, and Shoe Plates

The Contractor shall flatten the top and bottom surfaces of sole masonry and shoe plates to within \pm 1/32 inch.

The Contractor shall machine sole plate surfaces that will contact elastomeric bearing pads perpendicular to the direction of expansion.

The Contractor shall machine other expansion surfaces in the direction of expansion.

541.3.5.4.2 Pins and Rollers

The Contractor shall accurately turn pins and rollers to dimensions and ensure that they are smooth, straight, and free of flaws.

541.3.5.4.3 Pin Holes

The Contractor shall bore a two (2) inch diameter hole longitudinally through the center of pins with an eight (8) inch diameter or larger.

The Contractor shall bore pinholes true to the specified diameter, smooth and straight, at right angles to the axis of the member and parallel with each other unless otherwise required. The Contractor shall produce the final surface with a finishing cut.

The Contractor shall not vary the outside to outside distance of end holes in tension members and inside to inside distance of end holes in compression members by more than 1/32 inch. The Contractor shall bore holes in built-up members after shop assembly.

541.3.5.4.4 Threads

The Contractor shall ensure that bolt and pin threads are in accordance with Unified Standard Series UNC-ANSI B1.1, Class 2A for external threads and Class 2B for internal threads. The Contractor shall thread pin ends with a diameter of 1 3/8 inch or greater with six (6) threads per inch.

541.3.5.4.5 Surface Finish

The Contractor shall finish the surfaces of bearings, base plates, pins, rollers, and other bearing steel that will come into contact with each other or with concrete in accordance with ANSI B46.1, Surface Roughness, Waviness and Lay.

541.3.5.5 Connections

541.3.5.5.1 Welding

541.3.5.5.1.1 Welder Qualifications

The Contractor shall use annually certified welders or those who provide documentation demonstrating continuing experience in the process. Welder must be qualified for the position the weld is performed in. All welders shall be certified by AASHTO/AWS D1.1 or D1.5 unless otherwise noted by the Contract Documents.

Tier 1 – AASHTO/NSBA Steel Bridge Collaboration, S2.1 Steel Bridge Fabrication Guide Specification (Built-up plates and open rolled-shape structural elements AWS D1.5, welded tubular structural elements in accordance with D1.1)

Tier 2 – AISC Certification Program for Bridge and Highway Metal Component Manufacturers (AISC 204) current edition. The welder shall be AWS D1.1 certified.

Tier 3 – The welder shall be AWS D1.1 certified.

541.3.5.5.1.2 Testing of Complete Penetration Welds

The Contractor shall conduct nondestructive QC radiographic testing on complete penetration welds in accordance with AWS D1.5 or D1.1 (as applicable).

The Department may allow ultrasonic testing as a substitute for radiography. The Contractor shall submit an ultrasonic testing plan for approval at least 30 Days before the start of fabrication. The

Contractor shall provide detailed information about the Fabricator's previous experience with ultrasonic testing and resumes showing the training and experience of persons performing the testing. The Contractor shall not use ultrasonic testing for cases described in Section 6.7.1.1 of the AASHTO/AWS D1.5-Bridge Welding Code.

541.3.5.5.2 Bolted Connections

The Contractor shall bolt with high strength bolts in accordance with Section 542, "High-Strength Bolts."

The Contractor shall make bolt holes 1/16 inch larger than the nominal diameter of the connector, unless otherwise specified.

541.3.5.5.3 Gaps Between Ends of Abutting Members

Where the Contract requires abutting milled joints, the Contractor shall ensure there are no gaps. The Contractor shall face the ends to provide a full and even bearing when assembled.

Where the Contract requires close joints, the Contractor shall not exceed 1/8 inch between the ends of abutting members. The Contractor shall not exceed 1/4 inch between abutting ends of girders at splices.

541.3.5.6 Camber Verification

The Contractor shall verify girder camber during the laydown operation. Unless assembling girders in the horizontal position, the Contractor shall meet the total camber dimensions less the deflections produced by the weight of the girder.

541.3.6 Erection Requirements

The Contractor shall erect the Structure in accordance with AASHTO/NSBA Steel Bridge Collaboration S10.1, *Steel Bridge Erection Guide Specification*.

If requested by the Project Manager, a pre-erection conference shall be held prior to start of erection. The agenda shall be the review of the erection plan.

541.3.6.1 Placement of Bearings

The Contractor shall ensure that column bases and bearing devices bear fully and uniformly on substructures. The Contractor shall not place bearings on pier or abutment bridge seat areas that are improperly finished or irregular. The Contractor shall grout to achieve uniform bearing only when the Contract allows grouting.

The Contractor shall place masonry plates and beam and girder span pedestals on impregnated fabric pads approved by the Project Manager at least 1/8 inch thick.

541.3.6.2 Anchor Bolt Holes

The Contractor shall core drill anchor bolt holes in accordance with Table 541.3.6.2:1, "Required Nominal Anchor Bolt Hole Diameters."

Table 541.3.6.2:1
Required Nominal Anchor Bolt Hole Diameters

Bolt diameter (inch)	Hole diameter (inch)
3/4	1-1/2
1	1-3/4
1-1/4	2

The Contractor shall set anchor bolts using non-shrink grout from the Department's Approved Products List. The Contractor shall remove excess mortar after the grout has set. The Contractor shall ensure that anchor bolt washers and nuts bear evenly against the steel-bearing surface. The Contractor shall ensure anchor bolts at the expansion ends of spans allow the free movement of the span.

541.3.6.3 Field Bolting

The Contractor shall install high strength bolts in accordance with Section 542, "High-Strength Bolts."

The Contractor shall block main structural members to the desired camber before torquing the bolted splice connections.

For skewed steel bridges with diaphragms perpendicular to the longitudinal centerline, the Contractor shall finger tighten diaphragm attachment bolts before deck placement. The Contractor shall fully torque bolts after the deck slab is in place.

Following completion of the superstructure and after priming, the Contractor shall fill open holes in exterior beams and girders with button head bolts before final acceptance.

541.3.6.4 Field Welding

Field welding of permanent steel elements will not be permitted unless shown in the Plans, with the following exceptions:

1. Field welds shown in the Plans;
2. Splices for driven pile;
3. Sole plate to girder shoe plate;
4. Pedestrian rails;
5. Shear studs installed in the field for construction means and methods; or
5. As approved by the Project Manager

541.3.6.4.1 Field Welding Submittal and Qualifications

The Contractor shall submit a welding procedure and the welder's certification for the welder performing the Work. The welder certification must be consistent with the welding procedure and the

welding position required to perform the Work. Qualifications of the welders shall be consistent with the 541.3.5.4.1.1.

541.3.6.4.2 Field Welding Inspections

The Contractor shall provide a certified AWS Welding Inspector. This Inspector shall review and approve the welding procedure and the welder qualifications. This Inspector shall provide testing and documentation in accordance with 541.3.1, "Applicable Codes and Documents." Documentation shall be submitted to the Project Manager within Seven (7) Days of completion of the welding activity.

541.3.6.4.3 Field Installation of Shear Studs

Should the Contractor elect to install shear studs in the field, the Contractor shall field weld studs with automatic stud welding guns that shall be used to weld studs to girders. The operator shall be qualified per AWS D1.5 Subsection 7.7.4. The base metal where the stud is to be welded shall be ground to bright metal immediately prior to the weld being made. Manual welding will not be allowed except to make repairs. Repairs shall be in accordance with AWS D1.5 Subsection 12.6. Repair fillet size shall be a minimum of 5/16 inch.

Field welded studs shall be inspected in accordance with 541.3.6.4.2, "Field Welding Inspections."

541.3.6.5 Pilot and Driving Nuts

The Contractor shall use pilot and driving nuts in driving pins. The Contractor shall show details on the Working Drawings. The Contractor shall furnish one (1) pilot and one (1) driving nut for each size pin.

541.3.7 Removal of Lead-Paint Coated Steel Items

The Contractor shall dispose of lead paint debris in accordance with Section 547, "Safety and Environmental Requirements for Painting Operations."

541.3.8 Disposal of Steel Structures, Reinforcing Steel, Steel Debris or Steel Waste

The Contractor shall not reuse salvaged steel items from existing Structures on NMDOT Projects unless directed otherwise in the Plans. Salvaged steel shall be disposed of by Contractor as approved by the Project Manager.

541.3.9 QUALITY ASSURANCE INSPECTION FREQUENCY

541.3.9.1 Steel Inspections

The following Quality Assurance Inspections shall be performed by the Quality Assurance Inspector (QAI). Unless otherwise noted, the Inspections shall take place in the fabrication shop.

Tier 1 –

Rolled steel beams – minimum of one (1) QA Inspections per project

Plate girders – minimum of three (3) QA Inspections per project

Diaphragms and cross frames – include with the above inspections
Overhead sign structures – minimum of one (1) inspection per fabrication shop per year

Tier 2 –

Metal bridge barrier rails – 40% of welds by length
Diaphragms for concrete bridges – visual inspection upon delivery to site
Steel bearing components – 40% of welds by length

Tier 3 –

Drop inlets – visual inspection upon delivery to site
Safety grates – visual inspection upon delivery to site
Cattle & game guards – visual inspection upon delivery to site
Pedestrian rails – visual inspection upon delivery to site
Gates – visual inspection upon delivery to site
Access panels – visual inspection upon delivery to site
Miscellaneous steel – visual inspection upon delivery to site

It is recommended that a QA Inspection be performed at or near the completion of erection; this is in addition to those listed above.

541.3.9.2 Coating Inspections for paint and powder coating

The following Quality Assurance Inspections shall be performed by the Quality Assurance Inspector (QAI). Unless otherwise noted, the Inspections shall take place in the fabrication shop. The Project Manager may waive coating inspections.

Tier 1 –

Rolled steel beams – one (1) inspection concurrent with a steel inspection
Plate girders – one (1) inspection concurrent with a steel inspection
Diaphragms and cross frames – no requirement
Overhead sign structures – photos of coating process shall be provided to the QAI with QC traveler documentation, visual inspection upon delivery to site

Tier 2 –

Metal bridge barrier rails – two (2) shop inspections are recommended per project; this may be waived by the Project Manager.
Diaphragms for concrete bridges – no requirement
Steel bearing components – visual inspection upon delivery to site

Tier 3 –

Drop inlets – visual inspection upon delivery to site
Safety grates – visual inspection upon delivery to site
Cattle & game guards – visual inspection upon delivery to site
Pedestrian rails – visual inspection upon delivery to site
Gates – visual inspection upon delivery to site
Access panels – visual inspection upon delivery to site
Miscellaneous steel – visual inspection upon delivery to site

It is recommended that a QA inspection be performed at or near the completion of erection; this is in addition to those listed above.

541.3.9.3 Galvanized Elements

Galvanized elements shall be visually inspected upon delivery to the site by the Project Manager.

541.4 METHOD OF MEASUREMENT

If structural members are specified by a nominal unit weight, the Department will calculate weight based on the nominal weights and dimensions.

When structural members are not designated by a nominal unit weight, the Department will calculate weight using the unit weights listed in Table 541.4:1, "Metal Unit Weights for Measurement."

The Department will deduct the weight of copes, cuts, bevels, and open holes from the gross weight. The Department will not make deductions for bolt holes.

Table 541.4:1
Metal Unit Weights For Measurement

Material	Unit weight (lb./ft³)
Steel	490
Cast iron	445
Bronze	536

541.4.1 Bolts

The Department will pay the weight of fasteners as indicated on the accepted Working Drawings.

541.5 BASIS OF PAYMENT

Pay Item	Pay Unit
<i>Structural Steel for Concrete Bridges</i>	Pound
<i>Structural Steel for Steel Bridges</i>	Pound
<i>Structural Steel for Miscellaneous Structures</i>	Pound

541.5.1 Work Included in Payment

The following Work and items will be considered as included in the payment for the main items and will not be measured or paid for separately:

1. Submittals including re-submittals;
2. Nondestructive testing;
3. Protective coatings;
4. Additional weight of heavier sections provided solely for the Contractor's convenience;

5. All Incidentals necessary for the completion of the Work;
6. Weld Material weight; and
7. All QC/QA requirements.

SECTION 541-A PREFAB PEDESTRIAN BRIDGE

Section 541-A is intended to supplement Standard Specification Section 541

541-A.1 DESCRIPTION

541-A.1.1 General

These specifications are for fully engineered clear span bridges of welded steel construction, and shall be regarded as minimum standards for design and construction. A minimum of five (5) years of experience in design and fabrication of pedestrian bridges is required of the bridge supplier. The specific type bridge required will be a modified bow truss bridge with a minimum of one diagonal per panel, with concrete decking. Due to possible variations in member sizing and configuration, bridge span, for the purposes of this project, shall mean the distance from outside to outside of the end vertical members. Nominal width shall represent the clear passage width between the handrails.

541-A.1.2 Design Requirements

Prefabricated bridges shall be designed and fabricated in accordance with the American Association of State Highway and Transportation Officials (AASHTO), Standard Specifications for Pedestrian Bridges, 2009 or latest edition (The AASHTO Code). Design loads shall include considerations for vehicles and equestrian.

Bridges shall be cambered to offset full dead load deflections, but shall not cause the longitudinal slope of the bridge deck to exceed ADA standards.

Bridges shall be designed to accommodate a temperature differential of 100 degrees F. Slip pads of Ultra High Molecular Weight (UHMW) polyethylene or other approved material shall be placed between the smooth surface of the setting plate and the smooth bearing plate of the bridge. At least 1" clearance shall be provided between the bridge and concrete abutment at the expansion end of each bridge, as required for anticipated thermal expansion and contraction due to seasonal temperature variations. Cover plates, or an engineer approved watertight expansion joint seal, shall be provided to cover the expansion gap, as indicated on the plans.

541-A.1.3 Manufacturers / Suppliers

The following list are acceptable bridge manufacturers, however the Contractor may propose an approved equivalent supplier:

1. Contech Engineering Solutions
2. Big R Bridge
3. Anderson Bridges

541-A.2 MATERIALS

541-A.2.1 Material Thickness.

All structural members shall have a minimum steel thickness of at least 3/16" for angle stock, 1/8" for tubular or non-structural components, and 1/4" for closed structural tubular members..

541-A.2.2 Steel

Unpainted WEATHERING STEEL bridges shall be fabricated from ASTM A242 or ASTM A588 steel for plates and structural shapes and ASTM A847, ASTM A606 or ASTM 500 for tubular sections. Minimum yield (Fy) shall be greater than 50,000 psi. Materials shall be provided in accordance with the Buy America requirements.

541-A.2.3 Anchor Bolts

All anchor bolts and nuts shall conform to the requirements of ASTM A 307, Grade A, Carbon Steel Bolts and Studs, and shall be galvanized in accordance with the requirements of ASTM A 153. Each anchor bolt shall be provided with two nuts for jamming.

541-A.2.4 Deck

Decking shall be minimum 22 gauge galvanized steel "form deck" to receive six inch Structural Concrete Class AA (Colored).

541-A.3 CONSTRUCTION REQUIREMENTS

541-A.3.1 General Requirements

Workmanship, fabrication, and shop connections shall be in accordance with AASHTO Standard Specifications for Pedestrian Bridges (latest edition). Bridges shall be manufactured by a company whose primary business is the engineering and fabrication of such bridges, or similar structures.

541-A.3.2 Submittals

At least thirty (30) calendar days prior to the start of fabrication, the Contractor shall submit three (3) sets of complete design calculations, shop drawings, and construction details sealed by a New Mexico Professional Engineer, including installation instructions for pre-engineered, modified bow truss bridges and Buy America certifications.

After review of the drawings and calculations, the Project Engineer shall return one (1) set, with notations, to the fabricator. The fabricator shall then make appropriate changes and corrections and resubmit four (4) sets of calculations and drawings to the Project Engineer for final review. Fourteen (14) calendar days shall be allowed for the Project Engineer to review of any resubmittals.

No fabrication shall be done until the Contractor has received written notification stating that the Department has approved the shop drawings.

541-A.3.3 Fabrication Inspection

Manufacturer shall allow fabrication inspection if desired by owner. Fabrication inspection may be conducted by owner, owner's consultant, or NMDOT.

541-A.3.4 Welding

Welding materials shall be in strict accordance with the American Welding Society (AWS) Structural welding code, D1.1. Welders will be certified in accordance with AWS D1.1.

541-A.3.5 Splices

Field splices shall be bolted with High Strength ASTM A325 or ASTM A490 bolts; Type 3 bolts are required for weathering steel bridges.

541-A.3.6 Vertical Element Orientation

All vertical structural elements shall be perpendicular to the ground (plumb), including those for bridges having a difference in bearing elevations.

541-A.3.7 Weep Holes

½ inch diameter weep holes shall be drilled (flame cut holes will not be allowed) at all low points of all steel tubing members as oriented in the in-place, completed structure. In members that are level, or flat, a total of two weep holes shall be drilled, one at each end. Weep holes and their locations shall be shown on the Shop Drawings.

541-A.3.7 Toe Plates

Toe plates shall be attached to vertical structural members and shall take the form of a 5" (min.) steel channel located with a 2" opening above the floor deck. Bottom support frame of infill panels (if provided) may replace toe plates, if continuous and flush with inside face of truss verticals.

541-A.3.8 Finishes

All steel shall be sand blasted in accordance with the Steel Structures Painting Council" (SSPC) Surface Preparation Specification No. 6 "Commercial Blast Cleaning.

541-A.3.9 Field Construction

The substructure shall be constructed in accordance with the details shown in the plans and the pedestrian bridge shop drawings. Before construction begins on the substructure, the Contractor shall determine the anchor bolt requirements and substructure dimensions needed to properly erect the structure which will be provided. The Engineer shall be provided with two copies of detail sheets delineating these requirements before work begins.

541-A.4 METHOD OF MEASUREMENT – Reserved

541-A.5 BASIS OF PAYMENT

Pre-engineered bridges will be paid for at the contract unit bid price per each bridge installed in place, complete with all decking, concrete, steel reinforcing, anchor bolts, and railings. Bid item, description, and pay unit for this work shall be as follows:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
541405	Prefab Pedestrian Bridge (35 FT)	Lump Sum
541406	Prefab Pedestrian Bridge (110 FT)	Lump Sum

March 31, 2016

SPECIAL PROVISIONS MODIFYING

SECTION 545 – PROTECTIVE COATING OF MISCELLANEOUS STRUCTURAL STEEL

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Replace **SECTION 545 PROTECTIVE COATING OF MISCELLANEOUS STRUCTURAL STEEL** in its entirety with the following:

545.1 DESCRIPTION

This Work consists of coating new steel elements including:

1. bridge railing
2. pedestrian railing
3. drop inlet grates and frames,
4. cattle guards grates,
5. field coating of new steel piling
6. CWB access panels
7. gates
8. headgates & flapgates
9. I-beam posts
10. safety grates
11. sole plates and bearing devices
12. misc. steel elements

545.1.1 Terminology and Standards

The Contractor shall use terminology in accordance with the following standards:

Society for Protective Coatings (SSPC) Painting Manual Volume 2
Surface Preparation Standards, Guides, and Specifications, Section 2 of the SSPC Painting Manual
Volume 2 (SSPC-SP)
American Architectural Manufacturer's Association (AAMA)
American Association of State Highway and Transportation Official (AASHTO)
American Society for Testing and Materials (ASTM)
American Institute of Steel Construction (AISC)
National Association of Corrosion Engineers (NACE)

545.2 MATERIALS

The Contractor shall apply the coating system specified within the Contract Documents. If the Contract Documents do not specify a specific coating system, the Contractor may select the coating system from Table 545.2:1.

Table 545.2:1
Coating System Selection Matrix

Specification Section	Coating System								Color Comments
	galvanize	3-Coat poly	2-Coat epoxy s	2-Coat epoxy f	2-Coat acrylic	Powder Coat	3-Coat poly	2-Coat acrylic	if not galvanized, color (unless otherwise noted in drawings)
	541	544	545	545	545	545	546	546	
	541.2.6.1	544.2.1	545.2.1	545.2.2	545.2.3	545.2.4	546.2.1	546.2.2	
Element									
new structural steel	X	X					R		light gray*
metal Bridge railing	X					X		R	light gray*
metal Pedestrian railing	X					X		R	light gray*
drop inlet grates & frames	X		X	X				R	light gray*
cattle guard grates			X	X				R	safety yellow
CWB Access Panels	X		X	X	X	X		R	light gray*
Gates	X		X	X	X	X		R	interstate green
Headgates & Flapgates **			X	X	X				light gray**
I-Beam Posts	X		X	X	X	X		R	interstate green
new steel pilings							X R		light gray*
sole plates & bearing devices			X					R	light gray*
safety grates	X		X	X		X		R	light gray*
Misc. steel	X		X	X	X	X		R	light gray*
Coating Component									
galvanizing	C								
inorganic zinc primer		C	C		C				
organic zinc primer				C	C		C	C	
epoxy intermediate		C					C	***	
polyurethane topcoat		C					C		
epoxy topcoat			C	C					
acrylic topcoat					C			C	
powder coating						C			

“**X**” denotes a coating system that is acceptable for each element. Specific coating systems noted in the Contract Documents supersede the information provided in this table.

“**R**” denotes the coating system that is allowable for recoating unless otherwise specified in the Contract Documents. Reference 546 “Recoating Structures” for additional information. All recoating is allowable as field applied.

“**C**” denotes the coating system component, reference specification section for details.

* If the Contract does not specify a color, the Contractor shall use the color Federal Standard 16307, RAL 7004, Pantone 423, or approved equal.

** If purchased as an assembly, any corrosion inhibiting coating that is provided by the manufacturer is

acceptable.

*** Intermediate or tie-coat to be provided if recommended by the manufacturer.

545.2.1 Coating System No. 1: Shop Applied 2-Coat with Epoxy Topcoat

The Contractor shall select a complete coating system comprised of products meeting all performance requirements as listed in Table 545.2.1:1 below. Testing shall be in accordance with AASHTO R-31. All products in each system shall be from the same manufacturer. All products shall be represented on the latest version of the manufacturer's product data sheet as being suitable for use on bridges and capable of being applied at the specified dry film thickness requirements in Table 545.3.6:1.

Inorganic Zinc-Rich Primer – Shall achieve minimum SSPC Paint 20 Level 2 requirements for amount of zinc dust in the dry film of equal to or greater than 77% by weight.

Epoxy Topcoat Coat – Shall be a two-component epoxy polyamide or polyamidoamine coating, including Phenalkamine coatings with minimum solids by volume of 65%.

**Table 545.2.1:1
Acceptable Product Requirements**

TEST	REF. NO.	PRODUCT(S)	ACCEPTANCE CRITERIA	COMMENTS
Slip Coefficient	ASTM A 325, Appendix A.	IOZ	Class B, Min. 0.5	
Salt Fog Resistance	ASTM B 117	P/T (IOZ)	(A) No Delamination Allowed (B) Rust – Max creep 4mm, Avg. creep 2mm @5000 Hrs. (C) Blister – Conversion #8 @ 4000 Hrs.	
Cyclic Weathering Resistance	ASTM D 5894	P/T (IOZ)	(A) No Delamination Allowed (B) Rust – Max creep 4mm, Avg. creep 2mm @5040 Hrs. (C) Blister – Conversion #9 @ 4032 Hrs.	
Adhesion Pull-Off Strength	ASTM D 4541	IOZ Alone	2.4 MPa (350 psi)	
		P/T (IOZ)	2.4 MPa (350 psi)	
Freeze-Thaw Stability Pull-Off Strength	ASTM D 4541	P/T (IOZ)	2.4 MPa (350 psi)	
			4.1 MPa (600 psi)	
			2.4 MPa (350 psi)	
			4.1 MPa (600 psi)	
Field History	NA	P/T (IOZ)	Five (5) Bridges with Minimum two (2) year successful field history	

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P = Primer; T = Topcoat, IOZ = Inorganic Zinc Rich Primer

Primer information for the use of organic zinc for touch-up and repair is included in Section 546: Recoating Structures.

545.2.2 Coating System No. 2: Field Applied 2 Coat with Epoxy Topcoat

The Contractor shall select products meeting all performance requirements as listed in Table 546.2.1:1 below. Testing shall be in accordance with AASHTO R-31. All products used in a system shall be from the same manufacturer. All products shall be represented on the latest version of the manufacturer's product data sheet as being suitable for use on bridges and capable of being applied at the specified dry film thickness requirements in Table 546.3.5:1.

Epoxy Organic Zinc-Rich Primer (used to prime exposed bare steel areas only, spot prime) shall achieve minimum SSPC Paint 20 Level 2 requirements for amount of zinc dust in the dry film of equal to or greater than 77% by weight.

Epoxy Top Coat over existing finishes (applied over zinc primer and other sound existing coatings deemed suitable for over coating by the coating manufacturer's representative) shall be a two-component, surface tolerant epoxy coating with minimum solids by volume of 65%.

Table 545.2.2:1
Acceptable Product Requirements

TEST	REF. NO.	PRODUCT(S)	ACCEPTANCE CRITERIA	COMMENTS
Salt Fog Resistance	ASTM B 117	P/T (OZ)	(A) No Delamination Allowed (B) Rust – Max creep 8mm, Avg. creep 4mm @5000 Hrs. (C) Blister – Conversion #7 @ 4000 Hrs.	
Cyclic Weathering Resistance	ASTM D 5894	P/T (OZ)	(A) No Delamination Allowed (B) Rust – Max creep 8mm, Avg. creep 4mm @5040 Hrs. (C) Blister – Conversion #8 @ 4032 Hrs.	
Adhesion Pull-Off Strength	ASTM D 4541	OZ Alone P/T (OZ)	 4.1 MPa (600 psi) 4.1 MPa (600 psi)	
Freeze-Thaw Stability Pull-Off Strength	ASTM D 4541	P/T (OZ)	2.4 MPa (350 psi) 4.1 MPa (600 psi) 2.4 MPa (350 psi) 4.1 MPa (600 psi)	Requires same average as adhesion pull-off strength results, with no tests measuring less than 60% of those results

Field History	NA	P/T (OZ)	Five (5) Bridges with Minimum two (2) year successful field history	
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P = Primer; T = Topcoat, OZ = Epoxy Organic Zinc Rich Primer

545.2.3 Coating System No. 3: Shop or Field Applied 2 - Coat with Acrylic Topcoat

The Contractor shall select products meeting all performance requirements as listed in Table 545.2.1:1 above for Inorganic Zinc Rich Primer or Table 545.2.2:1 for Organic Zinc Rich Primer and 545.2.3:1 for Acrylic Top Coat below as applicable. It is acceptable to use either inorganic or organic zinc rich primer for 545.2.3 Coating System 3. All products used in a system shall be from the same manufacturer. All products shall be represented on the latest version of the manufacturer's product data sheet as being suitable for use on bridges and capable of being applied at the specified dry film thickness requirements in Table 546.3.5:1.

Epoxy Organic Zinc-Rich Primer (used to prime exposed bare steel areas) shall achieve minimum SSPC Paint 20 Level 2 requirements for amount of zinc dust in the dry film of equal to or greater than 77% by weight (Table 545.2.1:1), or;

Inorganic Zinc-Rich Primer (used to prime exposed bare steel areas) shall achieve minimum SSPC Paint 20 Level 2 requirements for amount of zinc dust in the dry film of equal to or greater than 77% by weight (Table 545.2.2:1), and;

Acrylic Topcoat (applied as overcoat over sound existing coatings deemed suitable for over coating by the coating manufacturer's representative or for repair to the finish of certain items per Section 545 Miscellaneous Steel) shall be a high performance DTM acrylic coating with minimum solids by volume of 38%. Suitable for application over zinc rich primers (Table 545.2.3:1).

Table 545.2.3:1
Acceptable Product Requirements

TEST	REF. NO.	PRODUCT(S)	ACCEPTANCE CRITERIA	COMMENTS
Adhesion Pull-Off Strength	ASTM D 4541	HPA	> 500 lbs.	One coat applied over blasted steel
Flexibility	ASTM D 522	HPA	Pass: No cracking / flaking	1/8 " conical mandrel One coat applied over blasted steel
Hardness (Pencil)	ASTM D 3363	HPA	Final Cure: "F"	One coat applied over blasted steel
Impact	ASTM D 2794	HPA	> 140 in. lbs.	One coat applied over blasted steel

HPA = High Performance Acrylic

545.2.4 Coating System No. 4 – Powder Coating

The Contractor shall obtain primer and topcoat from one (1) manufacturer. The Contractor shall select a coating system that meets the requirements of AAMA 2604.

545.2.5 Galvanizing or Zinc Coating

Reference Section 541.2.6.1.

545.2.6 Submittals

The Contractor shall provide a submittal for the proposed coating option and manufacturer to the Project Manager at least 30 Days before coating operations. If the color varies from the specified color, the Contractor may submit color samples on boards at least eight (8) inches by ten (10) inches for review and approval.

The Department may take random coating Materials samples during the Work for testing.

When the contract requires painting more than 1,500 square feet of steel surface, the Contractor shall submit a coating plan 30 Days prior to start of coating operations. Sample coating plans are available on the NMDOT website. The Project Manager shall have the option to waive the coating plan requirement.

545.2.6.1 Certification

Prior to coating application, the Contractor shall submit:

1. Notarized manufacturer's Certificates of Compliance stating that the Materials are the same as those described in the manufacturer's product data sheets.
2. Certified test reports from an independent laboratory performed in accordance with AASHTO R-31, showing acceptable performance results as listed on the chart in Section 545.

545.2.6.2 Product Data Sheets

The Contractor shall provide manufacturer's product data sheets and SDS with each Submittal that shows the following:

1. Mixing and thinning directions;
2. Recommended spray nozzles and pressures;
3. Minimum/maximum drying time, including re-coat times, for shop or field applied coats; and
4. Manufacturer recommended application procedures, including surface preparation and temperature requirements.

545.2.7 Contractor Qualifications

When the contract requires painting more than 1,500 sq ft of steel surface, the Contractor shall

demonstrate qualification by one of the following two methods:

Method 1

Obtain SSPC QP 1 certification for field painting or either SSPC-QP 3 certification or the AISC Sophisticated Paint Endorsement (SPE) for shop painting. The Contractor shall perform and document QA/QC inspections daily. QA/QC inspection documents shall be electronically submitted to the Project Manager on a weekly basis.

Method 2

Provide a coating plan and provide for NACE certified inspection (Level 2 minimum). The inspection services shall include but not be limited to:

1. Surface preparation and cleanliness inspection verifying profile and appropriate surface preparation.
2. Confirm products match approved submittals and certification letters. Document the batch numbers of all coatings.
3. Inspection of primer coat to include dry film thickness readings. Review contractors QA/QC reports for environmental conditions and document.
4. Observe application of stripe coat on the intermediate coat and document environmental readings during the start up of application. Review contractors QA/QC reports.
5. Inspect intermediate coat to include dry film thickness readings. Review Contractor's QA/QC reports.
6. Observe start up of finish coat application and document environmental conditions.
7. Final inspection to include visual inspection for runs, sags, and foreign material in coating. Also perform final dry film thickness inspection.
8. Inspect members after transportation, prior to subsequent coating and / or final acceptance.
9. Electronically submit interim reports after each inspection to the Project Manager within 3 working days.
10. Electronically submit comprehensive final report including photos to the Project Manager within 14 days of completion of inspection. Final report shall include QA/QC daily inspections performed by the Contractor.

Any deficiencies shall be corrected and reinspected by the NACE inspector prior to proceeding.

Samples of a coating plan and QA/QC inspection documents are available on the NMDOT website.

Provisions for demonstration of qualifications are incidental to the performance of the coating, no additional payment shall be made. NMDOT shall be granted open access to the coating operation to perform inspections and to review documentation of Contractor inspections.

The Project Manager shall have the option to waive the Contractor Qualification requirement for Miscellaneous Structural Steel scope.

545.3 CONSTRUCTION REQUIREMENTS

545.3.1 Liquid Coating Systems No. 1, No. 2, and No. 3

The Contractor shall apply coatings in conformance with SSPC – PA 1 “Shop, Field and Maintenance Painting of Steel” and with SSPC – PA Guide 13 “Guide Specification for Application of Coating Systems

with Zinc-Rich Primers to Steel Bridges” (aka AASHTO/NSBA Steel Bridge Collaboration S 8.1) and the manufacturer’s application instructions.

545.3.1.1 Surface Preparation

The Contractor shall remove contaminants in accordance with SSPC-SP I, or other methods approved by the Project Manager.

Surface preparation for all steel elements include in Section 545 shall be in accordance with SSPC-SP10 / NACE 2 Near White Blast Cleaning: When viewed without magnification shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products and other foreign matter of at least 95% of each unit area. Staining shall be limited to no more than 5 percent of each unit area, and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings. Unit area shall be approximately 3 in. x 3 in. (9 sq. in.).

Prepared surfaces shall be evaluated using the SSPC-VIS 3 Guide and Reference Photographs. The Contractor shall provide a current copy of the SSPC-VIS 3 Guide and Standard to the Project Manager. It shall become the property of the Department.

The Contractor shall maintain the steel dust free and prime within eight (8) hours after blast cleaning. The Contractor shall re-clean rusted or contaminated surfaces at no additional cost to the Department. The Contractor shall mask areas that require field welding before coating.

The Contractor shall clean again before applying each subsequent coat.

545.3.1.2 Coating

545.3.1.2.1 Mixing the Coating

The Contractor shall mix the coating with a power mixer to a smooth and lump-free consistency, in accordance with the coating manufacturer’s Specifications.

The Contractor shall mix the coating as much as possible in the original containers and continue mixing until the metallic powder or pigment is in suspension. The Contractor shall keep mixed primers continuously agitated before and during application.

545.3.1.2.2 Thinning the Coating

The Contractor shall not thin the coatings without the approval of the Project Manager. If it is necessary to thin the coatings, the Contractor shall thin the Material in accordance with the manufacturer’s recommendations.

545.3.1.2.3 Temperature and Weather Limitations

The Contractor shall only apply the coatings when the ambient air temperature and surface temperature of the steel are both above 50 °F and at least five (5) °F above the dew point.

The Contractor shall not apply the coatings when there is condensation or frost on the metal surfaces.

The Contractor shall not apply the coatings when the relative humidity is higher than 85 percent.

545.3.1.2.4 Coating Applications

The Contractor shall not apply coating until the Department approves the surface preparation. The Department may waive this inspection.

A stripe coat of primer and intermediate material shall be applied to all edges, corners, seams, crevices, interior angles, junctions of joining members, rivets, bolt heads, nuts and threads, welds and similar irregularities. The stripe coats shall be of sufficient thickness to completely hide the surface being covered and shall be followed, as soon as practicable, by a full application of the appropriate coating to its specified thickness.

The Contractor shall repair coated areas where the primer or topcoat runs, sags or cracks.

The Contractor shall not apply any coating until the previous coat has fully cured or per the manufacturer's application requirements.

The Contractor shall allow the manufacturer's minimum recommended cure time to lapse between coats. If more than 30 Days elapse between the primer application and the topcoat application, the Contractor shall contact the coating system manufacturer for surface preparation recommendations before applying subsequent coats.

The Department may accept minor cosmetic defects in ground level miscellaneous Structural Steel components not in public view, if the defects will not affect durability.

545.3.1.2.5 Required Coating of Components

The Contractor shall apply the primer and topcoat to steel surfaces, except those that will contact elastomeric bearing pads or are subject to sliding and rotational movements.

The Contractor shall coat new steel piling from the bottoms of the pier caps to two (2) ft. below the finished grade or streambed elevations.

545.3.1.2.6 Coating of Sole Plates for Concrete Bridges

The Contractor shall deliver sole plates to the Project with one (1) coat of primer applied to all surfaces except masked-off strips, where the sole plates will be welded to the shoe plates, and surfaces that will contact elastomeric bearing pads.

Before installation, the Contractor shall clean surfaces that will contact pads in accordance with SSPC-SP 6. The Contractor shall clean off all rust on sole plates prior to installing and welding.

After installing the pads and welding the sole plates to the shoe plates, the Contractor shall touch up the primer and apply topcoat to exposed surfaces.

545.3.1.2.7 Spray Equipment

The Contractor shall apply the coatings with spray nozzles at the manufacturer recommended pressures.

545.3.1.2.8 Film Thickness Requirements

The Contractor shall apply coatings in accordance with Table 545.3.1.2.8:1, "Required Film Thicknesses."

Table 545.3.1.2.8:1 Required Film Thicknesses	
Coating	Dry film thickness range (mils)
Primer (IOZ) OR Primer (OZ)	2 - 4
Topcoat (epoxy) OR Topcoat (acrylic)	3 - 5
	4 - 6
	2 - 4

545.3.1.2.9 Field Repair of Liquid Coatings

Field repair of liquid coatings shall be performed in accordance with Section 546 "Recoating Structures" and the manufacturer's recommendations. Field repair shall be accomplished with the same coating system used for the original application with the exception that organic zinc rich primer may always be used.

The Contractor shall field repair coated areas that are rusted or damaged. The Contractor shall prepare the surface in accordance with 546.3.1 "Surface Preparation of Existing Bridges and Structures" or with methods approved by the Project Manager.

The Contractor shall prime large areas using spray Equipment, brush, or roller. The Contractor shall prime small areas with a brush. The Contractor shall spray or brush the topcoat. Two (2) or more coats may be necessary to build up the required film thickness. The Contractor shall apply topcoat only to areas where the topcoat is damaged. Requirements of Section 546.3, "Construction Requirements" apply to field repairs.

545.3.2 Powder Coating System No. 3

545.3.2.1 Surface Preparation

The Contractor shall remove contaminants in accordance with SSPC-SP 1, or other methods approved by the Project Manager. The Contractor shall blast clean in accordance with SSPC-SP10 Near-White Metal Blast Cleaning. Additionally, for powder-coated surfaces, an iron or zinc phosphate wash shall be included to provide long-term corrosion protection.

545.3.2.2 Primer Application

The Contractor shall use a primer that is a zinc rich epoxy powder coating designed for use over ferrous metal substrates. The Contractor shall apply the zinc rich epoxy powder coat primer to a minimum of two (2) mils dry film thickness, above the peaks of any blast profile.

545.3.2.3 Topcoat Application

The Contractor shall use a topcoat that is a super durable polyester powder coating designed to provide for maximum UV exposure protection. The Contractor shall apply the polyester topcoat to a minimum of three (3) mils dry film thickness before the primer has cured or as recommended by the manufacturer.

**Table 545.3.2.3:1
Required Film Thicknesses**

Coating	Dry film thickness range (mils)
Zinc-rich epoxy primer	Min. 2 mils
Polyester topcoat	Min. 3 mils

The Contractor shall use a magnetic film thickness gage or an electronic film thickness detector to determine dry film thickness per SSPC – PA 2 “Procedure for Determining Conformance to Dry Coating Thickness Requirements”.

545.3.2.4 Fixturing

The Contractor shall suspend the components by suitable metal hooks or fixtures to provide a sufficient electrical grounding path. The Contractor shall affix the components with a minimum of direct contact area with the fixture device.

545.3.2.5 Curing

The Contractor shall place the powder-coated components in a suitable oven and cure per the manufacturer’s recommended cure cycle. The Contractor shall remove the components from the oven and allow cooling. The Contractor shall visually inspect the components to ensure a smooth continuous uniform finish, free from runs, sags, pinholes or other defects.

545.3.2.6 Touch-up Painting / Field Repair of Powder Coatings

Field repair of powder coatings shall be performed in accordance with Section 546 “Recoating Structures” and the manufacturer’s recommendations. The Contractor shall use Coating System No. 1 from Section 546.2.1, using the epoxy organic zinc-rich primer only where bare metal is exposed.

The Contractor shall field repair coated areas that are rusted or damaged.

545.4.8 Handling Steel

The Contractor shall handle or load newly coated Structural Steel only when the coating has fully cured.

The Contractor shall store coated components on pallets or in other approved ways so that the steel does not rest on soil.

The Contractor shall protect steel coatings from binding chains with approved softeners. The Contractor shall hoist with padded hooks and slings. The Contractor shall space parts during shipment to ensure that no rubbing occurs.

545.4.9 Provisions for Inspection

The Contractor will be responsible for performing and documenting Quality Control (QC) inspections of all shop / field surface preparation and coating activities. When the contract requires painting more than 1,500 sq. ft. of steel surface, the Contractor shall reference Section 544.2.2.3 Contractor Qualifications. When the contract required painting less than 1,500 sq. ft. of steel surface, the Contractor shall document all QC inspection activities, measurements and observations on the Daily Inspection report. These reports shall be submitted to the Project Manager at a minimum on a weekly basis and shall account for all work performed.

The Contractor shall notify the Project Manager at least ten (10) Days before surface preparation and/or coating to allow adequate time to plan inspection activities.

After completing erection, the Project Manager will inspect the surfaces to be embedded in concrete. The Contractor shall repair damaged or rusted surfaces before placing decks. After placing the deck and at an agreed upon time, the Project Manager will inspect the entire steel Structure for coating system damage. The Project Manager will mark damaged areas for repair and will re-inspect after repairs are complete.

545.4.10 Protection of the Work and Public

During the coating operations, the Contractor shall protect the work and the public from blast cleaning operations, paint splatter, splashes and smirches with protective covering or other methods approved by the Project Manager.

When the protective devices or procedures are ineffective, the Project Manager may suspend the Work until corrections take place.

545.4.11 METHOD OF MEASUREMENT—Reserved

545.4.12 BASIS OF PAYMENT

The Department will pay for the coating system as Incidental to Structural Steel, in accordance with Section 541, "Steel Structures."

SECTION 602
SLOPE AND EROSION PROTECTION STRUCTURES

602.2 **MATERIALS** Add the following to the section:

Riprap shall be brown or tan in color to generally match the tone of the existing site soils, not black, white or gray.

July 7, 2015

SPECIAL PROVISIONS FOR SECTION 602: SLOPE AND EROSION PROTECTION STRUCTURES

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

602.2.1 Classifications Delete Class D Classification from **Table 602.2.1:1** and substitute the following:

The Department will classify riprap and gabions in accordance with Table 602.2.1:1 "Riprap Classifications and Gabion Requirements" with the exception of Class D, Derrick Stone. Class D, Derrick Stone will follow the gradation requirements in Table 602.2.1:2 "Gradation Requirements for Class D, Derrick Stone" shown below.

Table 602.2.1:2
Gradation Requirements for Class D, Derrick Stone

CLASS, DESCRIPTION	PERCENT OF ROCK EQUAL OR SMALLER BY COUNT, D _x	RANGE OF INTERMEDIATE DIMENSION ¹ , (inches)	RANGE OF ROCK WEIGHT ² , (pounds)
D, Derrick Stone ³	100	30	5000
	70	24 – 18	1780 – 2500
	40	11 – 14	360 – 500
	20	6 – 8	70 - 100

¹ Intermediate dimension measured as the shortest straight-line distance from one side of the rock or rock particle to the other on the maximum projection plane (plane of rock or rock particle with the largest projected surface area).

² Weights based on a specific gravity of 2.65.

³ Include spalls and rock fragments to provide a stable dense mass.

SECTION 607 FENCE

Delete the entire Section 607 and substitute the following:

607.1 DESCRIPTION

This Work consists of constructing fence and gates.

607.2 MATERIALS

607.2.1 Wire

Provide wire and wire components with at least a Class 1 zinc coating in accordance with ASTM A 121 or ASTM A 116, unless otherwise specified in the Contract. Instead of Class 1 coating, the Contractor may coat the wire with aluminum alloy covering at least 0.3 oz per square foot of wire surface.

Provide coated brace wire with a size of at least 12 ½ gauge; use for constructing line wire, end braces and intermediate braces with wood posts.

607.2.2 Post Fasteners

Provide coated staples with a diameter of at least 0.148 in and a length of at least 1 1/2 in; use for fastening fence wire to wood posts.

607.2.3 Posts

Provide metal or wood corner, brace, intermediate brace gate, and line posts of the specified type, size, and length in accordance with the Contract.

607.2.4 Wood Posts

Provide wood posts cut from live southern yellow pine, lodgepole pine or ponderosa pine. Provide straight posts that are free of decay and other defects, trimmed smooth of knots and projections, and with both ends sawed off perpendicular to the centerline. Provide an average nominal diameter at the top of each post of at least 3 in. Ensure the diameter of corner, brace, intermediate brace, and gate posts is at least 6 in, measured 6 in below the top of the post. Wood posts shall be pressure treated with pentachlorophenol in accordance with Section 550.2.2, "Preservatives and Treatments Method" with a minimum retention of 0.3lb per cubic foot.

The Contractor may provide line posts with a slight crook in one direction, but the post may not vary more than 1 1/2 in from a straight line connecting both ends of the post.

607.2.6 Gates

Contractor shall provide tubular steel or steel panel frame gates. Galvanize gates in accordance with Section 607.2.2.2.1, "Metal Posts," or coat in accordance with Section 545, "Protective Coating of Miscellaneous Structural Steel." Use "Interstate Green" as the finished color coating, except for galvanized gates and unless otherwise specified in the Contract.

607.2.7 Fittings

Provide fittings, hardware, and appurtenances for fences and gates that are of commercial-quality steel, malleable iron, or wrought iron, and galvanized in accordance with ASTM A 153.

607.2.8 Concrete

Provide concrete with a 28-day compressive strength of 3000 psi minimum. Quikcrete or other similar packaged, pre-blended concrete mixtures to be mixed at the site according to the manufacturer's directions may be used.

607.3 CONSTRUCTION REQUIREMENTS

607.3.1 General

Clear the fence lines of trees, bush, stumps, logs, weeds, existing fences, and other obstructions that may interfere with fence construction, unless the Project Manager requires certain trees to remain in place. Dispose of removed material in accordance with Section 201, "Clearing and Grubbing."

The Contractor is to embed gate posts in concrete and shall install temporary guys or bracing to hold the posts in position until the concrete sets. Unless otherwise specified, do not install Materials on posts and do not strain posts, braces, or anchors set in concrete until 7 Days after concrete placement, or until the concrete has reached a compressive strength of 2,500 psi, whichever occurs first. Crown the concrete at the top of the foundation to shed water.

Only cut the tops of posts as approved by the Project Manager. Repair of Damaged Coating on Pull Cables and Tension Wires.

Firmly attach wire and fencing to the posts and braces. Tightly stretch wire and install it at the required elevations. Place fence wire on the field side of the posts, except on the inside of curves.

At each location where an electric transmission, distribution, or secondary line crosses new fence, provide and install a ground connection in accordance with the NEC®. Build new fences adjacent to existing fence before removing existing fences. When removing and rebuilding fences, maintain the security of livestock and protect adjacent properties and the traveling public. Remove the existing fence or unused Materials and neatly roll it up in single strand rolls. Remove the fence posts without damaging them and place the posts with the rolls of wire within the Right of Way for property owners to salvage, unless otherwise directed by the Project Manager. If the property owners do not pick the fence up within the allotted time, dispose of the fence as directed by the Project Manager.

607.3.2 Wire Fence

Set posts plumb and in accordance with the Plans. The Contractor may drive metal line posts. Excavate for footings and anchors in accordance with the Plans or as directed by the Project Manager. Place post hole backfill in thin layers and compact each layer.

607.3.2.1 Fence Tensioning

Stretch fence wire with a mechanical stretcher or other similar device. Do not allow the length between pull posts to exceed 300 ft.

607.3.2.2 Braces and Corner Posts

Place intermediate braces at equal intervals of not more than 300 ft or less and at every fence grade-change, such as edges of arroyos, bottoms and tops of hills, and as directed by the Project Manager. Maintain the required distance between the bottom wire and the ground. Space intermediate braces evenly between end braces and gateposts. Place end post and brace at end of fence segments. Stretch the wires and firmly attach them to the corner posts.

607.3.3 Gates

Fabricate and construct gates in accordance with the Contract.

607.4 METHOD OF MEASUREMENT

The Department will measure fences and gates along the top from outside to outside of end posts for each continuous run of fence or gate.

607.5 BASIS OF PAYMENT

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
607900	Wire Fence	Linear Foot

607.5.1 Work Included in Payment

The following work and items will be considered as included in the payment for the main item(s) and will not be measured or paid for separately: clearing and grubbing, grading, excavation, backfill, disposal of surplus material, concrete, fasteners, galvanizing, coating repairs and all additional bracing required for grade changes.

April 25, 2018

SPECIAL PROVISIONS MODIFYING SECTION 632: REVEGETATION

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Delete Section 632 - **REVEGETATION** in its entirety and replace with the following:

632.1 DESCRIPTION

This revegetation Work consists of preparing the soil, seeding, mulching, crimping, and the application of tackifier to areas stripped of vegetation during construction operations and are required to be revegetated. For additional information refer to the US Clean Water Act as outlined in the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP). Construction staking and digital submittals are included in the scope of the revegetation Work. The Department and Subcontractor shall each have at least one Section 632 TTCP-certified person on the project at all times.

632.2 MATERIALS

Provide submittals as per Table 632.3.4:1, "Operations Sequence for Classes of Seeding," for all Materials to the Project Manager at a minimum of ten (10) working days before revegetation Work commences. Submittals shall conform to the specifications and the revegetation Plan, and shall be on the Approved Products List. After submittals have been approved as per procedures identified in Section 632.3.3 the Contractor may substitute products on the Approved Products List with prior approval as per the same process. Rock Mulch material submittal shall be required and will not appear on the Approved Product List. Submittal shall be a full five gallon bucket sample provided to the PM for sieve analysis.

All bulk materials delivered to the project shall be accompanied by a certified weigh master ticket for materials utilized per project as per Section 109.1, "Measurement of Quantity." Split loads of fertilizer, seed, straw, tackifier, and bonded fiber matrix may be allowed with proper weigh master ticket and contractor affidavit. Split loads shall not be allowed for compost mulch and rock mulch.

All packaged Materials delivered to the Project shall be wrapped or otherwise securely protected from weather which might affect their integrity. Materials in weather-damaged packaging shall be rejected for use on the Project.

Certification for bulk Materials shall comply with Section 106.4, "Certificates of Compliance." Notify Project Inspectors when bulk Materials are delivered so loads may be inspected and verified.

The Contractor shall ensure that straw bales stored on the Project shall not exceed 20% moisture content.

632.2.1 Temporary Soil Stabilant/Tackifiers for Class A Seeding

Temporary soil stabilant and tackifier shall be considered the same and the terms used interchangeably. Tackifiers shall have a blue or green dye lasting a minimum of 36 hours to aid in application and inspection, and be bio-degradable. When used as part of seeding operations it shall be applied at a rate of 200 pounds per acre.

Tackifiers shall be plant-derived and bio-degradable and be composed of either guar, psyllium (*Plantago ovata*), or starch.

Guar. Guar is a plant based product derived from the ground endosperm of the [guar plant](#), treated with dispersant agents for easy mixing.

Psyllium. Psyllium is composed of the finely ground muciloid coating of [Plantago ovata](#) seeds that is applied as a dry powder or in a wet slurry to the surface of the soil. It dries to form a firm but re-wettable membrane that binds soil particles together but permits germination and growth of seed. Psyllium requires twelve (12) to eighteen (18) hours drying time.

Starch. Starch is non-ionic, cold-water soluble (pre-gelatinized) granular cornstarch. The Material is mixed with water. Approximate drying time is nine (9) to twelve (12) hours.

632.2.2 Seed for Class A and C Seeding

The Project seed list shall conform to the NMDOT Revegetation Zone and Seed List Maps at the NMDOT website or at the following link: <https://arcg.is/2peB6Cc>

The list used shall be the year the Project was let. The Contract shall specify varieties of noxious weed-free seed in accordance with New Mexico Seed Law (NMSA 1978, § 76-10-11 et seq.).

Seed submittal shall be a list from a seed producer showing the common name, botanical name, pure live seed, total poundage, source locality (county and state), and NMDOT Project control number as per the revegetation/erosion control Plan.

All seed suppliers must be on the current Approved Products List and provide documentation that their regulating state agency belongs to the Association of Official Seed Certifying Agencies (AOSCA).

Seed mixtures shall be pre-mixed and bagged certifying the mixture quantity and percentage as noted in the contract.

Substitutions for unavailable seeds shall be performed by adding the quantity of the unavailable seed to the quantity of the next seed species listed within that subcategory of the seed list. Before substitutions can be made the contractor must provide proof of unavailability in letter form from three seed suppliers listed on the NMDOT Approved Products List that the seed is not available.

All seed delivered to the Project shall be stored in a container protected from rodents and moisture and not subject to temperatures higher than 90°F.

632.2.2.1 Seed Labeling

Seal and label each bag in accordance with the Federal Seed Act (7 U.S.C. § 1551 et seq.) and NMDA

seed labeling requirements (NMSA 1978, § 76-10-13). Provide the following information on each bag tag for each species:

1. Variety (specify if certified);
2. Kind of seed;
3. Lot number;
4. Purity;
5. Germination;
6. Percentage crop seed, percentage inert, percentage noxious weeds, in accordance with New Mexico Seed Law (NMSA 1978, § 76-10-11. et seq)
7. Origin;
8. Test date; and
9. Weight (in pounds) of this species or percentage of total lot.

Provide seed analysis results that are not older than twelve (12) months prior to use.

Seed suppliers shall provide one-acre seed bags.

Provide to the Project Manager documentation of seed origin and pure live seed content from a certified testing Laboratory. Seed must arrive in the original sealed containers from the Supplier and the Revegetation Contractor must provide all tags and certifications to the Project Manager. Certification must be provided that the seed has been stored in appropriate conditions in the twelve (12) months before arriving at the Project. Each seed tag shall be affixed to the bag and have the project control number clearly identified. The certified seed Supplier shall maintain records of seed tag control numbers for a period of three (3) years.

632.2.3 Fertilizer for Class A and C Seeding

Fertilizer shall be organic, slow release with an N-P-K (nitrogen, phosphorous, potassium) analysis of either 3-6-3 or 3-7-2 and blended with endo-mycorrhizza and humates. Application rate shall be 1,000 lbs. per acre. Humates must comprise a minimum of 15% by weight. Endo-mycorrhiza must be arbuscular with a minimum propagule of 1.33 propagules per gram. Provide fertilizer (specified type and formulation) and supplier's certification in accordance with the contract. Each bag or tote of fertilizer shall have a visible, sealed, and un-altered analysis tag from the manufacturer that must be approved by an authorized person prior to application of the material. The tag must include the manufacturer's information, the N-P-K analysis of the product, and the weight of the bag or tote. NMDOT reserves the right to inspect any bill of lading or packing slips from the supplier to verify quantity of material on site.

632.2.4 Hydro-Mulch - Bonded Fiber Matrix (BFM) for Class C Seeding

Hydro-mulch shall be Bonded Fiber Matrix (BFM). BFM is a hydraulically-applied blanket that controls soil erosion and accelerates seed germination. BFM is a three-dimensional composite of wood or paper fibers bonded by polymer tackifier that provides high performance erosion prevention on slopes. Dye and tackifier shall be included in the BFM formulation. BFM shall be applied at a rate of 2,000 lbs. per acre. As a hydraulic erosion control product (HECP) as defined by the Erosion Control Technology Council, the BFM or its equivalent shall be Type 3 or higher in functional longevity as defined in Table 1 of the 2014 Standard Specifications for Hydraulic Erosion Control Products (HECPs) Part 2.01.

<p style="text-align: center;">Table 632.2.6:1 Requirements of Compost Mulch</p>
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632.2.5 Rock Mulch for Class C Seeding

Rock Mulch shall be between $\frac{3}{4}$ " and no greater than 1 $\frac{1}{4}$ " in size, with no more than 3% passing the $\frac{1}{2}$ " sieve. Rock shall have a minimum of two Fractured Faces. Rock which is black in color will not be acceptable. Pumice rock is not acceptable.

632.2.6 Composted Mulch for Class A Seeding

Furnish and place composted mulch as shown on the revegetation plan and in accordance with the criteria as described below. Composted mulch provider must be registered with or permitted by the New Mexico Environment Department Solid Waste Bureau and must be in compliance with 20 NMAC 9.1.

Composted mulch is defined as the product of a controlled aerobic thermophilic biological decomposition process that meets the quality requirements in Table 632.2.6:1, "Material and Operations for Classes of Seeding." Raw Materials used in producing composted mulch may include green waste, animal manure, animal bedding, paper waste, food waste, biosolids or other non-toxic organic matter, but shall not include animal mortalities.

Material	Measure	Method	Criterion
All Composted Mulches	Moisture Content*	Evaporative loss at 105°C	Between 35 % and 60%
	Carbon/Nitrogen Ratio*	Nitrogen by AOAC 993.13, Carbon by ASTM D5373	Between 15:1 and 20:1
	Particle Size	Sieve	40% minimum to 100% maximum of Material may pass ¾ inch screen; 100% of pieces smaller than 4 inches in length and 2 inches in diameter
	Electrical Conductivity*	1:5 slurry (mass basis)	<10 mmho/cm
	pH*	1:5 slurry (mass basis)	pH 5.0 – pH 8.0
	Organic Matter*	Loss on ignition at 550°C	25% - 100% of dry weight
	Maturity	Germination test in 50:50 (volume basis) mixture of ¾ inch screened composted mulch and twice-rinsed nursery sand.	Minimum 50% germination to second set of leaves for marigold seeds
	Stability	By temperature and moisture content	Maximum core temperature of 110°F after 48 hours in 5 foot tall conical pile, with moisture adjusted to between 40% and 60%.
	Debris	By volume	Less than one percent (1%) inorganic debris, including but not limited to, glass, plastic, stones and metal.
Composted Mulches with Wastewater Biosolids	Trace Metals*	HNO ₃ digestion	Complies with Table 3 of 40CFR503.13
	Fecal Coliforms*	MPN with A-1 broth	<1000 MPN/dry gram
*Tests marked with asterisks must be performed by a suitable analytical Laboratory; other tests may be performed by the composted mulch producer.			

632.2.6.1 Acceptance

Compost mulch suppliers on the Approved Products List are approved for project use. The NMDOT

Landscape Architect shall review lab analysis and submittals from the compost producers every 180 days and confirm their listing on the Approved Products List.

Before delivering composted mulch, provider shall furnish documentation that includes the following:

1. The raw Materials, by percentage of volume, used in the production of the delivered composted mulch;
2. Daily temperature records for at least 20% of the piles or batches used to produce the delivered composted mulch, illustrating attainment of at least 130°F for at least seven (7) consecutive Days;
3. A Laboratory analysis for criteria shown in Table 632.2.6:1, "Requirements of Compost Mulch" performed on composted mulch no more than 180 Days prior to delivery;
4. An affidavit, signed by a corporate officer, confirming that the composted mulch meets each requirement shown in Table 632.2.6:1, "Requirements of Compost Mulch"

632.2.6.2 Straw Mulch for Class A Seeding

Do not use rotten or moldy straw. All straw mulch must be barley straw and is to be free of noxious weeds as certified by an industry-recognized forage certification authority. Certification twine must appear on all certified straw bales. The color of the certified twine for straw bales shall be listed on the certification submittal for identification purposes. The date on the straw certification provided to NMDOT may not be older than one (1) year from the date of purchase. Before Acceptance the Contractor shall provide to the Project Manager weigh tickets signed by a certified weighmaster as per Section 109.1, "Measurement of Quantity," which confirms that the amount of bulk Materials delivered to the Project equals tonnage required for the Project per the determined acreage.

632.3 CONSTRUCTION REQUIREMENTS

632.3.1 Equipment

All Equipment shall be inspected by the Contractor to confirm Equipment is in good working order prior to commencing work. An Inspector shall witness the inspection and calibration.

To avoid the spread of noxious weeds, all revegetation Equipment (including but not limited to trucks, trailers, tractors, hydro-seeders, drill seeders, straw blasters, and disks) shall be pressure-washed to remove all visible mud, soil, and debris prior to entering the Project limits within the state right of way. If Equipment leaves the Project for any reason it shall be re-inspected when returned to the job site.

Disking attachments shall have a minimum six (6) foot carriage with front and rear discs.

Crimping Equipment shall have a minimum eight (8) foot wide carriage.

Skid steer attachments may only be used on confined areas for seeding operations.

Skid steers shall not be used for spreading compost unless in a confined area.

632.3.1.1 Drill Seeder

Drill seeding Equipment shall be inspected so that drill seed drop tubes are not torn or clogged. All

seed loaded into Equipment shall be verified by an Inspector to confirm correct application rates. An Inspector must verify that the auger in the seed bin is rotating and that seed is dropping through drop tubes.

The drill seeder must be inspected daily to prevent loss of seed or to prevent over-seeding. Calibration is necessary to control rate and depth of seed distribution. Calibration procedure and demonstration shall be as per manufacturer's specifications. The drill seeder shall be calibrated once per project unless it is replaced on the project. Drill seeders shall only be modified by manufacturer recommendation and documentation of the modification must be available.

The inspection shall ensure that the Equipment has the following:

1. Double disc openers with 'A' frames
2. Depth bands;
3. Drop tubes;
4. Packer wheels or drag chains;
5. Rate control attachments;
6. Seed boxers with covers and agitators for trashy seed; and
7. Keyway holding auger to shaft

632.3.1.2 Hydro-Seeder

The hydro-seeder cannons, hoses and agitators shall be in good working condition. The hydro-seeder shall be capable of applying materials up to distances of 200'.

632.3.2 Materials and Sampling

Inspector must be present when Materials are to be loaded into Equipment or distributed on the areas to be seeded. Contractor shall provide all containers and bags to the Project Inspector for verification.

A one (1) quart sealed zip lock bag of seed Material labeled with the Material identification and the Project control number is to be provided to the NMDOT Landscape Architect for examination and testing. The Department may reject Materials not in accordance with the Contract.

632.3.3 Pre-Seeding Conference

A mandatory pre-seeding conference called by the Project Manager shall be held on the Project before revegetation Work begins. Attending will be the NMDOT Project Manager or representative, the NMDOT Landscape Architect or certified seeding Inspector, the General Contractor, and the Revegetation Contractor.

The purpose of the meeting is to inspect the project, and off-site yards, pits, and borrow roads for confirmation of their revegetation requirements. The Project Manager shall have at the pre-seeding meeting documentation of all pits, Contractor yards, etc. approved for use on the Project. Per 632.3.12, "Seeding Operations for Class A and Class C Seeding," test strip location shall be verified following the Pre-seeding Conference. Construction staking must be completed and quantities must be verified by the Project

Manager before test strip commences.

Submittals must be provided to the Project Manager and Landscape Architect ten (10) Days prior to the proposed start of revegetation Work. Any revegetation Work done prior to this inspection shall be rejected.

All areas to be revegetated shall be measured and confirmed for each class of seeding in accordance with Section 801, "Construction Staking By The Contractor." The Project Manager and the Contractor shall field verify and agree on the acreage for each Class of seeding, including Modified Class A, before any Materials are ordered or delivered to the Project.

Construction staking shall also identify all areas which have less than 4" of soil cover and qualify for Modified Class A seeding.

The Prime Contractor shall provide minutes of this meeting for review and approval by the Project Manager and Landscape Architect or representative.

There will be no change in Materials or the scope of revegetation Work after the Contractor begins seeding operations.

For revegetation Work areas to be considered ready for revegetation they shall be accessible, free of Equipment, and no further construction processes occurring which would interfere with seeding operations. No further revegetation Work or Equipment access shall occur on areas which have been revegetated.

The Prime Contractor shall maintain a minimum twelve (12) foot wide Equipment access to all revegetated areas for use by revegetation Subcontractor until revegetation Work is complete.

632.3.3.1 Weather Limitations

Revegetation Work shall not be performed when the ground is frozen or when temperatures are below 32°F. No revegetation work shall be performed when wind speed exceeds fifteen (15) miles per hour as measured with a wind meter by the Inspector.

632.3.4 Seeding Classes

Provide the various classes and the Material and operations for each class in accordance with Table 632.3.4:1, "Operations Sequence for Classes of Seeding."

**Table 632.3.4:1
Operations Sequence for Classes of Seeding**

Operation	Class		
	A	MOD A	C
Disk seed bed to four (4)"	X	X	—
Apply fertilizer by broadcast, then disk to four (4)"	X	X	—
Apply one (1) inch compost mulch, disk to four (4)"	X	X	—
Drill seed	X	—	—
Straw crimp; apply tackifier, disk to 4"	X	—	—
Apply 1" compost mulch, disk to 4"	X	—	—

X

Track slopes with ridges horizontal and parallel to bottom of slope	—	—	X
Hand rake or chain harrow surface horizontally	—	X	X
Hydro apply seed, fertilizer, dye, tackifier	—	X	X
Scarify seeded areas horizontally to slope	—	—	X
Hydro mulch; apply tackifier, dye	—	X	X
Rock Mulch	—	—	X

Note: No seeding shall be applied on frozen ground

Key: X = required;
 — = not required

The Department defines the seeding classes as follows:

1. Class A = seeding with a drill seeder (slopes up to 3:1 or flatter)
2. Class C = seeding with hydro seeder (slopes steeper than 3:1 to a maximum of 2:1).

632.3.5 Modified Class A Seeding for Narrow Areas or Areas Inaccessible to Drill Seeding Equipment

Any project areas with slopes less than 3:1 requiring revegetation which are less than eight (8) ft. wide, or are inaccessible to drill seeding Equipment, or are too rocky to disk to a 4" depth, shall use the following procedure and payment is to be made at the Class A rate.

Disk soil to a four (4) inch depth with one (1) inch of incorporated compost mulch and fertilize as per Class A treatment. A skid steer with attachments may be used. If the seed bed is too rocky to disk to 4" omit compost mulch and chain harrow or hand rake the entire area and proceed with Steps 1 and 2 below.

A hydro-seeder shall then be used to apply the seed, dye, tackifier, and hydro mulch in two (2) steps as described below.

Step 1. Apply seed and dye to the newly disked soil, rake or chain harrow so seed is covered with soil.

Step 2. Apply an approved bonded fiber mulch with tackifier applied in two (2) coats from opposing directions at rate of 2,000 lbs. per acre.

Seed in these areas shall be applied at twice the specified rates and no extra payment shall be made therefore.

632.3.6 Revegetation of Areas Outside the Project Limits

Revegetation of all disturbed off-site locations will be in accordance with Sec. 104.7, "Final Cleanup," and the appropriate class of seeding will be used for the terrain. Section 632, "Revegetation," procedures will be followed for all public lands and private lands that are required to be revegetated unless other seed lists and procedures are required in a resource agency permit. All revegetation work done for permitted contractor- located activities shall be done at the Contractor's expense.

The Contractor must provide as part of submittals a letter of intent from landowners for off-site locations to be used as per Section 104.7, "Final Cleanup." The letter of intent must acknowledge the landowner's right to have revegetation performed as per our specifications and if that revegetation right is waived the owner acknowledges that neither the Contractor nor NMDOT shall be responsible for any claims, including but not limited to fugitive dust, noxious weeds, and siltation of waterways, related to the owner's decision to forgo revegetation. When revegetation Work is being performed on private land, a right of access permit for inspection of the revegetation Work for that private land must be provided by the Contractor to Project Management and shall be considered incidental to the Work.

The Contractor shall provide documentation of the treatment used and notify Project Management when the revegetation Work is being performed so Inspectors may be present.

Table 632.3.6:1
Schedule of Materials for Class A Seeding

CLASS A REVEGETATION MATERIALS PER ACRE				
<u>TACKIFIER</u>	<u>COMPOST MULCH</u>	<u>SEED</u>	<u>STRAW</u>	<u>FERTILIZER</u>
200 lbs	134 cubic yards	Per revegetation zone list	2 tons	1000 lbs.

Table 632.3.6.2
Schedule of Materials for Class A Modified Seeding

CLASS A MODIFIED REVEGETATION MATERIALS PER ACRE			
<u>COMPOST MULCH</u>	<u>SEED</u>	<u>HYDRO MULCH WITH TACKIFIER</u>	<u>FERTILIZER</u>
134 cubic yards	Per revegetation zone list X2	2,000 lbs	1000 lbs.

Table 632.3.6:3
Schedule of Materials for Class C Seeding

CLASS C REVEGETATION MATERIALS PER ACRE			
<u>HYDRO MULCH WITH TACKIFIER</u>	<u>SEED</u>	<u>ROCK MULCH</u>	<u>FERTILIZER</u>
2,000 lbs.	Per revegetation zone list X2	300 tons	1,000 lbs.

632.3.7 Materials Certifications

Provide all certifications for required Material to the Project Manager before the Project begins.

632.3.8 Seedbed Preparation for Class A Seeding

Till the seedbed with a disk, harrow, or chiseling tools to at least four (4) inches deep. Uproot competitive vegetation during seedbed preparation, and uniformly work the soil to a surface free of clods, large stones, or other Deleterious Material that would interfere with seeding Equipment. Ensure Inspector approves area that was disked before compost is added to the soil.

Add one (1) inch of compost mulch as specified by disc, harrow, or chisel to a depth of four (4) inches. The same day as and preceding tilling compost mulch into the seedbed water shall be added to the

compost mulch at a rate of 2,500 gallons per each 134 cubic yards. This is to aid in the incorporation of the mulch into the seedbed. All compost mulch must be incorporated into the seedbed before adding fertilizer and commencing drill seeding. Add fertilizer by broadcast and disc, harrow, or chisel to a depth of four (4) inches.

Till across the slope, along the contour. Do not till the seedbed if the moisture content of the soil is outside the limits recommended by the seed Supplier for planting, or the ground is in a non-tillable condition.

Do not prepare more seedbed area on which the entire seeding operation can be applied before the surface crusts or loses seed and fertilizer to erosion. If erosion or crusting occurs, perform seedbed preparation again.

After seed bed preparation and before drill seeding commences all rocks larger than four (4) inches in diameter shall be removed from the seed bed and no payment shall be made therefore.

632.3.9 Tracking and Scarification for Class C Seeding

Areas designated as Class C treatment shall be track-walked as per Table 632.3.4:1 with tracks parallel to the toe of slope to compact and score the slopes within seven working days prior to the commencement of Class C operations.

Slopes which have eroded or otherwise degraded in the seven working day period before seeding may need to be re-graded before revegetation.

Competitive vegetation shall be uprooted before hydro-seeding so that seed has good adherence to the surface and soil cover and no payment shall be made therefore.

Following tracking slopes shall be scarified by hand raking or chain harrowing horizontally and parallel to the bottom of the slope.

Following tracking of the slopes all rocks larger than four (4) inches in diameter shall be removed from the hydro-seed bed and no payment shall be made therefore.

632.3.10 Fertilizer for Class A and Class C Seeding

Fertilizer bags shall be examined before use to confirm correct analysis and content. Notify Project Inspector when bags are to be loaded into machines and all bags shall be collected and counted confirming correct amounts used.

Apply the fertilizer uniformly to the prepared seedbed. Class A shall be broadcast and Class C shall be hydro-applied. Mix fertilizer in the hydro-seeder for a minimum of ten (10) minutes before applying.

632.3.11 Compost Mulch for Class A Seeding

The Contractor shall wet down compost mulch so that wind loss is kept to a minimum. Stockpiles shall be less than six (6) ft. tall and oriented perpendicularly to the prevailing winds to prevent wind loss.

The compost mulch moisture content shall be indicated on the delivery ticket at the time of delivery and shall be within the 35 – 60 % range.

Regardless of the compost mulch moisture content, Project Management may require further wetting of compost mulch at delivery to prevent loss through wind. No extra payment shall be made therefore.

The certified Inspector shall verify the load is full before unloading to confirm the Material is up to the front of the trailer. Indications of a short load are gaps at the front of the truck, overloading at the back of the truck, and slip staining of the Material from the original loading line

632.3.12 Seeding Operations for Class A and Class C Seeding

Uniformly apply the seed mix at a rate in accordance with the Contract. Do not drive vehicles or other Equipment on seeded areas. The Contractor is responsible for protecting revegetation Work until Acceptance.

A test strip of each class of seeding shall be provided by Contractor before commencing general seeding. Each test strip shall measure no less than one acre in a configuration which works for the Equipment and the site, shall be at a location of the Contractor's choosing within the Project, and shall be done as per specifications with a certified Inspector and the Landscape Architect or representative present. Equipment calibration and a test strip are not required for projects less than an acre in size. The test strip is to verify equipment functionality, proper adjustment, application rate, and the Contractor's ability to perform the Work as per specification.

Upon Acceptance of the test plot the Contractor may proceed with seeding operations. If the test strip is not accepted, establish a new one acre strip location and re-verify. The Contractor shall not proceed to full seeding operation until an acceptable test strip has been produced. Payment will only be made for accepted test strips and shall be made under appropriate class of seeding.

The Contractor shall coordinate with Project Management prior to starting seeding operations to ensure that an Inspector is present at all times. No revegetation Work shall be performed without the presence of a certified Inspector.

Once seed is installed on a given Project area all operations to complete that class of seeding for that area must be completed the same Day.

If rainfall or some other factor prevents the Contractor from seeding to the specified depth on prepared surfaces, the Contractor shall prepare the seedbed and apply seed again, at no additional cost to the Department.

Class C areas are to be seeded at twice the standard rate and no extra payment is to be made therefore.

Do not perform seeding operations when wind velocity exceeds fifteen (15) mph. Disking may still be performed with winds exceeding 15 mph.

632.3.13 Drill Seeding for Class A Seeding

Plant seed 1/2 inch deep unless otherwise specified in the Contract. Ensure that the distance between the drilled furrows is no more than eight (8) inches. If the furrow openers on the drill exceed eight (8) inches, re-drill the area and no extra payment shall be made therefore.

632.3.14 Hydro-Seeding for Class C Seeding

Seed shall be applied in a slurry with fertilizer and dye. All Materials loaded into Equipment shall be verified by NMDOT Project Inspectors to confirm correct application rates. Mix all materials for a minimum of ten (10) minutes before application.

632.3.15 Hydro-Mulching for Class C Seeding

Hydro-mulching shall be applied in two sweeps from opposing directions to ensure coverage is complete. The BFM must contain a tackifier when applied. A dye capable of lasting 36 hours shall be included in slurry so that Project Inspectors can confirm coverage. Mulch must be applied the same Day as the seed to protect seed. All Materials loaded into Equipment shall be verified by NMDOT Project Inspectors to confirm correct application rates. Mix all Materials for a minimum of ten (10) minutes before application.

Contractor shall provide Project Management a laminated color reference card from the BFM manufacturer showing a close-up reference photograph of their product installed at the rate of 2,000 lbs. per acre.

632.3.16 Straw Mulching for Class A Seeding

Anchor straw mulch using a crimper with flat serrated discs at least one (1) inch thick with dull edges, spaced no more than nine (9) inches apart. Ensure that the disc diameter is large enough to prevent the frame of the Equipment from dragging in mulch.

Ensure that straw mulch crimping is at least two (2) inches deep and do not cover it with excessive amounts of soil. Perform mulch anchoring across the slope where practical, with no more than two (2) passes of the anchoring Equipment. Straw shall be evenly distributed over entire bedding area with no bare areas showing or areas with straw deeper than four (4) inches in depth before crimping.

Ensure that the rate of application of straw mulch is at least two (2) tons of air-dry straw per acre. The Inspector shall verify the total tons per acre of straw required per acre.

Ensure that straw mulch has at least 50% of fibers exceeding ten (10) inches long on the ground after application.

Spread straw mulch following drill seeding with a mechanical mulch spreader or by hand. If spreading by hand, tear apart the bales of mulch and fluff it before spreading.

Anchor straw following crimping with an approved tackifier with green dye at a rate of 200 lbs. per acre. The tackifier shall be incidental to the seeding.

When crimping the straw is impractical due to rocky areas it may be spread and not crimped. Tackifier

will be applied as per specification. This method shall be approved by the Project Manager for rocky areas only.

When the revegetation Work is being done the Contractor shall verify straw bale moisture content with a straw bale moisture meter with an eight (8) inch minimum length probe for the duration of the Project. An Inspector must be present and record this test. The moisture meter shall remain the property of the Contractor following Project completion and the testing shall be considered Incidental to the Project. Each bale must be tested to confirm that the bale interior moisture content is no greater than 20%. Any bales with moisture above this level shall be rejected and removed from the Project. Higher levels of moisture may indicate the presence of mold and the risk of spontaneous combustion.

632.3.17 Rock Mulch

The finished rock mulch surface must be smooth and uniform maintaining the original flow lines, slope gradients, and contours of the job. Rock mulch must be applied in a fashion not to tear up or damage the hydro-mulch when being placed. Methods and means of rock mulch installation are not specified and may vary as per access. Damaged hydro-mulch shall be replaced and no extra payment made therefore.

632.3.18 Class C Slopes with over 50' of Slope Length

Class C slopes in excess of 50' of slope length (measured along the slope face from toe to crest) shall have the following treatment.

Class G rip-rap shall be used for the lower portion of the slope from the toe upwards to the point where there will not be more than 50' of slope length covered with 3/4 inch to one (1) inch rock mulch described in 632.2.5, "Rock Mulch for Class C Seeding," and Table 632.3.4:1, "Operations Sequence for Classes of Seeding." The rip rap shall be placed over the hydro-seeded and mulched surface in a way that does not damage the applied mulch treatment, shall be installed from the toe of the slope upwards and shall be one layer of Class G rip-rap in thickness.

632.4 METHOD OF MEASUREMENT

The Contractor shall digitally provide for approval a to-scale printable revegetation plan as part of the submittals before the mandatory pre-seeding meeting. The plan shall identify each area by station, numerical order, project left, project right, and is to indicate the class of seeding as per Table 632.3.4:1, "Operations Sequence for Classes of Seeding." Quantities shall match those produced by construction staking and shall include all off-site areas.

The Contractor shall identify on the plan all areas identified by Construction Staking which have less than 4" of soil cover and qualify for Modified Class A treatment as per 632.3.5

An accompanying table to the plan shall be submitted showing the amount of each Material apportioned for each area on the Project and the acreage of that sub-area. Included in the plan shall be all off-Project areas requiring revegetation as enumerated in Section 632.5, "Basis of Payment."

632.5 BASIS OF PAYMENT

Pay Item	Pay Unit
<i>Class A Seeding</i>	Acre
<i>Class C Seeding</i>	Acre

632.5.1 Revegetation Work Included in Payment

The following revegetation Work items shall be considered as included in payment for the main items and shall not be measured or paid for separately:

- A. Tackifier for straw mulch;
- B. All compost mulch, fertilizer Materials, and water added at tilling;
- C. Rock for rock mulch;
- D. Moisture probe for straw bales;
- E. Weed removal and disposal prior to seed operations;
- G. Revegetation plan;
- H. Right of access permit to be provided by Contractor for inspection of off-site locations located on private property;
- I. Multiple mobilizations to meet NPDES requirements; and
- J. Construction staking

SECTION 667a GRAVITY WALL

The following Section shall be added:

667a.1 DESCRIPTION

This work will consists of furnishing and placing rock gravity walls in accordance with these Specifications and in conformity with the lines, grades, and dimensions as shown on the Plans or as established. The material for the rock and grout used and the construction of these walls shall be as specified herein.

The firm producing the gravity wall work of this section shall have 5 years experience in work of similar scope and nature to that specified. The proposed contractor must provide a minimum of 3 examples of similar work which are accessible to the owner for inspection.

667a.2 MATERIALS

Materials shall meet the following requirements:

- (a) **Rock.** The rock used for the construction of the gavity walls shall be locally available Moss Block Rock, generally reddish in color.
 - 1. Rock Retaining Walls, and Culvert Headwalls: The rocks for the construction of the Gravity Walls shall be well graded and vary in size from 6 inches to 24 inches. Control of gradation will be by visual inspection. However in the event the Project Manager determines rock to be unacceptable, the Project Manager will pick two (2) random truckloads to be dumped and checked for gradation. The Contractor at no additional cost shall provide mechanical equipment and labor needed to assist in checking gradation to the Owner.
- (b) **Grout.** Provide Portland cement, aggregates and water for grout in accordance with Section 509.

667a.3 CONSTRUCTION REQUIREMENTS

Construction Requirements for Gravity Walls shall be as follows:

- 1. The rock for the Gravity Walls shall be placed tightly, without obvious grout on the outside face of the rock wall. Rocks should be hand shaped as needed to provide a maximum gap between rocks of 1/2 inch. All exposed rocks in the final wall configuration must have at least have the dimension of one side greater than 8 inches and no side less than 4 inches. Chinking gaps with small rocks (under 4 inches) will not be allowed.
- 2. Subgrade under walls shall be compacted to 95% of maximum density determined in accordance with AASHTO T180, with a minimum bearing capacity of 2000 psf.
- 3. The rock walls shall be constructed to the dimensions and in the locations shown on the drawings. The walls shall be constructed with a 1 horizontal to 4 vertical batter on the front and back face, with a minimum width of 1 foot at the top of the wall.

4. The stone for the wall shall be laid to form substantial masonry presenting a neat, finished appearance. Headers shall hold the heart of the wall to the face. Headers shall occupy at least 20% of the area and they shall be evenly distributed. The length of stretchers shall not exceed three times their rise. Face stones shall be laid to break joint so that each rock laid rests on two beneath it. Spalls and pinners will not be allowed in the face and shall be used in the backing only where necessary.
5. Joints between rocks shall be staggered. There shall be no continuous vertical or horizontal seams.
6. All face stones shall be pitched to a string line on straight walls or laid to batter stakes for curved walls. The batter shall be consistent with respect to all parts of the wall and shall meet the minimum requirements set forth in the detail. The degree of roughness on the exposed face shall be measured with a six-foot straight edge supported between adjacent projections on the stone face. Variations in the face in excess of 2 inches, measured from the straight edge to the extreme depression in the stone will not be permitted. Rear faces shall present approximately plane surfaces and shall in general conform to the detail.
7. The top course of rock shall be grouted in place.
8. Prior to placing the grout, any type of debris, fines, smaller rock or silt shall be removed from around the rocks. Dewatering shall be implemented to guarantee that the grout will not be placed in water and the area will remain dewatered for a period of ten (10) hours after the grout has been placed. The surface of the rocks receiving grout shall be wet at all times prior to receiving grout.
9. Clean and wash any spillage before the grout sets on the outside face and top of walls. The visual surfaces of the rocks will be free of grout to provide a clean natural appearance. If washing does not clean off grout residue, the Contractor shall wash off any grout residue with muriatic acid and water, using a brush to scrub off the residue.
10. The underdrain system, as shown on the drawings, will not be paid for separately but is included in the work.
11. Examine the substrates, adjoining construction and the conditions under which the work is to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.
12. Verify dimensions before proceeding with the work. Obtain field measurements for work required to be accurately fitted to other construction. Be responsible for the accuracy of such measurements and precise fitting and assembly of finished work.

13. Job Mock-up: Prior to the construction of any rock walls, the Contractor, or Subcontractor who is constructing the walls for the Contractor, shall show the Project Manager, an example of similar rock walls that they had constructed previously. After acceptance of this previous work, the Contractor or Subcontractor shall construct approximately 40 square feet of rock wall as shown on the drawings for approval by the Project Manager. If the construction is approved, the Contractor or Subcontractor shall construct the remainder of the rock walls as approved. If the construction is not approved, the Contractor shall make any changes required by the Owner and Engineer to obtain approval, and construct the remainder of the walls as approved.

667a.4 METHOD OF MEASUREMENT

Gravity Walls will be measured by the actual number of headwalls installed.

667a.5 BASIS OF PAYMENT

The unit price of Gravity Wall shall be compensation for complete installation including but not limited to subgrade compaction, water, structure excavation and backfill, rock, grout, construction dewatering, delivery and installation.

Grout hot and cold weather operations shall be performed in accordance with Section 511 of the Standard Specifications. Hot and cold weather concreting will not be paid for separately, but shall be included in the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Gravity Wall	Square Foot

SECTION 667b RUBBLE MASONRY VENEER

The following Section shall be added:

667b.1 DESCRIPTION

This work will consist of furnishing and placing Rubble Masonry Veneer laid in random courses in mortar on pedestrian bridge abutments in accordance with these Specifications and in conformity with the lines, grades, and dimensions as shown on the Plans or as established. The material for the rock and mortar used and the construction of the veneer shall be as specified herein.

The firm producing the Rubble Masonry Veneer of this section shall have 5 years experience in work of similar scope and nature to that specified. The proposed contractor must provide a minimum of 3 examples of similar work which are accessible to the owner for inspection.

667b.2 MATERIALS

Materials shall meet the following requirements:

- (a) **Rock.** The rock used for the construction of the Rubble Masonry Veneer shall be locally available rounded river cobble, 6 inch maximum dimension.
- (b) **Mortar.** Masonry mortar shall be Type S conforming to ASTM C270

667b.3 CONSTRUCTION REQUIREMENTS

Construction Requirements for Rubble Masonry Veneer shall be as follows:

Facing of Concrete - Concrete placed before stone.

- 1. Set galvanized metal anchor slots flush with the projected face of concrete. Set the slots vertically at maximum horizontal spacings of 8 inches. Use foam filled slots to prevent filling with concrete.
- 2. Fit the metal anchors in the slots at a maximum vertical spacing of 24 inches. Extend the anchors to within 2 inches of the face of the stones.
- 3. If the shape of the concrete face is unsuitable for the use of metal slots, use 9 gage galvanized iron wire ties at a rate of six ties for each square yard of exposed surface.
- 4. Keep the concrete face continuously wet for 2 hours preceding the placing of the stone and fill interstices with mortar or with spalls surrounded by mortar.

Placing Stones.

- 1. Submit stone samples representing the range of colors and sizes to be used 14 days before beginning work. Masonry stone may be required to be selected at the source prior to shipment to the project site at the request of the Project Manager. Keep an adequate inventory of stone on the site to provide a variety of stones. Mix new stone with existing stone to produce a uniform pattern and color.

2. Clean stones and moisten before placing. Use hand tools to clean the exposed faces of the stones of mortar when removing and resetting stone masonry. Clean and moisten the bed. Clean the bearing surface and moisten before spreading the mortar bed on footings.
3. Place stone to provide a consistent pattern. Lay stones with the longest face horizontal and the exposed face parallel to the masonry face.
4. Place stones to provide maximum 1 ½" mortar joint width. Construct head joints in other masonry classes at angles with the vertical from 0 to 45 degrees.
5. Furnish a variety in the size of stones; as a general rule not over 10 percent will be of equal dimensions. Provide a variety in the spacing of the various sized stones. Do not stack, serpentine, rosette, cluster, set in a linear pattern, nest, or bunch groups of similar sized stones.
6. Maintain completed masonry at a temperature above 40 °F (4 °C) for 24 hours after construction.
7. Remove stones loosened after the mortar has taken initial set, clean off the mortar, and relay the stone with fresh mortar.
8. Thoroughly clean and wet all stone immediately before being set, and clean and moisten the bed which is to receive the stone before the mortar is spread. Keep the stone free from dirt, oil or any other deleterious material, which may prevent the proper adhesion of the mortar or detract from the appearance of the exposed surface. Lay stones in full beds of mortar, ensure the other joints for each stone are flushed with mortar. The owners representative may direct the lifting and resetting of stones to assure proper bedding.
9. Provide wider joints generally adjacent to larger stones and narrow joints generally adjacent to smaller stones.

Pointing.

1. Rake top surface joints to a depth of 1/4 inch maximum with a concave tooled finish. Rake all other joints and beds to a depth of between 1/2 inch and 3/4 inch with a flat (square) tooled finish. After tooling, rub the joints with a stiff broom to remove sheen. Immediately after being laid, and while the mortar is fresh, thoroughly clean all stone of mortar stain using fiber brushes and mild alkaline abrasive cleaner containing no caustic or harsh filler; begin at the top and work down. Leave stones clean and free of mortar stains or traces of cleaning compound.
2. Clean excess mortar and stain from stone masonry using a bristle brush after the mortar has dried, but before the initial set. Do not use chemicals for cleaning. Protect masonry during hot or dry weather by keeping it moist for at least 3 days after the work is completed.

Sample Sections.

1. Construct one Rubble Masonry Veneer Column at a location designated by the Project Manager. The approved sample locations will be incorporated into project delivery. Construct the samples with per plan typical details. Construct the samples using the same materials and methods that will be used for production work. Show the size and finish of stones, method of turning corners, pattern of stone work, stonework treatment at wall ends, finish of joints, and general requirements of the finished work.

2. The Project Manager will review the samples with the Contractor and determine at this review if the samples are approved. Do not begin production of any stone masonry work prior to approval of the samples. If the sample is unacceptable, remove and reconstruct the unacceptable section until the project manager, determines that an acceptable section has been constructed. Review of the new sections will follow the above stated process and time requirements of the initial sections. No additional compensation will be provided for removal of unacceptable sample sections or construction of subsequent sample sections. The approved sample section will become the quality and aesthetic standard for all Rubble Masonry Veneer constructed on this project and may supersede the criteria established in this section.

667b.4 METHOD OF MEASUREMENT

Rubble Masonry Veneer will be measured by the actual number of square feet vertical face feet of veneer installed.

667b.5 BASIS OF PAYMENT

The unit price of Rubble Masonry Veneer shall be compensation for complete installation.

Hot and cold weather operations shall be performed in accordance with Section 511 of the Standard Specifications. Hot and cold weather concreting will not be paid for separately, but shall be included in the work.

Payment will be made under:

Pay Item

Rubble Masonry Veneer

Pay Unit

Square Foot

SECTION 701

TRAIL SIGNS AND SIGN STRUCTURES

Delete the entire Section 701 and substitute the following

701.1 DESCRIPTION

This Work consists of providing and installing trail signs in accordance with the *MUTCD*.

701.2 MATERIALS

701.2.1 General

Provide Materials manufactured in accordance with the requirements of ASTM D 4956, current version.

701.2.2 Concrete

Use Class A concrete for extruded panel sign foundations in accordance with Section 510, "Portland Cement Concrete."

701.2.2 Sign Components

701.2.2.1 Retroreflective Sheeting

Use retroreflective sheeting Scotchlite TM Sheeting 680 - 10 or approved substitute from the Department's *Approved Products List*. Provide certification that sheeting is in accordance with ASTM D 4956, current version. Provide sheeting that has a smooth, flat exterior film with retroreflective elements homogeneous in appearance, weather resistant, and with a protected, pre-coated adhesive backing.

701.2.2.2 Vinyl Film

Use vinyl film premium grade film for exterior applications. Submit certification that sheeting is in accordance with ASTM D 4956, current version. Provide sheeting that has a smooth, flat exterior film homogeneous in appearance, weather resistant, and with a protected, pre-coated adhesive backing.

701.2.2.3 Color

Use a sign face color in accordance with ASTM D 4956, current version, and as per sign details. Use painted or vinyl sheeting on sign back for signs along trail. Confirm final color selections with Landscape Architect prior to fabrication.

701.2.2.4 Aluminum Panel Signs

Use 0.08 in minimum thickness 6061-T6 or 5052-H38 aluminum alloy for signs 24 in wide or less. Use 1/8 in minimum thickness 6061-T6 or 5052-H38 aluminum alloy for signs wider than 24 in.

Provide aluminum panel signs with smooth edges and corners.

701.2.2.5 Aluminum Composite Panel Signs

Use 3-millimeter thick minimum rigid aluminum composite panel of a thermoplastic core sandwiched between two aluminum sheets formed in a continuous process with no applied glues or adhesives; dibond or approved equal.

Provide aluminum composite panel signs with smooth edges and corners.

701.2.2.6 Steel Panel Signs

Use 0.125 in minimum thickness steel panel Hot Roll A606/A588A "Weathering Steel" (COR-TEN Equivalent) for weathered steel panels. Graphics to be waterjet-cut into steel plate, or as designated per drawings. Mount to frame with hidden pins or pre-threaded stud mounts.

Use 0.0625 in minimum thickness steel panel for colored back panel sign components. The flatness tolerance for an installed panel is 1/32 inch per foot of length and 0.004 inch per inch of width. Visible oil-panning of the sign panels will result in a rejection of the panel.

Provide steel panel signs with smooth edges and corners.

701.2.2.7 Corners

For exposed edge sign panels (those not placed in frames), cut corner radii in accordance with the FHWA Standard Highway Signs manual.

701.2.2.8 Aluminum Sign Substrate

Prepare aluminum sign substrate for retroreflective or vinyl sheeting as specified by the sheeting material manufacturer. Apply sheeting, legend, and clear coat in accordance with the manufacturer's recommendations. Keep a copy of the manufacturer's recommendations on file as specified in Section 701.2.1.1, "Sign Manufacturer's Quality Control." Drill holes in the aluminum sign panel to receive tamper proof hardware. Remove or file burrs from drilling holes in the material.

701.2.3.1 Digitally Printed Signs

Signs manufactured using digital printing process with a protective overlay film to produce all or part of the image shall conform to all other requirements of Section 701. For panel signs, all or part of the image shall be printed on the required sheeting which then shall be laminated to the aluminum sign panel.

701.2.3.2 Outdoor Weathering of Digitally Printed Signs

Inks applied using digital printing processes with a protective overlay film shall produce standard colors to match designated project color specifications and have outdoor weathering properties equal to that of the base reflective sheeting. Additional UV protection coatings shall be applied as per drawings.

701.2.4.1 Steel Posts / Frame Components (Trail Signs)

Provide Hot-Rolled Steel Members Fabricated from Tube-Square or Tube-Rectangle: ASTM A500/A513 and Plate or Bar Stock: ASTM A 499 -89, Grade 60, 42,000-psi (290-MPa) minimum yield strength.

For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness. Exposed steel posts to be raw, unfinished steel.

Install posts in accordance with NCHRP Report 350 criteria for single and multiple-post installations, and as per recommendations of the Structural Engineer according to withstand area wind loads. Supply Certificates of Compliance to the Project Manager.

701.2.4.2 Sign Structures and Hardware (Roadway Signs)

Select aluminum panel sign and base posts from the Department's Approved Products List. Install posts in accordance with NCHRP Report 350 criteria for single and multiple-post

installations, and with the post manufacturer's wind load chart. Supply Certificates of Compliance to the Project Manager.

Use one (1) of the following finishes:

1. Hot dipped galvanizing in accordance with ASTM A 653 or ASTM A 123; or
 2. Hot dip galvanized zinc coating, in accordance with AASHTO M 120, followed by a chromate conversion coating and a cross-linked polyurethane acrylic exterior coating; or
 3. Color No. 17038 black paint or Color No. 14109 green paint for U-channel posts.
- Provide paint

701.2.4.3 Wood Posts

Provide Western Red Cedar wood posts, rough sawn four sides, grade C + Better Clear with smooth surfaced tops.

701.2.4.4 Post Assembly Hardware

Weld steel frame components and grind welds smooth.

Use post assembly hardware not visible from view that is:

1. Hot dipped galvanized or cadmium plated in accordance with ASTM B766-86;
2. Stainless steel; or
3. Mechanically galvanized in accordance with ASTM B545 (Class Fe/Sn 20).

701.2.4.5 Fasteners

Use fasteners hidden from view per details. In locations where visible mounting is called for, use tamper-proof fasteners to attach signs that are:

1. Hot dipped galvanized, or cadmium plated in accordance with ASTM B766-86;
2. Stainless steel; or
3. Mechanically galvanized in accordance with ASTM B 545 (Class Fe/Sn 20).

The Contractor may use rivets to attach signs. Follow manufacturer's recommendations for installation procedures.

701.2.4.6 Breakaway Base Systems

Use Type I Breakaway base systems that include slip-type connection, hardware, and stub post as specified in the Contract.

701.2.5 Fabrication

701.2.5.1 Material Submittals & Review

Submit color and finish samples of each type of material used on signs for approval before fabrication.

1. Supply actual materials in the colors that will be used for the Work for review. Minimum size shall be 6" x 6", unless larger or smaller sizes are applicable to the material that the sample represents.
2. Submit two (2) of each sample. One sample will be returned to the Contractor. Contractor shall keep samples on file at the site to be used as control references for judging acceptability of the Work.

701.2.5.2 Shop Drawing Submittals & Review

Submit detailed sign shop drawings for approval before fabrication.

The Project Manager will review sign shop drawings. Do not fabricate or erect the signs until obtaining approval. Prepare accurately and of sufficient scale to show all aspects of the item or assembly including its method of attachment and relationship to adjoining Work. Shop Drawings are to be specifically prepared for the Work and shall not be reproductions of the Contract Documents. Submittals prepared from a reproduction of the Contract Documents will be returned without action. Shop Drawings may show minor variations from Contract Documents due to standard shop practice, field conditions or for other reasons which do not affect the Contract amount. If artwork is provided on disk, must be in Macintosh format in either Adobe Illustrator or PDF format.

1. Indicate materials, dimensions, thicknesses, connections, weights, clearances, and all other pertinent data and information.
2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
3. If required by local code, provide wind load calculations prepared by a licensed New Mexico engineer to confirm that sign components and sign design will withstand local wind loads.
4. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
5. For sign types requiring interior reinforcement, show internal structure, mounting poles and base details.
6. For sign types requiring electrical connections, indicate power, signal and control wiring details.
7. Do not make changes in visual elements without Designer's prior review and written approval.
8. Should the Fabricator find ambiguities, inconsistencies or errors in the Drawings or Specifications, or should they be in doubt as to their meaning, the Designer shall be notified at once, in writing, so the designer may provide clarification.

701.2.5.3 Graphics / Artwork Submittals & Review

Submit graphics / artwork proofs for all sign types for approval before fabrication. Submit full-size artwork or high quality photocopies or prints of graphics / artwork. If copies are submitted, they shall be suitable for judging sharpness of art and alignment. If artwork is provided on disk, must be in Macintosh format in either Adobe Illustrator or PDF files.

701.2.5.4 Product Data Submittals & Review

Submit original manufacturer's Product Data including brochures or standard catalog items. Clearly indicate item or model, space requirements, weights, sizes, dimensions, performance characteristics, capacities, wiring diagrams, controls, accessories and other pertinent data.

701.2.5.5 General Fabrication Requirements

Work shall be assembled in the shop, insofar as practicable, ready for installation at the site. Work that cannot be shop assembled shall be given a trial fit in the shop to ensure proper field assembly.

1. Holes for bolts and screws shall be drilled or punched. Drilling and punching shall produce clean, true lines and surfaces.

2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
3. Weld to or on structural steel in accordance with AWS D1.1. Welding shall be continuous along the entire area of contact. Exposed welds shall be ground smooth.
4. Exposed surfaces of work shall have a smooth finish and exposed riveting shall be flush.
5. Fastenings shall be concealed where practicable, otherwise locate fasteners where they will be inconspicuous.
6. Items specified to be galvanized shall be by hot dip process after fabrication if practicable. Galvanization shall be in accordance with ASTM A 123 and ASTM A 525, as applicable. Joints exposed to the weather shall be formed to exclude water.
7. Drainage and weep holes shall be included as required to prevent condensation buildup.

Provide signs as indicated in Sign Schedule. Fabricate in accordance with reviewed Shop Drawings. Signs and components shall be complete and free from visual and mechanical defects.

Letter and sign fabrication shall be a complete system including stiffeners, fasteners, welding, sealants, jointing, miscellaneous pieces and material thickness. Connections, angles, shapes and details shown are diagrammatic in nature and are to be sized, reinforced and detailed by fabricator.

No fabrication materials or procedures shall be used that will in any way change visual quality or in any manner have an adverse effect on existing materials or surfaces.

In fabrication of metal pans in sign structures or individual letters "oil canning" surface appearance will not be acceptable.

Prime concealed aluminum surfaces in contact with masonry, concrete or plaster with even coat of alkali resistant asphaltum base paint.

Aluminum Panel Fabrication: Fabricate sign panels as detailed, minimum .080 thickness unless noted otherwise, with corners neatly formed, edges smooth and free of sharp or other injurious surface. Exterior edges are to appear seamless and have continuous welds.

Grind welds smooth and fill prior to priming and finish painting. Sand exposed surfaces smooth and chemically treat with alidine to seal aluminum. Shop prime surface per paint manufacturer's recommendation. Apply manufacturer's recommended thickness of polyurethane enamel.

Dissimilar Materials: Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of asphalt varnish or a coat of zinc molybdate primer to prevent galvanic or corrosive action.

Shop Painting: Surfaces of miscellaneous metal work, except nonferrous metal, corrosion resisting steel, and zinc coated work, shall be given one coat of zinc molybdate primer, or an approved rust resisting treatment and metallic primer in accordance with manufacturer's standard practice. Do not paint surfaces of items to be embedded in concrete. Upon completion of work, thoroughly recoat all damaged surfaces.

701.2.5.6 Welding

Weld with correct type of weld to minimize permanent distortions of flat surfaces. Welding flux, oxides, and discoloration shall be removed by pickling or grinding, so that these areas match finish on adjacent areas. Any damage caused by fabrication must be repaired by

grinding, polishing, or buffing. All welds to be ground smooth as possible.

701.2.5.7 Fasteners

On sign-face surface fastening of sign panels shall not be exposed unless noted in drawings. Signface surfaces shall not be penetrated during fabrication or installation of signs. Sign-face surfaces shall not be deformed, distorted or discolored by attachment of concealed fasteners. Use 300 Series non-magnetic stainless steel fasteners with finish of system if fasteners are visible. Provide cadmium plated steel or equivalent when fasteners are used for steel to steel and steel to masonry construction. Miscellaneous fastening devices, and internal components shall be of aluminum, stainless steel, or zinc plated steel in accordance with ASTM A-164.

1. Exposed fasteners to be painted to match surrounding surfaces.

Adhesives: In accordance with recommendations made by manufacturer of material to be laminated or adhered. Adhesives that fade, discolor, or delaminate as a result of ultraviolet light or heat shall not be used. Adhesives shall be of non-staining and non-yellowing quality. Visible joints shall be free from air bubbles and other defects.

1. Silicone Adhesives: Ready to use, high performance adhesive. General Electric GC 1200 sealant, translucent SCS 1201 or equal as recommended by manufacturer for bonding condition.

Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

701.2.5.8 Finishes General

Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

Aluminum Finishes:

1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss.

Steel Finishes:

1. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
2. Exposed steel to allow to rust.
3. Powdercoat clear or apply Matthews Acrylic Polyurethane Clearcoat, matte finish. See drawings for weathered steel finish.

701.2.5.9 Fabrication Requirements for Contact Surfaces

Use galvanized or stainless steel for surfaces in contact with aluminum.

Coat aluminum surfaces in contact with concrete or earth with an alkali resistant asphalt paint in accordance with manufacturers recommendation.

701.3.1 General Installation**701.3.2 Installation Requirements**

Compact sign Structure footing foundations and backfill to 95% of maximum density as determined by AASHTO T 99.

Set posts plumb. Ensure that the mounting faces of multiple sign posts lie in the same plane. Securely mount signage in accordance with manufacturer's recommendations and as indicated, set plumb, level and true to line, and at proper height, without warp or rack.

701.3.3 Sign Installation

Notify the Project Manager two weeks before placing all signs; the project manager will mark the sign locations in the field.

Inspect signs for evidence of damage at site prior to installation. Retain protective coverings intact and remove simultaneously from similarly finished items to preclude non-uniform oxidation and discoloration. Restore protective coverings which have been damaged during shipment or installation of Work. Remove protective coverings only when there is no possibility of damage.

Neatly repair minor blemishes or marring on finished surfaces so that repairs are imperceptible. Completely replace components having permanent non-removable scratches, stains, or other defacement.

Upon completion of the Work, remove unused materials, debris, containers and equipment from the project site. Remove protective coverings and clean the exposed surfaces of the Work to remove dirt, stains and other substances, by methods as recommended by manufacture.

701.4 METHOD OF MEASUREMENT - Vacant**701.5 BASIS OF PAYMENT**

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
701000	Panels Signs	Square Foot
701101	Multi-Directional Slip Base Post for Aluminum Panel Signs	Each
701960	Steel Posts for Trail Signs	Linear Foot
701961	Vehicular Monument Sign	Each
701962	Kiosk Sign – Primary	Each
701963	Kiosk Sign – Secondary	Each
701964	Orientation Map Sign	Each
701965	Directional Sign – 1 Flag	Each
701966	Directional Sign – 2 Flag	Each
701967	Directional Sign – 3 Flag	Each
701968	Marker Signs	Each
701969	Marker – Rules Sign	Each

701.5.1 Work Included in Payment

The following work and items will be considered as included in the payment for the main items and will not be measured or paid for separately:

- A. Hardware;
- B. Excavation, backfill, compaction and concrete bases for sign installation and/or removal;
- C. All specialty trail signs will include both the sign panel(s) and the post(s).

January 29, 2015

**SPECIAL PROVISIONS
MODIFYING
SECTION 901: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)**

The 2014 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

Add subsection **901.4.1 Aggregate Index** to follow **901.4 EVALUATION OF MATERIALS FOR ACCEPTANCE**.

901.4.1 Aggregate Index

901.4.1.1 Description

The AI combines test values from the Los Angeles Wear Test, Soundness Loss Test, and Absorption Test. The AI is a single value representing the overall quality of the source from which the aggregates are obtained. Do not use to evaluate individual aggregate stockpile quality.

901.4.1.2 Sampling and Testing Procedures

Determine Los Angeles Wear, Soundness Loss, and Absorption values for the AI equation using at least five (5) random test samples obtained from all stockpiles at the source in accordance with AASHTO T 2. Submit all of the five (5) samples to a Department approved private Laboratory for combination into a single sample. The Project Manager or the State Materials Bureau will have a list of approved private Laboratories. Extract a representative test sample from the single sample to determine the Los Angeles Wear and Absorption values. Prepare the sample used to determine the Absorption as follows:

Plus 3/4 in	1000 grams
3/4 in to 1/2 in	1000 grams
1/2 in to 3/8 in	1000 grams
3/8 in to #4	1000 grams

Separate the remaining amount of the single sample into five (5) test samples using the procedures in AASHTO T 248. Calculate a Soundness Loss value for each of these five (5) samples using Table 901.4.1.2:1, "Standard Gradation for Soundness Loss Testing."

Table 901.4.1.2:1
Standard Gradation for Soundness Loss Testing

Sieve size	% passing
1 1/4 in	100
1 in	100
3/4 in	79
1/2 in	53
3/8 in	34
No. 4	0

Average the five (5) soundness loss results to obtain the overall soundness loss value for the subject aggregate pit.

901.4.1.3 Testing of Aggregates

Perform the following tests using a Department-approved private Laboratory or the State Materials Bureau:

1. Los Angeles Wear (in accordance with AASHTO T 96, Method B);
2. Soundness Loss (in accordance with AASHTO T 104); and
3. Absorption (in accordance with AASHTO T 85 or NMDOT 001 (20066)).

Use the same private Laboratory for the entire project unless otherwise approved (in writing) by the Project Manager.

Obtain samples under the observation of the Project Manager or Department designee. Split samples into two (2) samples in accordance with AASHTO T 248, if requested by the Project Manager. The private Laboratory and the State Materials Bureau will each test one (1) sample. Send copies of test reports to the Project Manager.

901.4.1.4 Frequency of Testing

Submit samples at least once every year to maintain continuous approval of Commercial Material Sources.

901.4.1.5 Equation

Calculate the AI of a coarse aggregate to the nearest whole number in accordance with the following equation:

$$AI = \frac{1}{3} \sqrt{LA^{2.2} + SL^{3.0} + A^{4.0}} \quad (1)$$

Where:

- AI* is the aggregate index
- LA* is the Los Angeles Wear, the percent of aggregate wear at 500 revolutions if tested in accordance with AASHTO T 96
- SL* is the soundness loss of the sample if tested in accordance with AASHTO T 104 using magnesium sulfate with a test duration of 5 cycles and a standard gradation
- A* is the absorption, the amount of moisture retained if tested in accordance with AASHTO T 85

Example:

1. Determine the L.A. Wear as a whole number – for example, 25;
2. Determine the Soundness Loss as a whole number – for example, 15;
3. Determine the Absorption as a whole number – for example, 3;
4. Calculate the value of the L.A. Wear taken to the 2.2 power – that is, $25^{2.2} = 1189.8$;
5. Calculate the value of the Soundness Loss taken to the 3rd power – that is, $15^3 = 3375.0$;
6. Calculate the value of the Absorption taken to the 4th power – that is, $3^4 = 81.0$;
7. Add the value obtained from steps 4, 5, and 6 – that is, $1189.8 + 3375.0 + 81.0 = 4645.8$;
8. Determine the square root of Step 7 – that is, $\sqrt{4645.8} = 68.2$;
9. Divide the result from Step 8 by 3 – that is, $68.2 \div 3 = 22.7$; The A.I. for this sample is 23.

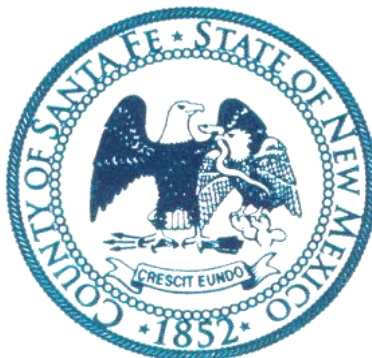
901.7 BASIS OF PAYMENT

Replace Table 901.7:5 with the following:

Table 901.7:5 Minimum Process Control Guidelines for Portland Cement Concrete Pavement (QC)			
Item	Property	Testing frequency	Test method
Fresh Concrete for PCCP	Unit Weight	1 per 125 yd ³	AASHTO T 121
	Air Entrainment	1 per 125 yd ³	AASHTO T 121
	Slump	1 per 125 yd ³	AASHTO T 119
	Compressive Strength	1 per 125 yd ³	AASHTO T 22, 23, 231
PCCP in Place	Thickness ^a	2 per 2,500 yd ^{2 b}	—
^a Complete corrective Work specified in Section 450.3.5.2, "Surfacing Smoothness Requirements," before determining pavement thickness ^b Determine thickness by actual survey conducted before and after the construction of the PCCP at fixed, randomly selected locations.			

SAMPLE AGREEMENT

**SAMPLE
AGREEMENT BETWEEN SANTA FE COUNTY AND CONTRACTOR
FOR CONSTRUCTION SERVICES**



**SANTA FE COUNTY
PURCHASING DIVISION
2014 EDITION**

[Changes, additions, deletions and/or any modifications other than those agreed upon by the parties upon execution of this contract, without the written consent of Santa Fe County shall render this document null and void.]

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION OR MODIFICATION.

Hereafter "County":

Katherine Miller, County Manager
Santa Fe County
PO Box 276
Santa Fe, New Mexico 87504-0276
TELEPHONE: 505-986-6200
FAX: 505-985-2740

Hereafter "Contractor":

TELEPHONE: _____

E-MAIL ADDRESS: _____

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RECITALS

WHEREAS, in accordance with Section 13-1-103 through Section 13-1-110 NMSA 1978, the County issued Invitation for Bid (IFB) No. 2019-0028-PW/MM for construction services for Arroyo Hondo Trail Segment 4;

WHEREAS, the Contractor submitted its bid, dated _____ in response to IFB No. 2019-0028-PW/MM;

WHEREAS, the County is authorized to enter into a construction contract for the Project pursuant to Sections 13-1-100, NMSA 1978;

WHEREAS, the Contractor hereby represents that it is a licensed contractor of the State of New Mexico pursuant to Chapter 60, Article 13 NMSA 1978;

WHEREAS, the Owner agrees to hire the Contractor, and the Contractor agrees to provide Construction Services as required herein for the Project in accordance with the terms and conditions set forth in this Agreement; and,

WHEREAS, the County requires the services of the Contractor, and the Contractor is willing to provide these services and both parties wish to enter into this Agreement.

ARTICLE 1 THE CONTRACT DOCUMENTS

1.1 DOCUMENTS

The contract documents consist of the following:

- Agreement between County and Contractor
 - General Conditions of the Construction Contract
 - Conditions of the Work of the Construction Contract
 - Bid Sheet
 - Addenda and Modifications issued before and after execution of this Contract
- Attachment A
Attachment B

1.2 CERTIFICATES AND DOCUMENTATION

The following certificates and documentation are hereby attached as exhibits as follows:

- | | |
|--|-----------|
| Project Manual | Exhibit A |
| Technical Specifications as listed in Plan Set | Exhibit B |
| Labor and Material Payment Bond | Exhibit C |
| Performance Bond | Exhibit D |
| Assignment of Antitrust Claims | Exhibit E |
| Certificate of Insurance | Exhibit F |

Notice of Award
Notice to Proceed
Change Order
Certificate of Substantial Completion

Exhibit G
Exhibit H
Exhibit I
Exhibit J

ARTICLE 2 THE WORK

2.1 THE WORK

The Contractor shall perform all the Work required by the Contract Documents for the following:

The work to be performed includes the construction of a 1.52 mile long concrete trail connecting the existing Rancho Viejo Fire Station Trailhead to the existing multi-use trail at the I-25 / NM 14 Interchange, and to the existing La Pradera Trail in Santa Fe County.

The work includes grading, base preparation, concrete placement, gravity rock wall construction, prefabricated steel pedestrian bridge fabrication and installation, drainage features, slope protection, site restoration and signage. The project also includes two (2) Prefabricated Steel Pedestrian Bridges.

The Contractor shall supply all labor, materials and equipment necessary to complete the work in accordance with the construction plans and specifications.

ARTICLE 3 EFFECTIVE DATE, TIME OF COMMENCEMENT, SUBSTANTIAL COMPLETION AND AMENDMENTS

3.1 EFFECTIVE DATE

The Effective Date of this Agreement is the date of signature by the County.

3.2 TIME OF COMMENCEMENT

The work to be performed under this Contract shall be commenced no later than ten (10) consecutive calendar days after the date of written Notice to Proceed issued by the County, hereto attached as Exhibit H.

3.3 SUBSTANTIAL COMPLETION

The Contractor shall achieve Substantial Completion of the entire work no later than one hundred and eighty (180) working days from the date of the Notice to Proceed, except as hereafter extended by valid written Change Order. A Certificate of Substantial Completion, attached hereto as Exhibit J, will be issued by the County to the Contractor, as adjusted by any Change Order, attached hereto as Exhibit I.

3.4 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified in this Article, the Contractor agrees that Liquidated Damages in the amount of Two Thousand Dollars (\$2000.00) shall be assessed per each calendar day that expires after the date of substantial completion, as adjusted by any change order, and until issuance by the County of a certificate of Substantial Completion in accordance with Paragraph 7 EFFECTIVE DATE AND TERM of the General Conditions.

- A. It is hereby understood and mutually agreed, by and between the Contractor and the County, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are *essential conditions* of this contract and it is further mutually understood and agreed that the work outlined in this contract shall be commenced on a date to be specified in the "Notice to Proceed."
- B. The Contractor agrees that work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the County, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- C. If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified or any proper extension thereof granted by the County, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the County the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as herein set forth, for each and every calendar day that the contract shall be in default after the time stipulated in the contract for completing the work.
- D. The amount is fixed and agreed upon by and between the Contractor and the County because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the County would in such event sustain, and the amount is agreed to be the amount of damages which the County would sustain and the amount shall be retained from time to time by the County from current periodical estimates.
- E. It is agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided that the Contractor shall not be charged with liquidated damages or any excess cost when the County determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the County. Provided that the Contractor shall not be charged with

liquidated damages or any excess cost when the delay in completion of the work is due:

1. To any preference, priority or allocation order duly issued by the County;
2. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the County, acts of another contractor in the performance of a contract with the County, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather;
3. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections above.

F. Provided further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the County shall grant a further period of time prior to the date of final settlement of the contract, notify the County in writing of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

3.5 AMENDMENTS

This Agreement may be amended by mutual agreement by both parties upon issuance of a Change Order by the County to the Contractor. Any such amendment shall be in accordance with Paragraph 10 AMENDMENTS-CHANGE ORDERS of the General Conditions. Unless otherwise agreed to by the parties, an amendment shall not affect any outstanding Purchase Order(s) issued by the County prior to the effective date of the amendment.

ARTICLE 4 CONTRACT SUM

4.1 LUMP SUM

The County 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, an agreed upon Lump Sum of (enter dollar amount in words) Dollars (\$0.00 enter dollar amount), exclusive of New Mexico gross receipts tax.

4.2 CONTRACT AMOUNT

The Contract sum is determined as follows:

(insert data from bid form concerning base bid, alternates, etc.)

Base Bid	\$
List Alternates, if applicable	\$
	\$
	\$
Total Contract Amount	\$

ARTICLE 5 PROGRESS PAYMENTS

5.1 PROGRESS PAYMENTS

Based upon an Application for Payment submitted to the County by the Contractor and Certificates for Payment issued by the County, the County 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:

- A. No later than (21) working days following receipt by the County of an 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 the County; less such amounts as the Architect/ Engineer shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents (Section 57-28-5, NMSA 1978).
- B. When making payments, the County, Contractor or subcontractor shall not retain, withhold, hold back or in any other manner not pay amounts owed for work performed. For additional information regarding retainage and the Prompt Payment Act (refer to Section 57-28-5, NMSA 1978).
- C. Contractors and subcontractors shall make prompt payment to their subcontractors and suppliers for amounts owed for work performed on the construction project within twenty-one days after receipt of payment from the County, contractor or subcontractor. If the contractor or subcontractor fails to pay its subcontractor and suppliers by first-class mail or hand delivery within twenty-one days after receipt of an undisputed request for payment, the contractor or subcontractor shall pay interest to its subcontractors and suppliers beginning on the twenty-second day after payment was due, computed at one and one-half percent of the undisputed amount per month or fraction of a month until payment is issued. These payment provisions apply to all tiers of contractors, subcontractors and suppliers (Section 57-28-1 et. seq. NMSA 1978).
- D. In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.
- E. All material and work covered by partial payments made shall thereupon become the sole property of the County, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work,

or as a waiver of the right of the County to require the fulfillment of all of the terms of the contract.

- F. County's right to withhold certain amounts and make application thereof. The Contractor agrees that it will indemnify and hold the County harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnisher of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the County's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the County may, after having served written notice on the said Contractor, either pay unpaid bills, of which the County has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the County to either the Contractor or its Surety. In paying any unpaid bills of the Contractor, the County shall be deemed the agent of the Contractor, and any payment so made by the County shall be considered as a payment made under the contract by the County to the Contractor and the County shall not be liable to the Contractor for any such payments made in good faith.

ARTICLE 6 FINAL PAYMENT

6.1 FINAL PAYMENT

The entire unpaid balance of the Contract Sum, shall be paid by the County to the Contractor within thirty (30) calendar days after notification of the County by the Architect/Engineer that all incomplete and unacceptable work that was noted during the Substantial Completion Inspection and listed on the attachment to the Certificate of Substantial Completion has been corrected, and provided the Contract has been fully performed and a final Certificate for Payment has been issued by the Architect/Engineer. In addition, the Contractor shall provide to the County a certified statement of Release of Liens and Consent of Surety.

6.2 ACCEPTANCE OF FINAL PAYMENT CONTITUTES RELEASE

The acceptance by the Contractor of final payment shall be and shall operate as a release to the County of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the County and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or its sureties from any obligations under this contract or the Performance and Payment Bond.

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

SANTA FE COUNTY

Anna T. Hamilton
Santa Fe County Board of County Commissioners

Date

ATTESTATION:

Geraldine Salazar
Santa Fe County Clerk

APPROVED AS TO FORM:

R. Bruce Frederick
Santa Fe County Attorney

Date

FINANCE DEPARTMENT APPROVAL:

Erika D. Lovato
Santa Fe County Interim Finance Director

Date

CONTRACTOR:

Signature

Date

Print name & title

**GENERAL CONDITIONS
TO AGREEMENT BETWEEN SANTA FE COUNTY
AND CONTRACTOR
FOR CONSTRUCTION SERVICES**

1.0 DEFINITIONS

The following terms as used in this contract are respectively defined as follows:

- 1.1** *Application for Payment* Contractor's written request for payment for completed portions of the work and, for materials delivered or stored and properly labeled for the respective project.
- 1.2** *Bidder.* An individual, partnership, firm, corporation, joint venture, or their authorized representative submitting a Bid.
- 1.3** *Change Order* A written document between the County and the Contractor signed by the County and the Contractor authorizing a change in the work or an adjustment in the contract sum or the contract time. A change order may be signed by the Architect or Engineer, provided they have written authority from the County for such procedure and that a copy of such written authority is furnished to the Contractor upon request. The contract sum and the contract time may be changed only by change order. A change order may be in the form of additional compensation or time; or less compensation or time known as a Deduction (from the contract) the amount deducted from the contract sum by change order.
- 1.4** *Calendar Day* Each and every Day shown on the calendar, beginning and ending at midnight.
- 1.5** *Contract Period* The elapsed number of working days or calendar days from the specified date of commencing work to the specified date of completion, as specified in the contract.
- 1.6** *Contractor* is a person, firm or corporation with whom the contract is entered into with the County.
- 1.7** *Construction Documents* All drawings, specifications and addenda associated with a specific construction project.
- 1.8** *Construction Schedule* A schedule in form satisfactory to the County, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule.
- 1.9** *Day* The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

- 1.10 *Labor and Material Payment Bond*** A written form of security from a surety (bonding) company to the County, on behalf of an acceptable prime Contractor or subcontractor, guaranteeing payment to the County in the event the Contractor fails to pay for all labor, materials, equipment, or services in accordance with the contract. (see Performance Bond and Surety Bond).
- 1.11 *Lump Sum Agreement (See Stipulated Sum Agreement)***
- 1.12 *Lump Sum Bid*** A single entry amount to cover all labor, equipment, materials, services, and overhead and profit for completing the construction of a variety of unspecified items of work without the benefit of a cost breakdown.
- 1.13 *Lump Sum Contract*** A written contract between the County and Contractor wherein the County agrees to pay the contractor a specified sum of money for completing a scope of work consisting of a variety of unspecified items or work.
- 1.14 *Payment Bond*** A written form of security from a surety company to the County, on behalf of an acceptable prime contractor or subcontractor, guaranteeing payment to all persons providing labor, materials, equipment, or services in accordance with the contract.
- 1.15 *Performance Bond*** A written form of security from a surety company to the County, on behalf of an acceptable prime contractor or subcontractor, guaranteeing the completion of the work in accordance with the terms of the contract.
- 1.16 *Progress Payment*** A payment from the County to the Contractor determined by calculating the difference between the completed work and materials stored and a predetermined schedule of values or unit costs. (see Schedule of Values, Unit Costs).
- 1.17 *Progress Schedule*** A pictorial or written schedule (including a graph or diagram) that shows proposed and actual start and completion dates of the various work elements.
- 1.18 *Punch list*** a list of items to be completed or corrected, prepared by the Architect/Engineer, checked and augmented as required by the Contractor or Construction Manager is appended hereto as Exhibit J. Note: The failure to include any item on such list does not relieve the Contractor of the responsibility to complete all work in accordance with the contract documents.
- 1.19 *Schedule of Values*** A statement furnished by the Contractor to the Architect or Engineer and the County reflecting the portions of the contract sum allotted for the various parts of the work and used as the basis for reviewing the Contractor's Applications for Payment.

- 1.20 Services** Includes services performed, workmanship, and material furnished or utilized in the performance of services.
- 1.21 Stipulated Sum Agreement** A written agreement in which a specific amount is set forth as the total payment for completing the contract (See Lump Sum Contract).
- 1.22 Subcontractor** is a person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with, the Contractor.
- 1.23 Unit Price Contract** A written contract wherein the County agrees to pay the Contractor a specified amount of money for each unit of work successfully completed as set forth in the contract.
- 1.24 Unit Prices** A predetermined price for a measurement or quantity of work to be performed within a specific contract. The designated unit price would include all labor materials, equipment or services associated with the measurement or quantity established.
- 1.25 Working Day** means every day except Saturday, Sunday and holidays recognized by Santa Fe County. Based on a review of weather that may adversely affect the Contractor's ability to effectively prosecute the Work, and the actual Work performed by the Contractor, the Architect or Engineer will determine (between the end of the day and noon of the next day) if the County will charge a Working Day. If the Contractor was able to effectively prosecute Work on a critical path item for six (6) or more hours on a Saturday, Sunday or County-recognized Holiday, the Architect or Engineer may charge a Working Day.
- 1.26 Work on (at) the project** is work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any subcontractor.

2. CONTRACT AND CONTRACT DOCUMENTS

- 2.1 Entire Agreement.** This Agreement represents the entire contract between the parties and, except as otherwise provided herein, may not be amended, changed, modified, or altered without the written consent of the parties hereto. This Agreement incorporates all of the conditions, agreements, and understandings between the parties concerning the subject matter of this Agreement, and all such conditions, understandings, and agreements have been merged into this written Agreement. No prior condition, agreement, or understanding, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless incorporated in this written Agreement.
- 2.2 Relationship of Contract Documents.** The Contract Documents are complementary, and any requirement of one Contract Document shall be as binding as if required by all.

- 2.3** Conflicting Conditions. Any provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

3. PLANS, SPECIFICATIONS AND ADDENDA

- 3.1** The plans, specifications and addenda, hereinafter enumerated in Article 1 of the Agreement Between County and Contractor for Construction shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect or limit the interpretation of the provisions to which they refer.

- 3.2** Certificates and Documents Incorporated. All certificates and documentation required by the provisions of the Agreement shall be attached to this Agreement at the time of execution, and are hereby incorporated by reference as though set forth in full in this Agreement to the extent they are consistent with its conditions and terms.

4. CONTRACT SECURITY – BONDS

- 4.1** Performance Bond. The Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the contract sum as security for the faithful performance of this contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law.

- 4.2** Payment Bond. The Contractor shall provide payment bond in an amount not less than one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by state, territorial or local law, as security for the payment of all persons performing labor on the project under this contract, furnishing materials in connection with this contract and all of Contractor's requirements as specified in the contract documents. The Payment Bond shall remain in effect until one year after the date when final payment becomes due.

- 4.3** Additional or Substitute Bond. If at any time the County for justifiable cause shall be or become dissatisfied with any surety or sureties, then upon the Performance or Payment Bonds, the Contractor shall within five (5) days after notice from the County so to do, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the County. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the County.

- 4.4** Labor and Material Bond. The Contractor shall provide to the County Labor and Material Bond in an amount equal to the required payments by the Contractor to pay specified subcontractors, laborers, and materials suppliers associated with the project.

5. TERMS AND MEANINGS

Terms used in this Agreement that are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

- 5.1 Words and Phrases.** Words, phrases, and abbreviations which have well-known technical or trade meanings used in the Contract Documents shall be used according to such recognized meanings. In the event of a conflict, the more stringent meaning shall govern.
- 5.2 Gender, Singular/Plural.** Words of any gender used in this Agreement shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires.
- 5.3 Captions and Section Headings.** The captions and section headings contained in this Agreement are for convenience of reference only, and in no way limit, define, or enlarge the terms, scope and conditions of this Agreement.
- 5.4 Interchangeable Terms.** For purposes of all provisions within this Agreement and all attachments hereto, the terms “Agreement” and “Contract” shall have the same meaning and shall be interchangeable.

6. COMPLIANCE WITH APPLICABLE LAW, CHOICE OF LAW

- 6.1** This Agreement shall be governed exclusively by the provisions hereof and by the laws of the State of New Mexico and applicable ordinances of Santa Fe County.
- 6.2** In performing its obligations hereunder, the Contractor shall comply with all applicable laws, ordinances, and regulations, including Santa Fe County Ordinance 2014-1 (Establishing a Living Wage).
- 6.3** Minimum Wage Rates. The Contractor, all subcontractors and subsubcontractors warrants and agree to will comply with all applicable provisions of the New Mexico Public Works Minimum Wage Act as outlined in the Bid Documents. Wage rates are not applicable to projects costing less than \$60,000.
- 6.4** This Agreement shall be construed in accordance with the substantive laws of the State of New Mexico, without regard to its choice of law rules. Contractor and the County agree that the exclusive forum for any litigation between them arising out of or related to this Agreement shall be federal and state district courts of New Mexico.
- 6.5** Pursuant to 13-1-191, NMSA 1978, reference is hereby made to the criminal laws of New Mexico, including §30-14-1, §30-24-2, and §30-41-1 through 3 NMSA 1978, which prohibit bribes, kickbacks, and gratuities, violation of which constitutes a felony. Further, the Procurement Code, 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation.
- 6.6** New Mexico Tort Claims Act. By entering into this Agreement, neither party shall be responsible for liability incurred as a result of the other party’s acts or omissions in connection with this Agreement. Any liability incurred in connection with this Agreement

is subject to the immunities and limitations of the New Mexico Tort Claims Act, Sections 41-4-1, et Seq. NMSA 1978, as amended. The County and its “public employees” as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and do not waive any limitation of liability pursuant to law. No provision in this Agreement modifies or waives any provision of the New Mexico Tort Claims Act.

- 6.7** Provision Required by Law Deemed Inserted. Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

7. EFFECTIVE DATE AND TERM

- 7.1** This Agreement shall, upon due execution by all parties, become effective in accordance with the Agreement Between County and Contractor for Construction, Article 3 - Effective Date, Time of Commencement and Substantial Completion. This Agreement shall not become effective until: (1) approved by the Santa Fe County Commissioners and/or the County Manager or their designee; and (2) signed by all parties required to sign this Agreement.
- 7.2** This Contract shall achieve Substantial Completion in accordance with the Agreement Between County and Contractor, Article 3 - Effective Date, Time of Commencement and Substantial Completion, unless earlier terminated pursuant to Section 8 (Termination) or 9, (Appropriations and Authorizations) of these General Conditions.

8. TERMINATION

- 8.1** Termination of Agreement for Cause. Either party may terminate the Agreement based upon any material breach of this Agreement by the other party. The non-breaching party shall give the breaching party written notice of termination specifying the grounds for the termination. The termination shall be effective thirty (30) days from the breaching party's receipt of the notice of termination, during which time the breaching party shall have the right to cure the breach. If, however, the breach cannot with due diligence be cured within thirty (30) days, the breaching party shall have a reasonable time to cure the breach, provided that, within thirty (30) days of its receipt of the written notice of termination, the breaching party began to cure the breach and advised the non-breaching party in writing that it intended to cure.
- 8.2** Termination for Convenience of the County. The County may, in its discretion, terminate this Agreement at any time for any reason by giving the Contractor written notice of termination. The notice shall specify the effective date of termination, which shall not be less than fifteen (15) days from the Contractor's receipt of the notice. The County shall pay the Contractor for acceptable work, determined in accordance with the specifications

and standards set forth in this Agreement, performed before the effective date of termination but shall not be liable for any work performed after the effective date of termination.

- 8.3** Right of the County to Terminate Contract In the event that any of the provisions of this contract are violated by the Contractor, or by any of its subcontractors, the County may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the County shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the County may take over the work and prosecute the same to completion by contract or by force account and at the expense of the Contractor and the Contractor and its Surety shall be liable to the County for any excess cost occasioned the County thereby, and in such event the County may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

9. APPROPRIATIONS AND AUTHORIZATIONS

This Agreement is contingent upon sufficient appropriations and authorizations being made for performance of this Agreement by the Santa Fe County Board of County Commissioners and/or, if state funds are involved, the New Mexico State Legislature. If sufficient appropriations and authorizations are not made in this or future fiscal years, this Agreement shall terminate upon written notice by the County to the Contractor. Such termination shall be without penalty to the County, and the County shall have no duty to reimburse the Contractor for expenditures made in the performance of this Agreement. The County is expressly not committed to expenditure of any funds until such time as they are programmed, budgeted, encumbered and approved for expenditure by the County. The County's decision as to whether sufficient appropriations and authorizations have been made for the fulfillment of this Agreement shall be final and not subject to challenge by the Contractor in any way or forum, including a lawsuit.

10. AMENDMENTS – CHANGE ORDERS

Contract Documents may be amended by a Change Order, hereto attached as Exhibit I to allow for additions, deletions, and revision as specified in Article 2 "The Work" of the Agreement between Santa Fe County and the Contractor or to amend the terms and conditions by a Change Order.

11. INDEMNIFICATION

- 11.1** The Contractor shall defend, indemnify, and hold harmless the County and its elected officials, agents, and employees from any losses, liabilities, damages, demands, suits, causes of action, judgments, costs or expenses (including but not limited to court costs and

attorneys' fees) resulting from or directly or indirectly arising out of the Contractor's performance or non-performance of its obligations under this Agreement, including but not limited to the Contractor's breach of any representation or warranty made herein.

11.2 The Contractor agrees that the County shall have the right to control and participate in the defense of any such demand, suit, or cause of action concerning matters that relate to the County and that such suit will not be settled without the County's consent, such consent can not to be unreasonably withheld. If a conflict exists between the interests of the County and the Contractor in such demand, suit, or cause of action, the County may retain its own counsel to represent the County's interest.

11.3 The Contractor's obligations under this section shall not be limited by the provisions of any insurance policy the Contractor is required to maintain under this Agreement.

12. AGGRIEVEMENT PROCEDURE DURING CONTRACT ADMINISTRATION

12.1 Any claims, disputes, or other matters in question between the Contractor and the County, except those which have been waived by the making or acceptance of final payment as provided in Paragraph 6.2 of the Agreement Between Santa Fe County and Contractor for Construction, shall be presented in the form of a written request accompanied by supporting data to the Architect/Engineer for formal decision, with a copy to the other party. Such formal decision of the Architect/Engineer is binding upon the Contractor and the Owner unless either or both notify each other and the Architect/Engineer in writing within fifteen (15) days of their receipt of the decision that they are unwilling to abide by the Architect's/Engineer's decision, are thereby aggrieved in connection with the decision, and are separately exercising such rights as either may have under the Contract Documents or by law and regulation. If the Architect/Engineer fails to provide a written decision or a reasonable schedule to issue a written decision within ten (10) days after the County or the Contractor has presented its request, that party may consider itself aggrieved and may proceed to exercise its rights.

12.2 A settlement agreement signed by the County and the Contractor shall supersede and cancel any other dispute resolution proceedings regarding the same matter.

12.3 Unless work is stopped or payment withheld in accordance with the conditions of the Contract, or unless otherwise agreed in writing, the Contractor shall carry on the Work and maintain its progress during any dispute resolution proceedings, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents.

13. DISPUTE RESOLUTION

13.1 Either County or Contractor may request mediation pursuant to the New Mexico Public Works Mediation Act, 13-4C-1 NMSA 1978, of any claim before such decision become final and binding. The request for mediation shall be submitted in writing to the other party. Timely submission of the request shall stay the effect of Paragraph 12.1.

- 13.2** County and Contractor shall participate in the mediation process in good faith. The process shall be completed within Sixty (60) days of filing of the request. The mediation shall be governed by the rules for mediation pursuant to the New Mexico Public Works Mediation Act.
- 13.3** If the dispute is not resolved by mediation, the dispute shall be resolved through litigation in the district court. The parties agree that the exclusive forum for such litigation shall be the State of New Mexico District Court for the First Judicial District at Santa Fe, New Mexico. Contractor irrevocably consents to the jurisdiction of said Court and agrees to accept service of a summons and complaint by mail or commercial courier service in accordance with Rule 1-004(E)(3) NMRA.

14. INSURANCE

- 14.1** The Contractor shall not commence work under this contract until they have obtained all the insurance required under this paragraph and such insurance has been approved by the County, nor shall the Contractor allow any subcontractor to commence work on its subcontract until the insurance required of the subcontractor has been so obtained and approved.
- 14.2** Proof of Carriage of Insurance. The Contractor shall furnish the County with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions".
- 14.3** General Conditions. The Contractor shall submit evidence of insurance as is required herein. Policies of insurance shall be written by companies authorized to write such insurance in New Mexico.
- 14.4** General Liability Insurance, Including Automobile. The Contractor shall procure and maintain during the life of this Agreement a comprehensive general liability and automobile insurance policy with liability limits in amounts not less than \$1,000,000.00 combined single limits of liability for bodily injury, including death, and property damage for any one occurrence. Said policies of insurance shall include coverage for all operations performed for the County by the Contractor; coverage for the use of all owned, non-owned, hired automobiles, vehicles and other equipment, both on and off work; and contractual liability coverage under which this Agreement is an insured contract. The Santa Fe County shall be a named additional insured on the policy.
- 14.5** Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance. The Contractor shall either 1) require each of its subcontractors to procure and to maintain during the life of its subcontract, Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in 14.4 above.

- 14.6 Workers' Compensation Insurance.** The Contractor shall comply with the provisions of the Workers' Compensation Act, 52-1-1 to 52-1-70 NMSA 1978. The Contractor shall procure and shall maintain during the life of this contract Workmen's Compensation Insurance as required by applicable State law for all of its employees to be engaged in work at the site of the project under this Contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Workmen's Compensation law, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of its employees as are not otherwise protected.
- 14.7 Scope of Insurance and Special Hazards.** The insurance require under subparagraphs 14.4 and 14.5 hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this Contract.
- 14.8 Builder's Risk Insurance (Fire and Extended Coverage).** Until the project is completed and accepted by the County, the County, or Contractor at the County's option is required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the County, the Contractor, subcontractors as their interests may appear. The Contractor shall not include any costs for Builder's Risk Insurance (fire and extended coverage) premiums during construction unless the Contractor is required to provide such insurance; however, this provision shall not release the Contractor from its obligation to complete, according to plans and specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.
- 14.9 Increased Limits.** If, during the life of this Agreement, the New Mexico State Legislature increases the maximum limits of liability under the Tort Claims Act (NMSA 1978, Sections 41-4-1 through 41-4-29, as amended), the Contractor shall increase the maximum limits of any insurance required herein.
- 14.10 Additional insured.** Santa Fe County will be listed as an additional insured on all policies, and proof of coverage must be provided before work begins. Contractor shall maintain adequate insurance in at least the maximum amounts which the County could be liable under the New Mexico Tort Claims Act. It is the sole responsibility of the Contractor to be in compliance with the law.

15. INDEPENDENT CONTRACTOR

- 15.1** The Contractor and the Contractor's agents and employees are independent contractors performing professional and technical services for the County and are not employees of the

County. The Contractor and the Contractor's agents and employees shall not accrue leave, retirement, insurance, bonding, use of County's vehicles, or any other benefits afforded to employees of the County as a result of this Agreement.

15.2 The Contractor shall not subcontract any portion of the services to be performed under this Agreement without prior written approval of the County.

15.3 The Contractor shall maintain detailed time records which indicate the date, time and nature of services rendered. These records shall be subject to inspection by the County and the State Auditor. The County shall have the right to audit billings both before and after payment. Payment under this Agreement shall not foreclose the right of the County to recover excessive illegal payments.

16. CONFLICT OF INTEREST OF OFFICERS OR EMPLOYEES OF THE LOCAL JURISDICTION, MEMBERS OF THE LOCAL GOVERNING BODY, OR OTHER PUBLIC OFFICIALS

16.1 No officer or employee of the local jurisdiction or its designees or agents, no member of the governing body, and no other public official of the locality who exercises any function or responsibility with respect to this contract, during its tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed. Further, the Contractor shall cause to be incorporated in all subcontracts the language set forth in this paragraph prohibiting conflict of interest.

16.2 No official of the County who is authorized in such capacity and on behalf of the County to negotiate, make, accept or approve, or to take part in negotiating, making accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the County who is authorized in such capacity and on behalf of the County to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

16.3 The Contractor warrants that the Contractor presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance or services required under this Agreement.

17. ASSIGNMENT

17.1 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 advance written approval of the County. Any attempted assignment or transfer without the County's advance written approval shall be null and void and without any legal effect.

18. SUBCONTRACTING

- 18.1** The Contractor shall not subcontract or delegate any portion of the services to be performed under this Agreement without the advance written approval of the County. Any attempted subcontracting or delegating without the County's advance written approval shall be null and void and without any legal effect.
- 18.2** Contractor shall provide to the County a listing of subcontractors within ten (10) days of the Contract award.
- 18.3** Contractor shall adhere to all provisions of the Subcontractor's Fair Practices Act 13-4-31 to 13-4-42, NMSA 1978.
- 18.4** Contractor shall provide to the County completed Non-Collusion Affidavit of Subcontractor form and Certification of Subcontractor Regarding Equal Employment Opportunity form for all subcontractors listed.
- 18.5** The Contractor shall not award any work to any subcontractor without prior written approval of the County, which approval will not be given until the Contractor submits to the County a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the County may require.
- 18.6** The Contractor shall be as fully responsible to the County for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as they are for the acts and omissions of persons directly employed by them.
- 18.7** The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the County may exercise over the Contractor under any provision of the contract documents.
- 18.8** Nothing contained in this contract shall create any contractual relation between any subcontractor and the County.
- 18.9** All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate written agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of County. Any contract between Contractor and a Subcontractor or Supplier shall provide that any remedy or claim for nonpayment of sums due or owing to Subcontractor or Supplier or services performed or materials provided is against Contractor and not County, subject to any remedy or rights Subcontractor or Supplier may have under the terms of the Contractor's Performance Bond and Section 13-4-19 NMSA 1978, the New Mexico Little Miller Act.

19. PERSONNEL

19.1 All work performed under this Agreement shall be performed by the Contractor or under its supervision.

19.2 The Contractor represents that it has, or will secure at its own expense, all personnel required to discharge its obligations under this Agreement. Such personnel (i) shall not be employees of or have any contractual relationships with the County and (ii) shall be fully qualified and licensed or otherwise authorized or permitted under federal, state, and local law to perform such work.

20. NOTICES

20.1 Any notice required to be given to either party by this Agreement shall be in writing and shall be delivered in person, by courier service or by U.S. mail, either first class or certified, return receipt requested, postage prepaid, as follows:

To the County: Santa Fe County
 Office of the County Attorney
 102 Grant Avenue
 Santa Fe, New Mexico 87501

To the Contractor: _____

20.2 Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed to either party may be changed by written notice given by such party to the other as hereinabove provided.

21. RELEASE

The Contractor, upon final payment of the amounts due under this Agreement, releases the County, the County's officers and employees from all liabilities and obligations arising from or under this Agreement, including, without limitation, all damages, losses, costs, liability, and expenses, including, without limitation, attorney's fees and costs of litigation that the Contractor may have.

22. WAIVER

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver be in writing signed by the party making the waiver and addressed to the other party; nor shall any custom or practice which may evolve between the parties in the administration of the terms hereof be construed to waive or lessen the right of either party to insist upon performance by the other party in strict accordance with the terms hereof. Further, the waiver by any party of a breach by the other party of any term, covenant, or condition hereof shall not operate as a waiver of any subsequent breach of the same or any other term, covenant, or condition thereof.

CONDITIONS OF THE WORK

1. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

- 1.1** The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Architect/Engineer/County will prepare jointly (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Architect/ Engineer/County in accordance with the schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each schedule to be subject to change from time to time in accordance with progress of the work.

2. SHOP OR SETTING DRAWINGS

- 2.1** The Contractor shall submit promptly to the Architect/Engineer/County two (2) copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Architect/Engineer/County and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Architect/ Engineer/County with two corrected copies. If requested by the Architect/Engineer/County the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Architect/Engineer/County, the Contractor will be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications, unless the Contractor notifies the Architect/Engineer/County in writing of any deviations at the time the Contractor furnishes such drawings.

3. MATERIALS, SERVICES AND FACILITIES

3.1 It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.

3.2 Any work necessary to be performed after regular working hours, on Sundays or legal holidays, shall be performed without additional expense to the County.

4. CONTRACTOR'S TITLE TO MATERIALS

- 4.1** No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he/she has good title to all materials and supplies used by him/her in the work, free from all liens, claims or encumbrances.

5. INSPECTION AND TESTING OF MATERIALS

- 5.1** All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the County. The County will pay for all laboratory inspection service direct, and not as a part of the Contract.
- 5.2** Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

6. "OR EQUAL" CLAUSE

- 6.1** Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and, any material, article, or equipment or other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is, in the opinion of the Architect/Engineer/County, of equal substance and function. It shall not be purchased or installed by the Contractor without the Architect/Engineer/County's written approval.

7. PATENTS

- 7.1** The Contractor shall hold and save the County and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the County, unless otherwise specifically stipulated in the Contract Documents.
- 7.2** License and/or Royalty Fees for the use of a process which is authorized by the County of the project must be reasonable, and paid to the holder of the patent, or its authorized licensee, direct by the County and not by or through the Contractor.
- 7.3** If the Contractor uses any design, device or materials covered by letters, patent or copyright, the Contractor shall provide for such use by suitable agreement with the County of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, the Contract prices shall include all royalties or costs

arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or its Sureties shall indemnify and save harmless the County of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials, or any trademark or copyright in connection with work agreed to be performed under this Contract, and shall indemnify the County for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after, completion of the work.

8. SURVEYS, PERMITS AND REGULATIONS

- 8.1** Unless otherwise expressly provided for in the Specifications, the County will furnish to the Contractor all surveys necessary for the execution of the work.
- 8.2** Unless otherwise expressly provided for in the Specifications, the Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of this Contract.
- 8.3** The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

9. CONTRACTOR'S OBLIGATIONS

- 9.1** The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this Contract, within the time herein specified. The Contractor will perform the Work in accordance with the provisions of this Contract and said specifications and in accordance with the plans and drawings covered by this Contract any and all supplemental plans and drawings, and in accordance with the directions of the Architect/Engineer/County as given from time to time during the progress of the work. The Contractor shall furnish, erect, maintain, and remove such construction plans and such temporary works as may be required.
- 9.2** The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Architect/Engineer and the County.

10. WEATHER CONDITIONS

- 10.1** In the event of temporary suspension of work, or during inclement weather, or whenever the Architect/Engineer/County shall direct, the Contractor will, and will cause its subcontractors to protect carefully its and their work and materials against damage or injury from the weather. If, in the opinion of the Architect/Engineer/County, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of its Subcontractors so to protect its work, such materials shall be removed and replaced at the expense of the Contractor.

11. PROTECTION OF WORK AND PROPERTY-EMERGENCY

- 11.1** The Contractor shall at all times safely guard the County's property from injury or loss in connection with this Contract. The Contractor shall at all times safely guard and protect its own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such is caused directly by errors contained in the Contract or by the County, or its duly authorized representatives.
- 11.2** In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Architect/Engineer/County, in a diligent manner. The Contractor shall notify the Architect/Engineer/County immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Architect/Engineer/County for approval.
- 11.3** Where the Contractor has not taken action but has notified the Architect/Engineer/County of an emergency threatening injury to persons or to damage to the work or any adjoining property, the Contractor shall act as instructed or authorized by the Architect/Engineer/County.
- 11.4** The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 15 of these Conditions of the Work.

12. INSPECTION

- 12.1** The authorized representatives and agents of the County shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

13. REPORTS, RECORDS AND DATA

- 13.1** The Contractor shall submit to the County such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the County may request concerning work performed or to be performed under this Contract.

14. SUPERINTENDENT BY CONTRACTOR

- 14.1** At the site of the work the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Architect/ Engineer/County and shall be one who can be continued in that capacity for the particular job involved unless he/she ceases to be on the Contractor's payroll.

15. CHANGES IN WORK

15.1 No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the County. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- A. Unit bid prices previously approved.
- B. An agreed lump sum.
- C. The actual cost of:
 - 1) Labor, including foremen;
 - 2) Materials entering permanently into the work;
 - 3) The County's or rental cost of construction equipment during the time of use on the extra work;
 - 4) Power and consumable supplies for the operation of power equipment;
 - 5) Insurance;
 - 6) Social Security and old age and unemployment contributions.
- D. To the costs for changes in work a fixed fee will be added to be agreed upon but not to exceed ten percent (10%) of the actual cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

16. EXTRAS

16.1 Without invalidating the contract, the County may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the County or the Architect/Engineer, acting officially for the County, and the price is stated in such order.

17. INSPECTION OF SERVICES

17.1 The Contractor shall provide and maintain an inspection system acceptable to the County covering the services under this Contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the County during contract performance and for as long afterwards as the Contract requires.

17.2 The County has the right to inspect and test all services called for by the Contract, to the extent practicable at all times and places during the term of the Contract. The County shall perform inspections and tests in a manner that will not unduly delay the work.

17.3 If the County performs inspections or tests on the premises of the Contractor or a

subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

17.4 If any of the services do not conform with the Contract requirements, the County may require the Contractor to perform the services again in conformity with Contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by re-performance, the County may require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and reduce the Contract sum to reflect the reduced value of the services performed.

17.5 If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with Contract requirements, the County may by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the County that is directly related to the performance of such service, or terminate the Contract for default.

18. CORRECTION OF WORK

18.1 All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Architect/ Engineer/County who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet their approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at its own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Architect/Engineer/County, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Architect/Engineer/County shall be equitable.

19. WARRANTY OF CONSTRUCTION

19.1 In addition to any other warranties in this Contract, the Contractor warrants that work performed under this Contract conforms to the Contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

19.2 This warranty shall continue for a period of one (1) year from the date of final acceptance of the work. If the County takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one (1) year from the date the County takes possession.

19.3 The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to County-owned or controlled real or personal property, when that damage is the result of the

Contractor's failure to conform to contract requirements or any defect of equipment, material, workmanship, or design furnished.

19.4 The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one (1) year from the date of repair or replacement.

19.5 The County shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

19.6 If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the County shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

19.7 With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Contract, the Contractor shall obtain all warranties that would be given in normal commercial practice; require all warranties to be executed, in writing, for the benefit of the County, if directed by the County; and, enforce all warranties for the benefit of the County, if directed by the County.

19.8 In the event the Contractor's warranty under subparagraph 19.4 of this clause has expired, the County may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

19.9 Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the County nor for the repair of any damage that results from any defect in County-furnished material or design.

19.10 This warranty shall not limit the County's rights under the Inspection and Acceptance clause of this Contract with respect to latent defects, gross mistakes, or fraud.

20. SUBSURFACE CONDITIONS FOUND DIFFERENT

20.1 Should the Contractor encounter sub-surface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, the Contractor shall immediately give notice to the Architect/Engineer/County of such conditions before they are disturbed. The Architect/Engineer/County will thereupon promptly investigate the conditions, and if they find that they materially differ from those shown on the Plans or indicated in the Specifications, they will at once make such changes in the Plans and/or Specifications as they may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 15 above.

21. CLAIMS FOR EXTRA COST

21.1 No claim for extra work or cost shall be allowed unless the same was done in pursuance of

a written order of the Architect/Engineer approved by the County, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the County, giving the County access to accounts relating thereto.

22. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES

22.1 Immediately after execution and delivery of the Contract, and before the first partial payment is made, the Contractor shall deliver to the County an estimated construction progress schedule in a form satisfactory to the County, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due to the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the County (a) a detailed estimate giving a complete breakdown of the Contract sum and (b) periodic itemized estimates of work done for the purpose of making partial payments thereof. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the Contract price.

22.2 Schedule

The Contractor shall, within five (5) days after the effective date of Notice to Proceed, prepare and submit five (5) copies of a progress schedule covering project operations for the Contract period. This progress schedule shall be of the type generally referred to as a Critical Path Method (CPM), Critical Path Schedule (CPS), and Critical Path Analysis (CPA), and other similar designations. The CPM shall be used to control the timing and sequences of the project. All work shall be done in accordance with the CPM Planning and Scheduling. A written statement of explanation shall be submitted with the progress schedule. All costs incurred by the contractor to implement the CPM shall be borne by the Contractor.

23. ASSIGNMENTS

23.1 The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the County. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this Contract.

24. MUTUAL RESPONSIBILITY OF CONTRACTORS

24.1 If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with

such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractors will so settle. If such other Contractor or subcontractor shall assert any claim against the County on account of any damage alleged to have been sustained, the County shall notify the Contractor, who shall indemnify and save harmless the County against any such claim.

25. SEPARATE CONTRACT

25.1 The Contractor shall coordinate its operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including its subcontractors, shall keep informed of the progress and the detail work of other contractors and shall notify the Architect/Engineer/County immediately of lack of progress or defective workmanship on the part of other contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by the Contractor of the status of the work as being satisfactory for proper coordination with its own work.

26. ARCHITECT/ENGINEER'S AUTHORITY

26.1 The Architect/Engineer/County shall give all orders and directions contemplated under this Contract and specifications, relative to the execution of the work. The Architect/Engineer/County shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Architect/Engineer/County's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Architect/Engineer/County shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

26.2 The Architect/Engineer/County shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this Contract and other Contractors performing work for the County shall be adjusted and determined by the Architect/Engineer/County.

27. STATED ALLOWANCES

27.1 It is understood that Contractor has included in its proposal for the Contract sum all allowances including "Allowed Materials" The Contractor shall purchase the "Allowed Materials" as directed by the County on the basis of the lowest and best bid of at least three competitive bids. If the actual sum for purchasing the "Allowed Materials" is more or less than the "Cash Allowance," the Contract sum shall be adjusted accordingly. The adjustment in contract price shall be made on the basis of the purchase price without

additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "Allowed Materials" shall be included in the applicable sections of the Contract Specifications covering this work.

28. USE OF PREMISES AND REMOVAL OF DEBRIS

28.1 The Contractor expressly undertakes at its own expense:

- A. to take every precaution against injuries to persons or damage to property;
- B. to store its apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of its work or the work of any other subcontractors;
- C. to place upon the work or any part thereof only such loads as are consistent with the safety of the portion of the work;
- D. to clean up frequently all refuse, rubbish, scrap materials, and debris caused by its operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
- E. before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from its operations, and to put the site in a neat, orderly condition.
- F. to effect all cutting, fitting or patching of its work required to make the same to conform to the plans and specifications and, except with the consent of the Architect/Engineer/County, not to cut or otherwise alter the work of any other Contractor.

29. QUANTITIES OF ESTIMATE

29.1 Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the County to complete the work contemplated by this Contract, and such increase or diminution shall in no way void this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

30. LANDS AND RIGHTS-OF-WAY

30.1 Prior to the start of construction, the County shall obtain all lands and rights-of-way necessary for the carrying out and completions of work to be performed under this Contract.

31. GENERAL GUARANTY

31.1 Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the County, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or

workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of final acceptance of the work unless a longer period is specified. The County will give notice of observed defects with reasonable promptness.

32. PROTECTION OF LIVES AND HEALTH

32.1 The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of its prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the County may determine to be reasonably necessary.

33. INTEREST OF MEMBER

33.1 No member of Santa Fe Board of County Commissioners shall be admitted to any share or part of this Contract or to any benefit that may arise therefrom.

34. OTHER PROHIBITED INTERESTS

34.1 No official of the County who is authorized in such capacity and on behalf of the County to negotiate, make, accept or approve, or to take part in negotiating, making accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the County who is authorized in such capacity and on behalf of the County to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

35. USE AND OCCUPANCY PRIOR TO ACCEPTANCE BY COUNTY

35.1 The Contractor agrees to the use and/or occupancy of a portion or unit of the project before formal acceptance by the County, provided the County:

- A. Secures written consent of the Contractor except in the event, in the opinion of the Architect/ Engineer, the Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other contract requirements.
- B. Secures endorsement from the insurance carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction.
- C. When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit

to complete construction. Consent of the surety must also be obtained.

ATTACHMENT A

BID SHEETS

ATTACHMENT B

ADDENDA & MODIFICATIONS

EXHIBIT A
PROJECT MANUAL

EXHIBIT B

TECHNICAL SPECIFICATIONS AS LISTED IN PLAN SET

EXHIBIT C

LABOR AND MATERIAL PAYMENT BOND

(SAMPLE)

KNOW ALL MEN BY THESE PRESENT, THAT WE _____
_____ as PRINCIPAL hereinafter called the "PRINCIPAL" and
_____ as SURETY hereinafter called the "SURETY", are held and
firmly bound unto Santa Fe County, a Political Subdivision of the State of New Mexico as OBLIGEE
hereinafter called the "COUNTY", for the use and benefit of any claimants as herein below defined, 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, the PRINCIPAL has a written contract dated _____, 2015, with the
COUNTY for the construction services for the (insert project description) _____ in Santa Fe
County, New Mexico, which must be constructed in accordance with drawings and specifications which
contract is referenced and made a part hereof, and is hereinafter referred to as the "Contract."

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 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 but not
be limited to that part of water, gas, power, light, heat, oil, gasoline, telephone services or
rental of equipment directly applicable to the Contract.
2. The above named PRINCIPAL and SURETY hereby jointly and severally agree with the
COUNTY 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,
prosecute a suit to final judgment for such sum or sums as may be justly due claimant, and
have execution thereof. The COUNTY shall not be liable for payment of any cost or
expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant, or other than one having a direct contract with the PRINCIPAL,
shall have written notice in the form of an sworn statement to the COUNTY and any
one or both of the following: the PRINCIPAL or SURETY above named, within
ninety (90) days after such said claim is made or suit filed, 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.
 - b. Such notice shall be served by mailing the same by registered mail or certified mail,
postage prepaid, in an envelope addressed to the COUNTY, PRINCIPAL or
SURETY, at any place where an office is regularly maintained by said COUNTY,

PRINCIPAL or SURETY 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.

4. Any suit under this Labor and Material Bond must be instituted in accordance with the statute of limitation under Section 37-1-3 NMSA 1978.
5. No right of action shall accrue on this Bond to or for the use of any person or corporation other than subcontractors or sub-subcontractors of the said Contract between PRINCIPAL and Santa Fe County named herein.

SIGNED AND SEALED THIS _____ DAY OF _____, 2015.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY (signature)

(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY'S Authorized New Mexico Agent

EXHIBIT D
PERFORMANCE BOND
(SAMPLE)

A. KNOW ALL MEN BY THESE PRESENT, THAT WE _____, as PRINCIPAL hereinafter called the "CONTRACTOR" and _____, as SURETY hereinafter called the "SURETY", are held and firmly bound unto OBLIGEE Santa Fe County, a Political Subdivision of the State of New Mexico, hereinafter called the "COUNTY", in the sum 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.

B. WHEREAS, the CONTRACTOR has a written contract dated _____, 2015, with the COUNTY for the construction services for the (insert project description) Santa Fe County, New Mexico, in accordance with drawings and specifications which contract is referenced made part hereof, and is hereinafter referred to as the "Contract."

C. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform said Contract (including any amendment thereto), then this obligation shall be null and void; otherwise it shall remain in full force and effect until the COUNTY shall by written instrument notify the SURETY that the obligation is discharged, except that the obligation shall continue for at least three (3) months following the expiration of the term of the Contract.

1. The SURETY hereby waives notice of any alteration or extension of the Contract time made by the COUNTY.
2. Whenever CONTRACTOR shall be, and is declared by the COUNTY to be in default under the Contract, the COUNTY having performed the COUNTY'S obligations thereunder, the SURETY must promptly remedy the default and shall promptly:
 - (1) Complete the Contract in accordance with its terms and conditions, or
 - (2) Obtain a bid or bids for submission to the COUNTY for completing the Contract in accordance with its terms and conditions, and upon determination by the COUNTY and SURETY of the lowest responsible bidder, arrange for a contract between such bidder and Santa Fe County, and make available as work progresses (even though there should be a default or a secession 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 the COUNTY to CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by the COUNTY to CONTRACTOR.

D. No right of action shall accrue on this Performance Bond to or for the use of any person or corporation other than Santa Fe County named herein or the heirs, executors, administrators, or successors of Santa Fe County.

E. This Bond shall be enforceable without the need to have recourse to any judicial or arbitral proceedings.

SIGNED AND SEALED THIS _____ DAY OF _____, 2015.

CONTRACTOR – PRINCIPAL (signature)

By: _____
(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY (signature)

(Printed name and title)

NOTARY PUBLIC (seal)

My Commission expires: _____

SURETY'S Authorized New Mexico Agent

EXHIBIT E

ASSIGNMENT OF ANTITRUST CLAIMS

TO BE EXECUTED BY GENERAL CONTRACTORS, SUBCONTRACTORS, SUPPLIERS,
AND SUBSUBCONTRACTORS OF CONTRACTORS ON COUNTY CONTRACTS.

FIRM NAME:
ADDRESS:

PROJECT:

PHONE NO.:

PROJECT NO:

_____ agrees that any and all claims which it may have or may inure to it for overcharges resulting from antitrust violations as to goods, services, and materials purchased in connection with the above-referenced project are hereby assigned to Santa Fe County, but only to the extent that such overcharges are passed on to the County. It is agreed that the undersigned retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the County, including the right to any treble damages attributable thereto.

FIRM: _____

BY: _____
Signed by Individual empowered to obligate Suppliers,
Subcontractors or Subsubcontractors

TITLE: _____

EXHIBIT F

CERTIFICATE OF LIABILITY INSURANCE

EXHIBIT G

NOTICE OF CONTRACT AWARD

TO:

FROM: _____, Public Works Department

CONTRACT NO. _____

This is to inform that you that you have been awarded the Contract for:

Project Name: _____

Date of Award _____ Amount of Award _____

Contractor Information:

Firm Name: _____ License# _____

Address: _____ Phone # _____

It is anticipated that construction will take place:

Approximate Starting Date: _____ Approximate Completion Date: _____

Santa Fe County hereby accepts your offer on the solicitation No. _____ as reflected in this award document. The rights and obligations of the parties shall be subject to and governed by this document and any documents attached or incorporated by reference.

SANTA FE COUNTY

Name of Public Works Director or designee: _____
(Print Name)

Signature

EXHIBIT H

NOTICE TO PROCEED

TO:

DATE:

PROJECT:

ATTN:

PROJECT NO.

CONTRACT NO.

IFB NO.

Enclosed is your copy of the Contract, which has been approved. Please consider this letter as official NOTICE TO PROCEED on the above-referenced project.

Your firm shall commence work within ten (10) calendar days of the above date and shall achieve Substantial Completion _____ calendar days thereafter, which shall be _____, 2015, unless modified by Change Order.

It is essential that you make reference to the above-stated project number on all documents sent to the Architect/Engineer from your office. These documents shall include correspondence, change order proposals, change orders, payment request statements, and all other project-related material which you forward to the Architect/Engineer for information and processing.

Also, before you may start any Work at the site, you must (add any other requirements):

OWNER:

Santa Fe County

SFC _____ DEPARTMENT

By:

Director, SFC Department

EXHIBIT I

CHANGE ORDER

PROJECT:

CONTRACTOR
CHANGE ORDER NO:

ARCHITECT/ENGINEER

PROJECT NO:

Contractor Telephone:
Contractor e-mail:
ENGINEER'S/ARCHITECT'S PROJECT NO:

CHANGE ORDER JUSTIFICATION (Provide definitive reason for proposed change order.)

You are directed to make the following changes in this Contract: (Provide a detailed description of the Scope of the Work.)

NOT VALID UNTIL SIGNED BY BOTH THE COUNTY AND THE ARCHITECT/ENGINEER.
Signature of the Contractor indicates his agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The Original Contract Sum was	
Net change by previously authorized Change Orders	\$0.00
The Contract Sum prior to this Change Order was he Contract Sum will be increased/decreased/unchanged	
by this Change Order in the amount of	\$0.00
The new contract Sum including this Change Order will be	\$0.00
The Contract Time will be increased/decreased/unchanged by <input type="text"/> days.	
The date of Substantial Completion as of the date of this Change Order therefore is: <input type="text"/>	

CHANGE ORDER SIGNATURE PAGE

REVIEWED

Santa Fe County

By: _____

Date: _____

AGREED AND RECOMMENDED

CONTRACTOR

By: _____

Date: _____

Title: _____

ARCHITECT/ENGINEER

By: _____

Date: _____

APPROVED

SANTA FE COUNTY

By: _____

Date: _____

EXHIBIT J

CERTIFICATE OF SUBSTANTIAL COMPLETION

SANTA FE COUNTY – (INSERT DEPARTMENT)

Public Works Director or designee (name): _____

CONTRACTOR: _____

Contractor Purchase Order Number: _____

ARCHITECT/ENGINEER: _____

Project Name: _____

Contract Date: _____

Project Description - Article 2 to Agreement Between Santa Fe County and Contractor (include address and project location description):

The contractor hereby certifies the Work of this project to be in complete conformance to the Contract Documents and is substantially complete, enabling the County to make use of the Work as intended.

By its signature below the Contractor further requests Architect/Engineer and County to inspect the Work and to concur in the Work's substantial completion by their signature and/or to provide in a timely manner to Contractor a listing of work items adjudged by them as remaining to be completed or corrected. Contractor agrees to complete and correct all work items (Punch List) representative of such listing within ____ days from date of receipt from Architect/Engineer.

Contractor

Signature

Print Name

Date

Accepted by Santa Fe County

_____ Signature (Public Works Director or Designee)	_____ Print Name	_____ Date
--	---------------------	---------------

Inspected/Concurrence Architect/Engineer

_____ Signature	_____ Print Name	_____ Date
--------------------	---------------------	---------------

PUNCH LIST

A list of items (Punch List) to be completed or corrected, verified by the Architect/Engineer and County, is appended hereto. Failure to include any incomplete items on such list does not alter the responsibility of the Contractor to provide all Work in complete conformance with the Contract Documents.

The Contractor shall complete or correct the work on the punch list appended hereto by _____ (Date)

The punch list consists of _____(indicate number of items) items.

The Work performed under this Contract has been reviewed and found to be substantially complete by the Director of Public Works who has hereby established the Date of Substantial Completion as _____ (date) which is also the date of commencement of all warranties and guarantees required by the Contract Documents. The Date of Substantial Completion of the Work or designated portion thereof is the date established by the Director of Public Works (or designee) when construction is sufficiently complete, in accordance with the Contract Documents, so the County may occupy the Work, or designated portion thereof, for the use for which it is intended.

The County accepts the Work or designated portion thereof as substantially complete and assumes full possession thereof, in accordance with the contract documents.

Punch List Items: (Use additional sheets if necessary)



**GEOTECHNICAL
ENGINEERING SERVICES
JOB NO. 1-60813
ARROYO HONDO TRAIL
SANTA FE COUNTY, NEW MEXICO**

GEO-TEST, INC.
3204 RICHARDS LANE
SANTA FE,
NEW MEXICO
87507
(505) 471-1101
FAX (505) 471-2245

8528 CALLE ALAMEDA NE
ALBUQUERQUE,
NEW MEXICO
87113
(505) 857-0933
FAX (505) 857-0803

2805-A LAS VEGAS CT.
LAS CRUCES,
NEW MEXICO
88007
(575) 526-6260
FAX (575) 523-1660

PREPARED FOR:

LORIS & ASSOCIATES, INC.



November 25, 2016
File No. 1-60813

Loris & Associates, Inc
100 Superior Plaza Way
Superior, Colorado 80027

Attn: Scott Belonger, P.E.

RE: Geotechnical Engineering Services
Arroyo Hondo Trail
Santa Fe County, New Mexico

Dear Mr. Belonger:

Submitted herein is the Geotechnical Engineering Services report for the above referenced project. The report contains the results of our field investigation, laboratory testing and recommendations for design and construction of the trail, as well as recommendations for two box culverts and two pedestrian bridges.

It has been a pleasure to serve you on this project. If you should have any questions, please contact this office.

Respectfully submitted:

Reviewed by:

GEO-TEST, INC.

Timothy Matson
Engineering Geologist

cc: Addressee (3)

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INTRODUCTION

This report presents the results of a geotechnical investigation performed by this firm for the proposed Arroyo Hondo Trail to be constructed in Santa Fe County, New Mexico.

The objectives of this investigation were to:

- 1) Evaluate the nature and engineering properties of the subsurface soils underlying the proposed trail alignment.
- 2) To provide recommendations for design and construction of the proposed trail, box culverts, pedestrian bridges, as well as criteria for site grading.

The investigation includes subsurface exploration, selected soil sampling, laboratory testing of the samples, performing an engineering analysis and preparation of this report.

PROPOSED CONSTRUCTION

It is understood that the project consists of a network of new trails to be located in the Rancho Viejo area of Santa Fe County with a total length of approximately 6 miles, as shown on Figure 1, Over All Trail Plan. The trail is divided into 5 separate segments; however, this report addresses segments 1 through 4. Recommendations for segment 5 will be presented in a subsequent report. Two box culverts and two pedestrian bridges are also planned. One of the box culverts will cross beneath the old on-ramp to I-25 from the east frontage road and the other will be next to existing box culverts crossing under NM-14. The southern pedestrian bridge will cross over Cañada del Rancho arroyo and the northern bridge will cross the Arroyo Hondo. The trail will be cut and or filled to provide for a level trail surface.

The proposed box culverts are anticipated to be for pedestrian traffic only and not be subject to storm water runoff. The proposed bridges will be single span pre-fabricated metal truss style type bridges, about 10 feet wide with a span length of about 100 feet. Structural loads on the abutments are 25 kip dead load, 50 kip uniform live load, 12 kip vehicle load and a 14 kip horizontal live load.

Should structural loads or other project details vary significantly from those outlined above, this firm should be notified for review and revision of

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recommendations contained herein.

FIELD EXPLORATION

Twenty-five (25) exploratory borings were drilled to depths ranging from approximately 6 to 25½ feet below existing grades. The approximate locations of the borings are shown on the accompanying Boring Location Maps, Figure 2-6. The soils encountered in the borings were continuously examined, visually classified and logged during the drilling operation. The boring logs are presented in a following section of this report. Drilling was generally accomplished using a truck mounted drill rig equipped with 5.5-inch diameter continuous flight hollow stem auger. Subsurface materials were sampled at five-foot intervals or less in the borings utilizing an open tube split barrel sampler driven by a standard penetration test hammer. In areas not accessible to our truck mounted drill rig, the drilling was accomplished using hand augers and samples of the subsurface materials were collected from the auger cuttings.

LABORATORY TESTING

Selected samples were tested in the laboratory to determine certain engineering properties of the soils. Moisture contents were determined to evaluate the various soil deposits both with depth and laterally. The results of these tests are presented on the boring logs.

Sieve analysis and Atterberg limits tests were performed on selected samples to aid in soil classification. The results of these tests are presented in the Summary of Laboratory Results and on the individual test reports.

SITE CONDITIONS

The area of the proposed trail starts near the parking lot for the Rail Runner at the NM 599 stop. The proposed trail extends through commercial and residential developments, and then trends in a mostly northeast direction, generally following the Arroyo Hondo and connecting with trails around the Dinosaur Trail area and the La Entrada subdivision in Rancho Viejo. Based on the Preliminary Geologic Map of the Turquoise Hill 7.5-minute quadrangle, most of the area is underlain by the Ancha Formation as well as younger fluvial terrace deposits, valley fill and alluvium confined to modern drainages.

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SUBSURFACE SOIL CONDITIONS

As indicated by the exploratory borings, the soils underlying the proposed trail consist predominantly of interbedded low plasticity silty clayey sands, sandy clays, silty clays, as well as non-plastic silty sands and relatively clean sands with various amounts of gravel. These soils are generally loose to medium dense or moderately firm to firm at the surface, becoming denser and firmer with depth. Detailed soil descriptions are presented on the boring logs.

Soil moisture contents were generally low throughout the depth of the borings and no groundwater was encountered.

CONCLUSIONS AND RECOMMENDATIONS**Trail**

Based on standard penetration and laboratory testing the native soils underlying the proposed trail are predominately medium dense in their present condition and are considered suitable to provide reliable support of the proposed trail. Accordingly, the proposed trail can be constructed directly on the densified native soils or on structural fill.

Box Culverts

The soils encountered at the approximate depth of the proposed box culverts are medium dense and considered suitable to provide reliable support of the box culverts as planned. Based on the above, the box culvert can bear on densified native soils or on properly compacted structural fill. Detailed recommendations for the design of the box culverts are presented in the following sections of this report.

Pedestrian Bridges

The soils underlying the southern pedestrian bridge are moderately firm on the southern abutment and dense on the northern abutment. The soils for the northern pedestrian bridge are medium dense on both abutments. These soils, in their present condition are considered suitable to provide reliable support for the bridges. Based on the subsurface soil conditions underlying the proposed bridge abutments, along with the magnitude of loads involved, it is recommended that the proposed bridge abutments be supported on shallow spread-type footings bearing directly on densified native soils or properly compacted structural fill. However, if the abutments will be subject to scour,

deep foundations may be necessary. Accordingly, as an alternate to shallow foundations, recommendations for the design of deep foundations are also provided. Although various types of deep foundations could be used, considering the subsurface soil conditions along with the magnitude of the foundations loads involved, the use of drilled, straight, cast-in-place concrete piers is considered the most economical deep foundation system.

Detailed recommendations for the design of shallow spread-type footings, as well as drilled pier foundations, along with recommendations for the required earthwork, are presented in the following sections of this report.

FOUNDATIONS

Box Culverts

The base of the culverts will act as self-supporting mat-type foundations. An allowable soil bearing pressure of 1,500 pounds per square foot should not be exceeded for mat foundation bearing on the native soils or on structural fill. This is based on the site preparation being accomplished as recommended in a following section of this report.

If the culverts have wing-walls, shallow spread-type footings should be used for support of the wing walls and they should also bear on densified native soils or on properly compacted structural fill soil placed as recommended in the site grading section of this report. An allowable soil bearing pressure of 2,000 pounds per square foot is recommended for the design of shallow spread-type footings. Minimum widths of continuous footings should be 1.33 feet. Footings, as well as any upstream or downstream cut off walls, should be established a minimum of 2.0 feet below the lowest adjacent grade.

The bearing values recommended above apply to full dead load plus realistic live loads, and can be safely increased by one-third for loading of short durations such as wind or seismic forces.

Settlement of the box culvert or footings designed and constructed as recommended herein are estimated not to exceed 1.0 inch for the soil moisture contents encountered during test drilling or compaction moisture contents introduced during construction. Differential movements are estimated not to exceed 75 percent of total movements.

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Lateral Loads

Resistance to lateral forces will be provided by soil friction between the base of the culverts and footings and by passive earth resistance against their sides. A coefficient of friction of 0.40 should be used for computing the lateral resistance between bases of the culverts and footings and the soil. With backfill as recommended in the site grading section of this report, a passive soil resistance equivalent to a fluid weighing 325 pounds per cubic foot should be used for analysis.

Lateral pressure against culvert walls and any wing walls will depend upon their degree of restraint. Walls which are restrained so as to limit movement at the top to less than 0.001 times the height of the wall should be designed for an "at rest" earth pressure of 55 pounds per square foot per foot of depth. Walls free to move at the top should be designed of an "active" earth pressure equal to 35 pounds per square foot per foot of depth. The recommended equivalent fluid pressures are applicable to a condition of horizontal backfill without surcharge loads. Analysis of earth pressures produced by sloping backfill or surcharge loads can be provided by this firm upon request.

Pedestrian Bridges**Shallow Foundations**

Conventional spread-type footings, bearing directly on densified native soils, or on properly compacted structural fill, are recommended for the support of the bridge abutments. An allowable soil bearing pressure of 2,000 pounds per square foot is recommended for footing design. This bearing pressure applies to full dead plus realistic live loads, and can be safely increased by one-third for totals loads including wind and seismic forces. The minimum recommended width of the footing is 24 inches. Footings should be founded at a minimum depth of 2.0 feet below lowest adjacent finished grade, or at a depth of 2.0 feet below the maximum depth of scour, whichever is the greater depth.

Maximum settlement of footings designed and constructed as recommended herein are estimated not to exceed 1.0 inch for the soil moisture contents encountered during test drilling or compaction moisture contents introduced during construction. Differential movements are estimated not to exceed 75 percent of total movements. Significant moisture increases in the foundation soils would create additional settlements.

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Drilled Pier Foundations

If the bridge abutments are subject to scour to greater depths than practicable to found spread-type footings, the bridge abutments can be founded on deep foundations extending below the depth of scour. Estimated allowable downward capacities for various diameters of drilled cast in-place concrete pier foundations versus depth should be established using an allowable end bearing pressure on the order of 4,000 pounds per square foot (psf) and an average side shear on the order of 1,000 psf below the depth of scour. The minimum recommended depth of pier is 10.0 feet below existing natural grade. The allowable downward capacities apply to full dead plus realistic live loads and can be increased by one-third for total loads including wind and seismic loads.

A passive soil resistance equal to an equivalent fluid pressure of 800 pounds per cubic foot against the sides of isolated drilled piers below the depth of scour can be used to analyze lateral resistance. Piers can be considered isolated when they are spaced at least three diameters center-to-center perpendicular to the line of thrust and 6 diameters parallel to the line of thrust. Resistance to lateral forces on the drilled pier foundations can be analyzed by this firm using the computer program LPILE Plus for windows, Version 5.0 by Ensoft, Inc., once the configuration of the piers and depth of scour is established and lateral forces are known.

Straight, drilled pier excavations should be advanced with a single flight auger, or bucket auger bits, to the design depth. It should be verified by observation and measurement that the excavations are open to that depth. The auger should then be placed back into the excavations and two additional passes made to clean loose material present in the bottom of the excavations.

It is estimated that only minor caving and/or sloughing will occur in the surficial soils during the drilling operations. Moderate to heavy caving and sloughing is anticipated in drilled pier excavations that extend into the relatively clean sands. Accordingly, casing and/or slurry drilling methods may be necessary to control concrete over-runs.

Concrete should be placed through a hopper or other device so that it is channeled in such a manner to free fall and clear the walls of the excavation and reinforcing steel until it strikes the bottom. Adequate compaction will be achieved by free fall of the concrete up to the top 5 feet. The top 5 feet of concrete should be vibrated in order to achieve proper compaction. The concrete should be designed from a strength standpoint so that the slump

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during placement is in the range of 4 to 6 inches.

Continuous observation of the construction of drilled piers should be performed by a representative of the geotechnical engineer to insure that they meet the requirements.

TRAIL PAVEMENT

It is recommended that the trail section can be constructed with crusher fines, asphaltic concrete or Portland cement concrete. Prior to placement of any fill or construction of the trail tread, the upper 8-inches of the existing native subgrade soils should be densified prior to placement of structural fill or construction as recommended in the Site Grading section of this report.

If crusher fines are used for the mixed-use trail, a minimum of 4-inches of crusher fines should be placed over a minimum of 8-inches of compacted native soils or on properly compacted structural fill. The crusher fines should have a plasticity index of 15 or less and should have a maximum of 20 percent passing the 200 sieve. The crusher fines should be moisture conditioned to +/- 2 percent and compacted to a minimum of 95 percent of the maximum density as determined in accordance with ASTM D-1557.

If asphaltic concrete is used, it should consist of a minimum of 2-inches of asphaltic concrete over a minimum of 8-inches of compacted native soils or on properly compacted structural fill. The asphaltic pavement should conform to NMSHTD criteria.

If Portland cement concrete pavement is used, the concrete should have minimum thickness of 4-inches and be placed over at least 8-inches of compacted native subgrade soils, or structural fill. The concrete should be air entrained, have a minimum compressive strength of 2,000 pounds per square inch or greater, and be constructed with load transfer joints designed for light maintenance vehicular traffic.

If desired as a working surface, a course of granular base can be placed beneath asphaltic concrete or the Portland cement concrete. Where granular base is used, it should have a plasticity index of no greater than 3 and meet the following grading requirements:

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Sieve Size (Square Openings)	Percent Passing by Dry Weight
1 Inch	100
¾ Inch	85-100
No. 4	45-95
No. 200	0-8

The granular base should be compacted to at least 95 percent of maximum dry density as determined in accordance with ASTM D1557.

SITE GRADING

The following general guidelines should be included in the project construction specifications to provide a basis for quality control during earthwork operations. It is recommended that all structural fill and backfill be placed and compacted under engineering supervision and in accordance with the following:

- 1) After clearing and grubbing, removal of any existing man-made fill, and making any required excavations, the exposed native soils should be densified prior to construction or placement of structural fill.
- 2) Densification of the exposed native soils should consist of scarifying to a depth of 8 inches, moisture conditioning to within 2 percent of the optimum moisture content and compacting the area to a minimum of 95 percent of maximum dry density as determined in accordance with ASTM D-1557.
- 3) The results of this investigation indicate that most of the native soils will be suitable for use as structural fill; however, some on site blending may be required to meet the specifications for structural fill. Any imported material must also meet the criteria for structural fill. All structural fill and backfill should be free of vegetation and debris, and contain no rocks larger than 3 inches. Gradation of the backfill material, as determined in accordance with ASTM D-422, should be as follows:

Size	Percent Passing
3 inch	100
No. 4	60 - 100
No. 200	15 - 60

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- 4) The plasticity index of the structural fill should be no greater than 15 when tested in accordance with ASTM D-4318.
- 5) Fill or backfill, consisting of soil approved by the geotechnical engineer, shall be placed in 8 inch loose lifts and compacted with approved compaction equipment. Loose lifts should be reduced to 4 inches if hand held compaction equipment is used. All compaction of fill or backfill shall be accomplished to a minimum of 95 percent of the maximum dry density as determined in accordance with ASTM D-1557. The moisture content of the structural fill during compaction should be within 2 percent of the optimum moisture content.
- 6) Tests for degree of compaction should be determined by the ASTM D-1556 method or ASTM D-6938. Observation and field tests should be carried on during fill and backfill placement by the geotechnical engineer to assist the contractor in obtaining the required degree of compaction. If less than 95 percent is indicated, additional compaction effort should be made with adjustment of the moisture content as necessary until 95 percent compaction is obtained.

CONSTRUCTION EXCAVATIONS

Excavated slopes for construction should be designed and constructed in accordance with 29 CFR 1926, Subpart P, and any applicable state or local regulations. Excavated permanent slopes should not exceed 2 to 1 (horizontal to vertical). Temporary construction excavations should be maintained at slopes of 1.5 to 1 (horizontal to vertical).

MOISTURE PROTECTION

The trail should be graded to drain and not allow any ponding on the surface of the paved areas. Positive drainage should also be provided away from the perimeter of the trail. Where possible, drainage should be routed around or under the trail and not be allowed to cross over or enter the paved trail.

Precautions should be taken during and after construction to minimize moisture increases of bridge foundation soils or behind culvert walls. It is recommended that positive drainage be provided away from the culvert walls and abutments to prevent ponding adjacent to the foundations. Backfill should be well compacted and should meet the specifications outlined in the site grading section of this report.

The foregoing recommendations should only be considered minimum

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requirements for overall site development. It is recommended that a civil/drainage engineer be consulted more detailed grading and drainage recommendations.

FOUNDATION REVIEW AND INSPECTION

This report has been prepared to aid in the evaluation of the trail alignment and to assist in the design of this project. It is recommended that the geotechnical engineer be provided the opportunity to review the final design drawings and specifications in order to determine whether the recommendations in this report are applicable to the final design. Review of the final design drawings and specifications will be noted in writing by the geotechnical engineer.

Variations from soil conditions presented herein may be encountered during construction of this project. In order to permit correlation between the conditions encountered during construction and to confirm recommendations presented herein, it is recommended that the geotechnical engineer be retained to perform sufficient review during construction of this project. Observation and testing should be performed during construction to confirm that suitable fill soils are placed upon competent materials and properly compacted.

CLOSURE

The data and analyses presented herein are:

- 1) Based upon our evaluation and interpretation of the findings of the field and laboratory program.
- 2) Based upon an interpolation of soil conditions between and beyond the explorations.
- 3) Subject to confirmation of the conditions encountered during construction.
- 4) Based upon the assumption that sufficient observation will be provided during construction.
- 5) Prepared in accordance with generally accepted professional geotechnical engineering principles and practice.

We make no other warranty, either expressed or implied. Any person using

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*Arroyo Hondo Trail
Job No. 1-60813*

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this report for bidding or construction purposes should perform such independent investigation as he deems necessary to satisfy himself as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project. If conditions encountered during construction appear to be different than indicated by this report, this office should be notified.

This report has been prepared for the sole use of Loris and Associates, Inc., specifically to aid in the design of the proposed Arroyo Hondo Trail, Segments 1 through 4, and associated box culverts and pedestrian bridges to be constructed in Santa Fe County, New Mexico, and not for the use by any third party.

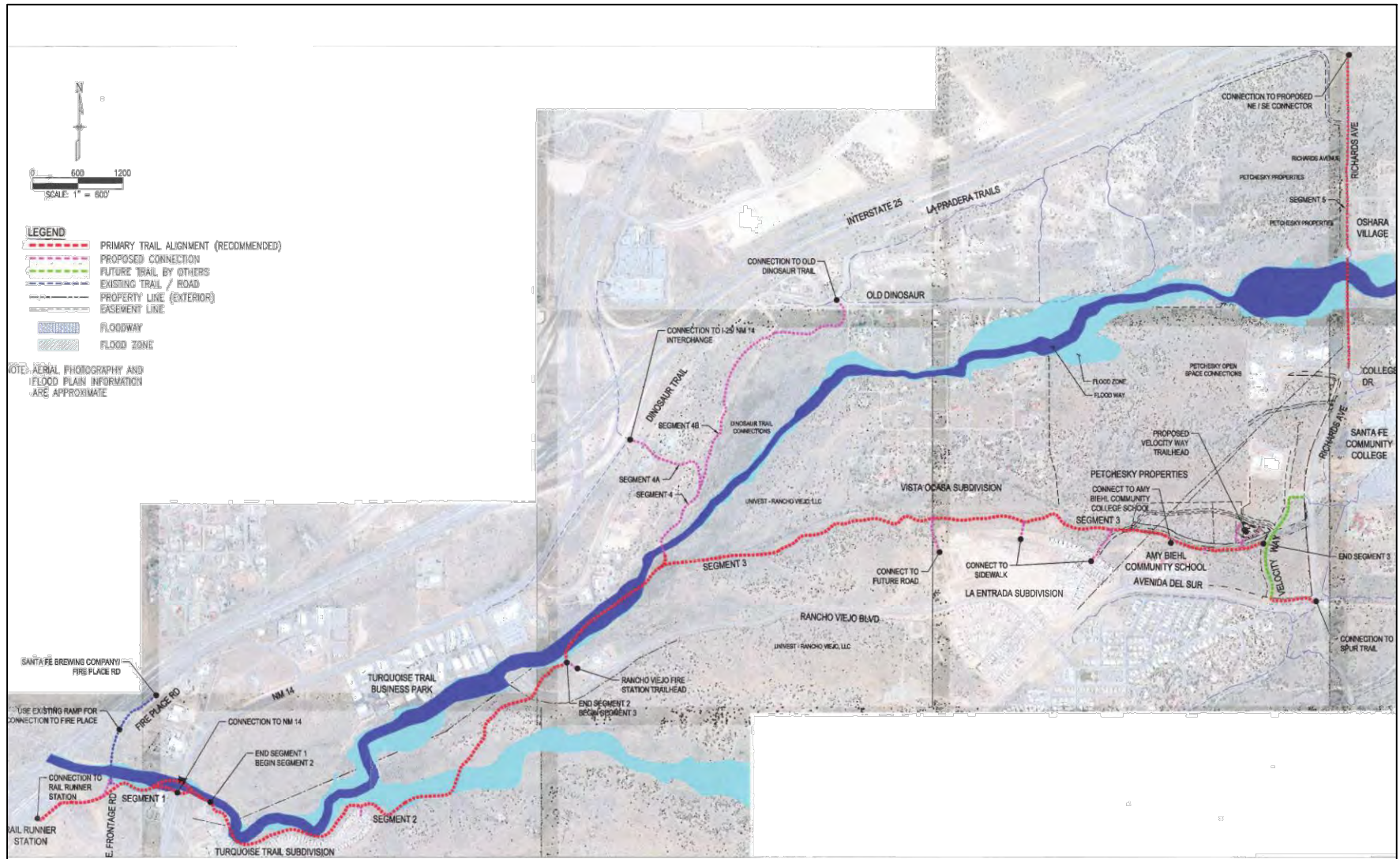
All soil samples will be discarded 30 days after the date of this report unless we receive a specific request to retain the samples for a longer period of time.

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OVERALL TRAIL PLAN



Arroyo Hondo Trail
Santa Fe, New Mexico
Job No. 1-60813

Figure 1



GEO-TEST
GEOTECHNICAL ENGINEERING
AND MATERIAL TESTING

BORING LOCATION MAP



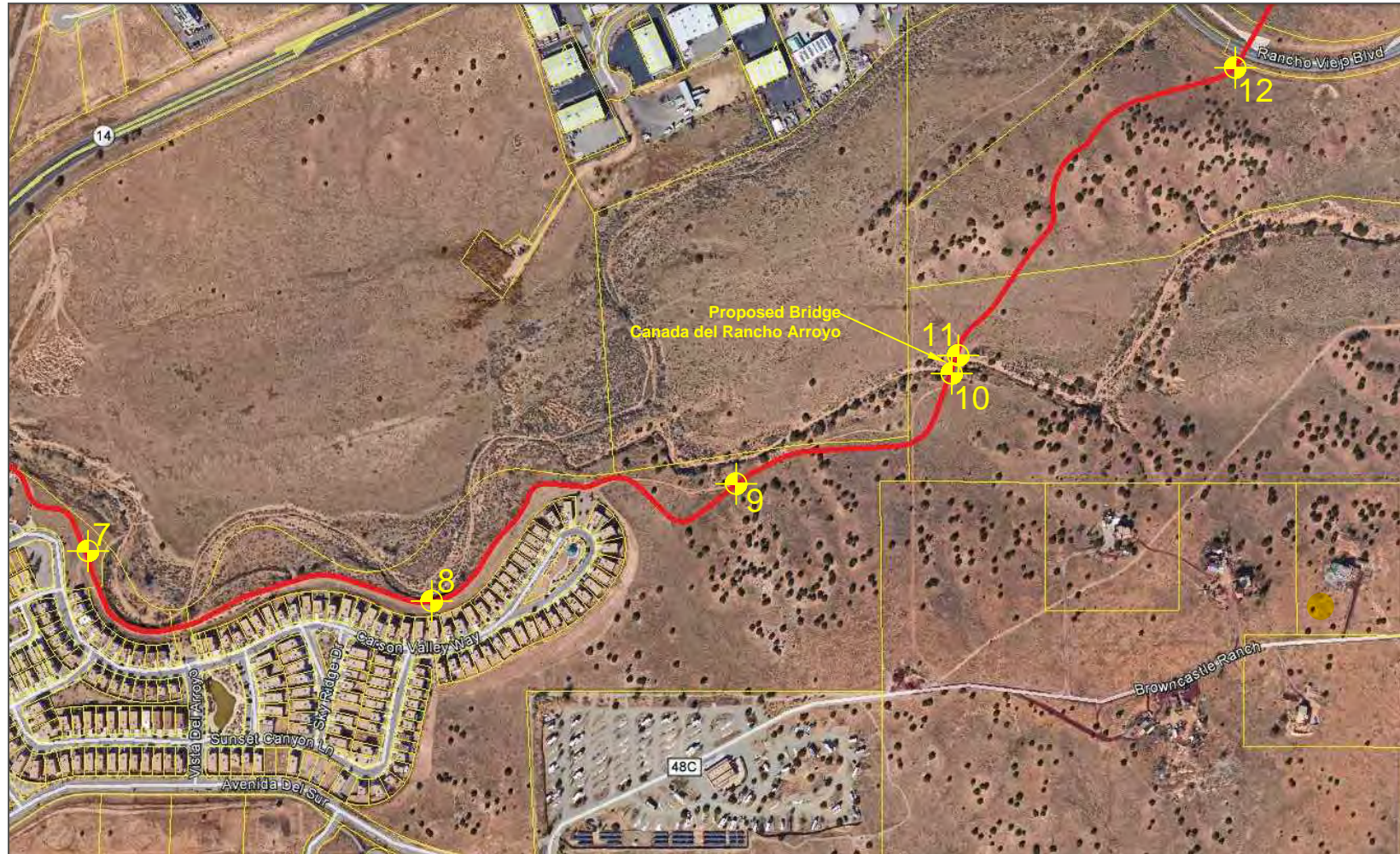
Arroyo Hondo Trail
 Santa Fe, New Mexico
 Job No. 1-60813

Figure 2



GEO-TEST
 GEOTECHNICAL ENGINEERING
 AND MATERIAL TESTING

BORING LOCATION MAP



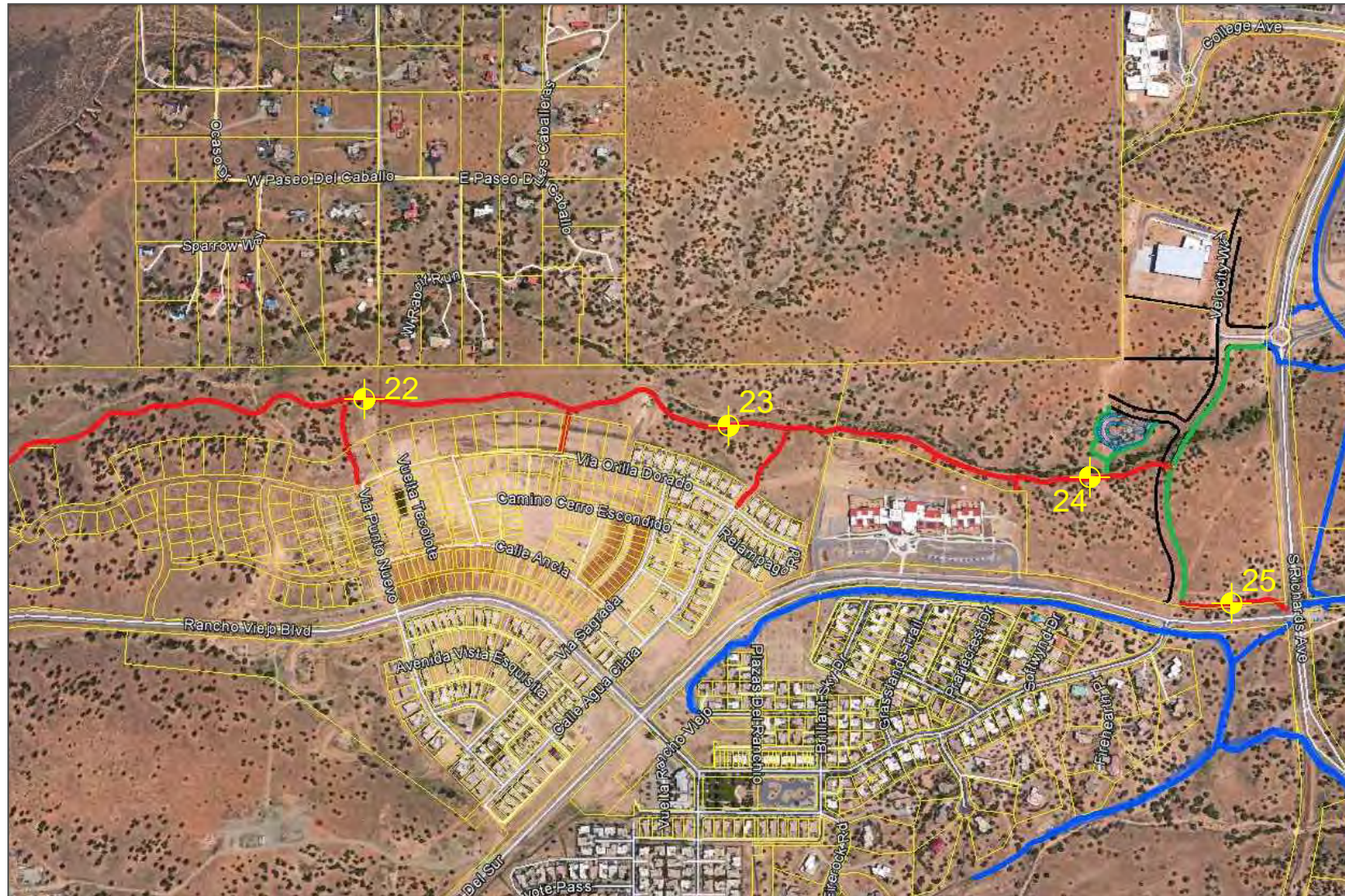
Arroyo Hondo Trail
 Santa Fe, New Mexico
 Job No. 1-60813

Figure 3



GEO-TEST
 GEOTECHNICAL ENGINEERING
 AND MATERIAL TESTING

BORING LOCATION MAP



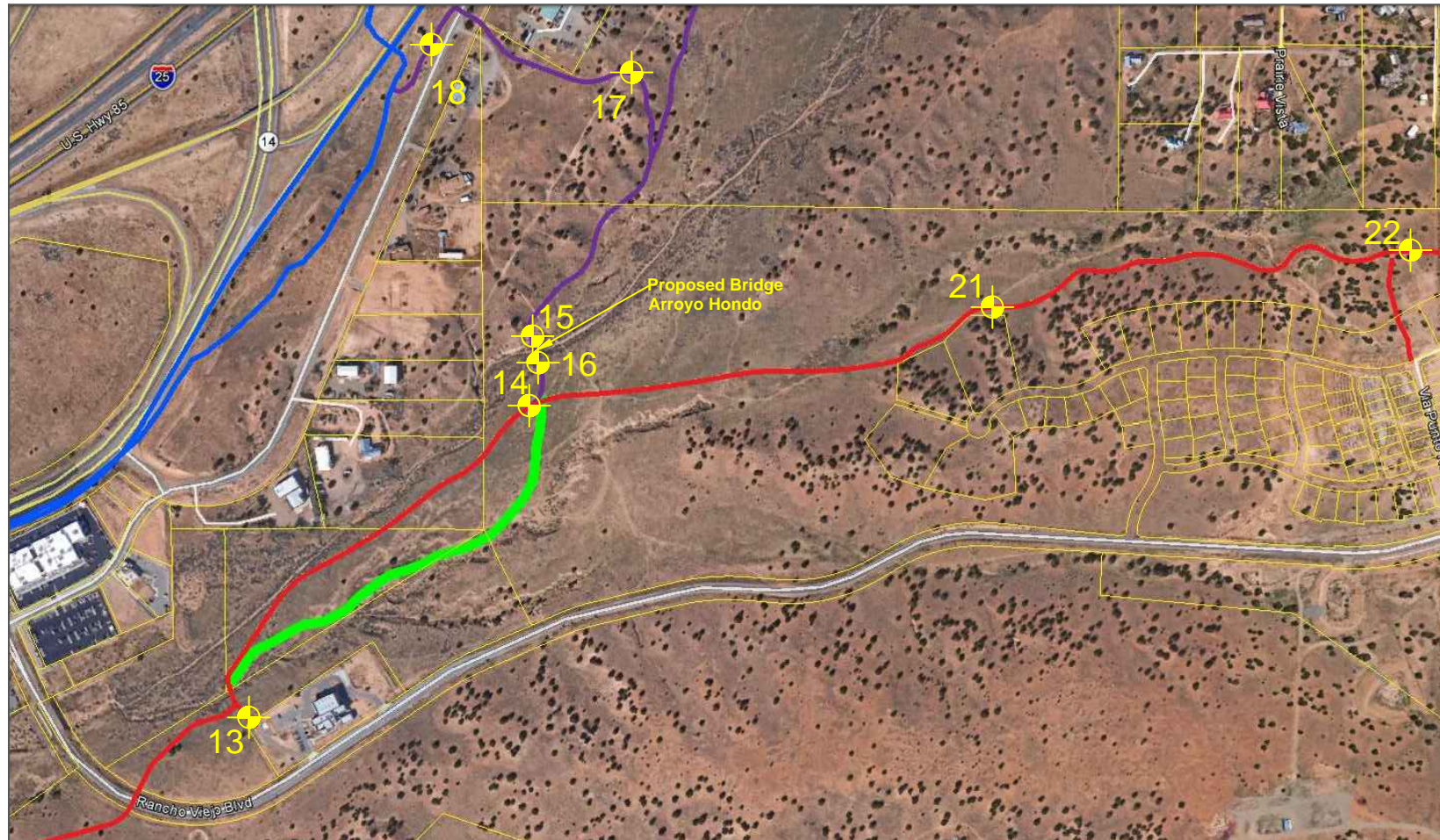
Arroyo Hondo Trail
 Santa Fe, New Mexico
 Job No. 1-60813

Figure 4



GEO-TEST
 GEOTECHNICAL ENGINEERING
 AND MATERIAL TESTING

BORING LOCATION MAP



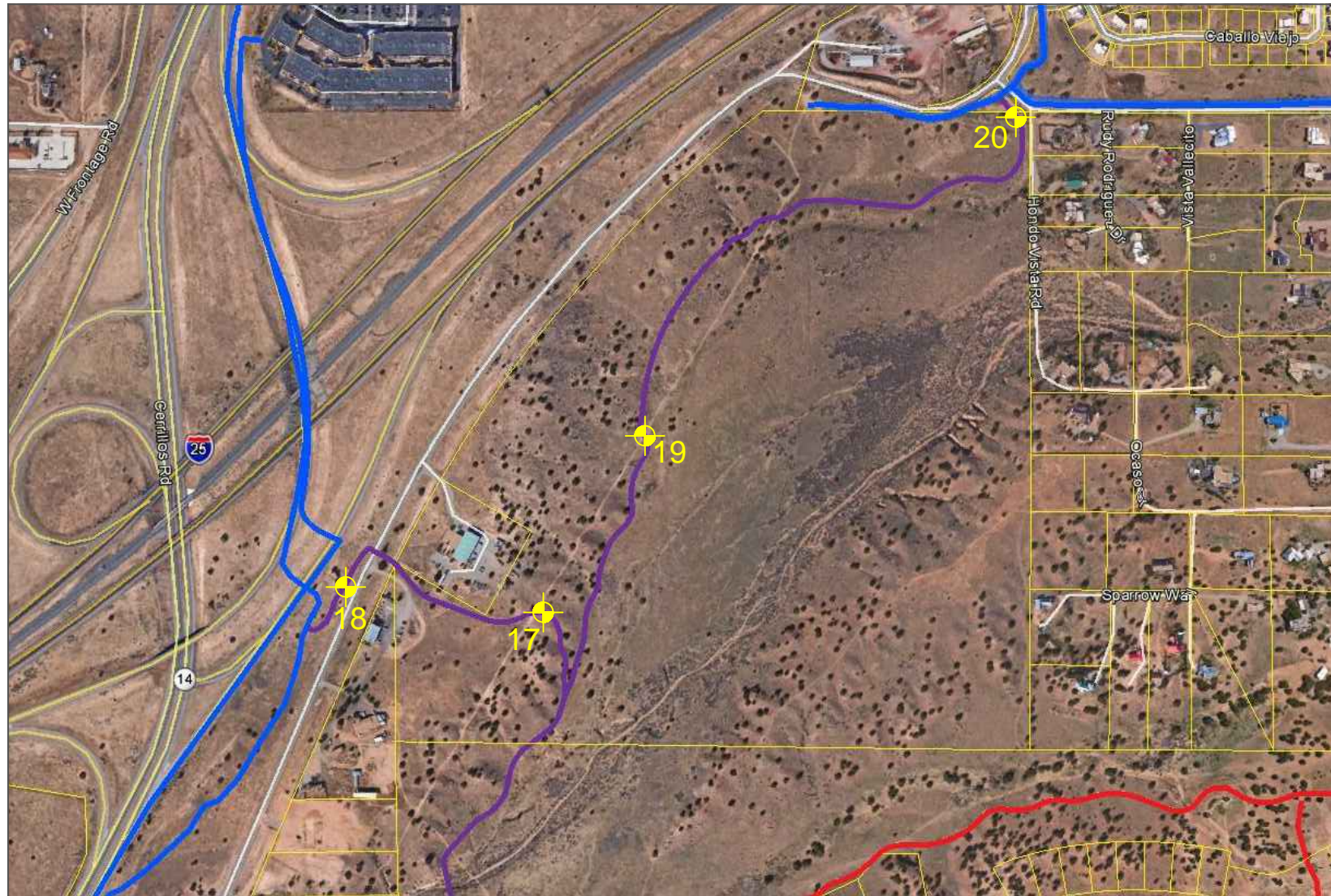
Arroyo Hondo Trail
 Santa Fe, New Mexico
 Job No. 1-60813

Figure 5



GEO-TEST
 GEOTECHNICAL ENGINEERING
 AND MATERIAL TESTING

BORING LOCATION MAP



Arroyo Hondo Trail
 Santa Fe, New Mexico
 Job No. 1-60813

Figure 6



GEO-TEST
 GEOTECHNICAL ENGINEERING
 AND MATERIAL TESTING

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Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

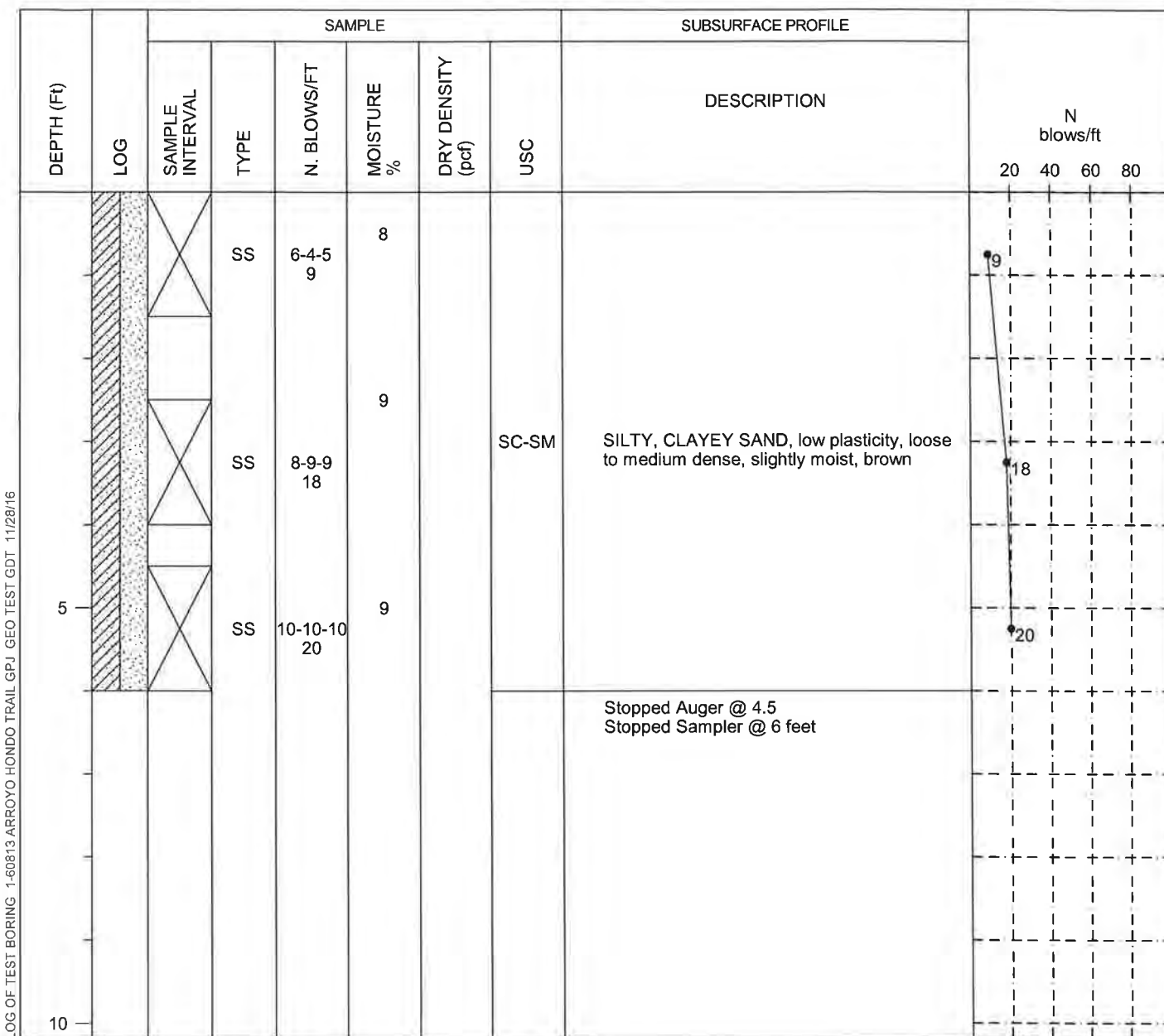
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 1**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/16/2016

Project No: 1-60813

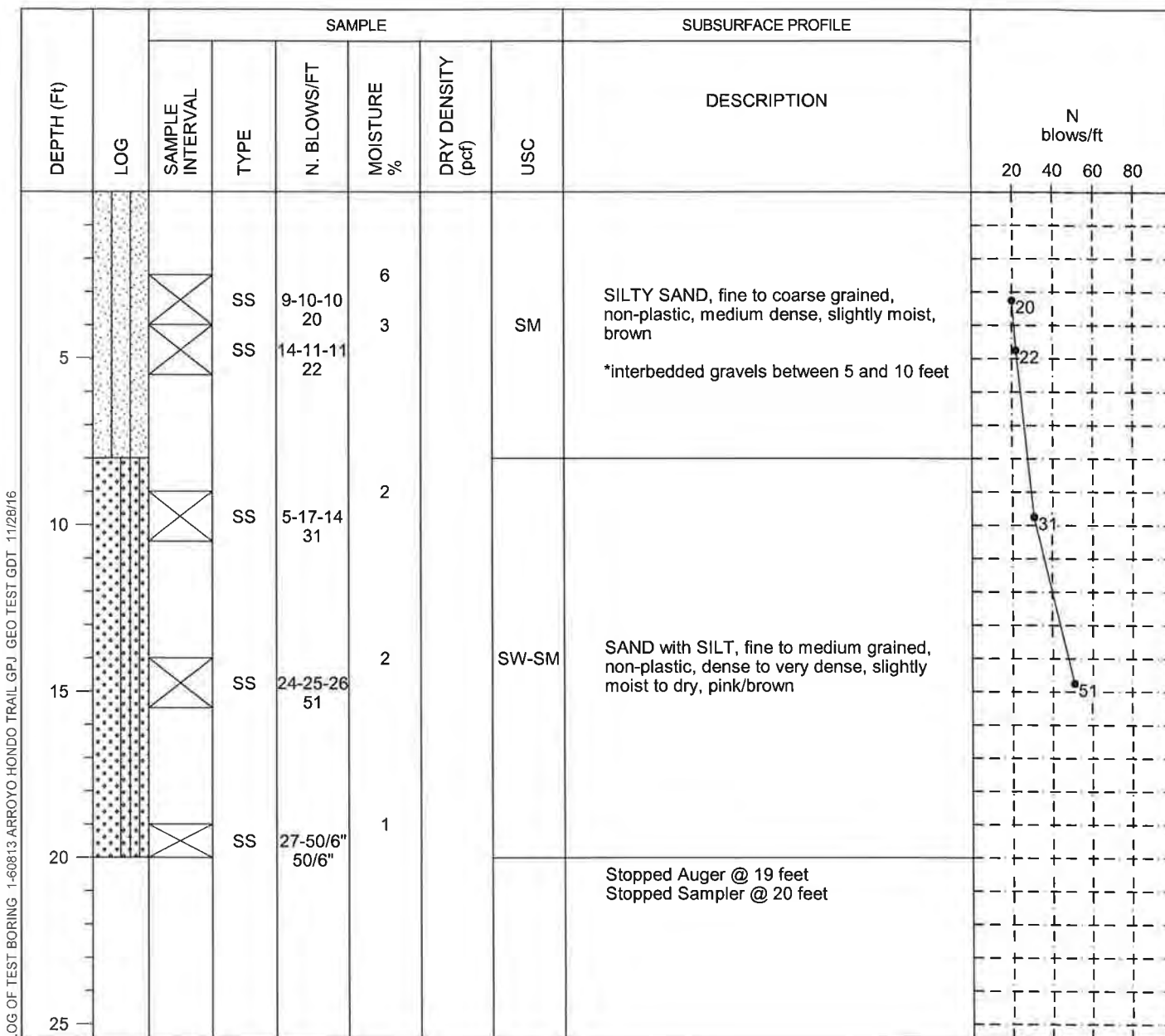
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 2**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/16/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 3**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft 20 40 60 80
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	
5			AC		5				
			SS	12-11-14 25	6		FILL	SILTY SAND, fine to coarse grained, non-plastic, medium dense, slightly moist, brown/red *misc. trash debris between 7 and 9 feet	25
10			AC						
			SS	50/0" 50/0"				Auger & Sampler Refusal @ 9 feet	
15									
20									
25									

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
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Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

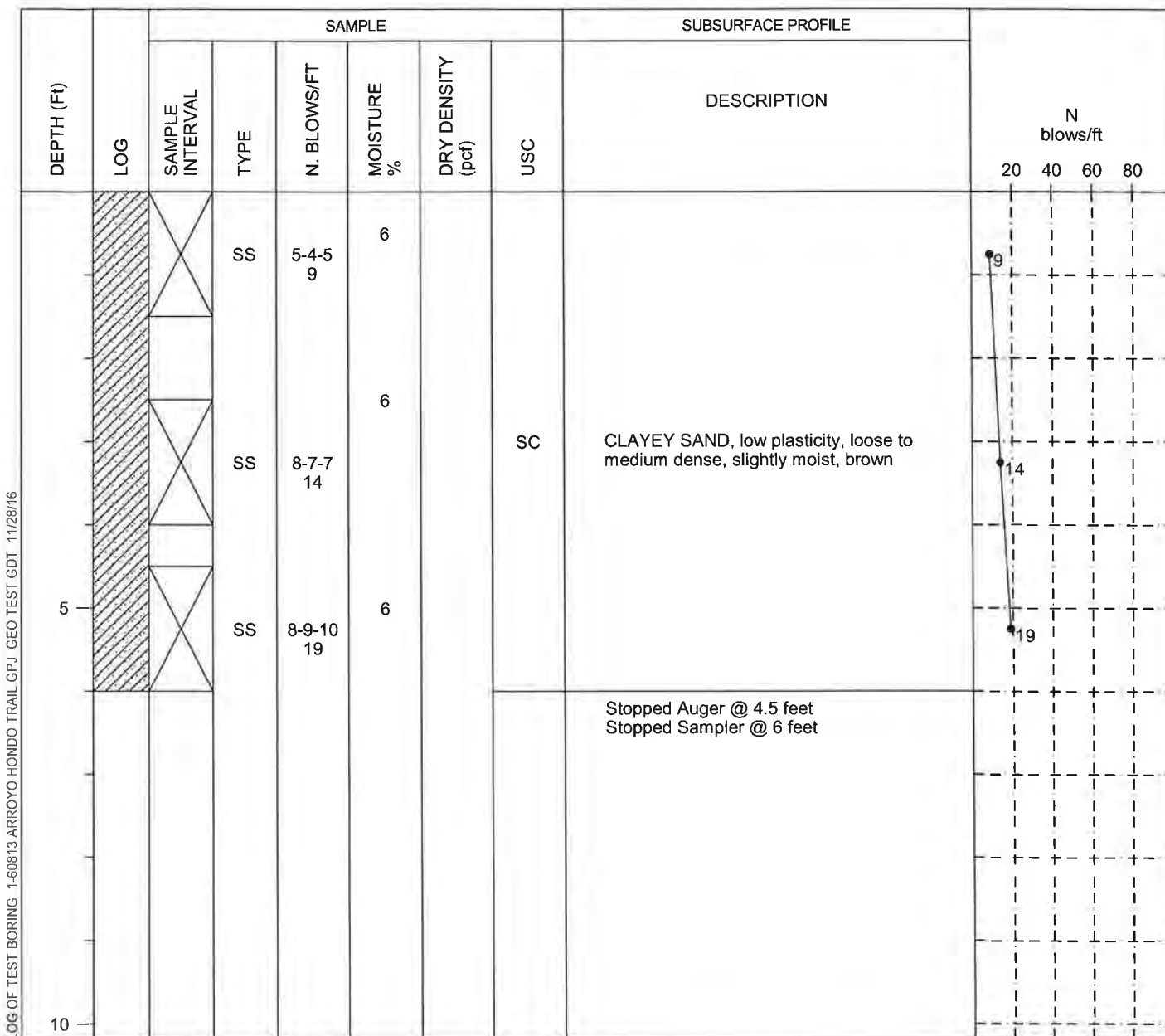
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 4**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

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Project: Arroyo Hondo Trail

Date: 11/14/2016

Project No: 1-60813

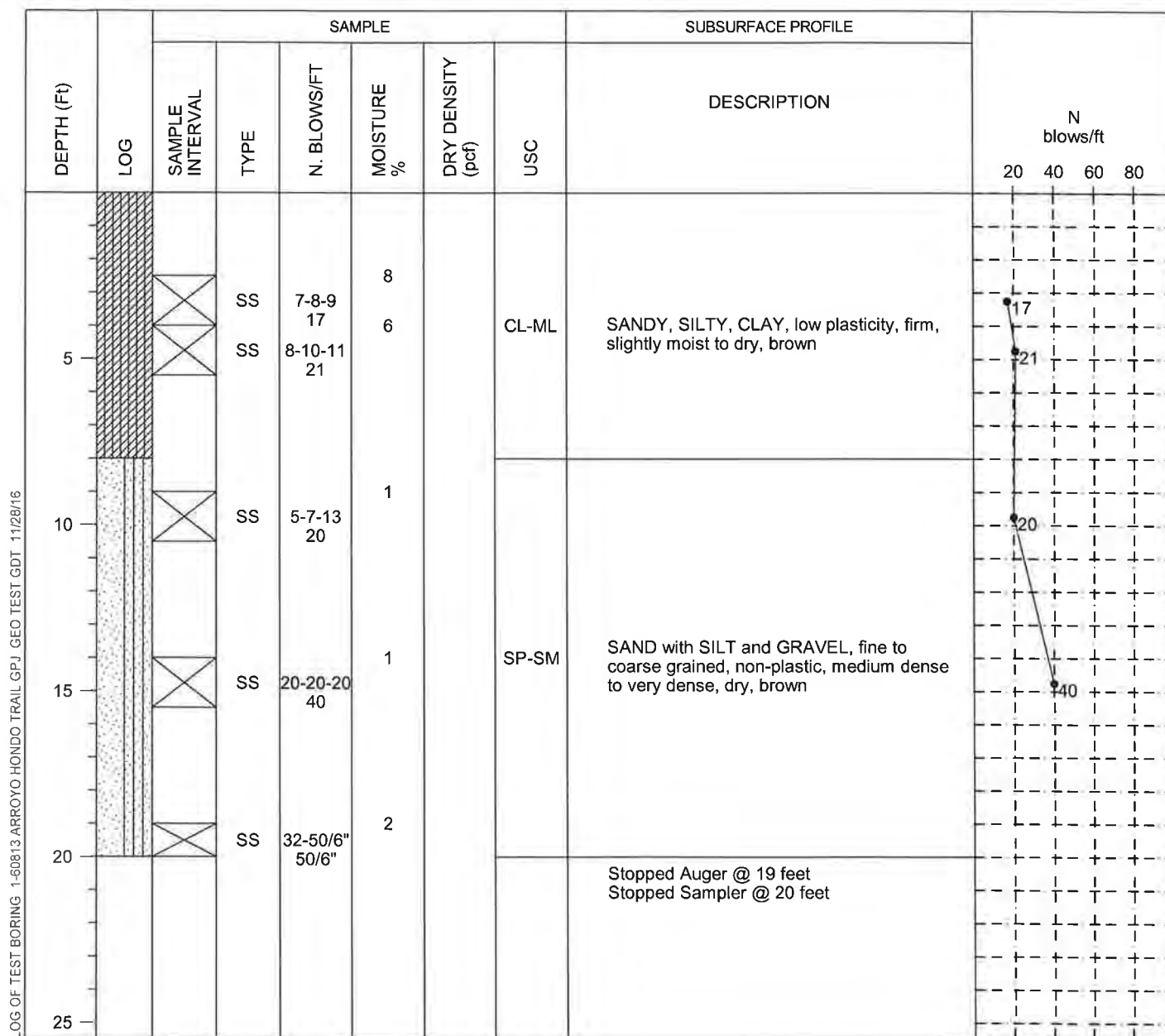
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 5**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

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Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

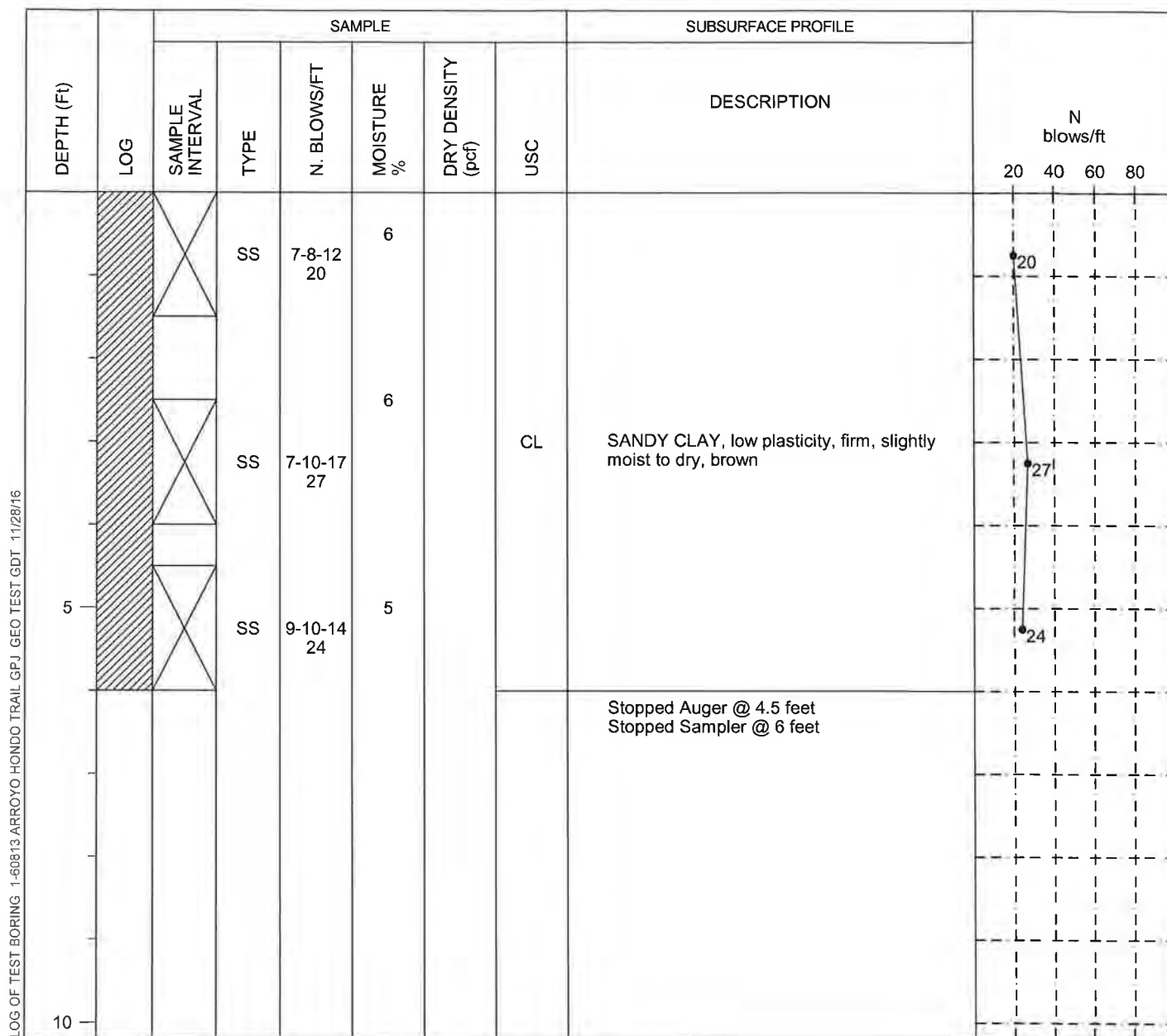
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 6**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

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Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

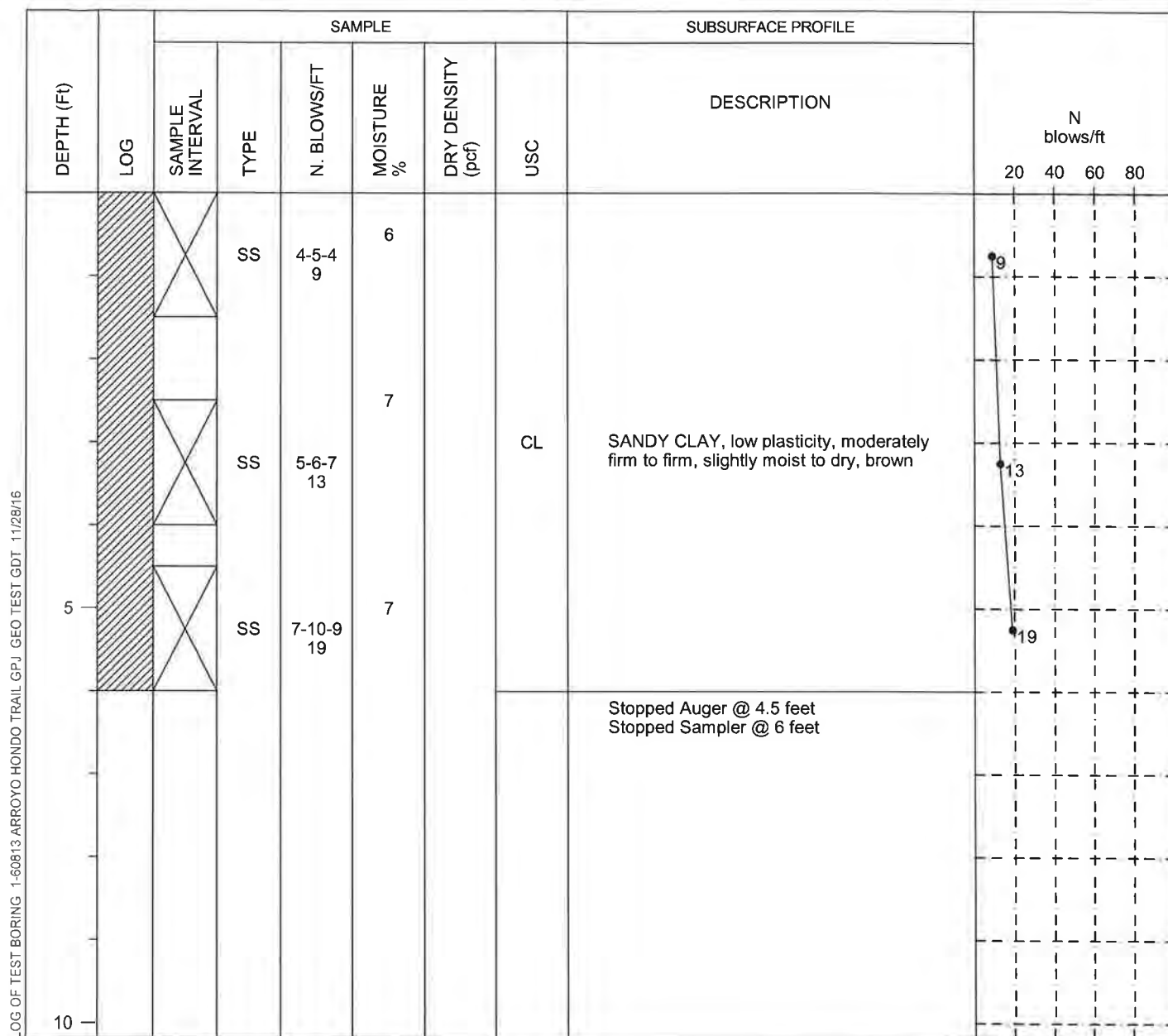
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 7**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

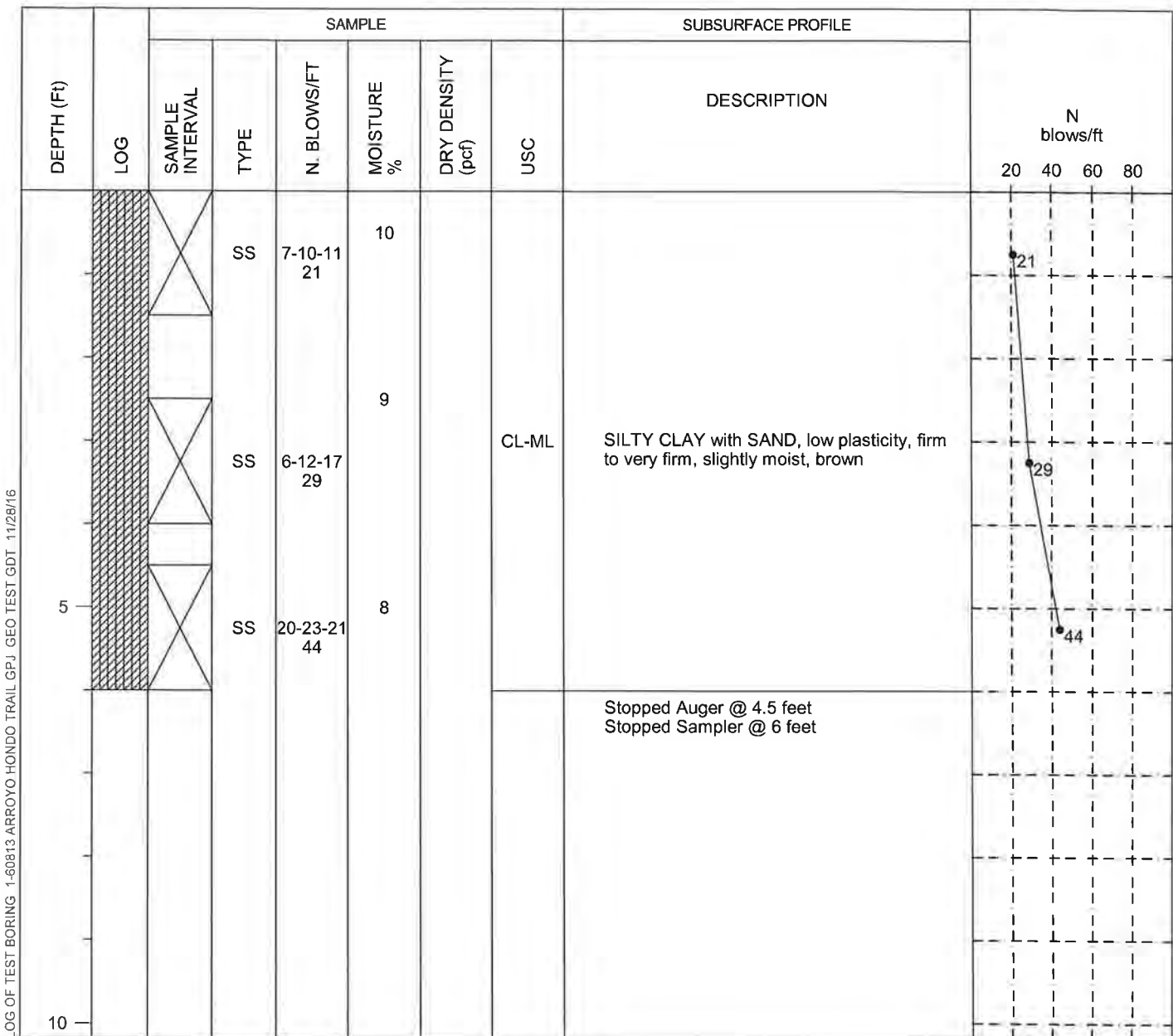
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 8**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/07/2016

Project No: 1-60813

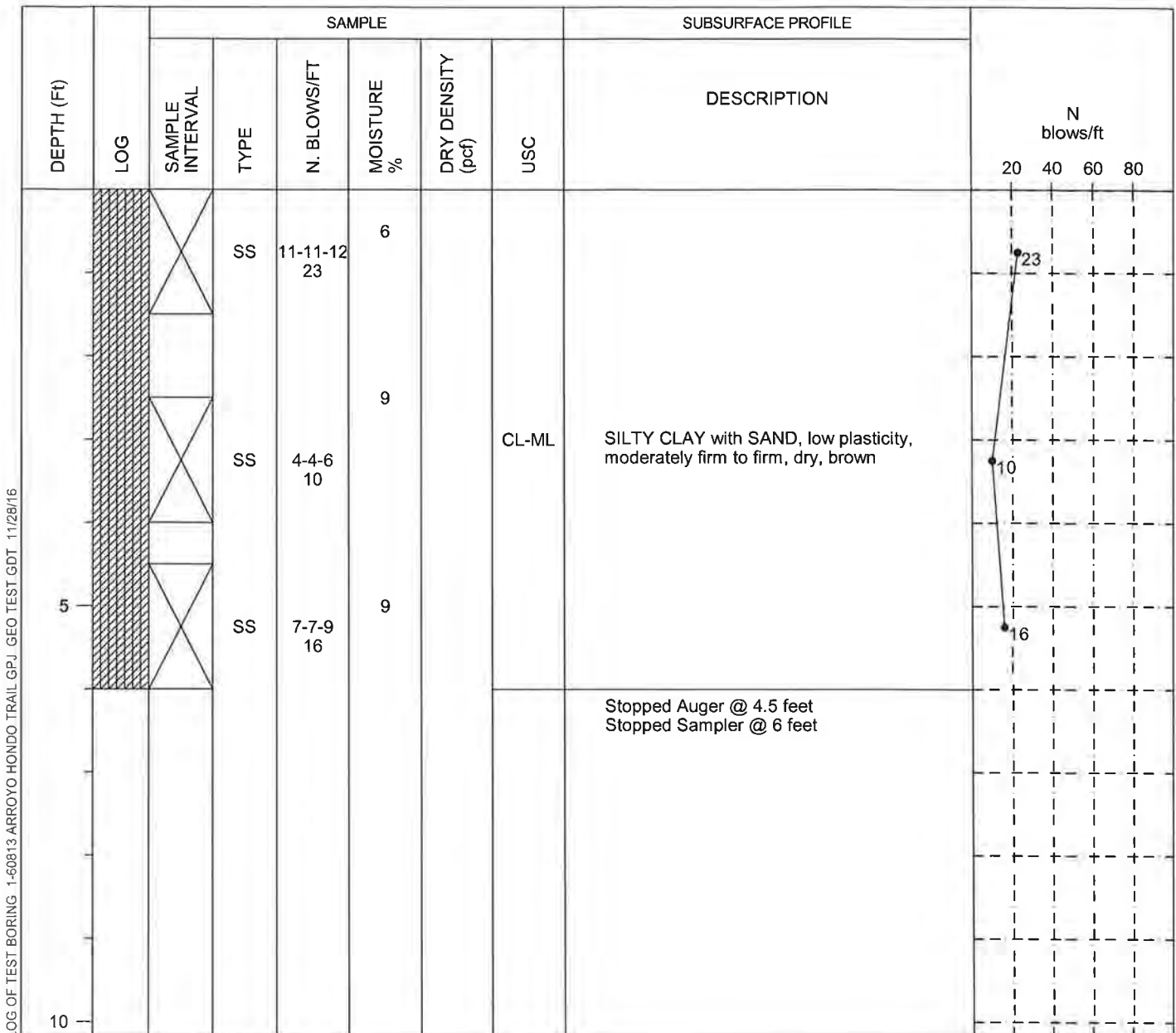
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 9**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/14/2016

Project No: 1-60813

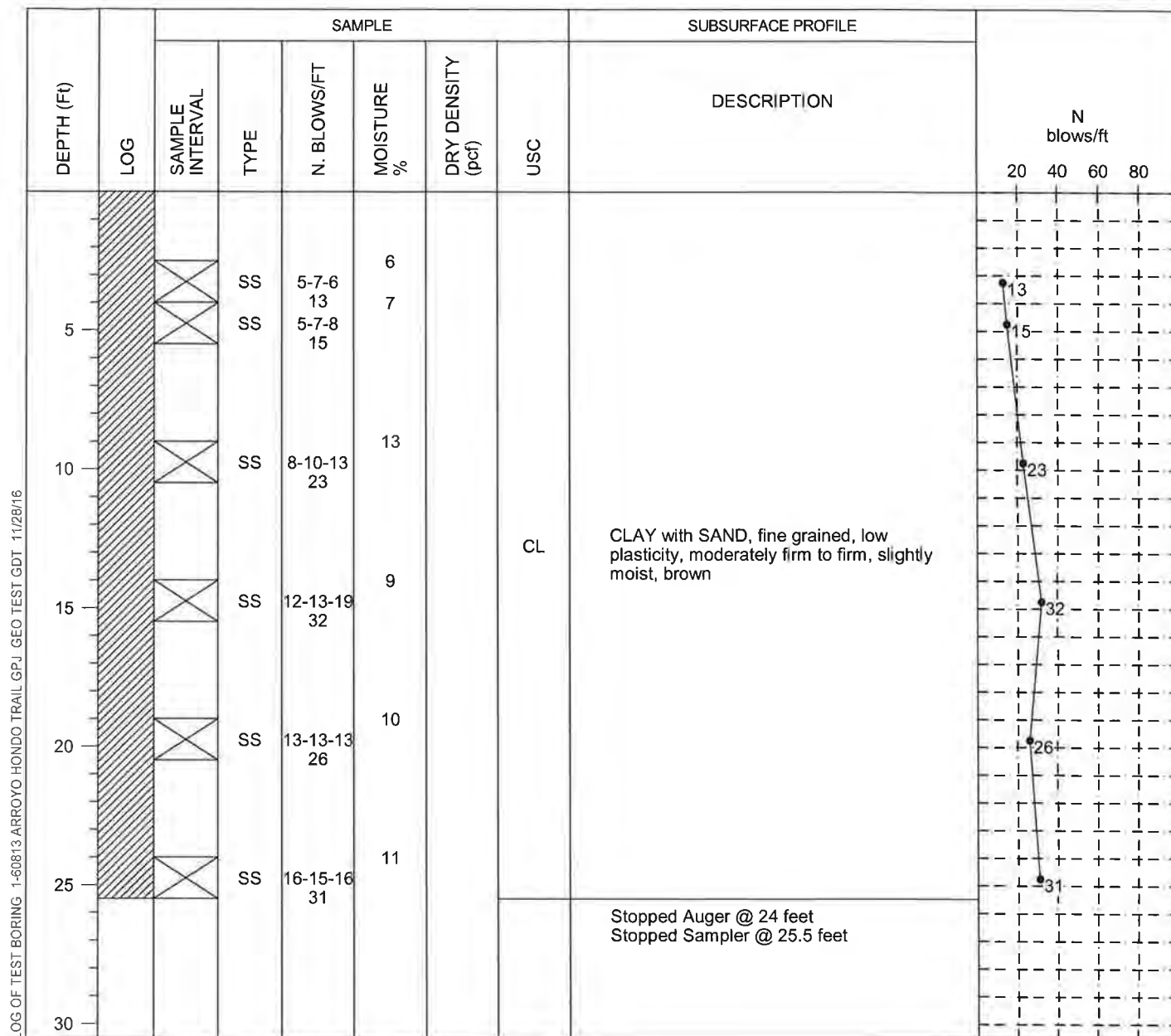
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 10**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: Arroyo Hondo Trail

Date: 11/14/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

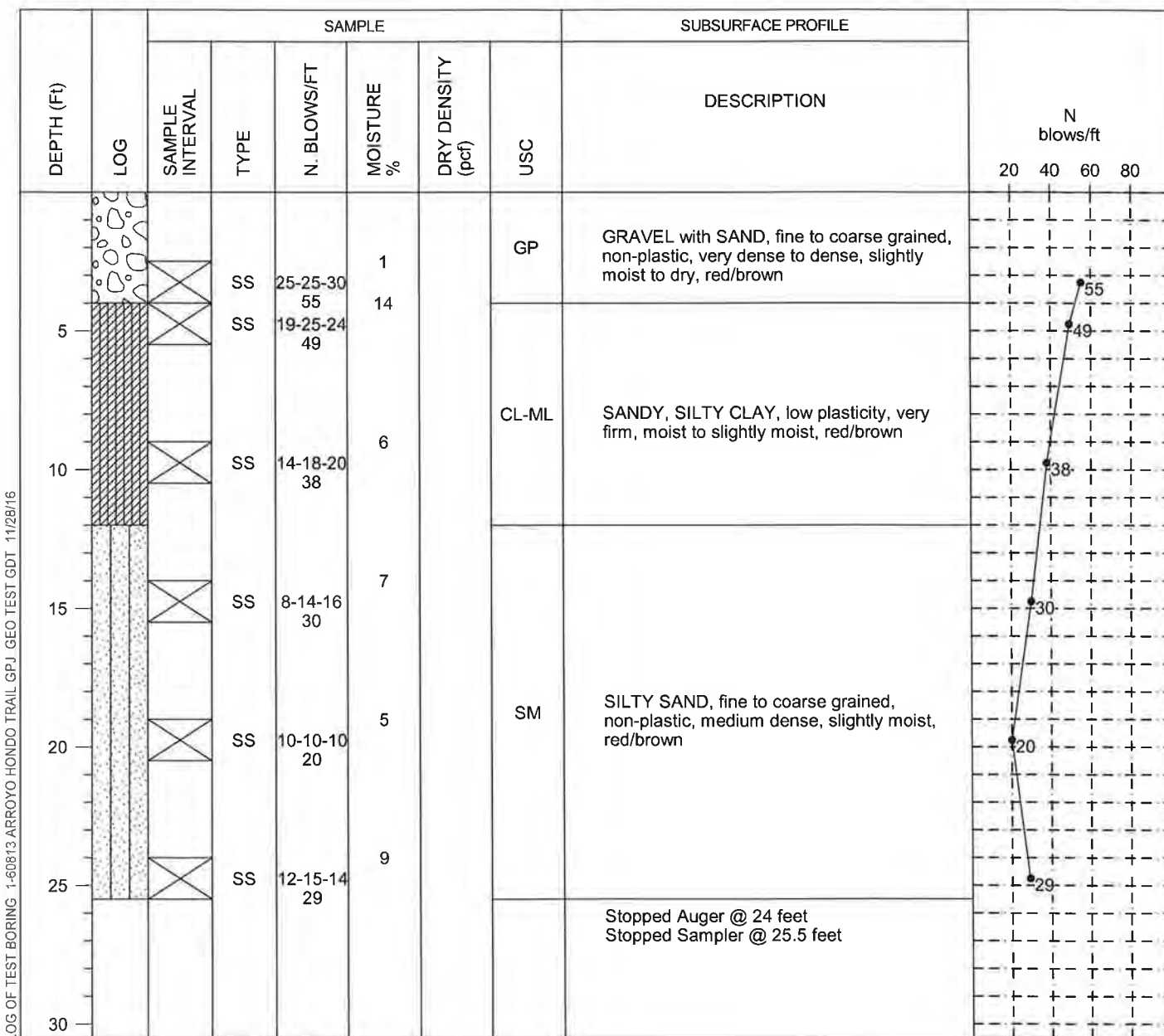
LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 11

During Drilling: none

After 24 Hours:



LEGEND

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube



Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

Type: Hand Auger

GROUNDWATER DEPTH

After 24 Hours:

LOG OF TEST BORING 1-60B13 ARROYO HONDO TRAIL GPJ GEO TEST GDT 11/28/16

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE				
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft			
									20	40	60	80
			GB		5		CL-ML	SANDY, SILTY, CLAY, low plasticity, slightly moist, brown				
5								Stopped Hand Auger at 3 feet				
10												

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 10/27/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 13**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft			
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION				
5			AC		4		SC	CLAYEY SAND with GRAVEL, weakly cemented (caliche), medium plasticity, dry, light brown/white				
10								Stopped Auger @ 4.5 feet * grade to steep to raise sampler boom				

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

LOG OF TEST BORING 1-60813 ARROYO HONDO TRAIL GPJ GEO TEST GDT 11/28/16

GEO-TEST

Project: Arroyo Hondo Trail

Date: 10/27/2016

Project No: 1-60813

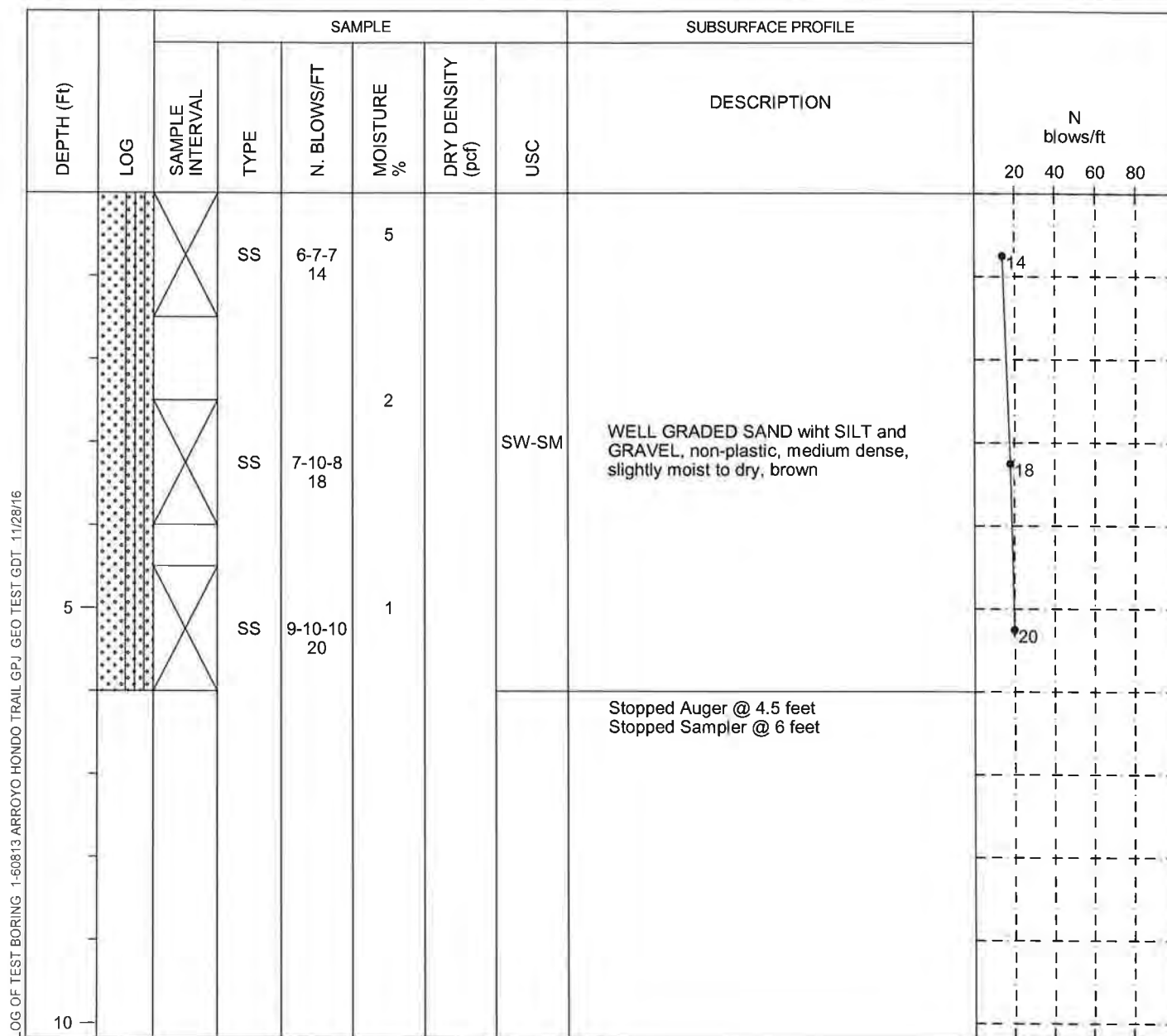
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 14**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/14/2016

Project No: 1-60813

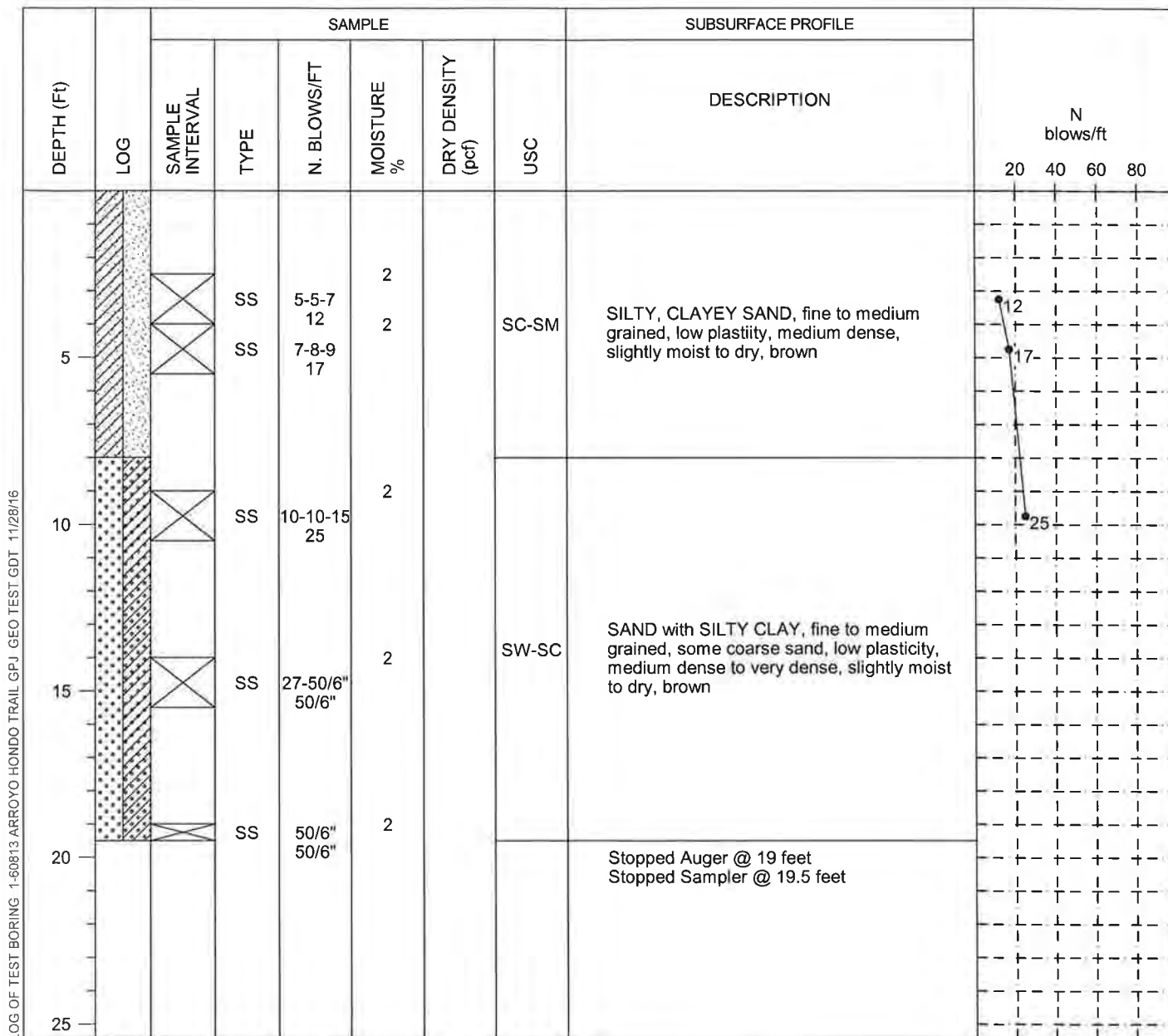
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 15**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/14/2016

Project No: 1-60813

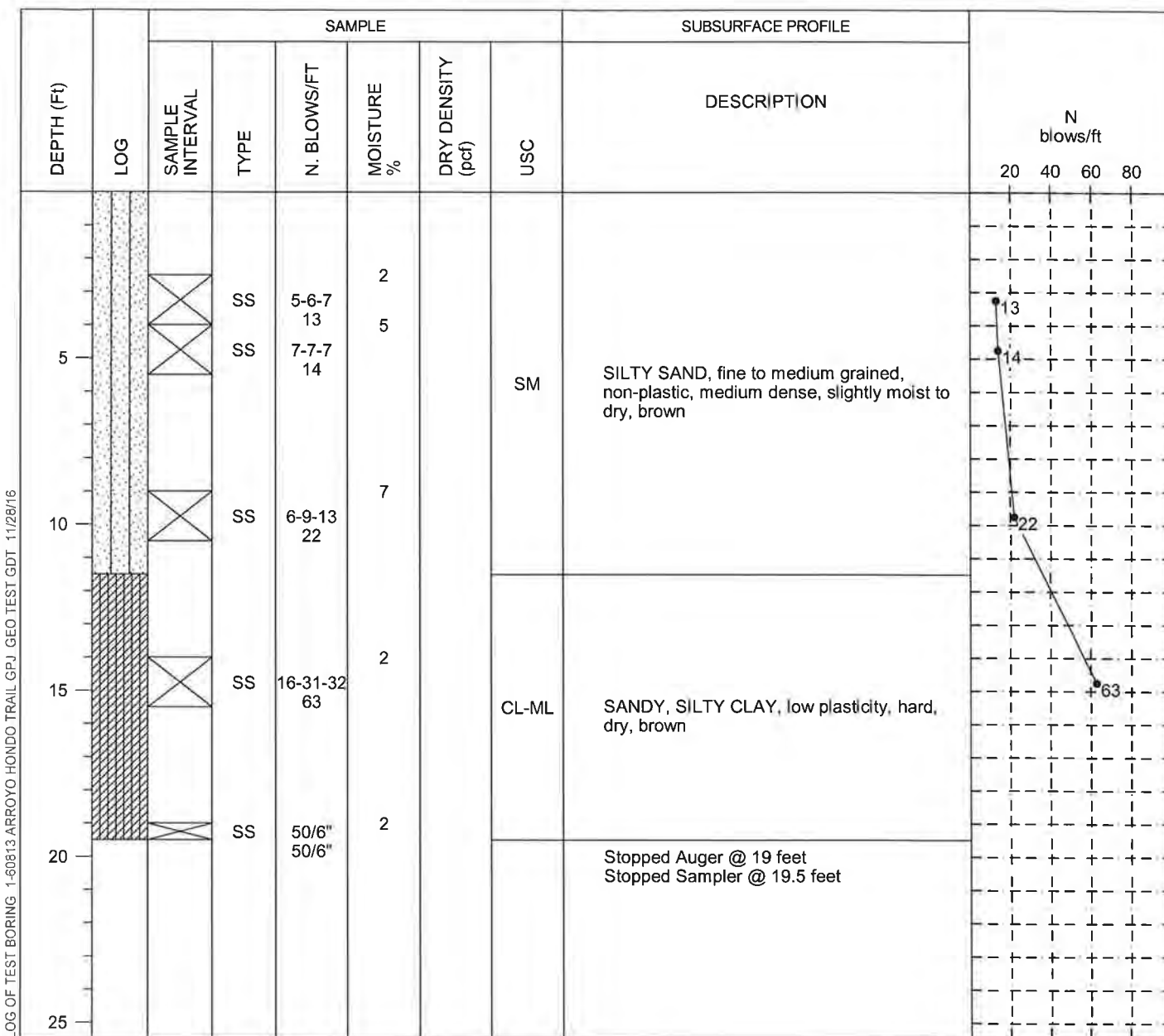
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 16**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: Arroyo Hondo Trail

Date: 10/27/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 17

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	
5			SS	10-11-11 22	4		SC	CLAYEY SAND, medium plasticity, medium dense, slightly moist to dry, brown	22
			SS	9-8-8 16	5				16
			SS	5-5-6 11	4				11
10								Stopped Auger @ 4.5 feet Stopped Sampler @ 6 feet	

LEGEND

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

LOG OF TEST BORING 1-60813 ARROYO HONDO TRAIL GPJ GEO TEST GDT 11/28/16

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/16/2016

Project No: 1-60813


Elevation:

Type: Hand Auger

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 18**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft 20 40 60 80
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	
			GB		7		SC-SM	SILTY, CLAYEY SAND, low plasticity, slightly moist, brown	
5								Stopped Hand Auger @ 3 feet	
10									

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

LOG OF TEST BORING 1-60813 ARROYO HONDO TRAIL GPJ GEO TEST GDT 11/28/16

GEO-TEST

Project: Arroyo Hondo Trail

Date: 10/27/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 19**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5		7-8-9	SS	17	7				17
		10-9-8	SS	17	11		CL	CLAY with SAND, medium plasticity, firm, slightly moist, brown	17
		9-9-9	SS	18	8				18
10								Stopped Auger @ 4.5 feet Stopped Sampler @ 6 feet	

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

LOG OF TEST BORING 1-60813 ARROYO HONDO TRAIL GPJ GEO TEST GDT 11/28/16



Project: Arroyo Hondo Trail

Date: 10/27/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

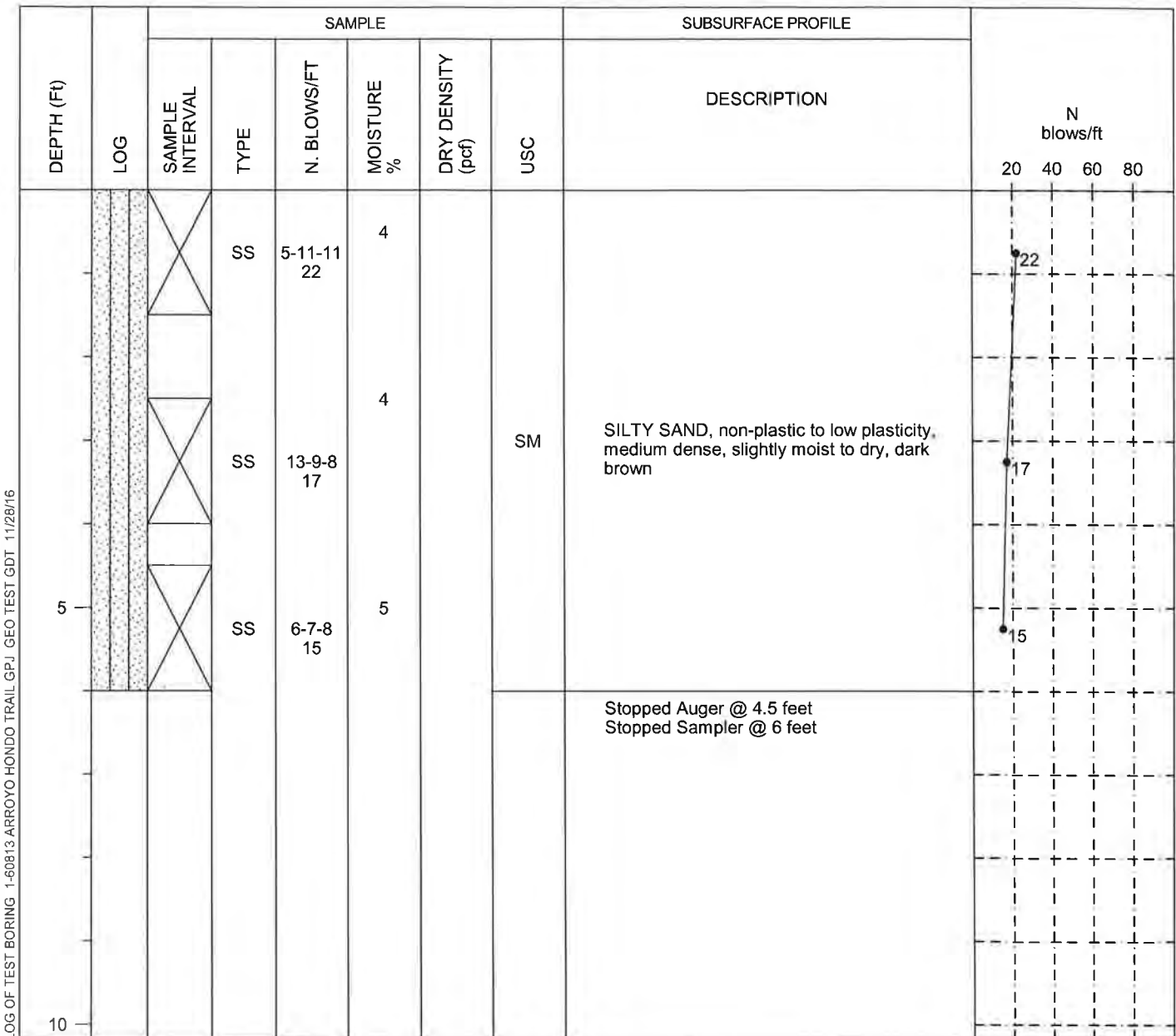
LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 20

During Drilling: none

After 24 Hours:



LEGEND

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/03/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 21**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft 20 40 60 80
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	
5			AC		5		CL	SANDY CLAY, low plasticity, dry, brown	
10								Stopped Auger @ 4.5 feet * grade too steep to boom up sampler	

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/03/2016

Project No: 1-60813

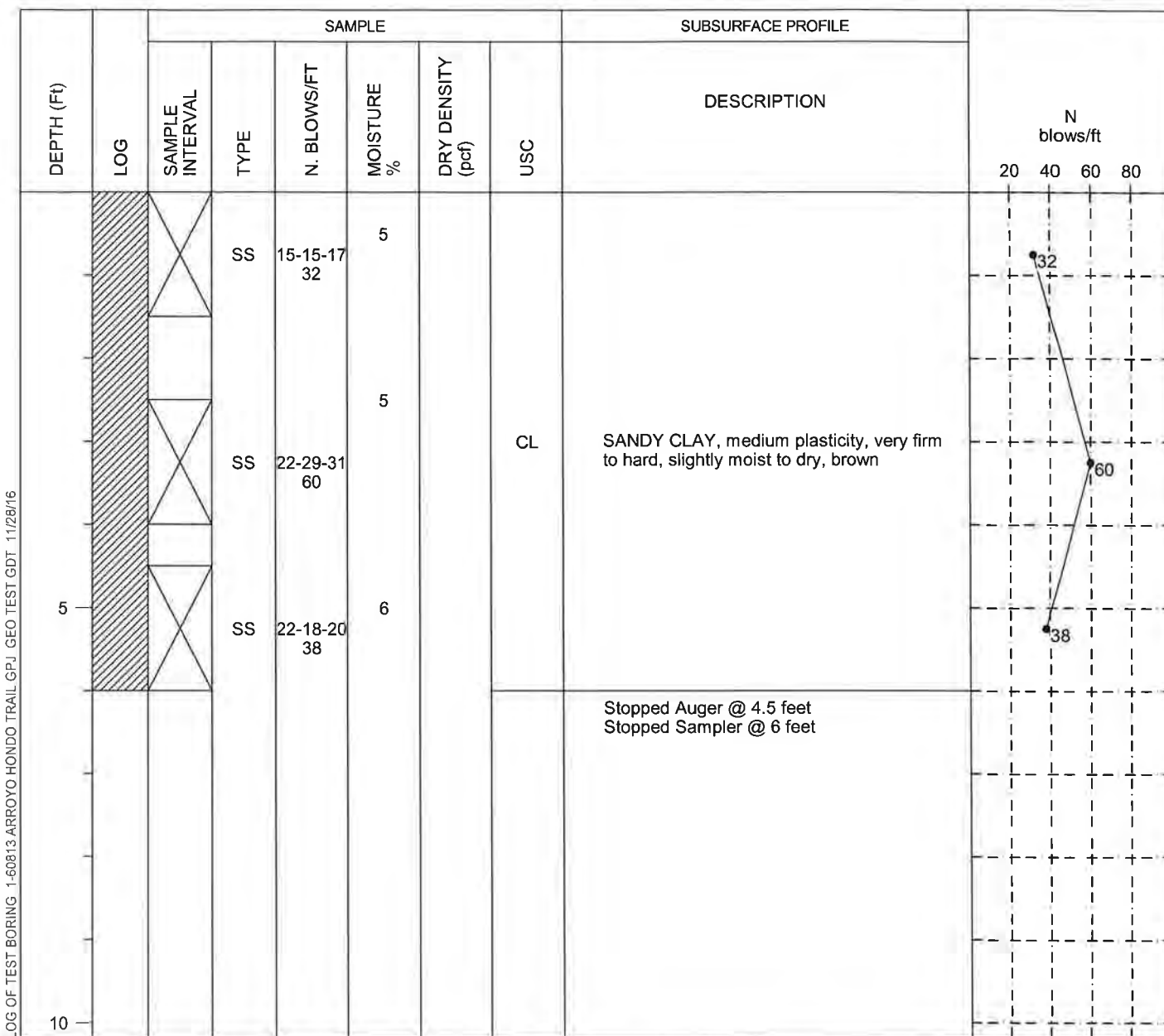
Elevation:

Type: 5.5" OD HSA

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 22**

During Drilling: none

After 24 Hours:

**LEGEND**

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: Arroyo Hondo Trail

Date: 11/03/2016

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

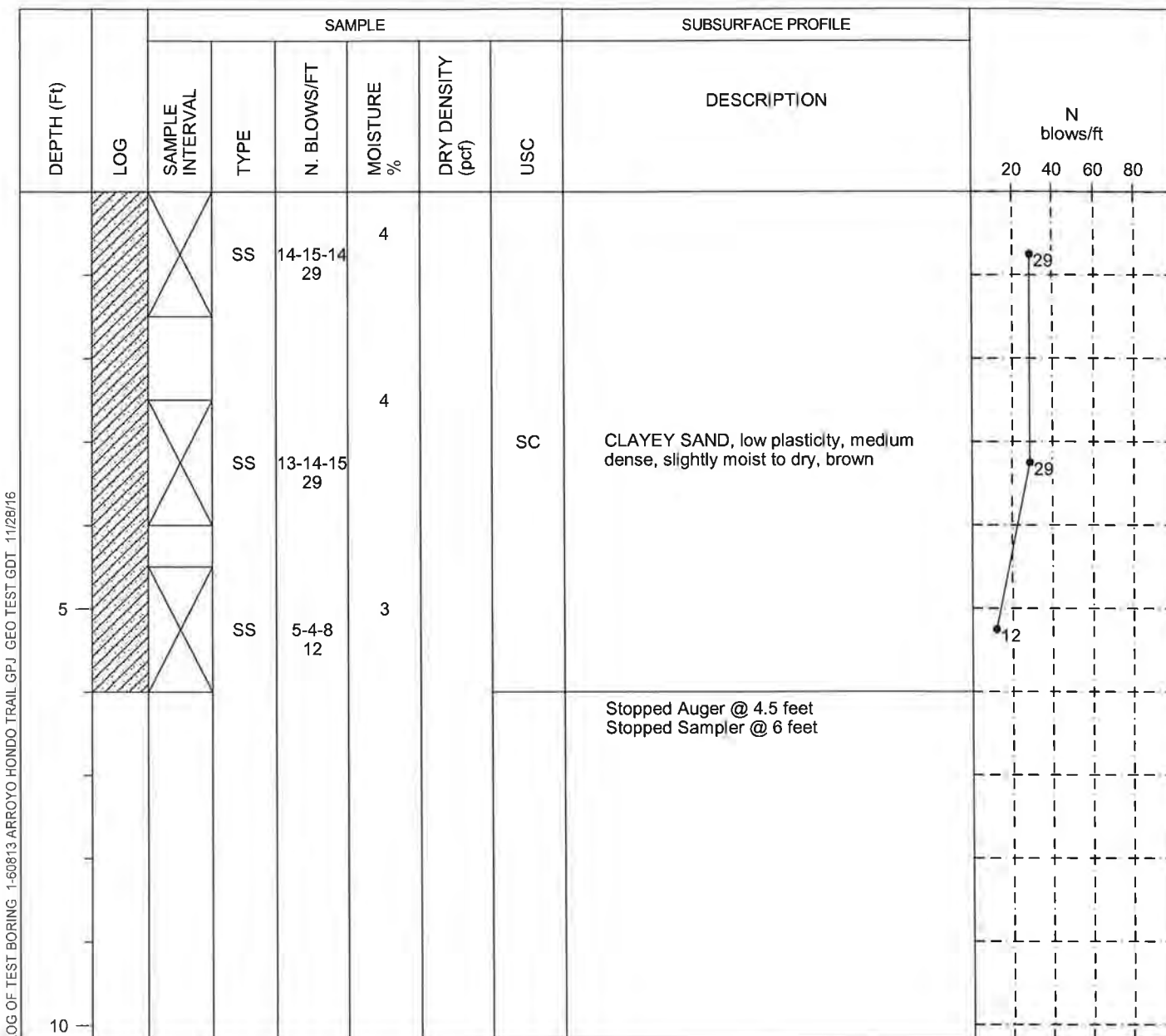
LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 23

During Drilling: none

After 24 Hours:



LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

GEO-TEST

Project: Arroyo Hondo Trail

Date: 11/16/2016

Project No: 1-60813


Elevation:

Type: Hand Auger

LOG OF TEST BORINGS**GROUNDWATER DEPTH****NO: 24**

During Drilling: none

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft			
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	20	40	60	80
5			GB		9		CL	SANDY CLAY, fine grained, medium plasticity, slightly moist, brown				
								Stopped Hand Auger @ 3 feet				
10												

LEGEND

SS - Split Spoon

AC - Auger Cuttings

UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed


ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

Type: Hand Auger

GROUNDWATER DEPTH


After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE						SUBSURFACE PROFILE	N blows/ft			
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	20	40	60	80
5		GB		8			ML	SANDY SILT, low plasticity, slightly moist, brown				
								Stopped Hand Auger @ 3 feet				
10												


AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.


SUMMARY OF LABORATORY RESULTS

						SIEVE ANALYSIS PERCENT PASSING											
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(%) MOIST	LL	PI	NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"
1	0.5		8.0														
1	2.5	SC-SM	8.8	23	7	42	54	66	86	95	100						
1	5.0		9.3														
2	2.5		6.0														
2	4.0	SM	3.1	20	3	29	45	73	93	97	99	100					
2	9.0		2.3														
2	14.0	SW-SM	2.2	NP	NP	8	12	31	79	94	99	100					
2	19.0		1.3														
3	2.5		5.2														
3	4.0		6.0														
4	0.5	SC	5.7	23	9	25	33	51	81	88	92	94	100				
4	2.5		5.7														
4	5.0		5.9														
5	2.5		8.3														
5	4.0	CL-ML	6.2	24	6	52	67	82	92	95	96	96	100				
5	9.0		1.2														
5	14.0	SP-SM	1.4	NP	NP	5	8	18	40	56	65	69	70	70	99		
5	19.0		1.8														
6	0.5		5.7														
						LL = LIQUID LIMIT PI = PLASTICITY INDEX NP = NON PLASTIC or NO VALUE						Project: Arroyo Hondo Trail Location: Santa Fe, NM Number: 1-60813					


SUMMARY OF LABORATORY RESULTS

						SIEVE ANALYSIS PERCENT PASSING											
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(%) MOIST	LL	PI	NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"
6	2.5	CL	5.7	28	8	58	71	81	95	99	100						
6	5.0		4.6														
7	0.5	CL	6.0	30	9	57	69	78	89	96	99	100					
7	2.5		6.6														
7	5.0		6.8														
8	0.5		9.8														
8	2.5		8.9														
8	5.0		7.7														
9	0.5		6.5														
9	2.5	CL-ML	8.7	27	6	82	94	97	100								
9	5.0		8.6														
10	2.5		6.3														
10	4.0	CL	7.2	24	8	73	84	92	97	99	100						
10	9.0		12.7														
10	14.0	CL	8.9	25	8	59	71	82	97	100							
10	19.0		10.4														
10	24.0	CL	10.7	31	10	82	89	93	98	100							
11	2.5	GP	1.3	NP	NP	4	5	10	28	40	48	51	55	58	78	99	
11	4.0		13.7														
						LL = LIQUID LIMIT PI = PLASTICITY INDEX NP = NON PLASTIC or NO VALUE					Project: Arroyo Hondo Trail Location: Santa Fe, NM Number: 1-60813						

SUMMARY OF LABORATORY RESULTS

						SIEVE ANALYSIS PERCENT PASSING											
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(%) MOIST	LL	PI	NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"
11	9.0	CL-ML	5.9	22	4	54	76	89	97	99	100						
11	14.0		7.2														
11	19.0	SM	4.7	21	2	44	59	68	76	86	99	100					
11	24.0		8.6														
12	1.5	CL-ML	5.3	23	6	53	69	78	94	99	100						
13	2.0	SC	4.3	29	11	33	47	59	75	89	99	100					
14	0.5		5.3														
14	2.5		2.1														
14	5.0	SW-SM	1.3	NP	NP	8	11	20	48	69	81	82	93	100			
15	2.5		2.4														
15	4.0	SC-SM	2.2	22	5	20	29	45	80	93	99	100					
15	9.0		2.3														
15	14.0	SW-SC	2.0	22	6	9	12	20	60	89	99	100					
15	19.0		1.7														
16	2.5	SM	2.0	NP	NP	12	24	55	86	97	100						
16	4.0		4.5														
16	9.0	CL-ML	6.9	26	7	52	67	82	97	99	100						
16	14.0		1.9														
16	19.0		1.8														
						LL = LIQUID LIMIT PI = PLASTICITY INDEX NP = NON PLASTIC or NO VALUE						Project: Arroyo Hondo Trail Location: Santa Fe, NM Number: 1-60813					

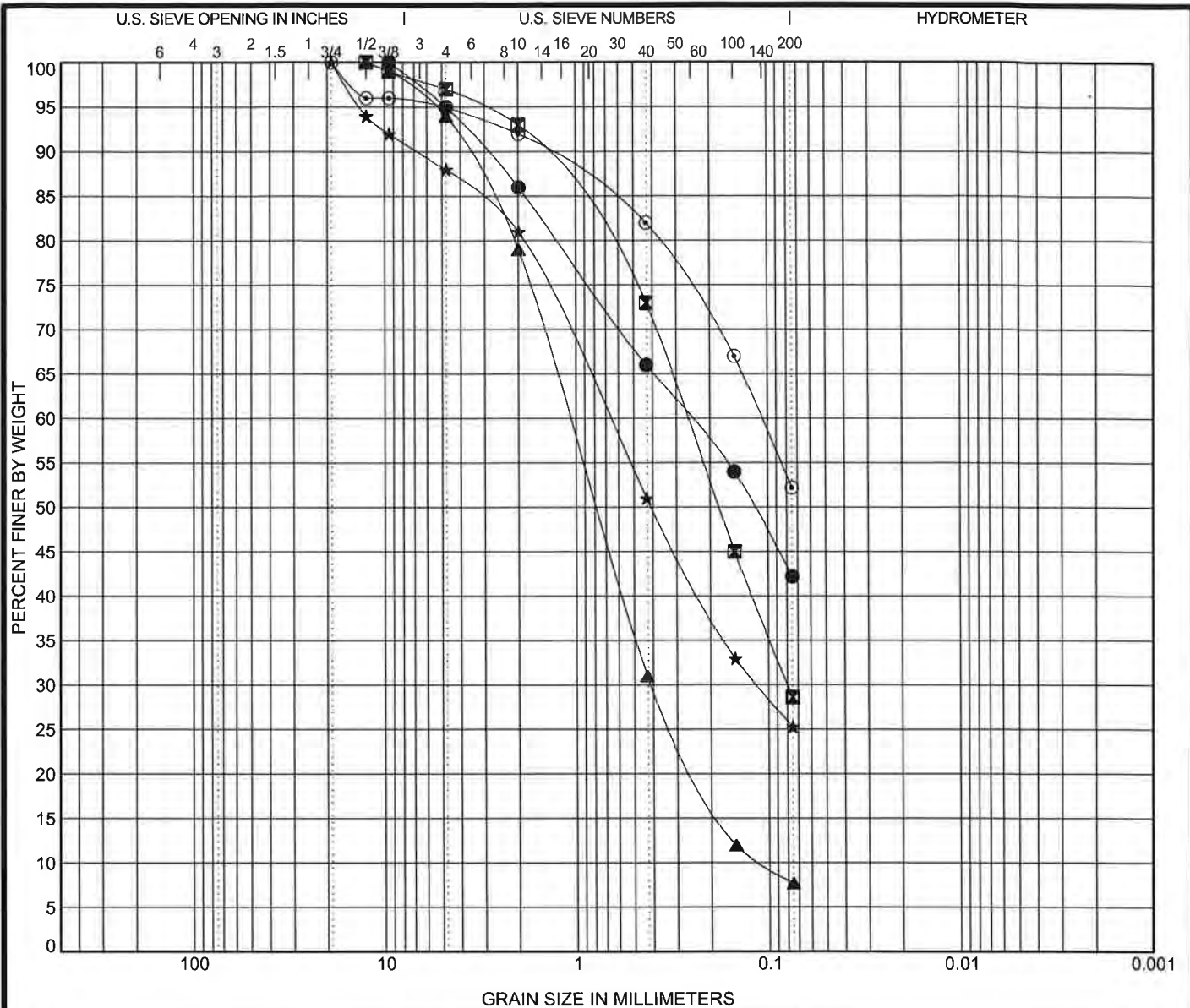
SUMMARY OF LABORATORY RESULTS

						SIEVE ANALYSIS PERCENT PASSING											
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(%) MOIST	LL	PI	NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"
17	0.5	SC	4.1	28	11	40	58	73	87	94	100						
17	2.5		5.1														
17	5.0		4.3														
18	1.5	SC-SM	6.6	24	4	44	65	85	96	99	100						
19	0.5		7.2														
19	2.5	CL	11.0	34	14	79	89	95	98	99	100						
19	5.0		8.0														
20	0.5		4.1														
20	2.5	SM	3.9	23	3	34	53	75	89	95	99	100					
20	5.0		5.5														
21	2.0	CL	4.5	30	9	63	73	80	83	96	100						
22	0.5		5.0														
22	2.5	CL	5.4	32	15	62	79	87	96	99	100						
22	5.0		5.8														
23	0.5		4.5														
23	2.5	SC	4.1	27	11	43	62	74	88	94	98	99	100				
23	5.0		2.7														
24	1.5	CL	8.7	30	12	68	76	84	95	99	100						
25	1.5	ML	8.4	30	7	63	74	84	95	99	100						
						LL = LIQUID LIMIT PI = PLASTICITY INDEX NP = NON PLASTIC or NO VALUE						Project: Arroyo Hondo Trail Location: Santa Fe, NM Number: 1-60813					

[illegible]

GRAIN SIZE DISTRIBUTION

Number: 1-60813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification				LL	PL	PI	Cc	Cu
●	1	2.5	SILTY, CLAYEY SAND(SC-SM)				23	16	7		
☒	2	4.0	SILTY SAND(SM)				20	17	3		
▲	2	14.0	WELL-GRADED SAND with SILT(SW-SM)				NP	NP	NP	1.40	10.02
★	4	0.5	CLAYEY SAND(SC)				23	14	9		
⊙	5	4.0	SANDY SILTY CLAY(CL-ML)				24	18	6		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	1	2.5	9.5	0.254			5.0	52.8	42.2		
☒	2	4.0	12.5	0.264	0.08		3.0	68.4	28.6		
▲	2	14.0	12.5	1.088	0.407	0.109	6.0	86.3	7.7		
★	4	0.5	19	0.682	0.115		12.0	62.7	25.3		
⊙	5	4.0	19	0.108			5.0	42.8	52.2		

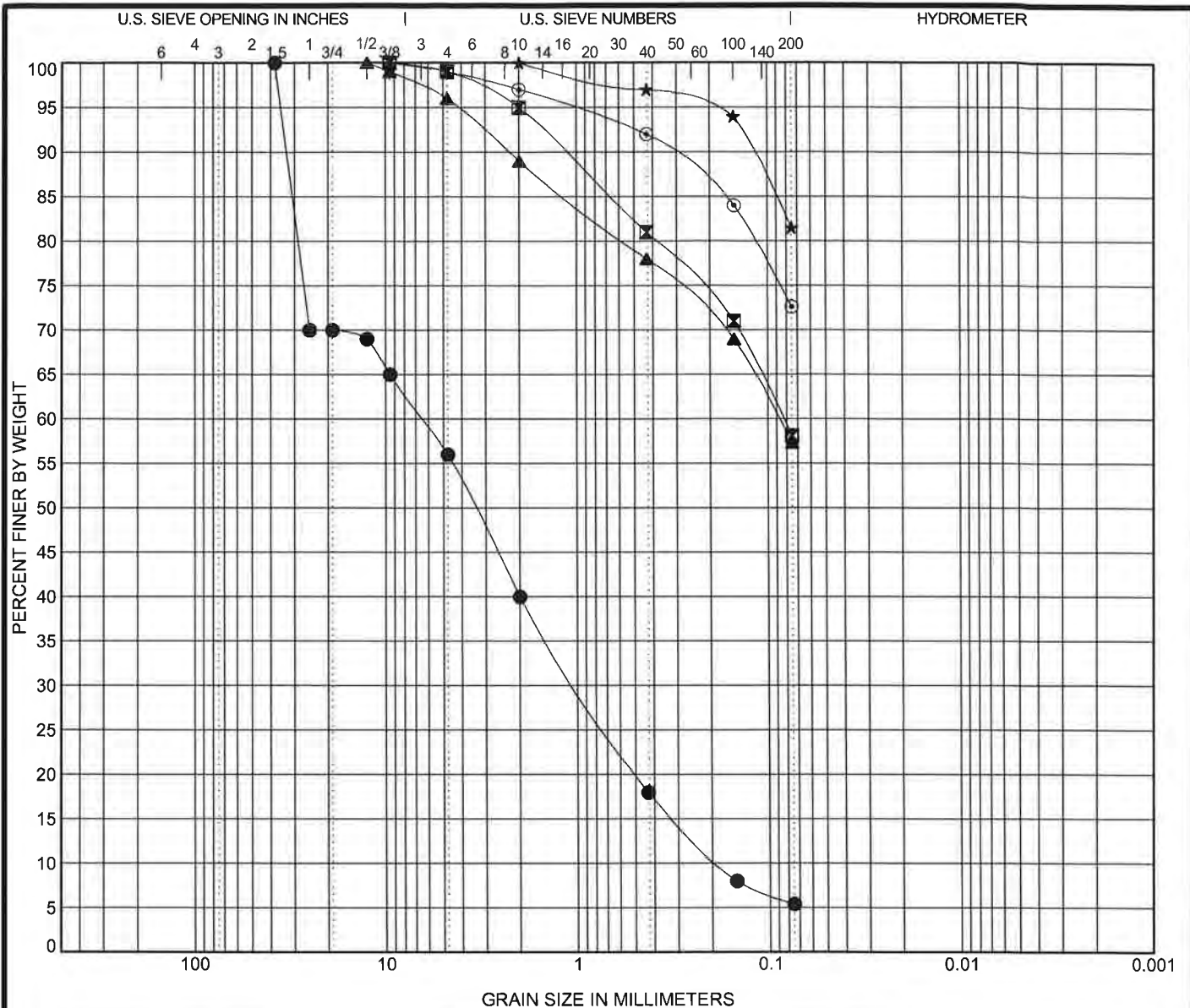
GRAIN SIZE DISTRIBUTION

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

Number: 1-60813

GEO-TEST



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	5	14.0	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)			NP	NP	NP	0.83	34.91
☒	6	2.5	SANDY LEAN CLAY(CL)			28	20	8		
▲	7	0.5	SANDY LEAN CLAY(CL)			30	21	9		
★	9	2.5	SILTY CLAY with SAND(CL-ML)			27	21	6		
◎	10	4.0	LEAN CLAY with SAND(CL)			24	16	8		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	5	14.0	38	6.464	0.994	0.185	44.0	50.6	5.4	
☒	6	2.5	9.5	0.083			1.0	40.9	58.1	
▲	7	0.5	12.5	0.088			4.0	38.7	57.3	
★	9	2.5	2				0.0	18.5	81.5	
◎	10	4.0	9.5				1.0	26.4	72.6	

GRAIN SIZE DISTRIBUTION

GEO-TEST

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

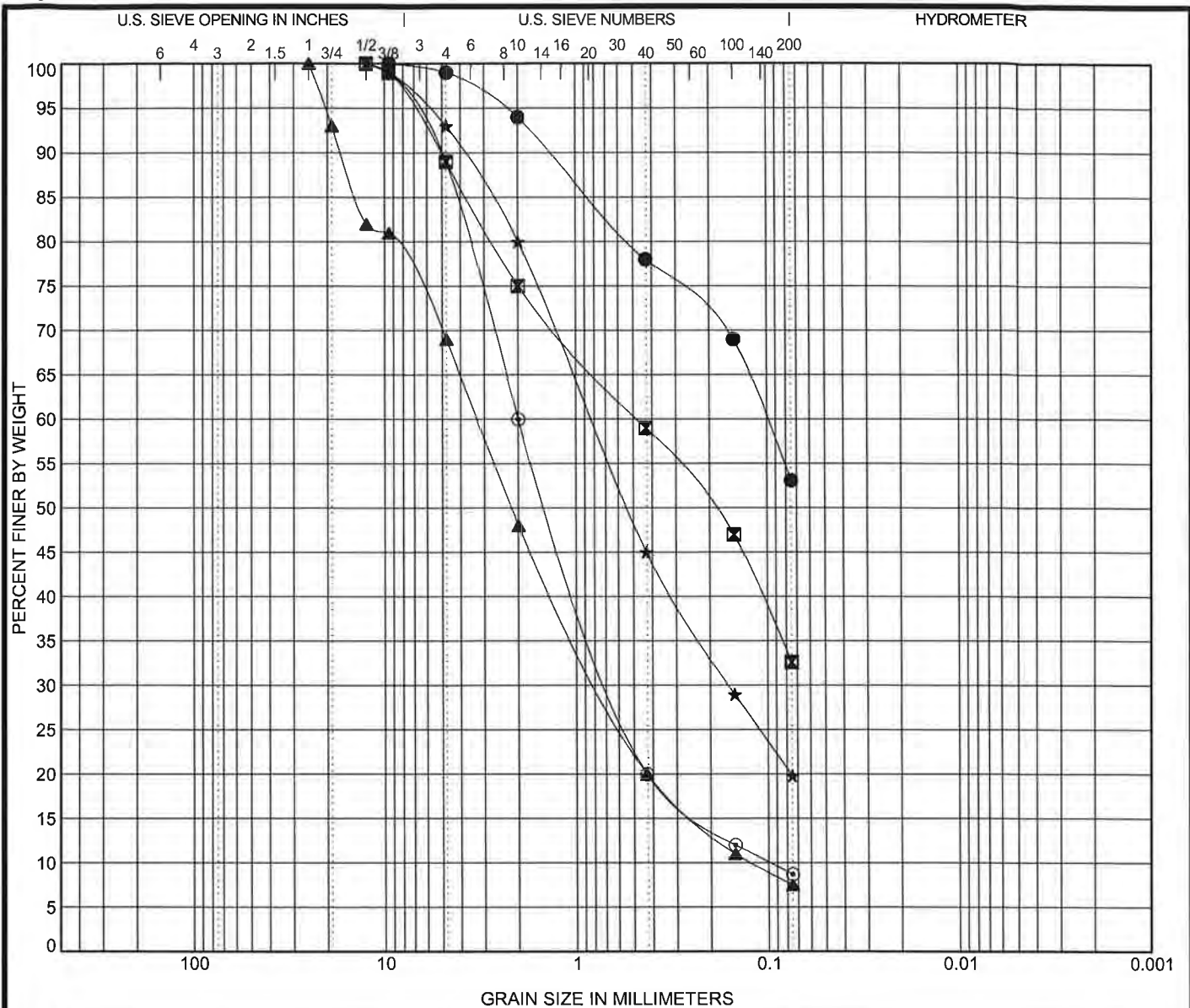
Number: 1-60813



Specimen Identification			Classification				LL	PL	PI	Cc	Cu
●	10	14.0	SANDY LEAN CLAY(CL)				25	17	8		
☒	10	24.0	LEAN CLAY with SAND(CL)				31	21	10		
▲	11	2.5	POORLY GRADED GRAVEL with SAND(GP)				NP	NP	NP	0.48	60.50
★	11	9.0	SANDY SILTY CLAY(CL-ML)				22	18	4		
◎	11	19.0	SILTY SAND(SM)				21	19	2		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	10	14.0	4.75	0.079			0.0	40.8	59.2		
☒	10	24.0	4.75				0.0	18.0	82.0		
▲	11	2.5	51	26.017	2.31	0.43	60.0	36.4	3.6		
★	11	9.0	9.5	0.091			1.0	45.2	53.8		
◎	11	19.0	12.5	0.169			14.0	41.7	44.3		

GEO-TEST

Number: 1-60813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	12	1.5	SANDY SILTY CLAY(CL-ML)			23	17	6		
■	13	2.0	CLAYEY SAND(SC)			29	18	11		
▲	14	5.0	WELL-GRADED SAND with SILT and GRAVEL(SW-SM)			NP	NP	NP	1.37	26.64
★	15	4.0	SILTY, CLAYEY SAND(SC-SM)			22	17	5		
◎	15	14.0	WELL-GRADED SAND with SILTY CLAY(SW-SC)			22	16	6	2.02	20.29
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	12	1.5	9.5	0.101			1.0	45.9	53.1	
■	13	2.0	12.5	0.473			11.0	56.4	32.6	
▲	14	5.0	25	3.279	0.745	0.123	31.0	61.5	7.5	
★	15	4.0	12.5	0.831	0.16		7.0	73.2	19.8	
◎	15	14.0	12.5	2	0.631	0.099	11.0	80.3	8.7	

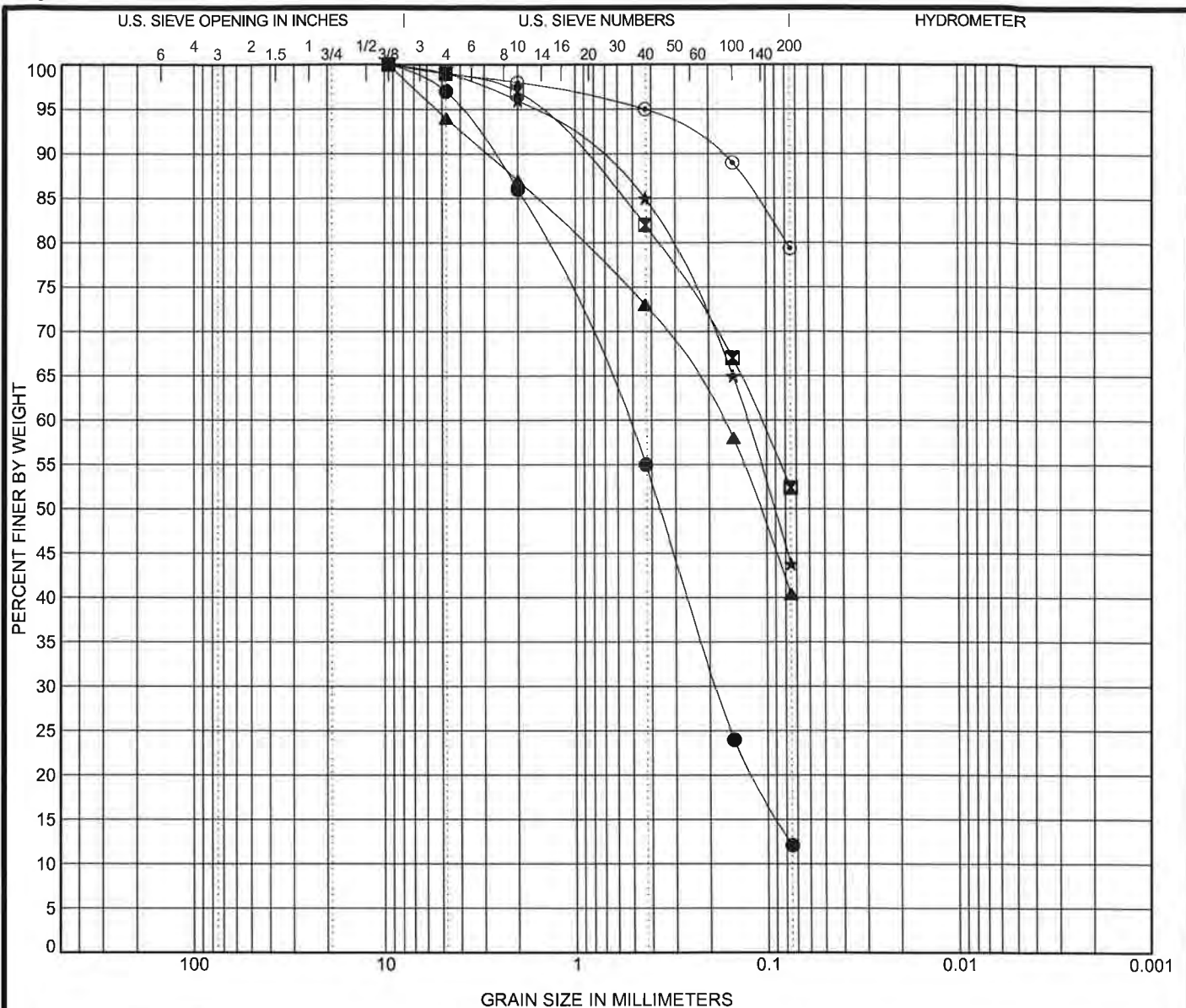
GRAIN SIZE DISTRIBUTION

GEO-TEST

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

Number: 1-60813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	16	2.5	SILTY SAND(SM)			NP	NP	NP	0.93	8.30
☒	16	9.0	SANDY SILTY CLAY(CL-ML)			26	19	7		
▲	17	0.5	CLAYEY SAND(SC)			28	17	11		
★	18	1.5	SILTY, CLAYEY SAND(SC-SM)			24	20	4		
◎	19	2.5	LEAN CLAY with SAND(CL)			34	20	14		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	16	2.5	9.5	0.551	0.184		3.0	84.9	12.1	
☒	16	9.0	9.5	0.108			1.0	46.6	52.4	
▲	17	0.5	9.5	0.173			6.0	53.6	40.4	
★	18	1.5	9.5	0.127			1.0	55.2	43.8	
◎	19	2.5	9.5				1.0	19.6	79.4	

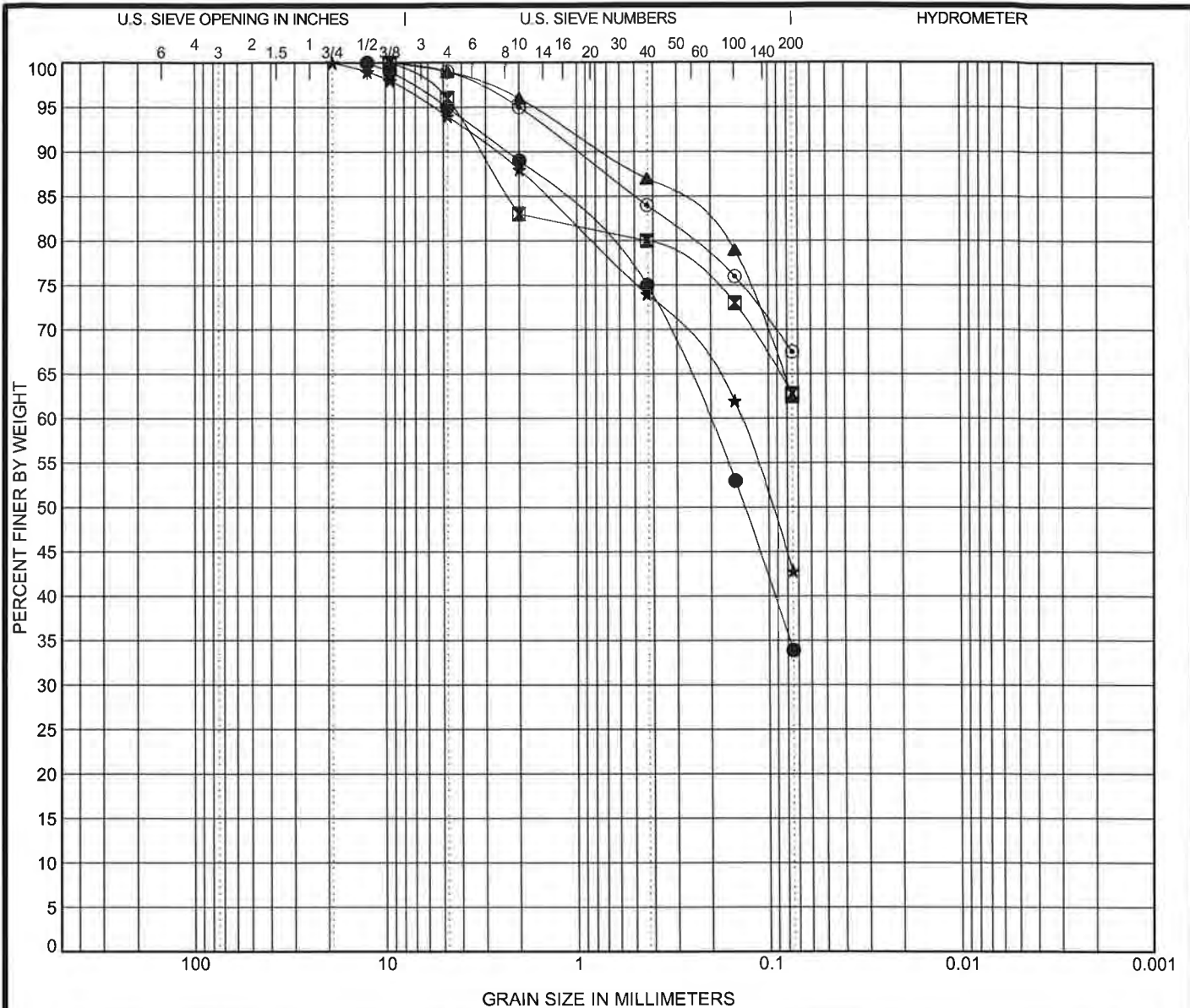
GRAIN SIZE DISTRIBUTION

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

Number: 1-60813

GEO-TEST



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	20	2.5	SILTY SAND(SM)			23	20	3		
■	21	2.0	SANDY LEAN CLAY(CL)			30	21	9		
▲	22	2.5	SANDY LEAN CLAY(CL)			32	17	15		
★	23	2.5	CLAYEY SAND(SC)			27	16	11		
◎	24	1.5	SANDY LEAN CLAY(CL)			30	18	12		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	20	2.5	12.5	0.21			5.0	61.1	33.9	
■	21	2.0	9.5				4.0	33.2	62.8	
▲	22	2.5	9.5				1.0	36.6	62.4	
★	23	2.5	19	0.14			6.0	51.2	42.8	
◎	24	1.5	9.5				1.0	31.5	67.5	

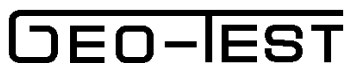
GRAIN SIZE DISTRIBUTION

GEO-TEST

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

Number: 1-60813



Project: Arroyo Hondo Trail

Date: 03/16/2018

Project No: 1-60813

Elevation:

Type: 5.5" OD HSA

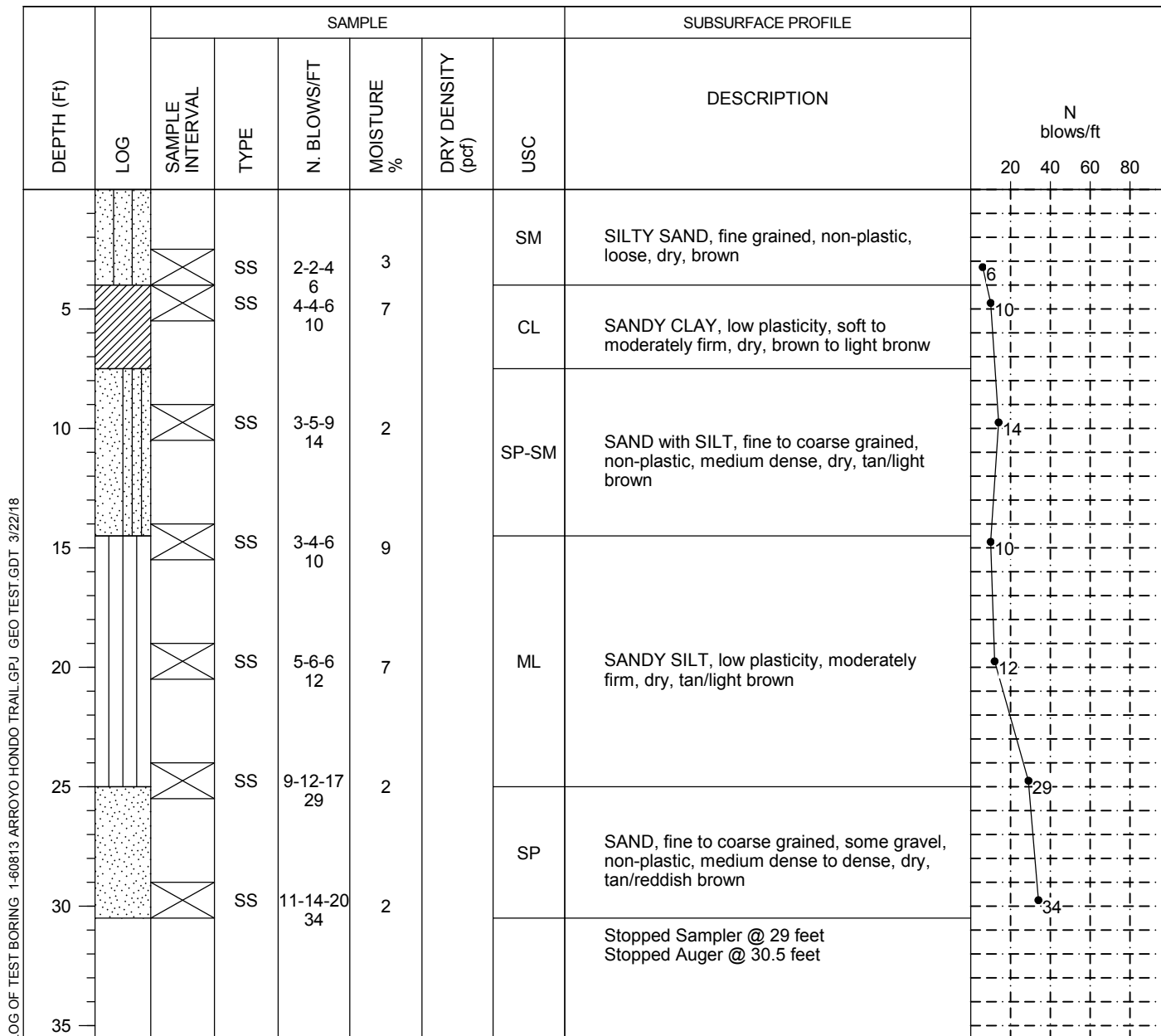
LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 31

During Drilling: none

After 24 Hours:



LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
 ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

SUMMARY OF LABORATORY RESULTS

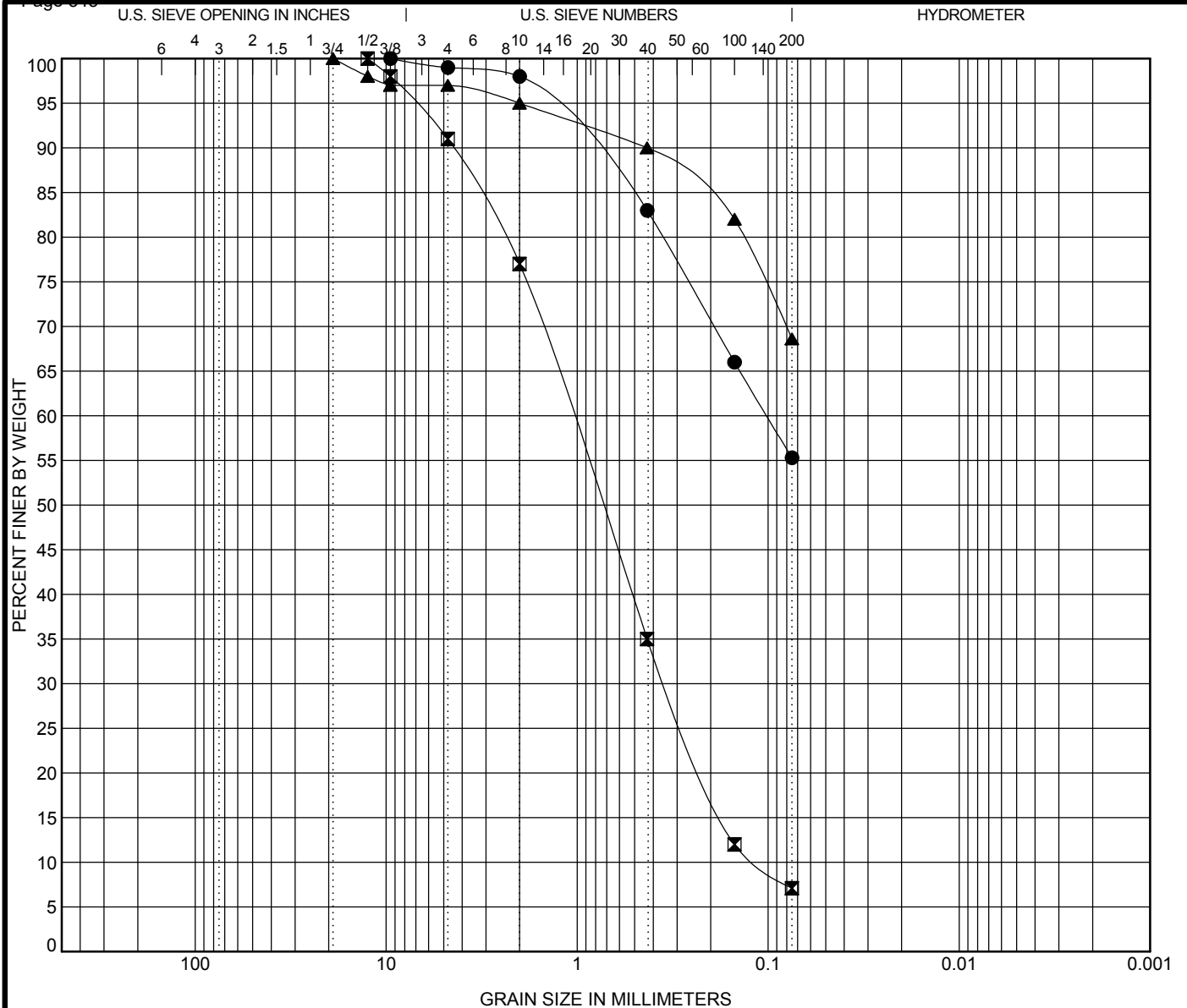
						SIEVE ANALYSIS PERCENT PASSING											
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(%) MOIST	LL	PI	NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"
31	3.0		2.9														
31	5.0	CL	6.5	27	8	55	66	83	98	99	100						
31	10.0	SP-SM	1.7	NP	NP	7	12	35	77	91	98	100					
31	15.0		8.5														
31	20.0	ML	7.2	22	3	69	82	90	95	97	97	98	100				
31	25.0		2.3														
31	30.0		1.9														

SUMMARY OF LABORATORY RESULTS 1-60813 ARROYO HONDO TRAIL.GPJ GEO TEST.GDT 3/22/18



LL = LIQUID LIMIT
 PI = PLASTICITY INDEX
 NP = NON PLASTIC or NO VALUE

Project: Arroyo Hondo Trail
 Location: Santa Fe, NM
 Number: 1-60813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	31	5.0	SANDY LEAN CLAY(CL)			27	19	8		
✕	31	10.0	POORLY GRADED SAND with SILT(SP-SM)			NP	NP	NP	0.96	9.50
▲	31	20.0	SANDY SILT(ML)			22	19	3		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	31	5.0	9.5	0.102			1.0	43.7	55.3	
✕	31	10.0	12.5	1.074	0.342	0.113	9.0	83.9	7.1	
▲	31	20.0	19				3.0	28.4	68.6	

GEO-TEST

GRAIN SIZE DISTRIBUTION

Project: Arroyo Hondo Trail

Location: Santa Fe, NM

Number: 1-60813