SPECIFICATIONS AND PROJECT MANUAL

ITB#: 2016-018-FAC
PROJECT#: 083105-16-001
BID OPENING: April 29, 2016 @ 11:00am

FURNISHING OF ALL LABOR AND MATERIALS FOR THE

MOUNTAIN VIEW MIDDLE SCHOOL MECHANICAL UPGRADES AND RELATED WORK

RIO RANCHO PUBLIC SCHOOLS
500 LASER RD. NE
RIO RANCHO, NM 87124

Architect’s Project Number: 15-400-169-00

Wilson & Company, Inc., Engineers & Architects
4900 Lang Avenue NE, Albuquerque, NM 87109

APRIL 12, 2016
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## INVITATION TO BID
CONSTRUCTION CONTRACT

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<th>DESIGN PROFESSIONAL OF RECORD:</th>
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<tbody>
<tr>
<td>Wilson &amp; Company, Inc.,</td>
</tr>
<tr>
<td>4900 Lang Avenue NE</td>
</tr>
<tr>
<td>Albuquerque, NM 87109</td>
</tr>
<tr>
<td>Brandon Hensley</td>
</tr>
<tr>
<td>Telephone: (505) 348-4161</td>
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<table>
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<td>RIO RANCHO PUBLIC SCHOOLS</td>
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<tr>
<td>500 LASER ROAD, NE</td>
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</tr>
<tr>
<td>RIO RANCHO, NM 87124</td>
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<tr>
<td>Telephone: (505) 896-0667</td>
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<tr>
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<tr>
<td>500 LASER ROAD NE</td>
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<td>RIO RANCHO, NM 87124</td>
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<tr>
<td>Contact Names:</td>
</tr>
<tr>
<td>Tom Weeks</td>
</tr>
<tr>
<td>Chief Procurement Officer</td>
</tr>
<tr>
<td>(505) 962-1143</td>
</tr>
<tr>
<td>Kathy Hayes</td>
</tr>
<tr>
<td>Purchasing Specialist</td>
</tr>
<tr>
<td>(505)962-1137</td>
</tr>
<tr>
<td>Craig Barnard</td>
</tr>
<tr>
<td>Project Manager</td>
</tr>
<tr>
<td>(505) 896-0667, Ext.1169</td>
</tr>
</tbody>
</table>

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

SEALED BIDS WILL BE RECEIVED AT THE ABOVE SPECIFIED DATE, LOCAL TIME AND ADDRESS THEN PUBLICLY OPENED AT THE ABOVE SPECIFIED ADDRESS AND READ ALOUD. BIDS NOT RECEIVED BY THE ABOVE SPECIFIED DATE, LOCAL TIME AND AT THE LISTED ADDRESS PRIOR TO BID TIME, WILL NOT BE OPENED OR CONSIDERED. DELIVERY IS SOLELY THE RESPONSIBILITY OF THE BIDDER.

THIS BID IS SUBJECT TO THE REQUIREMENTS OF THE BIDDING DOCUMENTS AS DEFINED IN THE "INSTRUCTIONS TO BIDDERS," SECTION 00100.

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

This mailing contains three pages
INVITATION TO BID page 2

Bids shall be presented in the form of a total Base Bid proposal, under a Lump Sum Contract, plus any additive or deductive alternates, that are selected by the Owner. A bid must be submitted on all bid items and alternates; segregated bids will not be accepted. Plans and specifications are available from the RRPS website @https//:www.rrps.net>District>Purchasing.

Bidders may also purchase a CD, with the Bid Documents, from Albuquerque Reprographics, Inc., at their cost.

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

In submitting this bid, each Bidder must satisfy all terms and conditions of the Bidding Documents. All work covered by this Invitation to Bid shall be in accordance with applicable state laws and, if bid amount is $60,000 or more, is subject to the minimum wage rate determination issued by the office of the Labor Commissioner for this project. If the bid amount of the contractor or any subcontractor exceeds $50,000, the contractor and/or subcontractor must comply with the registration requirements pursuant to the Public Works Minimum Wage Act.
INVITATION TO BID page 3

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

A 100% Performance Bond and a 100% Payment and Materials Bond, executed by a surety company authorized to do business in the State of New Mexico, shall be required from the successful Bidder prior to award of contract.

A completed Subcontractor Listing Form must accompany each bid.

Each subcontractor shall provide a performance and payment bond on a public works building project if the subcontractor’s contract (to the Contractor) for work to be performed on a project is one hundred twenty-five thousand dollars ($125,000) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to approved substitution of Subcontractor.

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

No Bidder may withdraw his bid for 45 days after the actual date of the opening thereof.

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

Attention of the Bidder is particularly directed to the current requirements as to Resident and Resident Veteran Contractor's Preference per Section 13-4-2 NMSA 1978. The provisions of Sections 13-4-1 through 13-4-4 NMSA 1978 are not applicable to projects receiving Federal aid or when the expenditure of Federal funds designated for a specific contract is involved.

Requests for approval of substitutions for “or equal” material or equipment, if allowed by the contract documents, must includes a detailed itemized comparison of the proposed substitution with the specified product and be submitted at least 10 days prior to the bid date in accordance with Paragraph 3.3 of the Instructions to Bidders.

A pre bid meeting is scheduled, prior to the bid date.

LOCATION: Mountain View Middle School
4101 Montreal Loop NE
Rio Rancho, NM 87144

On:
DATE: April 19, 2016, TIME: 2:00pm

END OF INVITATION TO BID
INSTRUCTIONS TO BIDDERS
Section 00 2113

1.0 DEFINITIONS AND TERMS
1.1 Terms used in these Bidding Documents which are defined in the Instructions to Bidders and in the Conditions of the Contract for Construction (General, Supplementary, and Other Conditions) have the meanings assigned to them in those documents.

A. ADDENDUM: A written or graphic instrument issued prior to the opening of Bids which clarifies, corrects, or changes the Bidding Documents or Contract Documents. Plural: addenda.

B. ALTERNATE BID: If requested by the Bidding Documents, the amount to be added to the Base Bid if the corresponding change in the project scope, materials, and/or methods of construction is awarded by the Owner.

C. BASE BID: Amount stated in the Bid as the sum for which the Bidder offers to perform the work, excluding alternate Bids.

D. BID: The offer of the bidder submitted on the prescribed form setting forth the prices for the work to be performed in conformance with the Bidding Documents.

E. BID LOT: A major item of work for which a separate quotation or proposal is requested.

F. BIDDER: One who submits a Bid directly to the Owner, as distinct from a subcontractor who submits a bid to a contractor.

G. BIDDING DOCUMENTS: The Bidding Requirements and the Contract Documents.

H. BID FORM: A form which includes a specific space in which the bid price shall be inserted and which the Bidder shall sign and submit along with all other necessary submissions. A Bidder may submit a reasonable facsimile of the Bid Form. Bids received by facsimile or in electronic format will not be accepted.

I. BIDDING REQUIREMENTS: Notice of Invitation to Bid, Prebid Information, Instructions to Bidders, Information Available for Bidders, the Bid Form, Supplements to the Bid Form, and portions of Addenda relating to any of these.

J. DAY: Day shall mean calendar day unless defined otherwise.

K. INVITATION FOR BID: All documents including those attached or incorporated by reference or utilized for soliciting sealed bids.

L. RESPONSIBLE BIDDER: A Bidder who is properly licensed in accordance with the Construction Industries Licensing Act and submits a Responsive Bid and who has furnished, when required, information and data to prove that his financial resources, production or service facilities, personnel, service reputation, and experience are adequate to make satisfactory delivery of the services, construction, or items of tangible personal property described in the Invitation for Bid.

M. RESPONSIVE BID: A bid which conforms in all material respects to the requirements set forth in the Invitation for Bid.

N. SUCCESSFUL BIDDER: The lowest Responsible Bidder to whom the Owner, on the basis of the Owner's evaluation, makes an award. A Successful Bidder does not become the contractor until an agreement with the Owner is signed.

2.0 EXAMINATION OF BIDDING DOCUMENTS AND SITE
2.1 Before submitting a Bid, each Bidder must, in accordance with the General Conditions with special attention to Article’s 1 and 3.:

A. Examine the Bidding Documents thoroughly;

B. Visit the site to familiarize himself with local conditions that may in any manner affects cost, progress, or performance;

C. Familiarize himself with Federal, State, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the Work; and

D. Study and carefully correlate the Bidder's observations with the Bidding Documents.
2.2 On request, the Owner will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid.

2.3 The lands upon which the Work is to be performed, rights-of-way for access thereto, and other lands designated for use by the Contractor in performing the work are identified in the Bidding Documents.

2.4 The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Section and that the Bidding Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

3.0 BIDDING DOCUMENTS

3.1 COPIES OF BIDDING DOCUMENTS

3.1.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Invitation may be obtained from the Design Professional (unless another issuing office is designated in the Invitation for Bid). The deposit will be refunded to Bidders who submit a bona-fide bid and return the bidding Documents in good and complete condition within fifteen (15) calendar days after opening of Bids.

3.1.2 Complete sets of Bidding Documents shall be used in preparing bids; neither the Owner nor the Design Professional assumes responsibility for errors or misinterpretations resulting from the use of incomplete or partial Bidding Documents.

3.1.3 The Owner and Design Professional, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3.2 INTERPRETATIONS

3.2.1 All questions about the meaning or intent of the Bidding Documents shall be submitted to the RRPS Chief Procurement Officer in writing. Replies will be issued by Addenda and mailed or delivered to all parties recorded by the RRPS Chief Procurement Officer as having received the Bidding Documents. Questions received less than seven (7) days prior to the date for opening of Bids will not be received and accepted. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

3.2.2 Bidders and Subcontractors shall promptly notify the RRPS Chief Procurement Officer of any ambiguity, inconsistency, or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.3 SUBSTITUTE MATERIAL AND EQUIPMENT

The contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by the contractor if acceptable to the Design Professional, application for such acceptance will not be considered by the Owner and Design Professional unless submitted with a detailed itemized comparison of the proposed substitution against the specified product at least ten (10) days prior to the date for opening Bids. Any product with a 5 (five) year or greater extended warranty must be submitted no less than forty-five (45) days prior to the opening of Bids, along with the same itemized comparison, to be considered by the Owner and Design Professional. Any allowance of substitutions will be published to all prospective Bidders via addendum. The procedure for submittal of any such application by the Contractor and consideration by the Owner and Design Professional is set forth in the Contract Documents.

3.4 ADDENDA
3.4.1 Addenda will be mailed or delivered to all who are known by the chief Procurement Officer to have received a complete set of Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 **Addenda will be issued no later than four (4) 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.

4.0 **BIDDING PROCEDURES**

4.1 **FORM AND STYLE OF BIDS**

4.1.1 Bids shall be submitted on forms identical to the form included with the Bidding Documents.

4.1.2 All blanks on the Bid Form shall be filled in by typewriter or manually in ink.

4.1.3 Where so indicated by the makeup of the Bid Form, sums shall be expressed in both words and figures, and, in case of discrepancy between the two, the amount written in words shall govern.

4.1.4 Any interlineation, alteration, or erasure must be initialed by the signer of the bid.

4.1.5 All requested Additive Alternate Bids shall be bid. If no change in the Base Bid is required, enter "No Change." Deductive Alternates shall not be used.

4.1.6 Where there are two or more major items of work (identified as "Bid Lots") for which separate quotations are requested, the Bidder may, at his discretion, submit quotations for any or all items, unless otherwise specified. Additionally, the Bidder may submit a lump sum price for all lots for which the Bidder has submitted separate quotations.

4.1.7 Each copy of the bid shall include the complete name of the Bidder and a statement that the Bidder is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the State of incorporation and have the applicable New Mexico Certificate of Incorporation number or Certificate of Authority number. The Bid shall include the current contractor's license number and type, Department of Workforce Solutions Minimum Wage Act registration number (DWS#), and the current Contractor's preference number. A bid submitted by an agent shall have a current Power of Attorney attached certifying the agent's authority to bind the Bidder.

4.1.8 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).

4.1.9 The address to which communications regarding the Bid are to be directed must be shown.

4.1.10 The Project Name and Number, as well as the Invitation to Bid Number, shall be clearly shown on the outside of the envelope in which the sealed Bid is submitted.

4.2 **BID SECURITY**

4.2.1 Bid security in an amount equal to at least five percent (5%) of the amount of the Bid shall be a bond provided by a surety company authorized to do business in this State, or the equivalent in cash, a cashier's check, or otherwise supplied in a form satisfactory to the Owner (Section 13-1-146, NMSA 1978) and
approved in writing by the Owner in advance. All General Contractor, or Primary Contractor, or Construction Manager at Risk Bonds shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, United States Treasury Department.

4.2.2 The bid security shall be in the amount of five percent (5%) of the highest Bid amount submitted, unless otherwise stipulated, pledging that the Bidder will enter into a Contract with the Owner on the terms stated herein and will furnish bonds covering the faithful performance of the Contract and payment of all obligations arising there under. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until:
   A. the Contract has been executed and bonds have been furnished,
   B. the specified time has elapsed so that Bids may be withdrawn, or
   C. all Bids have been rejected.

4.2.4 When the Bidding Documents require bid security, noncompliance by the Bidder requires that the Bid be rejected (13-1-147A, NMSA 1978).

4.2.5 If a Bidder is permitted to withdraw his Bid before award, no action shall take place against the Bidder or the bid security (13-1-147B, NMSA 1978).

4.2.6 The Owner may reduce bid security requirements authorized by the Procurement Code (13-1-28 to 13-1-199, NMSA 1978) to encourage procurement from small businesses. Reduction, if any, and the manner thereof will be stipulated in Paragraph 7. Reduction of the amount of bid security, if any, shall in no way reduce requirements for Performance, Payment, or other Bonds referenced in the Bidding Documents.

4.3 PREBID CONFERENCE

4.3.1 The Design Professional of Record shall conduct a Prebid Conference approximately fifteen (15), but not less than ten (10) days prior to the bid opening date stated in the Invitation to Bid.

4.3.2 The Design Professional of Record and his consultants, as applicable, shall be represented. Prospective Bidders, Prospective Subcontractors, and Prospective Vendors are encouraged to attend and should be prepared to ask questions regarding substitutions and to request clarification of the Bidding Documents. The failure of a Bidder, Subcontractor, or Vendor to attend shall be interpreted to mean that the Bidding Documents are clear and acceptable to all non-participants at the Prebid Conference. Such clarity and acceptability shall be presumed with respect to all Bidders.

4.3.3 Questions and requests for clarification presented in written form will receive written response, and if warranted, issued as Addenda. No verbal response shall be binding.

4.4 RESIDENT CONTRACTOR'S PREFERENCE

4.4.1 When Bids are received from nonresident contractors and resident contractors and the lowest responsible Bid is from a nonresident contractor, the contract shall be awarded as provided within the NM Procurement Code and RRPS Procurement Procedures.

4.4.2 No contractor shall be treated as a resident contractor in the awarding of public works contracts by the Owner unless the contractor has qualified with the State Purchasing Agent as a resident contractor pursuant to this section by making application to the State Purchasing Agent and receiving from him a
certification number. For convenience, and without warranty that the process is current, the procedure for application and certification is as follows:

4.5 SUBCONTRACTORS
4.5.1 The bidder shall list the Subcontractors he proposes to use for all trades or items on the Subcontractor Listing Form attached to the Bidding Documents. This requirement does not apply to second tier subcontractors, material suppliers, or subcontractors whose contract is for an amount no greater than the listing threshold described by Subsection A of 13-4-34 below. Requirements for Subcontractors pursuant to Chapter 18, Laws of 1988, 2nd Session; are as follows:

AN ACT
RELATING TO CONSTRUCTION INDUSTRIES; ENACTING THE SUBCONTRACTOR FAIR PRACTICES ACT.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO:

13-4-31 SHORT TITLE
Section 1 through 12 of this act may be cited as the "Subcontractors Fair Practices Act".

13-4-32 LEGISLATIVE FINDINGS
The legislature finds that the practices of bid shopping and bid peddling in connection with the construction, alteration and repair of public works projects often result in poor quality of material and workmanship to the detriment of the public, deprive the public of the full benefits of fair competition among contractors and subcontractors and lead to insolvencies and loss of wages to employees.

13-4-33 DEFINITIONS
As used in the Subcontractors Fair Practices Act:
   A. "contractor" means the prime contractor on a public works construction project who contracts directly with the using agency;
   B. "subcontractor" means a contractor who contracts directly with the contractor;
   C. "listing threshold" means the dollar amount, stipulated in the bidding documents, above which subcontractors must be listed;
   D. "notice" means information, advice or a written warning intended to apprise a contractor, subcontractor or using agency of some proceeding in which the contractor’s, subcontractor’s or using agency’s interests are involved or to inform him of some fact that is his right to know. Notice may be sent to a contractor, subcontractor or using agency by certified or registered mail and shall be deemed to be completed upon date of mailing; and
   E. "using agency" means any state agency or local public body requiring services or construction. (F.) (added for clarity from 13-4-13.1) “listed subcontractor” means a subcontractor who is currently registered with the labor and industrial commission.
LISTING OF SUBCONTRACTORS; REQUIREMENTS

A. Any using agency taking bids for any public works construction project shall provide in the bidding documents prepared for that project a listing threshold which shall be five thousand dollars ($5,000) or one-half of one percent of the architect's or engineer's estimate of the total project cost, not including alternates, whichever is greater. If the bidding documents do not include a listing threshold, then the using agency shall supply the listing threshold. If the listing threshold has not been included, the bid opening shall be postponed until the using agency has complied with this section. Any contractor or subcontractor interested in bidding may apply to the district court in the county in which the project will be located for an injunction preventing the bid opening until the using agency has complied with this section. Any person submitting a bid shall in his bid set forth:

1. the name and the city or county of the place of business of each subcontractor under subcontract to the contractor who will perform work or labor or render service to the contractor in or about the construction of the public works construction project in an amount in excess of the listing threshold; and
2. the category of the work that will be done by each subcontractor. The contractor shall list only one subcontractor for each category as defined by the contractor in his bid.

B. A bid submitted by a contractor who fails to comply with the provisions of Subsection A of this section is a non-responsive bid which shall not be accepted by a using agency.

EXEMPTION

With the exclusion of that portion of work covering street lighting and traffic signals, the Subcontractors Fair Practices Act shall not apply to contracts for the construction, improvement or repair of streets or highways, including bridges, underground utilities within easements including but not limited to water lines, sewer lines and storm sewer lines.

APPLICATION OF ACT

The Subcontractors Fair Practices Act shall not apply to any transaction occurring after the contractor and the listed subcontractor have executed a subcontract unless subsequent action on the subcontract relates to subcontractor listing requirements.

SUBSTITUTION OF SUBCONTRACTOR

A. No contractor whose bid is accepted shall substitute any person as subcontractor in place of the subcontractor listed in the original bid, except that the using agency shall consent to the substitution of another person as a subcontractor:

1. when the subcontractor listed in the bid, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract, when such written contract, based upon the general terms, conditions, plans and specifications for the project involved and the terms of such subcontractor's written bid, is presented to him by the contractor;
2. when the subcontractor listed in the original bid becomes bankrupt or insolvent prior to execution of a subcontract;
3. when the using agency refuses to approve the subcontractor listed in the original bid, provided such approval has been reserved in the bidding documents;
4. when the subcontractor listed in the original bid fails or refuses to perform his subcontract;
5. when the contractor demonstrates to the using agency or its duly authorized officer that the name of the subcontractor was listed as the result of an inadvertent clerical error;
6. when a bid alternate accepted by the using agency causes the listed subcontractor’s bid not to be low;
7. when the contractor can substantiate to the using agency that a listed subcontractor’s bid is incomplete;
8. when the listed subcontractor fails or refuses to meet the bond requirements of the contractor; and,
9. when it is determined that the listed subcontractor does not have a proper license to perform the work and the contractor has submitted the name of the subcontractor along with proof that the
subcontractor bid work for which he was not licensed by the Construction Industries Division of the Regulation and Licensing Department.

(10) when it determined by the using agency, the prime contractor or the director of the labor and industrial division of the labor department that a listed subcontractor is not a registered subcontractor on the date bids are unconditionally accepted for consideration.

B. Prior to approval of the contractor's request for substitution of a subcontractor, the using agency shall give notice in writing to the listed subcontractor of the contractor's request to substitute and of the reasons for the request. The notice shall be served by certified or registered mail to the last known address of the subcontractor. The listed subcontractor who has been so notified has five (5) working days within which to submit written objections to the substitution to the using agency. Failure to file written objections shall constitute the listed subcontractor's consent to the substitution. If written objections are filed, the using agency shall give at least five (5) working days' notice in writing to the listed subcontractor of a hearing by the using agency on the contractor's request for substitution.

C. No contractor whose bid is accepted shall permit any subcontract to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original bid without the consent of the using agency.

D. No contractor whose bid is accepted, other than in the performance of change orders causing changes or deviations from the original contract, shall sublet or subcontract any portion of the work in excess of the listing threshold as to which his original bid did not designate a subcontractor unless:

(1) the contractor fails to receive a bid for a category of work. Under such circumstances, the contractor may subcontract. The contractor shall designate on the listing form that no bid was received; or

(2) the contractor fails to receive more than one bid for a category of work. Under such circumstances, the contractor may subcontract. The contractor shall state on the listing form that only one subcontractor’s bid was received, together with the name of the subcontractor. This designation shall not occur more than one time on the subcontractor list.

13-4-37 BOND REQUIREMENTS (This requirement to be modified by Invitation to Bid – Section 0 1116- Page 3

B. It is the responsibility of each subcontractor submitting a bid to a contractor to be prepared to submit a faithful performance and payment bond if so requested by the contractor.

C. In the event any subcontractor submitting a bid to a contractor does not, upon the request of the contractor and at the expense of the contractor at the established charge or premium therefore, furnish to the contractor a bond issued by a corporate surety authorized to do business in New Mexico in accordance with the New Mexico Insurance Code (59A-1-1 to 59A-1-18, NMSA 1978) and listed in the United States treasury department circular 570 wherein the contractor is named the obligee, guaranteeing prompt and faithful performance of the subcontract and the payment of all claims for labor and materials furnished or used in and about the work to be done and performed under the subcontract, the contractor may reject the bid and make a substitution of another subcontractor subject to the provisions of Section 13-4-36, NMSA 1978. Such bond may be required at the expense of the subcontractor only if the contractor in his written or published request for subcontract bids:

(1) specifies that the expense for the bond shall be borne by the subcontractor; and

(2) clearly specifies the amount and requirements of the bond.

13-4-38. FAILURE TO SPECIFY SUBCONTRACTOR

If a contractor fails to list a subcontractor in excess of the listing threshold and he does not state that no bid was received or that only one bid was received, he represents that he is fully qualified to perform that portion of the work himself and that he shall perform that portion of the work himself. If after the award of the contract the contractor subcontracts any portion of the work, except as provided in the Subcontractors Fair Practices Act, the contractor shall be guilty of violation of the Subcontractors Fair Practices Act and subject to the penalties provided in Section 13-4-41 NMSA 1978.
13-4-39. **INADVERTENT CLERICAL ERROR**

A. The contractor, as a condition to assert a claim of inadvertent clerical error in the listing of a subcontractor, shall within four working days after the time of the prime bid opening by the using agency, give written notice to the using agency and to both the subcontractor he claims to have listed in error and the subcontractor who had bid to the contractor prior to bid opening.

B. Any listed subcontractor who has been notified by the contractor in accordance with the provisions of this section as to an inadvertent clerical error shall be allowed twelve working days from the time of the prime bid opening within which to submit to the using agency and to the contractor written objection to the contractor's claim of inadvertent clerical error. Failure of the listed subcontractor to file written notice within the twelve working days shall be primary evidence of his agreement that an inadvertent clerical error was made.

C. The using agency shall, in the absence of an objection to the contrary by the listed subcontractor in the original bid, consent to the substitution of the intended subcontractor if:

1. the contractor, the listed subcontractor listed in error and the intended subcontractor each submit an affidavit to the using agency, along with such additional evidence as the parties may wish to submit, that an inadvertent clerical error was in fact made, provided that the affidavits from each of the three parties are filed within twelve working days from the time of the prime bid opening; or

2. affidavits are filed by both the contractor and the intended subcontractor within the specified time but the subcontractor whom the contractor claims to have listed in error does not submit, within twelve working days from the time of prime bid opening, to the using agency and to the contractor written objection to the contractor's claim of inadvertent clerical error as provided in this section.

D. If affidavits are filed by both the contractor and the intended subcontractor but the listed subcontractor has, within twelve working days from the time of the prime bid opening, submitted to the using agency and to the contractor written objection to the contractor's claim of inadvertent clerical error, the using agency shall investigate the claims of the parties and hold a hearing to determine the validity of the claims, within thirty days after the receipt of the contractor’s written objection. Any determination made shall be based on facts contained in the affidavits submitted by all three parties and supported by testimony under oath and subject to cross-examination. The using agency may, on its motion or that of any other party, admit testimony of other contractors, any bid registries or depositories or any other party in possession of facts that may have a bearing on the decision of the using agency.

13-4-40. **EMERGENCY SUBCONTRACTING**

Subcontracting any portion of the work in excess of the listing threshold as to which no subcontractor was designated in the original bid shall be permitted only in the case of public emergency or necessity and then only upon a written finding by the using agency setting forth the facts constituting the emergency or necessity.

13-4-41. **PENALTIES**

A. When a contractor violates any provision of the Subcontractors Fair Practices Act except Section 13-4-34 NMSA 1978, the using agency shall:

1. in the case of a contractor who substitutes another subcontractor in violation of Section 13-4-36 NMSA 1978, for the subcontractor originally included in the bid, assess the contractor a penalty in an amount equal to the greater of ten percent of the amount bid by the listed subcontractor or the difference between the amount bid by the listed subcontractor and the amount bid by the substituted subcontractor;

2. in the case of a contractor substituting a listed subcontractor for another subcontractor, and the substituted subcontractor knowingly participated in a violation of Section 13-4-36 NMSA 1978, assess the substituted subcontractor a penalty in an amount equal to the greater of ten
percent of the amount bid by the listed subcontractor and the difference between the amount bid by
the listed subcontractor and the substituted subcontractor; or
(3) in the case of a contractor who fails to list a subcontractor in excess of the listing threshold as
defined in Section 13-4-38 NMSA 1978, assess the contractor a penalty of eight percent of the
amount of the subcontract issued for the first violation and thirty percent of the amount of the
subcontract issued for any violation thereafter, on any one project.
B. Penalties assessed pursuant to the provisions of this section shall be deposited into the fund from
which the contract was awarded.
C. In a proceeding under this section, the contractor shall be entitled to a hearing after notice.
D. A violation of the provisions of the Subcontractors Fair Practices Act constitutes grounds for
disciplinary action against a contractor or a subcontractor, pursuant to regulations of the construction
industries division of the regulation and licensing department.
E. A contractor or a subcontractor who attempts to circumvent the provisions of the Subcontractors
Fair Practices Act shall be subject to the penalties established pursuant to this section.
F. Any listed subcontractor removed in violation of the Subcontractors Fair Practices Act may bring
an action in the district court for damages, injunctive or other relief.

13-4-42. Not Used

13-4-43. DISPUTE RESOLUTION
Once the using agency has determined the existence of a valid claim under the provisions of the
Subcontractors Fair Practices Act, the using agency or agent of the using agency may:

A. hold a public hearing for the purpose of providing an informal resolution of the dispute by
preparing a "form of dispute" which shall be available to all parties. The form shall state concisely, in
numbered paragraphs, the matter at issue or dispute which the complainant expects to be determined.
The agent or the using agency shall evaluate the issues presented by both sides of the dispute and
render a decision within ten days after the hearing, and provide the parties with a written copy of the
decision by certified mail, return receipt requested; or
B. refer the matter in dispute to be resolved through arbitration.

4.5.2 The Bidder shall not list himself as the supplier or as the Subcontractor for any trade unless he has
previously performed work of this type or can prove to the Design Professional and the Owner's satisfaction
that he actually has, or will obtain, fully adequate ability to perform the work with his own forces.

4.5.3 Omission or non-compliance with the intent of the Subcontractor Listing (Section 00430) will be
grounds for considering a bid as non-responsive.

4.5.4 Prior to the award of the Contract, the Design Professional will notify the Bidder in writing if either
the Owner or the Design Professional, after due investigation and written findings of fact, has reasonable and
substantial objection to any person or organization on such list. If the Owner or Design Professional has
reasonable and substantial objection to any person or organization on such list and refuses in writing to accept
such person or organization, the Bidder may, at his option:
   A. withdraw his Bid, or,
   B. submit an acceptable substitute Subcontractor.
In the event of withdrawal under this paragraph, bid security will not be forfeited.

4.5.5 The Successful Bidder shall, within ten (10) days of Notice of Award of the Contract for the Work,
submit to the Design Professional all of the requirements of Subparagraph 6.1.
4.5.6 The Successful Bidder will be required to establish to the satisfaction of the Design Professional and the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the work described in the Bidding Documents.

4.5.7 Persons and organizations proposed by the Bidder and to whom the Owner and the Design Professional have made no reasonable objection under the provisions of Paragraph 4.5.6 must be used on the work for which they were proposed and shall not be changed except with the written consent of the Owner and the Design Professional. In an effort to gain consent, provide, if possible, a written request from the person or organization wishing to be replaced by the Bidder explaining the need for the replacement.

4.5.8 No Successful Bidder shall be required to employ any Subcontractor, other person, or organization against whom he has reasonable objection.

4.6 SUBMISSION OF BIDS
4.6.1 Bid, bid security, Subcontractors Listing Form, and other required documents listed in the Bidding Documents shall be submitted in an opaque sealed envelope marked in accordance with Subparagraph 4.6.2 below.

4.6.2 The Bid envelope shall be addressed as required by Section 00_2114 – Instructions to Bidders – Part B.

4.6.3 Bids received after the date and time for receipt of bids will be returned unopened.

4.6.4 The Bidder shall assume full responsibility for timely delivery of bids to the Owner, including those Bids submitted by mail or otherwise. Bids hand delivered to the Bid Opening Address shall be received beginning one hour prior to the bid. Bids will be clocked in at the time received, which must be prior to the time specified. Bids will then be held for public opening.

4.6.5 Oral, telephonic, or telegraphic bids are invalid and will not receive consideration.

4.7 CORRECTION OR WITHDRAWAL OF BIDS
4.7.1 A bid containing a mistake discovered before Bid Opening may be withdrawn by a bidder prior to the time set for Bid Opening by delivering verbal, written or telegraphic notice to the location designated in the Invitation for Bid as the place where bids are to be received.

4.7.2 Bid security, if required, shall be in an amount sufficient for the bid in conformance with Section 4.2.

4.7.3 Withdrawn Bids may be resubmitted up to the time and date designated for the receipt of Bids, provided they are then fully in conformance with the Bidding Documents.

4.7.4 After Bid Opening time, no modifications in bid prices or other provisions of bids shall be permitted.

4.7.5 After Bid Opening, a low Bidder alleging a material mistake of fact which makes his Bid non-responsive may be permitted to withdraw his Bid if the:
   A. mistake is clearly evident on the face of the Bid Document; or
   B. Bidder submits evidence which clearly and convincingly demonstrates that a mistake was made.
   Any decision by the Owner to permit or deny the withdrawal of a Bid on the basis of a mistake contained therein shall be supported by a written determination setting forth the grounds for the decision. If withdrawal is permitted, bid security will not be forfeited.

4.8 NOTICE OF CONTRACT REQUIREMENTS BINDING ON BIDDER
4.8.1 In submitting this bid, the Bidder represents that he has familiarized himself with the nature and extent of the following requirements and of the Conditions of the Construction Contract (General, Supplementary, Project and Other Conditions):

4.9 REJECTION OR CANCELLATION OF BIDS
An Invitation for Bid may be canceled, or any or all Bids may be rejected in whole or in part, when it is in the best interest of the Owner. A determination containing the reasons therefore shall be made part of the Project file. Bid security for rejected Bids shall be returned to the Bidder.

4.10 CONSIDERATION OF BIDS
4.10.1 RECEIPT, OPENING, AND RECORDING
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 (13-1-107, NMSA 1978).

4.10.2 BID EVALUATION AND AWARD
4.10.2.1 The Owner shall have the right to waive technical irregularities in the form of the Bid of the low Bidder which do not alter the price, quality, or quantity of the services, construction, or items of tangible personal property bid (13-1-132, NMSA 1978).

4.10.2.2 It is the intent of the Owner to award a contract to the lowest responsive and responsible bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. The unreasonable failure of a Bidder to promptly supply information in connection with an inquiry with respect to responsibility is grounds for a determination that the Bidder is not a responsible Bidder (13-1-133, NMSA 1978). See Section 6 as to Post-Bid Information that may be required of a Contractor as to qualifications.

4.10.2.3 If the Base Bid is within the amount of funds available to finance the construction, contract award will be made to the responsible Bidder submitting the low Base Bid; except that, if sufficient funds are available to fund alternates, the Owner may award the contract to the responsible Bidder submitting the low combined Bid within the amount of funds available (Base Bid plus or minus alternates). If the award is based on alternates, the Owner shall accept them in the order in which they are listed on the Bid Form.

4.10.2.4 Discrepancies in the Bid Form between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

4.10.2.5 Conditional Bids or Bids with additional terms will not be accepted.

4.11 NOTICE OF AWARD
A written Notice of Award shall be issued by the Owner after review and approval of the bid and related documents by the Owner with reasonable promptness (13-1-100 and 13-1-108, NMSA 1978).

4.12 CANCELLATION OF AWARD
When in the best interest of the public, the Owner may cancel the award of any contract at any time before the execution of said contract by all parties without any liability against the Owner.

5.0 PROTESTS
5.1 Any bidder, offerer, or contractor who is aggrieved in connection with this procurement (Bid) may protest to the Owner’s Chief Procurement Officer and the Owner in accordance with the requirements of NM Procurement Code and RRPS Procurement Procedures. The protest should be made in writing within twenty-four (24)
hours after the facts or occurrences giving rise thereto, but in no case later than fifteen (15) calendar days after the facts or occurrences giving rise thereto (13-1-172, NMSA 1978).

5.2 In the event of a timely protest under Subparagraph 4.10.1 (13-1-172, NMSA 1978 of the Procurement Code), the Owner’s Chief Procurement Officer and the Owner shall not proceed further with the procurement unless the Owner’s Chief Procurement Officer or the Owner makes a determination that the award of contract is necessary to protect substantial interests of the Owner (13-1-173, NMSA 1978).

5.3 The Owner’s Chief Procurement Officer or his designee shall have the authority to take any action reasonably necessary to resolve a protest of an aggrieved bidder, offerer, or contractor concerning a procurement.

5.4 The Owner’s Chief Procurement Officer or his designee shall promptly issue a determination relating to the protest. The determination shall:
   A. state the reasons for the action taken; and
   B. inform the protestant of the right to judicial review of the determination pursuant to Section 13-1-183, NMSA 1978 of the Procurement Code (13-1-175, NMSA 1978).

5.5 A copy of the determination issued under Section 13-1-175, NMSA 1978 of the Procurement Code shall immediately be mailed to the protestant and other bidders or offerers involved in the procurement (13-1-176, NMSA 1978).

6.0 POST-BID INFORMATION

6.1 SUBMITTALS TO DESIGN PROFESSIONAL
Within ten (10) days of Notice of Award and prior to construction, the following shall be submitted to the Design Professional:
   A. the Contractor required bonds and Certificates of Insurance;
   B. for the Owner's consideration for approval, a resume and Statement of Qualification of proposed Superintendent(s) and assistants until acceptable individuals are selected in accordance with Subparagraph 3.9.2 of the General Conditions to the Construction Contract;
   C. signed Subcontractors List including contract amount of each, evidence of required bonds, costs of each bond, and beneficiary of each bond; evidence of DOL registration, evidence of CID licensure;
   D. Assignment of Antitrust Claims (required for the Contractor, all Subcontractors, and all Suppliers);
   E. Certificate of Insurance;
   F. State W-9;
   G. evidence of other bonds or documents as specified in the Bidding Documents; and
   H. Schedule of Values and required supporting data in accordance with Paragraph 9.2 of the General Conditions to the Construction Contract.

6.2 RETURN OF BID SECURITY
All Bid Security in the form of checks, except those of the two lowest Bidders, will be returned immediately following the opening and checking of the Bids. The retained bid security of the unsuccessful of the two lowest bidders, if in the form of a check, will be returned within fifteen (15) days following the award of contract. The retained bid security of the Successful Bidder, if in the form of a check, will be returned after a satisfactory contract bond has been furnished and the Contract has been executed. Bid Securities in the form of Bid Bonds will be returned only upon the request of the unsuccessful Bidder, but will be released by the Purchasing Agent for the District after the Notice of Award is sent by the Owner.

6.3 EXECUTION AND APPROVAL OF CONTRACT
The Contract shall be signed by the Successful Bidder and returned, together with both the Contract Bonds and Certificate of Insurance, within fifteen (15) days after the date of the Notice of Award. If the Contract is
not executed by the Owner within forty-five (45) days following receipt from the Bidder of the signed Contract with Bonds and Certificate, the Bidder shall have the right to withdraw his proposal without penalty unless the Bidder has previously agreed to extend the date for acceptance by the Owner. No Contract shall be effective until it has been fully executed by all of the parties thereto.

6.4 NOTICE TO PROCEED
The Owner will issue a written Notice to Proceed to the Contractor stipulating the date from which Contract Time will be charged and the date Contract Time is to expire, subject to valid modifications of the Contract authorized by Change Order.

6.5 FAILURE TO EXECUTE CONTRACT
Failure to return the signed Contract with acceptable Contract Bonds and Certificate of Insurance within fifteen (15) days after the date of the Notice of Award shall be just cause for the cancellation of the award and the forfeiture of the Bid Security, which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. 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.

6.6 CONTRACTOR’S QUALIFICATIONS STATEMENT
Bidders to whom award of a contract is under consideration shall submit, upon request, information and data to prove that their financial resources, production or service facilities, 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 (13-1 -82, NMSA 1978). The Contractor shall always submit the requirements of Subparagraph 3.9.2 of the General Conditions to the Construction Contract and also in accordance with Paragraph 6.1-B above.

7.0 OTHER INSTRUCTIONS TO BIDDERS
7.1 The bid will be awarded in accordance with Subparagraph 4.10.2.3. The Owner may accept from the apparent low bidder prior to the Award, a reduction to the bid cost or time and, may discuss with the apparent low bidder for potential deductive modifications to the Work prior to the Award however, the Award shall be made on the un-modified Construction Documents with alternates accepted in accordance with this Paragraph 7.0.

7.2 If the lowest responsible bid has otherwise qualified, and if there is no change in the original project scope, terms or conditions, the lowest bidder may negotiate with the purchaser for a lower total bid in order to avoid rejection of all bids for the reason that the lowest bid was up to ten percent higher than budgeted project funds. Such negotiation shall not be allowed if the lowest bid was more than ten percent over budgeted project funds.
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INSTRUCTIONS TO BIDDERS – PART B
Section 00 2114

1.0 BID ENVELOPE

The Bid envelope shall be addressed at the front center of the envelope to:

RIO RANCHO PUBLIC SCHOOLS
PURCHASING ROOM 120
500 LASER ROAD NE
RIO RANCHO, NM 87124

Also on the front of the envelope the Bidder shall mark: the name and address of the Bidder shall in the upper left corner; the name of project, Invitation to Bid Number, date of opening and, time of opening in the lower left corner; and, "SEALED BIDS ENCLOSED" in the lower right corner or otherwise on the face thereof.

2.0 RRPS BACKGROUND CHECKS

2.1 Background Checks Required: Rio Rancho Public Schools (RRPS) requires that any employee (including contractors and sub-contractors), working on Rio Rancho Public School project(s) have a background check. As per Section 28-2 NMSA 1978, Criminal Offender Employment Act, RRPS has the right to refuse public employment for any one or any combination of the following causes:

A. Misdemeanor conviction or felony of moral turpitude and the misdemeanor or felony involves our business (protection of students and adults on our premises).
B. However, RRPS can allow employment if felony or misdemeanor involves moral turpitude and does not directly relate to the employment only, if after investigation, we determine that the person convicted has not been sufficiently rehabilitated to warrant the public trust.
C. Sufficient rehabilitation equals the following:
2.2 Completion of probation or parole supervision.
2.3 Expiration of a period of three years after final charge with no repeated charges, or
2.4 Three years after release from imprisonment without any subsequent conviction.
2.5 Regardless of rehabilitation, RRPS will not employ an individual if a conviction is discovered for any of the following offenses:
   A. Trafficking in a controlled substance.
   B. Criminal sexual penetration.
   C. Related sexual offense.
   D. Child abuse
   E. RRPS cannot bar anyone from employment for the following:
      a. Records of arrest not followed by a valid conviction and;
      b. Misdemeanor convictions not involving moral turpitude.

2.6 Background Check Process: After receipt of the Notice to Proceed, the contractor shall proceed as follows:
See attached RRPS Fingerprint procedure form at the end of Division 00.

-END OF SECTION-
BID FORM  (Lump Sum or Unit Price)

ITB NO.: 2016-018-FAC

PROJECT NAME: Mountain View Middle School Mechanical Upgrades

PROJECT NO.: 083105-16-001

LOCATION:  4101 Montreal Loop NE
            Rio Rancho, NM 87144

This Bid is submitted to Owner:

RIO RANCHO PUBLIC SCHOOLS
500 LASER ROAD SE
PURCHASING, ROOM 120
RIO RANCHO, NM  87124
Phone (505) 896-0667

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Owner in the form included in the Bidding Documents to perform and furnish all Work as specified or indicated in the Bidding Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. The Bidder accepts all of the terms and conditions of the Invitation for Bid and Instructions to Bidders, including without limitation those dealing with the disposition of bid security and other Bidding Documents. This Bid will remain subject to acceptance for forty-five (45) days after the day of Bid opening. The Bidder shall sign and submit the Agreement between Owner and Contractor (hereinafter called Agreement) with the Bonds and other documents required by the Bidding Requirements within fifteen (15) days after the date of the Owner's Notice of Award.

3. In submitting this Bid, the Bidder represents, as more fully set forth in the Agreement, that:

   A. the Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all of which is hereby acknowledged):

      No.       Title:     Date:
      No.       Title:     Date:
      No.       Title:     Date:
      No.       Title:     Date:
      No.       Title:     Date:
      No.       Title:     Date:

BIDDER’S Name and Address:

Telephone:
Fax:
Federal Tax ID #:
New Mexico Tax ID #:
CID License #
B. the Bidder has familiarized himself with the nature and extent of the Bidding Documents, Work, site, locality, and all local conditions, laws, and regulations that in any manner may affect cost, progress, performance, or furnishing of the Work;

C. the Bidder has carefully studied all reports and drawings of subsurface conditions which are identified in the Information Available to Bidders and accepts the determination set forth in the Information Available to Bidders of the extent of the technical data contained in such reports and drawings upon which the Bidder is entitled to rely;

D. the Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Bidding Documents;

E. the Bidder has given the Design Professional written notice of all conflicts, errors, and discrepancies that he has discovered in the Bidding Documents, and the written resolution thereof by the Design Professional is acceptable to the Bidder;

F. this Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; the Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; the Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and the Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over the Owner;

G. the Bidder acknowledges that he has attended any mandatory pre-bid conference scheduled by the Owner or the Design Professional pertaining to this project;

H. the Bidder agrees to show clearly on the envelope in which the Bid is submitted the Project Name and Number, and Invitation to Bid Number; and,

I. the Bidder will complete the Work for the following price(s) (do not include any gross receipts tax in the price(s)).

5. Bids shall be presented in the form of a total Base Bid proposal under a Lump Sum Contract plus additive alternates that are selected by the Owner. A bid must be submitted on all bid items and alternates; segregated bids will not be selected by the Owner.
A. LUMP SUM PRICE (please use typewriter or print legibly in ink) Base Bid (use words):

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<th>Item</th>
<th>Base Bid (use words)</th>
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<th>Alternate 1 (add) (deduct)</th>
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<th>Alternate 2 (add) (deduct)</th>
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<th>Alternate 3 (add) (deduct)</th>
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<th>Alternate 4 (add) (deduct)</th>
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All specific cash allowances are included in the price(s) set forth above.

B. UNIT PRICE

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<th>Unit Price (in words)</th>
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If the required quantities of the items listed below are increased or decreased by Change Order, the adjustment unit prices set forth below shall apply to such increased or decreased quantities:

ITEM
UNIT PRICE (in words)

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<th>Item</th>
<th>Unit Price (in words)</th>
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6. The Bidder agrees that:

A. The Work to be performed under this Contract shall be commenced not later than ten (10) consecutive days after the date of written Notice to Proceed, and that Substantial Completion shall be achieved **not later than 90 days** after the date of written Notice to Proceed, except as hereafter extended by valid written Change Order by the Owner.

B. All interior construction work must be completed **prior to the last week in July** and the T & B work is to be done **after school hours**.

C. Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified, the Contractor agrees to pay to the Owner in partial consideration for the award of this Contract the amount of **One Thousand Dollars ($1,000.00) per consecutive day**, not as a penalty, but as liquidated damages for such breach of the Contract.

D. The above prices shall include all labor, materials, removal, overhead, profit, insurance, taxes (**not including gross receipts tax**), etc., to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the Contract Documents.

E. It is understood that the Owner reserves the right to reject any or all Bids and to waive any technical irregularities in the bidding.

7. The following documents are attached to and made a condition of this Bid:
   A. Bid Security with Agent's Affidavit;
   B. Subcontractors Listing; and,
   C. Other (list):

8. The terms used in this Bid and the Bidding and Contract Documents which are defined in the Conditions of the Construction Contract (General, Supplementary, and Other Conditions), included as part of the Bidding Documents, have the meanings assigned to them in those Conditions.

9. The Bidder is a(n):

A. **INDIVIDUAL:**

   By: ____________________________
   (Individual's Signature)
   Doing business as: ____________________________
   Business address: ____________________________
   ____________________________________________
   ____________________________________________

   Telephone: (____) ____________________
   FAX: (____) ____________________

B. **PARTNERSHIP:**

   By:
   (Firm Name)
(General Partner's Signature)
Business address:___________________________________________________________
________________________________________________________________________
________________________________________________________________________
Telephone: (___) ______________________
FAX: (___) ______________________

C. CORPORATION:

Corporation Name:__________________________________________________________
State of Incorporation:________________________________________________________

By __________________________________________ Title: ____________________________
(Print Name of Person Authorized to Sign)

* __________________________________________________________
   Signature of Authorized Person

If a New Mexico Corporation: ____________________________________________
   NM Certificate of Incorporation Number

If a Foreign Corporation: ________________________________________________
   NM Certificate of Authority Number

Attest (Secretary):__________________________________________________________
Business address __________________________________________________________
________________________________________________________________________

Telephone: (___) ______________________
FAX: (___) ______________________

CORPORATE SEAL HERE

Or,

D. JOINT VENTURE:

By ______________________________________ (Name)
Address: ____________________________________________

________________________________________________

Telephone: (___) __________________

FAX: (___) __________________

-----------------------------------------------------------------------------------------

By ________________________________
(Name)

Address: ____________________________________________

________________________________________________

Telephone: (___) __________________

FAX: (___) __________________

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By ________________________________
(Name)

Address: ____________________________________________

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Telephone: (___) __________________

FAX: (___) __________________

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By ________________________________
(Name)

Address: ____________________________________________

________________________________________________

Telephone: (___) __________________

FAX: (___) __________________

Each Joint Venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated in the appropriate category.

**BIDDER MUST FILL IN THE FOLLOWING** (if none, write none)

NM License Number _________________ License Classification: ____________________

Dept. of Workforce Solutions Minimum Wage Act Registration Number (DWS#)

______________________________

Resident Contractor's Preference Number: ____________________________________________
AGENT'S AFFIDAVIT

(To be filled in by Agent)

STATE OF ____________________________

COUNTY OF ____________________________

______________________________________, being first duly sworn, deposes and says that he / she is the duly appointed agent for and is licensed in the State of New Mexico.

Deponent further states that a certain bond was given to indemnify the State of New Mexico in connection with the construction of

dated the __________ day of ____, 20__, executed by
Contractor, as principal, and ______________________, as surety, signed by this Deponent; and Deponent further states that said bond was written, signed, and delivered by him/her; that the premium on the same has been or will be collected by him/her; and that the full commission thereon has been or will be retained by him/her.

______________________________________

Subscribed and sworn to before me, a notary public in and for the County of, this _____ day of _________________________, 20__. Notary Public

My Commission Expires:

AGENT'S ADDRESS:

Telephone
(This page intentionally left blank)
COMBINED
LIST OF SUBCONTRACTORS
and
ASSIGNMENT OF ANTITRUST CLAIMS
by
CONTRACTOR, SUBCONTRACTORS,
SUBSUBCONTRACTORS, and SUPPLIERS

EXAMPLE TRADES AND SUPPLIERS: SITE WORK, CONCRETE, MASONRY, FRAMING, LUMBER,
STEEL, STEEL FABRICATION, ROOFING, EXTERIOR INSULATION AND FINISH, DRYWALL, DOORS,
GLASS AND GLAZING, PLASTER, PAINTING, CARPET, RESILIENT, CONVEYING SYSTEMS, HVAC,
CONTROLS, PLUMBING, SHEET METAL, ELECTRICAL

1. Subcontractor Listing shall be included with Bid as a condition of the Bid and be fully complete with regards to all Subcontractors providing services valued at $5,000.00 or more, or one-half of one percent of the architect's or engineer's estimate of the total project cost, not including alternates, whichever is greater pursuant to Section 13-4-34, NMSA 1978.

Listing Threshold for this Project: **$5,000.00**

a. Subcontractor Listing shall be expanded after Bid by apparent low bidder if Awarded, and before Contract, to include major Suppliers and, each entity listed shall be signed by individual empowered to obligate Supplier, Subcontractor, or Subsubcontractor.

b. Subcontractor Listing shall also be expanded after Bid by apparent low bidder if Awarded, and before Contract, to include the Department of Workforce Solutions labor enforcement fund registration number. See the Department of Workforce Solutions web site at [www.dws.state.nm.us](http://www.dws.state.nm.us) under “Public Works” for registration form, listings and information.

c. See Instructions to Bidders, Section 00 2113 Paragraph 4.5, Subcontractors, for rules regarding changes in this list after bidding.

2.

PROJECT NAME: MOUNTAIN VIEW MIDDLE SCHOOL MECHANICAL UPGRADES

INVITATION TO BID NUMBER: 2016-018-FAC

The undersigned agrees that any and all claims which the firm 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 the Owner, but only to the extent that such overcharges are passed on to the Owner. It is agreed that the firm retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the District, including the right to any treble damages attributable thereto.
<table>
<thead>
<tr>
<th>TYPE OF WORK</th>
<th>ENTITY NAME</th>
<th>CITY &amp; STATE</th>
<th>Labor enforcement fund registration # (if over $60,000)</th>
<th>SIGNATURE *</th>
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<td>SITE WORK</td>
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INVITATION TO BID NUMBER: 2016-018-FAC
Sealed bid opening date: April 29, 2016 @ 11:00am
RIO RANCHO PUBLIC SCHOOLS

*Signature not required until after Bid but, before Award
<table>
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<tr>
<th>TYPE OF WORK</th>
<th>ENTITY NAME</th>
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PREQUALIFICATION

GENERAL
The Contractor represents to the Owner that the Contractor:

1. is financially solvent, able to pay debts, and has sufficient working capital to complete the Work;
2. is able to furnish the plant, tools, materials, supplies, equipment, skilled labor and sufficient experience and competence required to complete the Work equal to or exceeding industry standards;
3. shall, prior to bid, be properly licensed according to the requirements of the Construction Industries Licensing Act, Chapter 60, Article 13 NMSA 1978 and ensures to the Owner that such license shall remain in effect for the duration of the Work and warranty periods that the Contractor is authorized and properly licensed to do business in the State of New Mexico and in the locale where the Work is located;
4. execution of the agreement and performance thereof is within the Contractor's duly authorized powers; and
5. or assigns have visited the site of Work and has become familiar with the conditions under which the Work is to be performed, obtained all available information and have correlated observations and acquired information with the requirements of the Contract Documents including conditions:
   a) bearing upon access to the site, accommodations required, transportation, disposal, handling and storage;
   b) affecting availability of labor, materials, equipment, water, electricity, utilities and roads;
   c) such as weather, river stages, flooding;
   d) related to the apparent form and nature of the Work site, including the surface and sub-surface conditions; and,
   e) that in general would be deemed by a prudent contractor to be material to the Work as to assess risk, contingencies and other circumstances;
6. has completed prior contracts with diligent and continuous effort and has been responsive to post-occupancy corrections.

PREQUALIFICATION FORMS
Mechanical Contractor Qualification Form.

DEBARRED OR SUSPENDED CONTRACTORS
A business (contractor, subcontractor, or supplier) that has either been debarred or suspended pursuant to the requirements of Sections 13-1-177 through 13-1-180 and 13-4-11 through 13-4-17, NMSA 1978 as amended, shall not be permitted to do business with the State and shall not be considered for award of contract during the period for which it is debarred or suspended.
1. MECHANICAL CONTRACTOR INFORMATION

Name: _______________________________________________________________________
(if same as General Contractor refer to previous page)

a. How many years has your organization been in business as a Mechanical Contractor? ______
c. How many years has your organization been in business under its present business name? ______
d. Under what other or former names has your organization operated?
   ________________________________________________________________________________
   ________________________________________________________________________________

e. Is the firm’s contractor’s license free of ever being suspended or revoked by the CID or by the appropriate licensing agency in any other state?
   (__) Yes, free of suspension or revocation   (__) No: If no, attach explanation.

2. PACKAGED ROOFTOP HVAC UNIT EXPERIENCE

a. List three (3) completed public-use projects that involved working in an occupied building and utilizing a VRF HVAC System with contact information for each one:

   Project 1 Name: ____________________________________________________________$ Amount______________________
   Contact: _______________________________________________________________ Phone ________________________
   □ Occupied Building      □ Utilized Packaged Rooftop HVAC System

   Project 2 Name: ____________________________________________________________$ Amount______________________
   Contact: _______________________________________________________________ Phone ________________________
   □ Occupied Building      □ Utilized Packaged Rooftop HVAC System

   Project 3 Name: ____________________________________________________________$ Amount______________________
   Contact: _______________________________________________________________ Phone ________________________
   □ Occupied Building      □ Utilized Packaged Rooftop HVAC System

3. KEY PERSONNEL EXPERIENCE

a. Does your assigned Project Manager, (name)________________ have the following minimum qualifications and experience:

   2. At least five (5) years’ experience in the construction industry?
      (__) Yes  Number of Years: _________________________ (__) No
      (2) Experience on at least three-(3) construction type projects as identified in 2. EXPERIENCE
          (__) Yes  Number of Projects ______________________  (__) No
STATE OF NEW MEXICO
Taxation and Revenue Department

APPLICATION FOR PREFERENCE

GENERAL INSTRUCTIONS PLEASE READ BEFORE COMPLETING

Sections 13-1-21 and 13-1-22 NMSA 1978 authorize and set forth the criteria required for a business to qualify as a Resident Business or Resident Contractor. It is important to note, a resident preference is applicable to contracts, which typically call for, but are not limited to, the furnishing of tangible personal property, i.e. goods, supplies, materials, equipment, printed materials and certain services.

A “resident preference” is applicable only to procurements made pursuant to a formal bid process or formal Request For Proposals (RFP) process in accordance with Sections 13-1-21 and 13-4-2 NMSA 1978. Additionally, any person, firm, corporation, or other legal entity must have all required licenses at the time the application for preference is submitted to the Taxation and Revenue Department for consideration.

Please note: All certifications are subject to revocation in accordance with applicable rules. A certification merely establishes that the Taxation and Revenue Department has determined based upon the information provided in the application, as of the date of issuance, that the holder was entitled to treatment as a resident business and/or contractor by state agencies and local public bodies.

The attached application for preference is required by Section 13-1-22 NMSA 1978 as amended during the First Special Legislative Session of 2011. The application includes an affidavit from a certified public accountant setting forth certain eligibility criteria for businesses or contractors, as required by Section 13-1-22 NMSA 1978. The completed application along with payment of Thirty Five ($35) dollars must be submitted to the Taxation and Revenue Department prior to issuance of a resident business preference or a resident contractor preference certificate.

In addition to the application, the Taxation and Revenue Department may require submission of additional information to ensure eligibility.

A certificate is valid for three (3) years from the date of its issuance; provided that if there is a change of ownership of more than fifty percent, a resident business or resident contractor shall reapply.

For questions concerning the application process please call (505) 827-0951. The application along with payment should be sent to:

New Mexico Taxation and Revenue Department
Santa Fe District Office
PO Box 5374
Santa Fe, NM 87502-5374

APPLICATION FOR RESIDENT PREFERENCE

00 4556 - 1
APPLICATION FOR RESIDENT CONTRACTOR CERTIFICATION

General Information

Name of Business: ____________________________
Doing Business As (DBA): ____________________________

Mailing Address:

City: ___________________ State: ___________________ Zip: __________

New Mexico Combined Reporting system (CRS) Identification Number: ________________

VIN of vehicle registered in New Mexico: ___________________

Name of vehicle owner: ________________________

Choose one of the following contractor statues and check the appropriate boxes that apply to your business. If any statement in this application is not appropriate to or does not otherwise describe your business, your business may not qualify for this preference.

☐ The contractor is currently licensed as a contractor in New Mexico.
☐ The contractor has paid property taxes on real property in New Mexico in each of the last five years or the business has paid rent on real property in New Mexico in each of the last five years.
☐ The contractor has paid another New Mexico State tax in each of the last five years.
☐ The contractor has paid unemployment insurance on at least three full-time New Mexico resident employees in each of the last five years or the contractor has been licensed as a contractor in New Mexico for ten consecutive years.

New Contractor

☐ The contractor is currently licensed as a contractor in New Mexico.
☐ Property Taxes on real property in New Mexico have been paid in each of the last five years by the owner or the majority of owners or the preponderance of owners have paid rent on real property in New Mexico in each of the last five years.
☐ The owner(s) of the business have paid another New Mexico State tax in each of the last five years.
☐ This business has not applied for a Resident Business Certificate or Resident Contractor Certificate in each of the last five years.

Relocated Business

☐ The contractor is currently licensed as a contractor in New Mexico.
☐ The business has leased real property in New Mexico for the last ten years or the business has purchased real property in New Mexico valued at over $100,000 and eighty percent or more of the business employees in the prior year were residents of New Mexico.

Previously Certified Business or Purchased, Reorganized, Name changed Business

☐ The contractor is currently licensed, or was eligible for certification as a contractor in New Mexico.
☐ The business has reorganized into one or more different legal entities or the business was purchased by another legal entity but operates in the same commercial enterprise or the business has merged with another legal entity but operates in substantially the same commercial enterprise.

STATE OF NEW MEXICO
COUNTY OF ____________________________

I hereby swear, under oath that the statements in the application for Resident Contractor Certification are true and complete to the best of my knowledge.

Name: ____________________________
Signature: ________________
CR License #: ________________
State: ___________________
Phone #: ________________

Subscribed and sworn to before me this ______ day of ___________ 20____

Notary Public: ________________________
My Commission Expires: ________________

Signature of Applicant: ____________________________
Date: ____________________________

Send completed application to: Taxation and Revenue Department
PO Box 5374
Santa Fe, NM 87504-5374

APPLICATION FOR RESIDENT PREFERENCE
00 4556 - 2

DBB_v.3.1_5.3.12
## APPLICATION FOR RESIDENT VETERAN CONTRACTOR CERTIFICATION

### SECTION I

<table>
<thead>
<tr>
<th>Name of Licensed Contractor</th>
<th>General Information</th>
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</thead>
<tbody>
<tr>
<td>Mailing Address - City, State, Zip Code</td>
<td>Doing Business As (DBA) if applicable</td>
</tr>
<tr>
<td>Physical Address - City, State, Zip Code</td>
<td></td>
</tr>
<tr>
<td>Name of Business Owner or Officer</td>
<td>Phone Number of Business Owner or Officer</td>
</tr>
<tr>
<td>Name of Business Contact</td>
<td>Phone Number of Business Contact</td>
</tr>
<tr>
<td>NM(CRS) Number:</td>
<td>Contractor License Number</td>
</tr>
<tr>
<td>VIN of Vehicle Registered by Contractor with New Mexico</td>
<td>Name of Vehicle Owner</td>
</tr>
</tbody>
</table>

### SECTION II

**Resident Veteran Contractor Status Information**

Please choose the relevant business status category below and place a checkmark next to all statements that apply to the applicant's business under the relevant category. If any statement under the relevant category is not appropriate to or does not otherwise describe the applicant's business, it may not qualify for certification.

**Existing Contractor**

- The contractor has been in existence for at least five years; and
- The contractor is licensed as a contractor in New Mexico; and
- The contractor has paid property taxes or rent on real property in New Mexico in each of the preceding five years; and
- The contractor has paid at least one other tax administered by the State of New Mexico in each of the preceding five years; and
- The contractor has paid unemployment insurance on at least three full-time New Mexico resident employees in each of the preceding five years or the contractor has been licensed as a contractor in New Mexico for ten consecutive years.

**New Contractor**

- The contractor did not exist as a business in any form and has been in existence for less than five years; and
- The contractor is currently licensed as a contractor in New Mexico; and
- The owner or majority of owners of the business have paid property taxes or rent on real property in New Mexico in each of the preceding five years; and
- The owner or majority of owners of the business have paid at least one other tax administered by the State of New Mexico in each of the preceding five years; and
- This contractor has not applied for a Resident Business Certificate or Resident Contractor Certificate during the preceding five years.

**Relocated Contractor**

- The contractor moved at least eighty (80%) percent of its total domestic personnel from another state to New Mexico in the past five years; and
- The contractor is currently licensed as a contractor in New Mexico; and
- Eighty (80%) percent or more of the total personnel of the business in the prior year were residents of New Mexico; and
- The business has leased real property in New Mexico for ten years; or
- The business has purchased real property in New Mexico valued in excess of $100,000.
Previously Certified Contractor or a Contractor Previously Eligible for Certification

- The contractor is licensed as a contractor in New Mexico; and
- After January 1, 2012, but less than three years ago, the contractor obtained and was eligible for resident contractor certification. However, the contractor has since: (1) changed its name; (2) reorganized into one or more different legal entities; or (3) been purchased by or merged with another legal entity, but now operates in New Mexico as substantially the same commercial enterprise.

OR

After January 1, 2012, but less than three years ago, the contractor applied and was eligible for resident contractor certification. However, before the Department was able to issue certification, the business: (1) changed its name; (2) reorganized into one or more different legal entities; or (3) was purchased by or merged with another legal entity, but now operates in New Mexico as substantially the same commercial enterprise.

SECTION III  Annual Revenue and Documentation

Please provide the business’ previous year’s annual revenues below and attach the required documents. If the required documents are attached, please place a checkmark next to the second statement below. An application submitted without the required information and documentation will be incomplete.

- The previous year’s annual revenues of the resident veteran business are $_________; and
- Attached to this application is verification by the Federal Dept. of Veterans Affairs that the business is either a veteran-owned small business or a service-disabled veteran-owned small business;
  OR
  Attached to this application is proof that a veteran or veterans own a majority of the business and verification of either (1) veteran status as indicated by the U.S. Dept. of Defense DD Form 214 of release or discharge from active duty with an honorable discharge or (2) service disabled-veteran status by the Dept. of Veterans Affairs.

AND

- Any applicant provided a certificate of Resident Veterans Preference by the Taxation and Revenue Department as either a business or a contractor under the provisions of Sections 13-1-21 or 13-1-22 NMSA 1978, agrees that when awarded a contract involving a Veterans Preference during the last calendar year beginning on January 1 and ending on December 31, to report the award amount involved to the State Purchasing Division of the General Services Department. The report will be given under the penalty of perjury and indicate whether the awarded amount was as a purchase from a public body, or as a public works contract from a public body, as the case may be.

SECTION IV  Affidavit

AFFIDAVIT FROM CERTIFIED PUBLIC ACCOUNTANT

STATE OF ______________
COUNTY OF ______________

I hereby swear, under oath that it is my professional opinion that the applicant meets the required criteria set forth in NMSA 1978, Section 13-1-22 (2012) for Resident Veteran Business Certification and that ALL information provided and ALL checkmarked statements in the foregoing application are true and complete to the best of my knowledge.

Name
CPA License #
State
Date

Signature

NOTARY

Subscribed and sworn to before me this ________ day of ____________, 20______.

Notary Public

(My Commission Expires ____________) (NOTARY SEAL)

I am authorized to sign this application on behalf of the applicant and attest to the truthfulness of the information provided herein.

Signature of Applicant
Date

Please see last of instructions; APPLICATION AND FEE SUBMISSION for correct mailing address and fee.
APPLICATION FOR RESIDENT VETERAN CONTRACTOR CERTIFICATE

INSTRUCTIONS

Beginning January 1, 2012, but not after June 30, 2022, New Mexico veteran contractors who wish to obtain a resident veteran contractor preference must first apply for and obtain a resident veteran contractor certificate issued by the New Mexico Taxation and Revenue Department (TRD). The preference may be used by the holder to obtain a bidding advantage when participating in a formal bid process or formal request for proposal process for the sale of goods or services to a New Mexico state or local public body. The contractor must submit with its bid or proposal a copy of a valid resident veteran contractor certificate.

So long as the contractor initially meets and continues to meet the necessary requirements, the certificate is valid for three years from the date of issuance. The contractor must submit a new application if the contractor’s status has changed or if there is a change in ownership of more than fifty percent.

The purchasing agent for a public body may verify that a resident veteran contractor certificate is issued by TRD by accessing the TRD web site at https://secure.mvd.newmexico.gov/residentcertificate/default.aspx, or by calling (505) 827-0951.

RESIDENT VETERAN CONTRACTOR CERTIFICATE APPLICATION

TRD has prescribed form ASD-22244 that must be completed in order to obtain a resident veteran contractor certificate. The required contents of the form are summarized below.

SECTION I  General Information

This section requires provision of the applicant’s general business information, including basic contact information. The contact information provided must be that of the contractor or the contractor’s authorized representative.

SECTION II  Resident Veteran Contractor Status Information

To complete the application, the CPA must select the contractor status category that applies to the contractor: existing contractor, new contractor, relocated contractor, or previously certified contractor or contractor previously eligible for certification. The CPA must select only the contractor status category that pertains to the applicant and indicate which statements included in the applicable category accurately describe the contractor. If any statement is not appropriate to or does not otherwise describe the applicant’s business, it may not qualify for certification.

NOTE: When a contractor is an existing contractor, the application must indicate whether, during the previous five years, the contractor paid unemployment insurance on at least three full-time employees who are residents of New Mexico. When a contractor is a relocated contractor, the application must indicate whether at least 80% of the total personnel of the contractor in the prior year were New Mexico residents. For the purposes of this application, a New Mexico “resident” is considered to be a person who is domiciled in this state during any part of the calendar year or a person who is physically present in this state for at least 185 days during the calendar year.

SECTION III  Annual Revenue and Documentation

Complete Section III by entering the previous year’s annual revenues of the resident veteran contractor and attaching the documentation required. An application submitted without the required information and documentation will be incomplete.
SECTION IV

Affidavit

This portion of the form is a sworn statement by the CPA indicating that the statements selected in Section II are accurate descriptions of the contractor, and that all other information provided in the form is true and correct to the best of the CPA's knowledge. The affidavit also provides a sworn statement that it is the CPA's professional opinion that the contractor meets the required criteria for resident veteran contractor certification.

The contractor, officer of the contractor business or the contractor’s authorized representative must also sign the application, affirming that the statements made and information provided in the application are true and correct.

APPROVALS AND PENALTIES

TRD will examine the application and affidavit. If necessary, TRD may seek additional information to ensure the contractor’s eligibility. If TRD determines that the contractor is eligible, it will issue a certificate to the contractor. If TRD determines that the contractor is not eligible, it will issue notification within 30 days. If such notification is not provided by the Department, the application is deemed approved.

A certificate is valid for three years from the date of issuance; provided that if there is a change of ownership of more than 50%, the applicant must reapply. A contractor must also reapply if it has changed its name, reorganized into one or more different legal entities or was purchased by or merged with another legal entity, but now operates in New Mexico as substantially the same commercial enterprise. In such a case, the certification of the contractor in its previous form will apply three years from the date of the previous certification, but only to the extent the contractor was eligible for certification in its previous form.

If an application is denied, the business has 15 days from the date of the denial to file an objection with TRD, submitting evidence to support the objection. TRD must review the evidence and issue a response to the objection within 15 days of the filing of the objection.

If following a hearing and an opportunity to be heard, TRD finds that a contractor provided false information to TRD in order to obtain a certificate or that a contractor used a certificate to obtain a preference and the contractor did not perform the percentage of the contract specified in the bid or proposal, the business:

1. Is not eligible to receive a certificate or preference for a period of five years from the date on which TRD became aware of the submission of the false information or the failure to perform the contract as specified in the bid or proposal; and
2. Is subject to an administrative penalty of up to $50,000 for each violation.

REVOCATIONS

TRD will contemplate revoking an issued certificate if information is revealed that the holder’s situation has changed and/or the business does not qualify as a resident veteran contractor. If TRD contemplates revocation, it will issue a Notice of Contemplated Action to the contractor. The contractor will be provided with an opportunity to request an administrative hearing on the matter.

APPLICATION AND FEE SUBMISSION

Submit the application along with $35 application fee to:

New Mexico Taxation and Revenue Department
Santa Fe District Office
PO Box 5374
Santa Fe, NM 87502-5374

For questions concerning the application process please call (505) 827-0951.
Agreement between the Owner and the Contractor
2010 Edition, Version 3.1

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION

Project (short title): Mountain View Middle School
Mechanical Upgrades
Location: Rio Rancho, NM

Contract No.:
Project No.: 083105-16-001

Distribution to:
☐ District Representative (original)
☐ Contractor (original)
☐ Design Professional (copy)
☐ Project Manager (copy)
☐ Contracts Specialist (copy)
☐ Other ________________________

This Agreement entered into this day of , 20__, by and between the parties as follows:

THE OWNER:
RIO RANCHO PUBLIC SCHOOLS
500 LASER ROAD, SE
RIO RANCHO, NM 87124
Telephone: (505) 896-0667
Fax: (505) 896-4276

and, hereinafter “Owner” and,
PSFA ☐ IS ☑ IS NOT a Co-Owner in this Agreement.

DESIGN PROFESSIONAL OF RECORD:
NAME OF INDIVIDUAL
NAME OF FIRM
ADDRESS 1
ADDRESS 2
CITY/TOWN, NM ZIP CODE
Telephone: (505)
Fax (505)

At the time of this Agreement, there is no State funding in this Project and the Public School Facilities Authority (PSFA) is not Co-Owner and any reference to the PSFA is effectively removed from the Construction Documents.

AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR

RRPS_v.3.1_10.12.15
RECITALS

WHEREAS WHEREAS, the District, otherwise known as the Owner, will oversee and manage the work and make direct payment of Owner-approved expenses;

WHEREAS the Owner, through its School Board, is authorized to enter into a construction contract for the Project pursuant to Sections 13-1-100 and 22-5-4, NMSA 1978; and

WHEREAS the Owner has let this contract according to the established State purchasing procedures for contracts of the type and amount let.

The OWNER and the CONTRACTOR agree as set forth below.

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of the following:

- Bid Form
- Agreement Between Owner and Contractor
- Performance Bond
- Labor and Material Payment Bond
- Agent's Affidavit
- Certificate of Insurance
- Assignment of Antitrust Claims
- Notice of Award
- Notice to Proceed
- Conditions of the Contract (General, Supplementary, and Other Conditions)
- Drawings
- Specifications
- All Addenda Issued Prior to and All Modifications Issued after Execution of This Agreement

These documents form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein. An enumeration of the Contract Documents appears in Article 7.

ARTICLE 2

THE WORK

The Contractor shall perform all the Work required by the Contract Documents for the following:

Mechanical upgrades to Mountain View Middle School, originally constructed in 1995. The scope of work includes the replacement of existing combination heating and evaporative cooling rooftop air handling units serving approximately 30,560 ft² of the total 125,000 ft² of the facility. These existing units will be removed and replaced with 16 new, high-efficiency, gas-fired, DX-cooled, packaged rooftop units. Existing ductwork serving various classrooms in these areas will be reused, as possible. All new diffusers will be provided for areas served by these units and new electrical will be provided for the additional loads. New Automated Logic Controls will be provided to tie into the existing district-wide DDC backbone. Project also includes minor roof patching and acoustic ceilings.
ARTICLE 3

TIME OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

The Work to be performed under this Contract shall commence not later than ten (10) consecutive calendar days after the date of written Notice to Proceed. Substantial Completion shall be achieved not later than Ninety (90) calendar days after the date of written Notice to Proceed, except as hereafter extended by valid written Change Order by the Owner.

Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified for Substantial Completion, the Contractor agrees, in partial consideration for the award of this Contract, to pay to the Owner the amount of One thousand Dollars ($1,000.00) per consecutive calendar day, not as a penalty, but as liquidated damages for such breach of this Contract.

ARTICLE 4

CONTRACT SUM

The Owner shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of Dollars ($                  ).

The Contract sum is determined as follows:

Base Bid Amount………………………………..$
Alternates (if any)……………………………
Award Amount………………………………...
Gross Receipts Tax* @          %………………
Contract Sum …………………………………..$

Breakdown of required labor, material and performance and payment bond costs.

Total cost of Contractor bond**……………..$
Total cost of all Subcontractor bonds……..$
Total cost of all project bonds………………$

*Gross receipts tax (GRT) shall be incorporated in each line item of the Schedule of Values and in each approved Modification / Change Request (MCR) amount for change in the Work. During the course of the Project, any change in GRT rate will be applied to the remaining balance of Contract Sum by separate approved MCR.

**Contractor labor, material and performance and payment bond costs shall be calculated on Award Amount exclusive of GRT.
ARTICLE 5

PROGRESS PAYMENTS

Based upon Applications for Payment submitted to the Design Professional by the Contractor and Certificates for Payment issued by the Design Professional, the Owner 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:

Not later than twenty-one (21) days following the end of the period covered by the Application for Payment of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and 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 Owner; less such amounts as the Design Professional shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents.

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate provided by State statute regulating prompt payment.

ARTICLE 6

FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the Owner to the Contractor within thirty (30) calendar days after notification of the Owner by the Design Professional 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, a Certificate for Final Completion and final Certificate for Payment has been issued by the Design Professional; and the Contractor has provided to the Owner a certified statement of Release of Liens (AIA Document G706A or approved form) and Consent of Surety and such other documents required by the General Conditions.

ARTICLE 7

GENERAL AND SPECIAL PROVISIONS

7.1 This document shall be executed in no less than three (3) counterparts, each of which shall be deemed an original.

7.2 Contractor to provide Insurance {See General Conditions for the Contract for Construction}

7.3 This Agreement shall be governed exclusively by the provisions hereof and by the laws of the State of New Mexico as the same from time to time exist.
7.4 Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

7.5 As between the parties to this Agreement: As to all acts or failures to act by either party to this Agreement, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the relevant Date of Substantial Completion of the Work; and as to any acts or failures to act occurring after the relevant Date of Substantial Completion, not later than the date of the Owner's approval of the Final Certificate of Payment.

7.6 The Contractor shall hold harmless and indemnify the Owner against any and all injury, loss, or damage, including cost of defense - including but not limited to court costs and attorneys' fees - arising out of the negligent acts, errors, or omissions of the Contractor.

7.7 This Agreement shall not become effective until:
A. signed by all parties required to sign this Agreement.

7.8 The Contractor and his agents and employees are independent contractors and are not employees of the Owner or the State of New Mexico. The Contractor and his agents and employees shall not accrue leave, retirement, insurance, bonding, use of State vehicles, or any other benefits afforded to employees of the Owner or the State of New Mexico as a result of this Agreement.

7.9 The Contractor, upon Final Payment of the amounts due under this Agreement, releases the Owner, his officers and employees, and the State of New Mexico from his liabilities and obligations arising from or under this Agreement, including but not limited to all damages, losses, costs, liability, and expenses, including but not limited to attorneys' fees and costs of litigation that the Contractor may incur.

7.10 The Contractor agrees not to purport to bind the Owner or the State of New Mexico to any obligation not assumed herein by the Owner or the State of New Mexico unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

7.11 Notices. All notices herein provided to be given, or which may be given, by either party to the other shall be deemed to have been fully given when made in writing and deposited in the United States mail postage prepaid, in the instance of Notice of Termination of Work, Certified Mail, Federal Express, or similar verifiable delivery method addressed as follows:

OWNER: RIO RANCHO PUBLIC SCHOOLS
ALFRED R. SENA
500 LASER ROAD SE
RIO RANCHO, NM 87124

CONTRACTOR: (NAME OF COMPANY)
(ADDRESS 1)
(ADDRESS 2)
(CITY/TOWN), NM (ZIP CODE)
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 herein above provided.

7.12 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 requires otherwise.

7.13 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.

7.14 This document shall be executed in no less than three (3) counterparts, each of which shall be deemed an original.

7.15 Certificates and Documents Incorporated. All certificates and documentation required of the Contractor by the provisions of this 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.

7.16 Separability. If any clause or provision of this Agreement is illegal, invalid, or unenforceable under present or future laws effective during the term of this Agreement, then and in that event it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby.

7.17 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.

7.18 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 embodied in this written Agreement.

7.19 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.

7.20 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.

7.21 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.
7.22 Pursuant to Section 13-1-191, NMSA 1978, reference is hereby made to the Criminal Laws of New Mexico (including Sections 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 (Sections 13-1-28 through 13-1-199, NMSA 1978) imposes civil and criminal penalties for its violation.

7.23 The Contract Documents, which constitute the entire Agreement between the Owner and the Contractor, are listed in Article 1 and, except for Modifications issued after execution of this Agreement, are enumerated in this Paragraph 7.21.

7.24.1 The following documents bound in the Project Manual dated: (April 12, 2016)

**DOCUMENTS**

- Division 00 – Procurement and Contracting Requirements
- [00 4113] [00 4166] Bid Form
- 00 4336 Combined Subcontractor Listing and Assignment of Antitrust Claims
- 00 5101 Notice of Intent to Award
- 00 5102 Notice of Award
- 00 5213 Agreement between Owner and Contractor
- 00 5501 Notice to Proceed
- 00 6113 Performance Bond
- 00 6114 Labor and Material Payment Bond
- 00 6129 Agent's Affidavit – Construction Contract Bonds
- 00 6131 Bond Review Form – Construction Contract Bonds
- 00 6216 Certificate of Insurance
- 00 7200 General Conditions of the Contract
- 00 7300 Supplementary Conditions
- --------- Addenda and Modifications

**SPECIFICATIONS**

- Division 01 - General Requirements
- 01 1000 Summary
- 01 2000 Price and Payment Procedures
- 01 2100 Allowances
- 01 2300 Alternates
- 01 3100 Project Management and Coordination
- 01 3300 Submittal Procedures
- 01 3301 Submittal Transmittal Form
- 01 4000 Quality Requirements
- 01 5000 Temporary Facilities and Controls
- 01 5001 Project Sign
- 01 6300 Product Substitution Procedures
- 01 6301 Prior Approval Substitution Form
- 01 6302 Contractor Substitution Request form
- 01 7000 Execution Requirements
- 01 7500 Starting and Adjusting
- 01 7700 Closeout Procedures
- 01 7800 Closeout Submittals
- 01 7801 Equipment Inventory
01 7900  Demonstration and Training
[01 9310  3-Year Extended Service & Maintenance]
[01 9311  3-Year Extended Service & Maintenance Agreement Form]

Division________________________________________________________
### 7.24.2 The following Drawings, dated: April 12, 2016

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### 7.24.3 Addenda

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**END OF ARTICLE 7**
AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR

CONTRACTOR

By: __________________________
Printed Name: __________________________
Title: __________________________     Date: ___________

Federal Identification Number: ________________________
NM CRS Identification Number: ________________________

OWNER:

By: __________________________
Printed Name:     Alfred R Sena, M. Arch.____
Title:    District Representative     Date: ____________

By: __________________________
Printed Name:    Tom Weeks______________        Date: ____________
Title:   Chief Procurement Officer

By: __________________________
Printed Name:    Randy Evans, BS_______
Title:   Executive Director of Finance        Date: _____________

APPROVED:

By: __________________________
Printed Name:  V. Sue Cleveland, Ed. D._____        Date: _____________
Title:  Superintendent

This Agreement is entered into as of the day and year first written above.
SAMPLE
THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A312

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond:

CONTRACTOR AS PRINCIPAL
Company:
(Corporate Seal)

SURETY
Company:
(Corporate Seal)

Signature: __________________________
Name and Title: ____________________

Signature: __________________________
Name and Title: ____________________

(Any additional signatures appear on page 3)

(FOR INFORMATION ONLY—Name, Address and Telephone)
AGENT or BROKER: ________________________________
OWNER'S REPRESENTATIVE (Architect, Engineer or other party): ________________________________
1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3 If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4 When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equal to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

   .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

   .2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

5 If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6 After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigate costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

8 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation avail—
SAMPLE

able to sureties as a defense in the jurisdiction of the suit
shall be applicable.

10 Notice to the Surety, the Owner or the Contractor shall
be mailed or delivered to the address shown on the sig-
nature page.

11 When this bond has been furnished to comply with a
statutory or other legal requirement in the location where
the construction was to be performed, any provision in this
bond conflicting with said statutory or legal requirement
shall be deemed deleted herefrom and provisions con-
forming to such statutory or other legal requirement shall
be deemed incorporated herein. The intent is that this
Bond shall be construed as a statutory bond and not as a
common law bond.

12 DEFINITIONS

12.1 Balance of the Contract Price: The total amount
payable by the Owner to the Contractor under the
Construction Contract after all proper adjustments
have been made, including allowance to the Con-
tractor of any amounts received or to be received by
the Owner in settlement of insurance or other claims
for damages to which the Contractor is entitled, re-
duced by all valid and proper payments made to or on
behalf of the Contractor under the Construction Con-
tract.

12.2 Construction Contract: The agreement between
the Owner and the Contractor identified on the sig-
nature page, including all Contract Documents and
changes thereto.

12.3 Contractor Default: Failure of the Contractor,
which has neither been remedied nor waived, to per-
form or otherwise to comply with the terms of the
Construction Contract.

12.4 Owner Default: Failure of the Owner, which has
neither been remedied nor waived, to pay the Con-
tractor as required by the Construction Contract or to
perform and complete or comply with the other terms
thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL
Company: (Corporate Seal)

SURETY
Company: (Corporate Seal)

Signature: ____________________________
Name and Title: _______________________
Address: ____________________________

Signature: ____________________________
Name and Title: _______________________
Address: ____________________________
(This page intentionally left blank)
SAMPLE
THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A312

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond:

CONTRACTOR AS PRINCIPAL
Company:
(Corporate Seal)

SURETY
Company:
(Corporate Seal)

Signature: ____________________________
Name and Title:

Signature: ____________________________
Name and Title:

(Any additional signatures appear on page 6)

(FOR INFORMATION ONLY—Name, Address and Telephone)
AGENT or BROKER: ____________________________
OWNER'S REPRESENTATIVE (Architect, Engineer or other party): ____________________________
SAMPLE

1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2 With respect to the Owner, this obligation shall be null and void if the Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3 With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4 The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the Contractor:

.1 Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

.2 Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and

.3 Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5 If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6 When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after the receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2 Pay or arrange for payment of any undisputed amounts.

7 The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work. This priority is considered an additional bond, in addition to this Bond.

9 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this
SAMPLE

Bond shall be construed as a statutory bond and not as a common law bond.

14 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15 DEFINITIONS

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL
Company: (Corporate Seal)

SURETY
Company: (Corporate Seal)

Signature: ____________________________
Name and Title: ________________________
Address: ______________________________

Signature: ____________________________
Name and Title: ________________________
Address: ______________________________

THE AMERICAN INSTITUTE OF ARCHITECTS, 1755 NEW YORK AVE., N.W., WASHINGTON, D.C. 20006

A312-1984 6
Modification No.1:

Paragraph 6 of this Payment Bond is deleted in its entirety and replaced with the following provision: Within 45 days (1) after the claimant has satisfied the conditions of Paragraph 4 and (2) after the Surety has received at its home office all supporting documentation it requested to substantiate the amount of the claim, the Surety shall pay or arrange for payment of any undisputed amounts. Failure of the Surety to satisfy the above requirements shall not be deemed a forfeiture or waiver of the Surety’s or the Contractor’s defenses under this Bond or their right to dispute such claim. However in such event the claimant may bring suit against
AGENT'S AFFIDAVIT

(To be filled in by Agent)

STATE OF __________________________

COUNTY OF __________________________

____________________________________, being first duly sworn, deposes and says that he /

she is the duly appointed agent for and is licensed in the State of New Mexico.

Deponent further states that a certain bond was given to indemnify the State of New Mexico in connection with the construction of

dated the ______ day of ____________, 20__, executed by Contractor, as principal, and ______________, as surety, signed by this Deponent; and Deponent further states that said bond was written, signed, and delivered by him/her; that the premium on the same has been or will be collected by him/her; and that the full commission thereon has been or will be retained by him/her.

______________________________

Subscribed and sworn to before me, a notary public in and for the County of, this ______day of __________________________, 20__. __________________________ Notary Public

My Commission Expires:

AGENT'S ADDRESS:

Telephone
Instructions:

1. **Contractor** shall attach pre-signed or un-signed form to Performance Bond and Labor and Material Bond and submit to Design Professional with Post-Bid submittals (see Section 00 2113 - Instructions to Bidders).

2. **District** shall review Surety for acceptability and, if approved, sign form prior to approval of Contract.

3. After review and approval of bonds, District shall include signed form with approved Contract in transmittal to PSFA.

REVIEW AND APPROVAL:

This Bond has been executed by a Surety named in the current list of "companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, United States Treasury Department.

APPROVED:

By: ________________________________ Date: __________________
Owner's Representative or Governing Authority
PROJECT NAME: Mountain View Middle School  
Mechanical Upgrades  
PROJECT NUMBER: 083105-16-001  

M/C R LOG NUMBER ____________________________  
(Assigned by DP or PSFA)  
Current Date ___________  
REQUESTED BY DISTRICT REP (DR) ☐ CONTRACTOR ☐ DP ☐ PSFA ☐ INITIAL ___________  
WHO HAS REQUESTED THE WORK BE DONE  
ie: user group name/individual/contractor/subcontractor/ etc.  

DESCRIPTION OF CHANGE  
First why, then how.  

ATTACHMENT(S) YES ☐ NO ☐  

OWNER REVIEW OF CONTENT AND/OR FEASIBILITY  
INITIAL ___________ DATE ___________  
DR INITIAL ___________ DATE ___________  
PSFA  

☐ DO NOT PROCEED  
☐ PROCEED WITH ESTIMATE OF COSTS ONLY (within 10 calendar days of receipt of this MCR)!  
☐ PROCEED WITH WORK, ESTIMATES OF COSTS TO FOLLOW (estimate within 10 days of receipt of this MCR)!

A/E – ESTIMATED COST OF REQUIRED DESIGN WORK: (estimate within 5 days; include breakdown of costs)  
$ ___________ Initial ___________ Date ___________  
Project DP  

PROCEED WITH DESIGN: (Forward proposed costs of work to OWNER for approval, include GRT)  
APPROVED AMOUNT $ ___________ Initial ___________ Date ___________  
DR PSFA  

CONTRACTOR’S PROPOSED COST: (Include backup, include GRT)  
APPROVED AMOUNT $ ___________ Initial ___________ Date ___________  
DR PSFA  

MUST BE COMPLETED TO FINALIZE:  
INITIAL ___________ DATE ___________  
DR ___________ DATE ___________  
PSFA  

☐ PROCEED WITH MODIFICATION OF WORK AND TO CONTRACT SUM (INCLUDE IN CHANGE ORDER)  
☐ REJECTED BUT, REPLACED BY MCR #  
☐ REJECTED – STOP ALL ACTION ON THIS REQUEST  

MODIFICATION / CHANGE REQUEST (MCR) FORM  

00_6360-  
MCRForm_psfa_DBB_version_3.000.doc
MODIFICATION / CHANGE REQUEST NO.__________    DATE: __________

PROJECT NO. 083105-16-001

DESCRIPTION OF PROPOSED WORK:

NOTE: Fill out a separate worksheet for each subcontractor on this MCR. The GC shall use this same form to summarize the total of all subcontractor proposals while adding GC costs. Attach all worksheets and breakdowns to summary sheet for each MCR. See Article 7.2 in Section 00 7200 General Conditions.

SUBCONTRACTOR'S COSTS (ATTACH SUBCONTRACTOR'S SHEET AND COST BREAKDOWNS):*

1. Total of subcontractor's material (attach itemized breakdown): $________
2. Total of subcontractor's labor cost including fringe benefits and labor burden (attach itemized breakdown): $________
3. Other directly attributable costs allowed (attach itemized breakdown): $________
4. Subtotal: $________
5. Subcontractor's O&P ______%: $________
6. Subcontractor's Bond: $________
7. Permits paid by subcontractor: $________
8. Subcontractor's Total Costs: $________

GENERAL CONTRACTOR'S COSTS (ATTACH WORKSHEETS)*

9. GC's material (attach itemized breakdown): $________
10. General Contractor's labor cost including fringe benefits and labor burden @______% (attach itemized breakdown): $________
11. Construction equipment (rental). $________
12. Directly attributable field supervision, insurance, etc. (attach itemized breakdown): $________
13. Subtotal: $________
14. General Contractor's Overhead $ Profit on subcontractor ( % of Item 8): $________
15. General Contractor's Overhead & Profit on work by General Contractor's forces ( % of Item 13): $________
16. Subtotal (sum of Items 13, 14 and 15): $________
17. Bond ( % of Item 16): $________
18. Permits paid by General Contractor: $________
19. Subtotal (sum of Items 8, 16, 17 and 18): $________
20. Gross Receipts Tax _________% of Line 19: $________
21. General Contractor's total cost (sum of Lines 19 and 20): $________

* Allowable costs and percentages shall not exceed those indicated in Article 7.2.5.
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# General Conditions of the Contract for Construction

2010 Edition, Version 3.1

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ARTICLE 1  GENERAL PROVISIONS

1.1  BASIC DEFINITIONS

1.1.1  THE CONTRACT DOCUMENTS
The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and Addenda issued prior to execution of the Contract, and Modifications. Modifications are (1) a written amendment to the Contract signed by Owner and Contractor, (2) Modification / Change Request hereinafter referred to as MCR approved by Owner, Contractor and Design Professional, (3) Change Order, or (4) a written order for a minor change in the Work, hereinafter referred to as Supplemental Instruction issued by the Design Professional. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or Invitation to Bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of Addenda relating to bidding requirements).

1.1.2  THE CONTRACT
The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Design Professional and Contractor, (2) between the Owner and a Subcontractor, Material Supplier and Equipment Supplier, (3) between the Owner and Design Professional or (4) between any persons or entities other than the Owner and Contractor. The Design Professional shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Design Professional's duties.

1.1.2.1  Each and every provision of law and clause required by law to be inserted in this Contract shall be read and enforced as though it were included herein; and if through error or otherwise any such provision is not inserted, or is not correctly inserted, then upon the written application of either party the Contract shall be amended without cost to make such insertion or correction and that the remainder of this Contract shall remain in effect and not be affected thereby.

1.1.3  THE WORK
The term "Work" means the construction and services required by or reasonably inferable from the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the results indicated by the Contract Documents in a safe, expeditious, orderly and workmanlike manner in keeping with current standards of the industry. The Work may constitute the whole or a part of the Project.

1.1.4  THE PROJECT
The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.5  THE DRAWINGS
The Drawings are the graphic and pictorial portions of the Contract Documents showing, the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.6 THE SPECIFICATIONS
The Specifications are the written requirements of the Contract Documents for products, materials, workmanship, and performance of related services.

1.1.7 THE PROJECT MANUAL
The Project Manual is the volume of written Construction Documents typically containing Bidding Requirements, contract forms, Conditions of the Contract and Specifications.

1.1.8 PUNCH LIST
A punch list is a comprehensive list of incomplete, defective or incorrect Work prepared by the Contractor, Design Professional or Owner to indicate Work required to be completed. Specific punch lists required by the Contract Documents include the Substantial Completion Punch List created by the Contractor prior to application for Substantial Completion in accordance with Paragraph 9.8, and that includes the Close-Out Punch List as required by Paragraph 9.10, and any other punch list created by the Owner or Design Professional for the purposes of this Paragraph and otherwise successful completion of the Work.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS
1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

1.2.2 Reasonably Inferable, as used in this Contract, shall mean information or knowledge that is derivable or evident by prudent and diligent examination of the Contract Documents and other information reasonably available by the Contractor or Subcontractor knowledgeable in their field and includes items:

1. specified in the Contract Documents required to complete the Work, but not graphically indicated. Contractor shall provide the minimum product or work necessary to fulfill the specifications or otherwise the requirements of any industry standards, such as, but not limited to, final function of Work such as strength, profile, or use as indicated by the Contract Documents; and,

2. shown or graphically indicated as required to complete the Work but not specified. Contractor shall provide the minimum product or work necessary to complete the depicted Work, such as, but not limited to, final function of Work such as strength, profile, or use as indicated by the Contract Documents.

1.2.3 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings are for convenience of reference only and shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.
Such separation will not operate to make the Owner or Design Professional an arbiter of labor disputes or work agreements.

1.2.4 Words shall be first interpreted within the context they are used and by definition, if any, provided by the Contract Documents themselves. Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in accordance with such recognized meanings. If the meaning of a word is not clear from the Contract Documents or have a well-known technical or construction industry meaning, the Webster's Collegiate Dictionary, current at time of contract, meaning shall apply.

1.2.5 INCONSISTENCIES
In the event of conflicts in the Contract Documents, the most restrictive or otherwise most beneficial to the Owner shall apply to all similar conditions. Other rules for conflicts in the Contract Documents shall be that:

1. Addenda shall govern over all other Contract Documents and subsequent Addenda shall govern over prior Addenda only to the extent modified;
2. between drawings and specifications, the specifications shall govern;
3. within the drawings:
   a) schedule, when identified as such, shall govern over notes or other directions included within the drawings.
   b) specific note shall govern over general note.
   c) note evidently intended to be used as a general or typical note, shall be used as such throughout.
   d) dimensions provided shall take precedence over scaled measurements.
   e) large scale drawings shall take precedence over smaller scale drawings; and
4. General Conditions shall govern over all sections of the Contract Documents, except as modified by Supplementary General Conditions or Addenda.
5. The Contractor shall comply with the provisions of Article 3.2 in providing notification of conflict within the Contract Documents, regardless of rules governing such conflicts and contained in this subparagraph.

1.3 CAPITALIZATION
1.3.1 Within the General Conditions, these terms are capitalized when they are used specifically in relations to the Agreement: Owner and Contractor who are parties to this Agreement, Design Professional who performs services under agreement with the Owner, Subcontractors who perform work under subcontract at any tier with the Contractor, the various Bidding and Contract Documents, Project, Work, titles of numbered Articles and Paragraphs within the Contract Documents, and names used to identify parts of the Project. When these terms are used generically and not specifically associated with the Project, they are not capitalized.

1.4 INTERPRETATION
1.4.1 In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent
from one statement and appears in another is not intended to affect the interpretation of either statement.

1.5 EXECUTION OF CONTRACT DOCUMENTS
1.5.1 The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor does not sign all the required documents of the Contract Documents, the Design Professional shall identify such unsigned documents.

1.5.2 Execution of the Contract by the Contractor is representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

1.6 OWNERSHIP AND USE OF DRAWINGS AND SPECIFICATIONS
1.6.1 Drawings, specifications and copies thereof shall remain the Owner's property. They are not to be used on another project. Neither the Contractor nor any Subcontractor, material supplier or equipment supplier or any person or entity shall own or claim a copyright to any Drawings, Specifications or any other documents prepared or developed for definition of the Work. The Owner will retain all common law, statutory and other reserved rights, in addition to the copyrights. The Contractor, Subcontractors, material suppliers and equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents for use in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Owner's copyrights or other reserved rights.

2.1 GLOSSARY OF COMMONLY-USED TERMINOLOGY
2.1.1 These General Conditions utilize specific terms which relate to the Owner's organization, systems, and standard forms and documents. Examples of such terms are listed and defined as follows:

1. "Modification Change Request (MCR)" is a written document required by the Owner on matters involving changes in the Work, and as defined by Paragraph 7.2.
2. "PSFA-CIMS" is the PSFA internet-based project communications system required for use on the Project, as defined in Subparagraph 4.2.4.3.
3. "Public School Capital Outlay Council (PSCOC)" is the body with responsibility to approve allocations for public school capital outlay assistance.
4. "Public School Facilities Authority (PSFA)" is the agency, under the Public School Capital Outlay Council (PSCOC) charged with the responsibility for overseeing projects.

ARTICLE 2 OWNER
2.1 GENERAL
2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a
representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Subparagraph 4.2.1, the Design Professional does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

2.1.2 If Project includes PSCOC funding then:
1. the Owner, referred to throughout the Contract Documents, shall be interpreted to be both the School District and the Public School Facilities Authority (PSFA) as if singular in number; and,
2. there shall be two (2) Owner representatives - ONE REPRESENTING School District and one representing PSFA. Agreement by both representatives shall be required in all instances where the Contract Documents require Owner approval; and,
3. provisions of Subparagraph 4.2.4.3 requiring use of the PSFA CIMS system shall apply; and,
4. Work shall be fully in accordance with the Contract Documents, including all contractual and implied responsibilities; and,
5. after Final Completion in accordance with Paragraph 9.11 the Contract requirements shall recognize only the School District as the Owner.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Furnishing of such evidence shall be a condition precedent to commencement or continuation of the Work. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

2.2.2 Except for permits and fees, including those required under Subparagraph 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities that shall include utility expansion charges but, not tapping fees.

2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner, but shall exercise proper precautions relating to the safe performance of the Work.

2.2.4 Unless stated otherwise in the Contract Documents, the Owner shall furnish in accordance with Article 6 specific testing, adjusting and compliance monitoring and explicitly:
1. geotechnical testing and analysis including soil testing and compaction, but excluding load testing for caissons and piers; and,
2. concrete testing including slump analysis and compression testing with, at the Owner's request, the Contractor responsible for forming test cylinders or similar; and
3. testing and balancing of heating and air-conditioning systems with the Contractor responsible for timely, diligent and coordinated corrections to Work required until performance is compliant with the Contract Documents.
The Contractor shall be responsible for testing and costs as defined by Paragraph 13.5 and Subparagraph 12.2.1.1.

2.2.5 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work, under the Owner's control, shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.

2.2.6 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, five (5) copies of Drawings and Project Manuals; however, the Contractor may have more copies free of charge if they are available without additional cost to the Owner.

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven (7) day period, without prejudice to other remedies that the Owner may have, correct such deficiencies. In such case, an appropriate Modification in accordance with Article 7 shall be issued deducting from payments then or thereafter due the Contractor for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Design Professional's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

2.4.2 If in the event that the Contractor defaults or neglects to carry out the Work to final completion in keeping with the Substantial Completion Schedule provided in accordance with Subparagraph 9.8.2 and, fails within a seven (7) day period after receipt of written notice from the Owner to correct such default with diligence and promptness, the Owner may after such seven (7) day period, without prejudice to other remedies, correct Punch List and Close-Out deficiencies to achieve project completion without further notice to the Contractor or its surety. In such case, an appropriate Modification in accordance with Article 7 shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Design Professional's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.
2.4.3 In carrying out the Owner's right to complete the Work in accordance with Paragraph 2.4, the Owner shall have the right to exercise the Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the Work.

ARTICLE 3 CONTRACTOR

3.1 GENERAL

3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Design Professional in the Design Professional's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than Contractor.

3.1.4 The Contractor shall, prior to bid, be properly licensed according to the requirements of the Construction Industries Licensing Act, Chapter 60, and Article 13 NMSA 1978 and shall ensure to the Owner that such license shall remain in effect for the duration of the Work and warranty periods.

3.1.5 Debarred or Suspended Contractors: A business (Contractor, Subcontractor, or supplier) that has either been debarred or suspended pursuant to the requirements of Sections 13-1-177 through 13-1-180, and 13-4-11 through 13-4-17, NMSA 1978, shall not be permitted to do business with the State and shall not be considered for award of contract during the period for which it is debarred or suspended.

3.1.6 Bribes, Gratuities and Kickbacks

3.1.6.1 It is illegal in the State of New Mexico for any public employee to solicit or accept anything of value in connection with award of contract for this Bid and for any person to offer or pay anything of value to any such public employee (30-24-1 and 30-24-2, NMSA 1978).

3.1.6.2 Pursuant to Section 13-1-191, NMSA 1978, reference is hereby made to the Criminal Laws of New Mexico (including 30-24-1, 30-24-2, and 30-41-1 through 30-41-3, NMSA 1978), which prohibit bribes, kickbacks, and gratuities, and 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.

3.1.7 Assignment of Antitrust Claims

3.1.7.1 The Contractor agrees that any and all claims that the Contractor may have or that may inure to the Contractor for overcharges resulting from antitrust violations as to goods, services, and materials purchased in connection with this Bid are hereby assigned to the State of New Mexico, but
only to the extent that such overcharges are passed on to the State. The Contractor further agrees to require each of its Subcontractors and suppliers to assign any and all such claims for overcharges to the State by executing an assignment on the form provided by the Owner for such purpose. The executed forms (see Section 00 4336 of the Bid Documents) shall be submitted prior to the commencement of the Work or the supplying of any materials by the supplier or Subcontractor. The submission of this executed form may be waived by the Owner upon a showing of a good-faith effort by the Contractor to obtain agreement in writing from its supplier or Subcontractor. Waiver by the Owner will not unreasonably be denied.

3.1.7.2 It is agreed that the Contractor retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the State, including the right to any treble damages attributable thereto.

3.1.8 Contracts with Nonresident Persons or Partnerships or Un-admitted Foreign Corporations; Agent for Service of Process

If Contractor is a non-resident person or partnership or a foreign corporation not admitted to do business in the State, Contractor will comply with all requirements of NMSA 1978 §§ 13-4-21 through 13-4-24 for designation of an agent for service of process.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.1 Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Subparagraph 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and for the purpose of discovering errors, omissions in the Contract Documents; any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly in writing to the Design Professional as a Request for Interpretation in accordance with Subparagraph 3.2.4.

3.2.1.1 Before ordering any materials or proceeding with Work, the Contractor and Subcontractors shall verify measurements at the Work site and shall be responsible for the correctness of such measurements.

3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly in writing to the Owner and to the Design Professional, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed Design Professional, unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any suspected non-conformity discovered by or made known to the Contractor shall be reported promptly in writing to the Owner and to the Design Professional. If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Design Professional and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.
3.2.3 If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Design Professional in response to the Request for Interpretation pursuant to Subparagraphs 3.2.1 and 3.2.1.1, the Contractor shall make Claims as provided in Subparagraphs 4.3.6 and 4.3.7. If the Contractor fails to perform the obligations of Subparagraphs 3.2.1 and 3.2.1.1, the Contractor shall pay such costs and damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents as would have been avoided if the Contractor had performed such obligations.

3.2.4 REQUEST FOR INTERPRETATION

3.2.4.1 Any question concerning a variation or deviation from the Contract Documents, including a minor change in the Work found necessary due to actual field conditions, shall be submitted to the Design Professional as a Request for Interpretation (RFI) for review and resolution before proceeding with the Work. When submitting an RFI, the Contractor must provide all information necessary for the Design Professional to promptly process, including detailed:

1. reference(s) to Specification number, Drawing page and detail, and the like;
2. description of issue;
3. drawings, photos or sketches of conditions, if necessary; and,
4. submittals or other information as necessary to facilitate resolution.

3.2.4.2 Request for Interpretation may be initiated only by the Contractor and shall be answered by Design Professional within ten (10) days, or other reasonable time agreed upon between the parties. All Subcontractor RFI's must be initiated through the Contractor. All answers to RFI's by the Design Professional's consultants or Owner must be initiated through the Design Professional.

3.2.4.3 If substitutions are allowed after the contract award, RFI shall not be used for any substitution request (see Subparagraph 3.4.2).

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Design Professional and shall not proceed with that portion of the Work without further written instructions from the Design Professional with concurrence from the Owner. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage not due to negligence of the Contractor, its employees, subcontractors or their agents or employees. This paragraph shall not be deemed to create a duty on the part of the Design Professional or the Owner to the Contractor, Subcontractor or their employees to monitor for jobsite safety.
3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.4.2 The Contractor may request substitution of material only if:
   1. allowed after the contract award;
   2. all supporting information has been evaluated and approved by the Contractor;
   3. includes a detailed itemized comparison of the proposed substitution with the specified product;
   4. acceptance does not include substantial revision of Contract Documents, unless Contractor agrees to reimburse the Owner for those costs; and,
   5. substitution request is submitted as a formal MCR with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order.

3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner and Design Professional that materials and equipment furnished under the Contract will be of good quality and new, unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance and improper operation, or normal wear and tear and normal usage. If required by the Design Professional, the Contractor shall furnish satisfactory evidence as to kind and quality of materials and equipment.

3.6 TAXES

3.6.1 Gross Receipts Tax (GRT)

3.6.1.1 Section 7-10-4, NMSA 1978 provides that any person (as defined in Section 7-10-3, NMSA 1978) performing services for the State, as those terms are used in the Gross Receipts Tax
Registration Act (Chapter 7, Article 10, NMSA 1978), must be registered and be issued an identification number with the Taxation and Revenue Department to pay the GRT.

3.6.1.2 The identification number is needed to properly complete the approval process of the Contract; therefore, so as to cause no delay in the processing, the Contractor must register with the Department. For information:
- Taxation and Revenue Department
  P.O. Box 630
  Santa Fe, New Mexico  87504-0630
  TELEPHONE:  (505) 827-0700
TRD Website:  www.state.nm.us/tax/
or, TRD District Office in Albuquerque, Farmington, Las Cruces, Santa Fe or Roswell.

3.6.1.3 The Contractor shall pay New Mexico Gross Receipts and other applicable taxes specific for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded.

Exception: Contractor shall not be responsible for any Tribal Employment taxes, such as, NBAT or TERO taxes.

3.6.1.4 Failure of the Contractor to be registered with TRD for payment of Gross Receipts Tax will result in all payment to Contractor to be withheld until Contractor provides adequate evidence of registration with TRD.

3.6.2 Nonresident Contractor's Requirements for Gross Receipts Tax Surety Bond

3.6.2.1 Section 7-1-55A, NMSA 1978 provides that any person (as defined in Section 7-1-3, NMSA 1978) engaged in the construction business who does not have his principal place of business in New Mexico and enters into a prime construction contract to be performed in this State shall, at the time such contract is entered into, furnish the Taxation and Revenue Department with a surety bond or other acceptable security in a sum equivalent to the gross receipts to be paid under the contract multiplied by the applicable rate of the GRT to secure payment of the tax imposed on the gross receipts from the Contract. He shall obtain a certificate from the Taxation and Revenue Department that the requirements of this paragraph have been met.

3.6.2.2 If the total sum to be paid under the Contract is changed by ten percent (10%) or more after the date the surety bond or other acceptable security is furnished to the Director or his delegate, such person shall increase or decrease, as the case may be, the amount of the bond or security within fourteen (14) days after the change (7-1-55B, NMSA 1978).

3.6.2.3 In addition to the above requirements, the Contractor will be subject to all the requirements of Section 7-1-55, NMSA 1978.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the Building Permit and other permits and governmental fees, licenses and inspections and Certificate of Occupancy necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are
received, negotiations concluded, and facilities occupied. Changes or modifications to the work shall include all requirements of this paragraph.

3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work. Certificates of Inspection, use and occupancy will be delivered to the Owner upon completion of the Work in sufficient time for occupation of the facility in accordance with the approved schedule for the Work. Contractor shall deliver a photocopy of the Building Permit will be delivered to the Design Professional and Owner as soon as it is obtained.

3.8 ALLOWANCES

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

1. allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts.

2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances;

3. whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by appropriate Modification in accordance with Article 7. The amount of the Change Order shall reflect:
   a) the difference between actual costs and the allowances under Clause 3.8.2.1; and,
   b) changes in Contractor's costs under Clause 3.8.2.2.

3.8.3 Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in the Work.

3.9 SUPERINTENDENT

3.9.1 The Contractor shall employ a competent Superintendent, who is acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.9.2 Within ten (10) days after Notice of Award and commencement of the Work, the Contractor shall submit to the Design Professional, for the Owner's consideration for approval, a resume and Statement of Qualification of proposed Superintendent(s) and assistants. During construction, the Contractor shall replace individuals who are no longer acceptable to the Owner and shall submit a resume and Statement of Qualification for proposed replacements.
3.10 CONTRACTOR'S SCHEDULES, LOGS, MEETINGS AND REPORTS

3.10.1 The Contractor, promptly after being awarded the Contract and before the first payment application, shall prepare and submit for the Owner's and Design Professional's information a Critical Path Construction Schedule for the Work that indicates the intended start and completion of the various construction activities, which shall be implemented and adhered to by the Contractor, Subcontractors, material suppliers and equipment suppliers. At a minimum, the schedule shall be a GANTT type schedule and shall not exceed time limits allowed by the Contract Documents with no fewer work breakdown events than line items of the Schedule of Values. The Schedule will incorporate and make provisions for significant known Owner activities, holidays and other special occasions. The Contractor will acknowledge that a reduction in activity may be necessary during the time prior to and during periods of special Owner events or occasions. The schedule shall be revised to indicate Work complete before each payment application and at appropriate intervals as required by the conditions of the Work and progress of the Work. The revised schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work including, but not limited to time recovery strategies and Recovery Plan, if progress of the Work is behind schedule.

3.10.1.1 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Design Professional.

3.10.2 The Contractor shall prepare before the second payment application and keep current, for the Design Professional's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Design Professional fourteen (14) days, or as otherwise agreed between the parties, to review submittals. A Submittal Log shall be maintained by the Contractor indicating for each scheduled submittal, the appropriate specification number, the date of submission, the date of approval and any re-submittals.

3.10.3 Weekly Meeting: Prior to the start of Work on the site and in no event later than the first payment application, the Contractor shall establish a weekly meeting time with the Owner and Design Professional and shall establish an agenda for the meeting. Contractor shall host the weekly job site meeting and shall maintain meeting minutes and distribute such notes to all parties in attendance and to those requested at the next meeting within three (3) days of the meeting. The meetings shall include but not be limited to:

1. adoption of previous week's meeting notes that include list of attendees;
2. new business;
3. old business;
4. items requiring action with those assigned to action and expected action date;
5. outstanding RFI's;
6. outstanding submittals; and,
7. other business including review of Progress Report or Payment Application if appropriate.

Meetings shall be open forum, chaired by the Contractor and shall include any Subcontractors doing work or anticipating work in the near future or for any other reason, Owner, any entities that the Owner would like to attend, including User Representative or users of completed project, Design Professional, any consultant(s) to the Design Professional who have or will have any work under way associated with the consultant’s specialty. The Contractor shall alert the Owner and Design Professional as to which consultants are requested to attend the next meeting and include request in
the meeting minutes. Phone or web conferencing may be used if effective in the opinion of the Owner.

3.10.3.1 Progress Report: Each month, at the regularly scheduled weekly meeting that is just prior to the Contractor submitting the Payment Application for that month; the Contractor shall present a Progress Report. The Contractor prepared Progress Report shall review the Project Schedule, review the Schedule Recovery Plan if necessary, and review the Three-Week-Look-Ahead Schedule.

3.10.3.2 The Contractor prepared Three-Week-Look-Ahead Schedule shall include specific details of Work expected to be accomplished three weeks into the future, identify critical path Work to be completed, and identify potential obstacles including RFIs, submittals, material deliveries, utility hook-ups or any other event or task that might hinder the progress of the Work.

3.10.4 Emergency Contact List: The Contractor shall at the first weekly meeting, deliver to the Owner and the Design Professional an Emergency Contact List that will include emergency contacts for every company that has worked or will do work on the Project. List shall include company, main office number, after hours office number(s); and, both a primary and secondary contact name, cell number and home number. The Contractor shall keep the Emergency Contact List current and distribute the most current version to Owner and Design Professional.

3.10.5 Daily Report: The Contractor shall prepare a Daily Report each day that Contractor, Subcontractors or any other entity are on the Project. The Daily Reports shall be maintained at the site, be well organized and include:

1. report date and who prepared the report;
2. weather conditions - low temp, high temp, visibility, humidity, wind, wind direction, cloud conditions, precipitation amount, other notes;
3. companies present by name and their - number of workers, work location, total man hours that day for each company;
4. equipment - type, source, units of work done, location of work, hour meter reading;
5. material brought to site - description, units, quantity, quality, location, time;
6. visitors to site - name, company, time;
7. safety concerns - company, contact, noticed by, work activity, safety issue, requirement, outcome; and,
8. quality assurance and control - company, description of issue, specification section, issued by.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner, one record copy of the As-Built Drawings, Specifications, Addenda, Modification / Change Requests, and other Modifications, in good order and marked currently to record field changes and selections made during construction, as well as, one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals, and Meeting Notes and Daily Job Reports. These shall be available to the Design Professional and the Owner and shall be delivered to the Design Professional for submittal to the Owner upon completion of the Work. Information maintained in PSFA-CIMS in accordance with Subparagraph 4.2.4.1 with web access at the site shall be considered "at the site".
3.12  SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1  Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor for a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.12.2  Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

3.12.3  Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.12.4  Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Design Professional is subject to the limitations of Subparagraph 4.2.7. Informational submittals upon which the Design Professional is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned without action.

3.12.4.1  Shop Drawings, Product Data, Samples and similar shall not be submitted on a "piece meal" basis and shall be submitted in packages, in accordance with the Construction Documents, so that like or interrelated submittals, that must be compared or correlated one to another, are submitted together. Submittals not submitted as a package so that they may be compared one to another for approval or other action shall be returned to the Contractor without review but, with explanation by the Design Professional as why and what is required when re-submitted. For example, finish materials such as tile, carpet, wall covering and paint shall be submitted as a package.

3.12.4.2  If substitutions are allowed after the contract award, a submittal shall not be used for any substitution request (see Subparagraph 3.4.2).

3.12.5  The Contractor shall review for compliance with the Contract Documents, approve and submit to the Design Professional Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Design Professional without action.

3.12.6  By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Design Professional and, if required, by the Jurisdiction Having Authority.

3.12.8 The Work shall be in accordance with approved submittals, except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Design Professional's approval of Shop Drawings, Product Data, Samples or similar submittals, unless the Contractor has substitution approved in accordance with Subparagraph 3.4.2, or unless the Contractor informed the Design Professional in writing of such deviation at the time of submittal and the Design Professional has given written approval to the specific deviation as a minor change as a Supplemental Instruction. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Design Professional's approval thereof.

3.12.9 The Contractor shall direct specific attention, in writing on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Design Professional on previous submittals. In the absence of such written notice the Design Professional’s approval of a resubmission shall not apply to such revisions.

3.12.10 The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a Design Professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Design Professional will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed Design Professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. The Owner and the Design Professional shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such Design Professionals, provided the Owner and Design Professional have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Subparagraph 3.12.10, the Design Professional will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

3.12.11 The Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

3.13 USE OF SITE

3.13.1 The Owner assumes no responsibility or liability for the physical conditions or safety of the Work site or for any improvements located on the Work site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be
required to make any adjustment to either the Contract Sum or Contract Time concerning any failure by the Contractor or Subcontractor to comply with the requirements of this Paragraph 3.13.

3.13.2 The Contractor will bear the cost and make the necessary arrangements and provisions for all construction water required during the entire construction period through the Owner or otherwise.

3.13.3 The Contractor will bear the cost and make the necessary arrangements and provisions for all construction electricity including distribution required during the entire construction period through the Owner or otherwise.

3.13.4 The Contractor will bear the cost and be responsible for temporary lighting, heating and cooling for the entire project.
Exception: If available and at no premium cost to the Owner, the Owner will at no cost to the Contractor, allow the Contractor to utilize the Owner’s existing lighting, heating and cooling providing Contractor will return systems to like or better condition that shall include, but not be limited to, new lamping, new filters, and the like.

3.13.5 Any temporary utility or other work done by the Contractor to accommodate Work requirements shall be removed at the conclusion of the Work and all finishes shall be repaired to match the existing, or in the areas of new construction, equal to or exceeding the requirements of the Contract Documents.

3.13.6 The Contractor shall request in writing any utility shut downs well in advance of necessity of any shut down and shall not proceed with any shut down without prior Owner approval. The Owner shall not be required to make any adjustment to either the Contract Sum or Contract Time concerning any failure by the Contractor or Subcontractor to comply with the requirements of this Subparagraph 3.13.3.

3.13.7 The Contractor shall provide and maintain a suitable temporary main field office at the Project site. The Office may be in, or a part of, the existing facility, provided that prior approval is obtained from the Owner. The Contractor will move or remove their office from the existing facility at the request of the Owner.

3.13.8 The Contractor may, if space is available, allow Subcontractors, material suppliers and equipment suppliers to provide and maintain field offices or storage trailers on the Project site for their own use. Locations and size of any office or storage trailers shall be as approved by the Contractor and Owner prior to their placement on site. The Owner or Contractor may at any time require any temporary building or trailer to be moved or removed.

3.13.9 The Contractor shall conduct and confine operations at the site to areas as permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

3.13.10 All project related vehicles either company or personal vehicles may park on-site only in areas designated by the Owner and Design Professional. Parking will only be provided to the extent space on site will allow. All Contractors’ parking must be well removed from normal facility traffic, and especially away from any pedestrian crossings, walkways, or drop off or loading areas.
3.13.11 All Contractor access to the Project site shall be by a designated construction entrance as directed by the contract documents, the Design Professional and the Owner, and shall be enforced by the Contractor.

3.13.12 Access to existing facility work areas, either occupied or not occupied, shall be controlled by the Owner. Every effort will be made by the Contractor to cooperate with the Owner’s security requirements and policies. Access to a work area must be in accordance with the times and conditions scheduled and agreed to by all parties. Any access, other than at normally scheduled work times, must be coordinated with the Owner or Owner’s appointee at least 48 hours in advance. The Owner has the right to restrict or limit access as necessary to meet their needs, especially in regard to security and safety. Each Contractor, Subcontractor, or supplier’s full cooperation is required.

3.13.13 The Project working hours shall be those established by the Contract Documents and as agreed by the Owner. Any changes in project working hours such as adding shift work, extending work day hours or other similar changes must be submitted least forty-eight (48) hours in advance to the Owner for consideration.

3.13.14 Contractor shall make every effort to minimize disruptions such as noise or dust and shall provide safe access and egress to the Owner’s operations, facility, portion of facility, or surrounding areas, including, but not limited to neighborhood or community, and shall, to inform and gain approval from the Owner of planned work, prepare and present to the Owner and Design Professional for Owner approval prior to beginning construction or using the site a:

1. schedule for the work, to include phasing plans, proposed hours of operations, and activities to take place on weekends, school holidays and/or other special access requirements;
2. site logistics plan, showing proposed secure and fenced areas, locations and types of temporary barricades, material storage and staging areas, school property entrances used for material deliveries, and special material or equipment storage requirements. This plan will include a description and proposed location for the Contractor’s temporary office, storage trailers, Subcontractor’s trailers, sanitary facilities, employee parking areas, etc.;
3. detailed construction and phasing plan, to include locations of proposed temporary dust or noise partitions, alternate emergency egress routes, temporary facilities, means and path of moving materials and equipment into the facility, and provisions for maintaining and supplying required utility services; and,
4. routing plan to maintain safe ingress and egress to all areas at all times for students, staff and public either nearby or within the Project site that shall include re-routing pedestrian ways, re-routing traffic, erect routing signs, building of bridges, barricades, pedestrian tunnels, or whatever effort that will best accommodate Owner operations and provide required protection while work is in progress ensuring that no entrances or exits are blocked, closed off, or restricted in any way unless prior approval is granted by the Owner and the Fire Marshall or other jurisdiction having authority.

3.13.15 Contractor shall ensure that any and all of the Contractor’s flammable liquids are stored outside of the building, and transported in approved containers. Paint, paint thinners, gasoline, oil, roofing materials or other flammable materials shall be stored fifty (50) feet, or more, outside of all buildings, marked as to contents and properly protected. The Contractor shall not pour flammable or toxic solvents, thinners, etc., into drains and sewers.
3.13.16 Whenever electric light for illumination purposes is found necessary for the safe progress of the work, the Contractor shall provide such lights as may be required to properly execute the work. This temporary lighting shall be constructed and arranged as not to interfere with the progress of other trades or Contractors working in the facility. This system of temporary lighting shall be erected and maintained strictly in accordance with the controlling codes and OSHA standards. The Contractor shall furnish all bulbs and temporary lighting devices required to carry on the work for all Trades under their Contract.

3.13.17 In accordance with Paragraphs 3.15, 6.3, 10.2 and others of the General Conditions, the Contractor shall be responsible for the daily removal and disposal of all rubbish, debris and trash from the site and building which results from Work. The Contractor shall provide a dumpster, or other trash removal facility, for use by their Subcontractors and all rubbish, debris and trash shall be deposited in Contractor provided containers located at an approved location on the site. There shall be no burning of trash or other open fires on the site. If in the opinion of the Owner neatness is not maintained, the Owner may following appropriate notice to the Contractor, have the area cleaned and withhold cost from any amounts owing to Contractor.

3.13.18 The Contractor shall, at the completion of Work in a given area, expeditiously remove all surplus material, equipment, and debris of every nature resulting from their operations, and put the areas in a neat, clean, and orderly condition. At Final Completion of the Project or an area of the Project, the Contractor shall final clean from top to bottom inside and out everything to the Owner’s satisfaction that including plumbing fixtures, equipment, windows, floors, walls, light fixtures and the like in accordance with Paragraph 3.15 of the General Conditions.

3.13.19 The Contractor shall in accordance with Article 10, afford protection to all adjacent areas, buildings, roads, walks, and all other property adjacent to their work. Any portion of a building or other property damaged during construction operations shall be promptly, properly and thoroughly repaired and replaced without cost to the Owner.

3.13.20 Contractor shall maintain a safety plan that includes how the Contractor proposes to meet all OSHA and related requirements, details on safety equipment to be utilized, how the potential for fire and other potential hazards will be addressed, welding and cutting procedures and, how the Contractor will maintain safety related systems such as fire alarms, intercoms, and sprinklers while the Work is proceeding in accordance with Paragraph 3.3 and other parts of the General Conditions.

3.13.21 Jobsite Requirements Pertaining to Personnel:
1. All personnel on site, directly or indirectly in the employ of Contractor, are restricted from any interaction with any Owner Staff, Students, or other members of the public while on, or adjacent to Owner property except through jobsite meetings in accordance with Subparagraph 3.10.3 or as otherwise determined by the Owner;
2. shall remain in their designated work areas. Communications with any non-project related persons on or near the site shall be through project Superintendent;
3. no firearms or any other types of weapons, of any sort will be allowed on site. If any person is found to be in possession of any Firearm, of any kind, they will be directed to leave immediately and will not be allowed to return. This includes any firearms found in Company or Private vehicles, tool boxes or brought on site in any other manner;
4. it is the policy of the Owner to prohibit smoking on any occupied school campus and on a new, un-occupied, site to limit smoking to designated areas;
5. it is the policy of the Owner to prohibit use, possession, sale, and distribution of alcohol, drugs, or other controlled substances on its premises and to prohibit the presence of an individual with such substances in their body from the workplace, the Contractor shall enforce this policy; and,

6. Contractor agrees that any employee who is found in violation of requirements of this Paragraph, or of the Contract Documents, or who refuses to permit inspection shall be barred from the Project site at the discretion of the Owner in accordance with Subparagraph 13.8.4.1.

3.14 CUTTING AND PATCHING

3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

3.14.1.1 Cutting and patching shall be done by individuals skilled in working the materials involved so to prevent a reduction of visual qualities or resulting in substantial evidence of the cut-and-patch work.

3.14.2 The Contractor shall not damage or endanger a portion of the Work, fully or partially completed, or existing construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor will not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.15 CLEANING UP

3.15.1 The Contractor on a daily basis shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials and shall then thoroughly clean the premises and the site to the Owner's satisfaction.

3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor in accordance with Paragraph 6.3.

3.16 ACCESS TO WORK

3.16.1 The Contractor shall provide the Owner and Design Professional access to the Work in preparation and progress wherever located.

3.17 ROYALTIES, PATENTS AND COPYRIGHTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Design Professional harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturer is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Design Professional. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a
3.18 **INDEMNIFICATION**

3.18.1 To the fullest extent permitted by law and to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor in accordance with Paragraph 11.3, the Contractor shall indemnify and hold harmless the Owner, Design Professional, Design Professional's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Subparagraph 3.18.1 shall not be limited by a limitation on amount or type of damages compensation or benefits payable by or for the Contractor, Subcontractor under any Liability Insurance, Workers' Compensation Acts, Disability Benefit Acts or other employee benefit acts.

3.19 **REPRESENTATIONS AND ASSURANCES**

3.19.1 The Contractor, in addition to the requirements of the Contract Documents, represents to the Owner, as an inducement to the Owner to execute the Owner-Contractor Agreement, which representations will survive the execution and delivery of the Agreement and the completion of the Work that Contractor:

1. is financially solvent, able to pay debts, and has sufficient working capital to complete the Work;
2. is able to furnish the plant, tools, materials, supplies, equipment, skilled labor and sufficient experience and competence required to complete the Work equal to or exceeding industry standards;
3. in accordance with Subparagraph 3.1.4, is authorized and properly licensed to do business in the State of New Mexico and in the locale where the Work is located;
4. in execution of the Agreement and performance thereof is within the Contractor's duly authorized powers; and,
5. Subcontractors, material suppliers and equipment suppliers have visited the site of Work and have become familiar with the conditions under which the Work is to be performed, obtained all available information and have correlated observations and acquired information with the requirements of the Contract Documents including conditions:
   a) bearing upon access to the site, accommodations required, transportation, disposal, handling and storage;
   b) affecting availability of labor, materials, equipment, water, electricity, utilities and roads;
c) such as weather, river stages, flooding;
d) related to the apparent form and nature of the Work site, including the surface and sub-
surface conditions; and,
e) that in general would be deemed by a prudent contractor to be material to the Work as to
assess risk, contingencies and other circumstances.

ARTICLE 4    ADMINISTRATION OF THE CONTRACT
4.1    DESIGN PROFESSIONAL
4.1.1  The term "Design Professional" means the Architect, Engineer or other professional person
lawfully licensed to practice the profession within the State of New Mexico and can fulfill the
requirements of the Contract Documents within that person's licensed authority. If lawfully allowed,
the Design Professional shall also mean the Design Professional's authorized representative unless the
Owner has a reasonable objection.

4.1.2  Duties, responsibilities and limitations of authority of the Design Professional as set forth in
the Contract Documents shall not be restricted, modified or extended without written consent of the
Owner, Contractor and Design Professional. Consent shall not be unreasonably withheld.

4.1.3  If the employment of the Design Professional is terminated, the Owner shall employ a new
Design Professional against whom the Contractor has no reasonable objection and whose status under
the Contract Documents shall be that of the former Design Professional.

4.1.4  If there is no Design Professional, the Owner shall assume the responsibilities for
Administration of the Contract Documents.

4.2    DESIGN PROFESSIONAL'S ADMINISTRATION OF THE CONTRACT
4.2.1  The Design Professional will provide administration of the Contract as described in the
Contract Documents, and will be an Owner's representative (1) during construction, (2) until final
payment is due and (3) with the Owner's concurrence, from time to time during the one-year period
for correction of Work described in Paragraph 12.2. The Design Professional will have authority to
act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise
modified in writing in accordance with other provisions of the Contract.

4.2.2  The Design Professional, as a representative of the Owner, will visit the site at intervals
appropriate to the stage of the Contractor's operations (1) to become familiar with and to keep the
Owner informed about the progress and quality of the Work completed, (2) to use all reasonable
efforts to guard the Owner against defects and deficiencies in the Work, and (3) to determine in
general if the Work is being performed in a manner indicating that the Work, when fully completed,
will be in accordance with the Contract Documents. The Design Professional will not be required to
make exhaustive or continuous on-site inspections to check the quality or quantity of the Work that is
the responsibility of the Contractor to provide. The Design Professional will neither have control
over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or
procedures, or for the safety precautions and programs in connection with the Work, since these are
solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Subparagraph 3.3.1. However, if the Design Professional becomes aware of the failure of the Contractor, Subcontractors or any other person or entity performing any of the Work to use proper construction means, methods, techniques, sequences, procedures, safety precautions and programs or failure of any of the foregoing parties to carry out the Work in accordance with the Contract Document, the Design Professional shall promptly notify the Contractor and the Owner of the deficiency.

4.2.3. The Design Professional will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Design Professional will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

4.2.4.1 Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized or requested by the Owner, the Owner and Contractor shall endeavor to communicate with each other through the Design Professional about matters arising out of or relating to the Contract. Communications by and with the Design Professional's consultants shall be through the Design Professional. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with Owner's separate contractors shall be through the Owner.

4.2.4.2 English is the language that will be used on site to issue all directions, used in all project related meetings, and used in all project related correspondence. Contractor, Subcontractors, material suppliers and equipment suppliers’ foremen and supervisory staff, must be able to read and converse in English, and be able to receive and understand all directions issued by the Owner and Design Professional.

4.2.4.3 In accordance with Subparagraph 2.1.2, with the Contract Documents, or otherwise required by Owner, the Contractor, Design Professional and Owner shall utilize PSFA-CIMS for project communications and shall:

1. create and respond to all contractual communications through the PSFA-CIMS including, but not limited to, Daily Reports, RFI's, MCR's, Meeting Minutes, Submittal Log and Punch Lists;
2. provide an adequate number of users to properly manage the Project in accordance with the Contract Documents and the Project Schedule;
3. have access to the Internet and an Internet e-mail address, of their own choice, and provide to the PSFA the names, positions, and e-mail addresses of all individuals who will have access to the PSFA-CIMS;
4. contract directly with a PSFA authorized training vendor if the limited PSFA training is not deemed sufficient to correctly and consistently use the PSFA-CIMS;
5. have adequate computing hardware and software (listed below) to run PSFA-CIMS; and,

a) Browser – Internet Explorer 6.0 SP2 or 7.0
b) Operating system - Windows® XP SP2
c) Display – **1024x768**
d) CPU – **1.4 GHz or greater**
e) Connection – **ISDN, T1, broadband, or DSL**
f) RAM – **1024 MB/1 GB or higher**

6. agree that use of this PSFA-CIMS software will not replace or change any contractual responsibilities of the Contract Documents; and,
7. have installed Adobe Acrobat 7.0, or higher .pdf converter or equal; and,
8. optionally have, but not required to have, as a benefit to sending images to Design Professional and Owner as an attachment to an RFI or other CIMS document instead of faxing or mailing, an attached scanner minimum 800 x 600 pixels and a digital camera minimum resolution of one (1) mega pixels.

For PSFA-CIMS information on installation and use of the PSFA-CIMS or for scheduling training contact the PSFA-CIMS administrator at (505)843-6272 or e-mail question to training_support@nmmpsfa.org and include PSFA-CIMS support in subject line.

### 4.2.5
Based on the Design Professional's evaluations of the progress and quality of the Work, Contractor's Application for Payment and all other information available to the Design Professional, the Design Professional shall within **five (5) days** of receipt of a properly completed Application for Payment certify to the Owner the undisputed amount recommended for payment to the Contractor and shall provide specific reasoning for denial of disputed amounts.

### 4.2.6
The Design Professional will have authority to reject Work that does not conform to the Contract Documents, and shall do so unless, after consultation with the Owner, Owner instructs otherwise. Whenever the Design Professional considers it necessary or advisable, the Design Professional will have authority, subject to the Owner's approval, to require inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Design Professional nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Design Professional to the Contractor, Subcontractors, material and equipment suppliers, their agents or employee, or other persons or entities performing portions of the Work.

### 4.2.7
Unless rejected in accordance with Subparagraph 3.12.4.1 or is otherwise not in compliance with Section 3 of this Agreement, the Design Professional, shall within a reasonable time not to exceed **fourteen (14) days**, or other reasonable time agreed upon by the parties, review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, for the purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is conducted solely in the interest of the Owner, and shall not relieve the Contractor of responsibility for determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Design Professional's review of the Contractor's submittals shall not relieve the Contractor of any obligations of these General Conditions. The Design Professional's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Design Professional, of any construction
means, methods, techniques, sequences or procedures. The Design Professional's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7.1 The Contractor shall be responsible for cost of inordinate re-reviews, exceeding two, by Design Professional due to non-compliance with Subparagraph 3.12.6.

4.2.7.2 Rejection of any submittal due to non-compliance with Subparagraph 3.12.6 shall not be the basis for claim for a project delay.

4.2.8 The Design Professional may prepare for Owner consideration, Modification / Change Requests and Change Orders. The Design Professional shall review Contractor proposals for adjustment to the Contract Sum or Contract Time relative to a Modification / Change Request and shall either approve, reject or suggest compromise to such proposals.

4.2.8.1 The Design Professional may authorize Supplemental Instructions for minor changes in the Work as provided in Paragraph 7.4, provided there is no material change to the time, cost, specification or scope of the Work.

4.2.9 The Design Professional will conduct inspections to make recommendations to the Owner of the date or dates of Substantial Completion and the date of Final Completion, will receive, approve and forward to the Owner, for the Owner's records, written warranties, Certificates of Insurance and related documents required by the Contract and assembled by the Contractor and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

4.2.10 If the Owner and Design Professional agree, the Design Professional will provide one or more project representatives to assist in carrying out the Design Professional's responsibilities at the site.

4.2.11 Subject to the claims procedures set forth in Paragraph 4.3, the Design Professional will, in the first instance, interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Design Professional's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Design Professional shall be furnished in compliance with this Paragraph 4.2, then delay shall not be recognized on account of failure by the Design Professional to furnish such interpretations until ten (10) days after written request is made for them.

4.2.12 Interpretations and decisions of the Design Professional will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Design Professional will make all reasonable efforts to secure faithful performance by both the Owner and the Contractor and will not show partiality to either, and will not be liable for results or interpretations or decisions so rendered in good faith.
4.2.13 The Design Professional's decisions on matters relating to aesthetic effect will, with the Owner's consent, be final if consistent with the intent expressed in the Contract Documents.

4.3 CLAIMS AND DISPUTES

4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Time Limits on Claims. Claims by either party must be initiated within twenty-one (21) days after occurrence of the event giving rise to such Claim or within five (5) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Design Professional and the other party.

4.3.3 Continuing Contract Performance. Pending final resolution of a Claim except as otherwise agreed in writing or as provided in Subparagraph 9.7.1 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.4 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than twenty-one (21) days after first observance of the conditions. The Design Professional will promptly investigate such conditions and if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Design Professional determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Design Professional shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within twenty-one (21) days after the Design Professional has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Design Professional for initial determination, subject to further proceedings pursuant to Paragraph 4.4.

4.3.5 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.6.
4.3.6 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Design Professional, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Design Professional, (4) unjustified failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Paragraph 4.3.

4.3.7 CLAIMS FOR ADDITIONAL TIME

4.3.7.1 If the Contractor wishes to make Claim for an increase in the Contract Time, it shall be submitted as a Modification / Change Request in accordance with Article 7. In the case of a continuing delay only one Claim is necessary.

4.3.7.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. Substantiation must include supporting evidence from the U.S. Weather Bureau or similar for the previous ten (10) year averages for the locale of the Project, as well as, evidence supported by original project schedule and daily job logs that specific Work events falling on the critical path were delayed.

4.3.8 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding five (5) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

4.3.8.1 The Contractor shall promptly notify the Owner and Design Professional in writing of any claims received by the Contractor for personal injury or property damage related to the Work.

4.3.9 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are changed in a proposed Modification / Change Request by more than fifteen percent (15%), the applicable unit prices shall be equitably adjusted in accordance with Article 7.

4.3.10 Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by the:

1. Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

2. Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, loss of profit except anticipated profit arising directly from the Work performed.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Subparagraph 4.3.10 shall be
deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

4.4 RESOLUTION OF CLAIMS AND DISPUTES

4.4.1 Decision of Design Professional. Claims, including those alleging an error or omission by the Design Professional, but excluding those arising under Paragraphs 10.3 through 10.5, shall be referred initially to the Design Professional for decision. An initial decision by the Design Professional shall be required as a condition precedent to mediation, arbitration or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless thirty (30) days have passed after the Claim has been referred to the Design Professional with no decision having been rendered by the Design Professional. The Design Professional will not decide disputes between the Contractor and persons or entities other than the Owner.

4.4.2 The Design Professional will review Claims and within ten (10) days of the receipt of the Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Design Professional is unable to resolve the Claim if the Design Professional concludes that, in the Design Professional's sole discretion, it would be inappropriate for the Design Professional to resolve the Claim.

4.4.3 In evaluating Claims, the Design Professional may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Design Professional in rendering a decision. The Design Professional may request the Owner to authorize retention of such persons at the Owner's expense.

4.4.4 If the Design Professional requests a third party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten (10) days after receipt of such request, and shall either provide a response on the requested supporting data, advise the Design Professional when the response or supporting data will be furnished or advise the Design Professional that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Design Professional will either reject or approve the Claim in whole or in part.

4.4.5 The Design Professional will approve or reject Claims by written decision, which shall state the reasons therefore and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Design Professional shall be final and binding on the parties but subject to mediation and arbitration.

4.4.6 A written decision of the Design Professional shall state that (1) the decision is final, but subject to mediation and arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within thirty (30) days after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said thirty (30) days period shall result in the Design Professional's decision becoming final and binding upon the Owner and Contractor. If the Design Professional renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned.
4.4.7 Upon receipt of a Claim against the Contractor or at any time thereafter, the Design Professional or the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Design Professional or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.5 MEDIATION
4.5.1 Any Claim arising out of or related to the Contract, except those waived as provided for in Subparagraph's 4.3.10, 6.2.3, 9.11.4, and 9.11.5 shall, after initial decision by the Design Professional or thirty (30) days after initial decision by the Design Professional or thirty (30) days after submission of the Claim to the Design Professional, be subject to mediation as a condition precedent to arbitration or the institution of legal or equitable proceedings by either party.

4.5.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the procedures of the New Mexico Public Works Mediation Act (NMSA §13-4C-1 et seq.) except that before any party may select a mediator it must confer in good faith with the other party concerning the selection of a mutually acceptable mediator. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable proceedings, which shall be stayed pending mediation for a period of sixty (60) days from the date of notice of mediation session, unless stayed for a longer period by agreement of the parties or court order.

4.5.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Settlement Agreements reached in mediation and signed by all parties involved in the dispute shall be enforceable in any court having jurisdiction thereof.

4.6 ARBITRATION
4.6.1 Any Claim arising out of or related to the Contract, except those waived as provided for in Subparagraphs 4.3.10, 6.2.3, 9.11.4 and 9.11.5, shall after decision by the Design Professional or thirty (30) days after submission of the Claim to the Design Professional, be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes by mediation in accordance with the provisions under Paragraph 4.5.

4.6.2 Claims not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The Demand for Arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Design Professional.

4.6.3 A Demand for Arbitration shall be made within the time limits specified in Subparagraphs 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Paragraph 13.7.
4.6.4 Claims and Timely Assertion of Claims. The party filing a Notice of Demand for Arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

4.6.5 Arbitration proceedings under this Agreement may be consolidated or joined with arbitration proceedings pending between other parties if the arbitration proceedings arise out of the same transaction or relate to the same subject matter. Consolidation will be by order of the arbitrator, in any of the pending cases, or if the arbitrator fails to make such an order, the parties may apply to any court of competent jurisdiction for such an order. Inclusive to this Subparagraph are the Owner, the Design Professional, the Contractor, all subcontractors, material suppliers, equipment suppliers, engineers, designers, lenders, sureties, and all other parties concerned with the construction of the Project are bound, each to each other, by this Subparagraph, provided such party has signed this Agreement or has signed an agreement which incorporates this Agreement by reference or signs any other agreement to be bound by this arbitration clause.

4.6.6 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

ARTICLE 5 SUBCONTRACTS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct or indirect contract with the Contractor to perform a portion of the Work regardless of contractual tiers below the prime contract between the Owner and Contractor. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after Notice of Intent to Award, shall furnish in writing to the Owner through the Design Professional the names of entities and key personnel (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Design Professional will promptly reply to the Contractor in writing stating whether or not the Owner or the Design Professional, after due investigation, has reasonable objection to any such proposed entity or person. Failure of the Owner or Design Professional to reply promptly shall constitute notice of no reasonable objection. The requirements of this Subparagraph 5.2.1 shall supplement Subcontractor listing at bid as required by §13-4-34 NMSA 1978.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Design Professional has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.
5.2.3 If the Owner or Design Professional has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Design Professional has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by the change, and an appropriate Modification in accordance with Article 7 shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsibly in submitting names as required.

5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Design Professional makes reasonable objection to such substitute. Any substitutions of a Subcontractor will comply with the New Mexico Subcontractor Fair Practices Act to the extent that the Subcontractors Fair Practices Act is applicable.

5.3 SUBCONTRACTUAL AND SUPPLIER RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including performance of Work, responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Design Professional. Each subcontract and supplier agreement shall preserve and protect the rights of the Owner and Design Professional under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with suppliers. The Contractor shall make available to each proposed Subcontractor and supplier, prior to execution of the Agreement, copies of the Contract Documents to which the Subcontractor and suppliers where appropriate will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents.

5.3.2 Nothing contained in Subparagraph 5.3.1 or elsewhere in the Contract Documents shall create any contractual relationship with or cause of action in favor of a third party against the Owner.

5.3.3 Each entity intending to do work on the Project shall, prior to bid, be properly licensed according to the requirements of the Construction Industries Licensing Act, Chapter 60, Article 13 NMSA 1978 and shall ensure to the Contractor and to the Owner that such license shall remain in effect for the duration of the Work and warranty periods.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS AND SUPPLIER AGREEMENTS

5.4.1 Each subcontract or supplier agreement for a portion of the Work may be assigned by the Contractor to the Owner provided that assignment is:
1. effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those subcontract or supplier agreements which the Owner accepts by notifying the Subcontractor, supplier and the Contractor in writing: and
2. subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

5.4.2 Upon such assignment, if the Work has been suspended for more than thirty (30) days, the Subcontractor's or supplier's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Paragraph 4.3.

6.1.2 When separate contracts are awarded for different portions of the Project or other Construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor and Subcontractors shall participate with other separate contractors, the Owner's own forces and the Owner in reviewing and coordinating their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised. The Contractor and Subcontractors shall not delay or cause additional expense to another contractor by neglecting to perform correctly or to an agreed schedule. In the absence of a schedule mutually agreed upon by all parties, the Owner may create a binding schedule for all parties or take other appropriate action to avoid unnecessary delay and damages.

6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11, and 12.

6.1.5 Unless otherwise provided in the Contract Documents, the Owner's separate contractor shall test, adjust, and balance (TAB) the HVAC system to design requirements in coordination with the
Contractor's or Subcontractors own forces. The TAB work shall integrate with the Contractor's or Subcontractor's installation of the Work, equipment start-up and operational testing as required by the Contract Documents. Coordination and cooperation for this work and other similar Owner contractor work shall be in accordance with Paragraph 6.2.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors’ reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends on proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Design Professional and Owner apparent discrepancies or defects in such other construction that would render it unsuitable for proper execution and results. Failure of the Contractor to report shall constitute an acknowledgment that the Owner's or separate contractor’s completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities and damage to the Work or defective construction of the Owner or a separate Owner contractor. Should the Contractor sustain any personal injury or damage to property through any act or omission of any other Contractor having a contract with the Owner, the Contractor sustaining damage will have no claim or cause of action against the Owner for such damage and hereby waives any such claim.

6.2.4 The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed or existing construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5.

6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Subparagraph 3.14.

6.3 OWNER’S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Design Professional will allocate the cost among those responsible.

ARTICLE 7  CHANGES IN THE WORK

7.1 GENERAL
7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Modification / Change Request, or by Supplemental Instruction for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 Any material change in the Work require a Modification / Change Request (MCR) that has been finalized by agreement by the Owner and based on proposal from the Contractor and recommendation of the Design Professional. A Change Order, required to modify the Purchase Order, shall accumulate approved MCRs, and must be approved by the Owner, Contractor and Design Professional. Supplemental Instruction for a minor change in the Work, will not create cost or time effect on the Project in accordance with Subparagraph 7.4.1, and may be issued only by the Design Professional.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Modification / Change Request or Supplemental Instruction.

7.2 MODIFICATION / CHANGE REQUEST

7.2.1 A Modification / Change Request or MCR is a written document that may be initiated by the Contractor, Design Professional or Owner that identifies why there is a potential change in the Work that may require an adjustment, to the Contract Sum or Contract Time, or both, and suggests how that the change should take place. Following the initiation of a MCR by one of the parties, the Owner:

1. must agree to MCR's content and feasibility and if in agreement may authorize the MCR to; proceed with estimates of costs only; or proceed with the Work with estimates of costs to follow in accordance with Subparagraph 7.2.4;
2. will consider proposal(s) from the Contractor in accordance with Article 7 for adjustment to Contract Sum or Contract Time, if any; and,
3. shall authorize the Work to proceed if not previously authorized in accordance with Subparagraph 7.2.4 and authorize adjustment to Contract Sum in accordance with Paragraph 7.2 or, shall reject the MCR and replace with another or, stop all action on the MCR.

7.2.1.1 A MCR is required for any modification or change in the Work that:

1. may affect the Contract Sum or Time;
2. alters the Work by substitution or any other way not considered minor as defined by Paragraph 7.4; or,
3. otherwise materially affect the Work or intended function of the Project including a change to aesthetics.

7.2.1.2 A MCR when finalized by Owner approval, may modify the Contract without invalidating the Contract and may order changes in the Work within the general scope of the Contract with Contract Sum and Contract Time. Owner approval of a MCR:

1. shall adjust the Contract Sum accordingly; and,
2. will begin Owner consideration of related adjustment to Contract Time, if any;
3. and shall be included into a Change Order upon approval of the parties in accordance with Paragraph 7.3.
7.2.2 A MCR shall be used to:
   1. approve a modification or change to the Work;
   2. accumulate data such as cost and time impacts before authorizing a modification or change to the Work;
   3. direct Work to be done with cost, time, etc. to follow in the absence of total agreement on the terms of a modification or change to the Work or to prevent delay of the Work; and,
   4. stop all action on a proposed modification or change to the Work.

7.2.3 If Work defined by a MCR requires an adjustment to Contract Sum or Contract Time, the Contractor shall, within ten (10) days of the date of Owner issuance of MCR or delivery of MCR to Contractor if that date is later, prepare and deliver to the Design Professional a proposal for such adjustment based on:
   1. unit prices or lump sum allowances stated in the Contract Documents;
   2. unit price or lump sum determined in accordance with Subparagraph 7.2.5;
   3. provision in the MCR as determined by the Owner and in accordance with Subparagraph 7.2.5; or,
   4. a manner agreed upon by the parties and consistent with Subparagraph 7.2.5 and these General Conditions.

7.2.4 Upon receipt of a Modification / Change Request authorized by the Owner to "Proceed with the Work with costs to follow", the Contractor shall consider the MCR a directive and promptly proceed with the change in the Work involved and, provide a proposal for adjustment to Contract in accordance with Subparagraph 7.2.3.

7.2.5 Allowable Costs and Fees: If a proposal to adjust the Contract Sum exceeds $200 and if not otherwise provided in the MCR or Contract Documents, the Contractor, shall provide an itemized accounting* together with appropriate supporting data that include:
   1. quantities and unit costs of materials, including cost of transportation, whether incorporated or consumed;
   2. quantities and unit costs of labor, including labor burdens such as social security and unemployment insurance, fringe benefits such as health insurance required by agreement or custom (Labor Burdens shall not include retirement plans qualified by minimum employment time, organizational fees or dues, legal or related expenses, information technology training and the like);
   3. quantities and unit utilization or rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
   4. quantities and unit costs of on-site supervision and field office personnel directly attributable to the change;
   5. quantities and unit costs of and insurance, use tax or similar related to the Work;
   6. Overhead and Profit**;
   7. quantities and unit premiums for all bond costs and permit fees on items 1 through above; and,
   8. State Gross Receipts Tax (GRT); and,
* If pricing compounds, the compounding order shall be the same as listed items 1 - 8 of this Sub-paragraph.

** Overhead and Profit (O&P), that may include, but is not limited to, project management, main office expenses, computers, minor tools and incidentals, may be added on top of items 1 through 5 above, provided that combined they do not exceed the following:

<table>
<thead>
<tr>
<th>Subtotal before applying overhead and profit</th>
<th>Under $2000</th>
<th>$2000 to $10,000</th>
<th>$10,001 to $50,000</th>
<th>Over $50,001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor - For work performed by own forces</td>
<td>18%</td>
<td>16%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>Contractor - For subcontracted work.</td>
<td>11%</td>
<td>9%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>For work performed by 1st tier Subcontractor</td>
<td>18%</td>
<td>15%</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>For work performed by 2nd tier Subcontractor</td>
<td>10%</td>
<td>8%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Subcontractor - Maximum aggregate O&amp;P allowed over cost regardless of number of tiers.</td>
<td>29%</td>
<td>24%</td>
<td>18%</td>
<td>14%</td>
</tr>
</tbody>
</table>

**Exception:** In extraordinary circumstances, the Owner may allow adjustment to the above maximums provided net profit does not exceed 2% of the cost of MCR before bonds or tax.

7.2.5.1 Time-and-Material: If for the purpose of authorizing Work to proceed upon issuance on an MCR prior to the Owner receiving proposal of costs, so that labor or material costs are to be accumulated for later inclusion into a proposal to adjust the contract sum, the MCR must clearly state conditions and limitations of time-and-material work to proceed under the change in Work with costs to follow provision of the MCR. At a minimum, the MCR shall state the maximum allowable cost. In addition, the Daily Job Report must reflect all appropriate detail on related Work, such as work performed that day, number of workers, materials received and similar. A separate daily worker log must also be maintained that will be included in the proposed cost of the MCR. The daily worker log for each MCR, must list each worker, the type of work performed and the hours worked, and must be signed-off daily by an individual, agreed upon in the MCR, that may be the Project Superintendent. In accordance with this Paragraph 7.2, proposal of costs shall be delivered by the Contractor within Ten (10) days of issuance of MCR.

7.2.5.2 Audit: The Owner shall be entitled to audit the books and records of a Contractor or any Subcontractor for any time-and-material or negotiated cost, such as those associated with a change in the Work, to the extent that such books and records relate to the proposal or performance of such Work. Such books and records shall be maintained by the Contractor for a period of three years from the date of final payment under the prime Contract and by the Subcontractor for a period of three years from the date of final payment under the subcontract, unless a shorter period is otherwise authorized in writing.
7.2.6 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Design Professional. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7.2.7 A proposed adjustment to Contract Sum and Contract Time submitted by Contractor for a MCR indicates agreement of the Contractor therewith for the proposed Modification. The Design Professional shall make recommendation to the Owner on the appropriateness of the proposed adjustment. The Owner may, after evaluation of the proposal and review of the Design Professional's recommendation, accept the Contractor's proposed adjustment to Contract Sum and finalize the MCR. If Owner approves MCR, it shall be recorded for inclusion into a Change Order.

7.2.8 If the Contractor does not respond promptly with a proposal for adjustment to Contract Sum and Contract Time relative to an MCR or disagrees with the method for adjustment, or; if there are amounts or terms in dispute for such changes in the Work; the Design Professional on the basis of reasonable expenditures or savings of those performing the Work attributable to the change in the Work shall make a determination for purpose of settlement of dispute. That determination of adjustment to the Contract Sum and Contract Time shall be presented to the Owner and the Contractor for consideration. If the Owner or the Contractor do not agree with the Design Professional's determination, the provisions of Subparagraph 7.2.9 shall apply. When the Owner and Contractor agree with the determination made by the Design Professional concerning the adjustments in the Contract Sum, such agreement shall be effective immediately upon Contractor's acceptance in writing and Owner's approval of MCR.

7.2.9 The Owner shall, within fifteen (15) days of the determination made by the Design Professional regarding adjustment to Contract Sum or Contract Time in accordance with Subparagraph 7.2.8, either:

1. accept the Design Professional's determination and, approve the MCR with the adjustment recommended by the Design Professional and record the MCR as approved by the Owner to be included into a Change Order; or

2. approve the MCR with an adjustment the Owner determines to be appropriate based on available information and record the MCR as approved by the Owner to be included into a Change Order.

Adjustment to Contract Sum in accordance with this Subparagraph 7.2.9 shall be subject to the right of Contractor to disagree and assert a claim in accordance with Paragraph 4.3.

7.2.10 Partial agreement of an adjustment to Contract Sum or Contract Time relative to a MCR may be allowed by the Owner only if adjustment to Work, requested by the MCR, can be subdivided into independent parts. In the event of such subdivision; MCR shall be broken into separate parts with alpha suffixes such as MCR 2A, MCR 2B and so on.

7.2.11 Periodically, approved MCR's shall be accumulated by the Owner or Design Professional into a Change Order in accordance with Paragraph 7.3.

7.3 CHANGE ORDERS
7.3.1 A Change Order is a written instrument prepared by the Design Professional and signed by the Owner, Contractor and Design Professional, stating their agreement upon:

1. change in the work as made by finalized Modification / Change Request(s) that has been previously approved by the Owner or authorized in accordance with Sub-paragraphs 7.2.8 or 7.2.9;  
2. amount of the adjustment, if any in the Contract Sum resultant of approved MCR(s);  
3. extent of the adjustment, if any, in the Contract Time related to approved MCR(s); or,  
4. if disagreement on adjustment in the Contract Time, parties agree to postponement of inclusion of any adjustment to Contract Time into a Change Order; however, all Contractor proposed or Owner offered adjustment(s) to time shall be incorporated into a Change Order prior to Substantial Completion in accordance with Subparagraph 9.8.6.

**POSTPONEMENT OF ADJUSTMENT TO CONTRACT TIME LANGUAGE:**
"At the time of this Change Order, there is no agreement on adjustment to the Contract Time related to MCR(s) XX, XX, XX and XX. The Contractor, without prejudice and without waiving any rights to such claim for adjustment to Contract Time in relation to these MCR(s), agrees to postpone claim in accordance with Paragraph 7.3 of the General Conditions."

7.3.2 Methods used in determining adjustments to the Contract Sum include those listed in Paragraph 7.2. Proposals submitted that do not follow the requirements under Paragraph 7.2 will be returned to be resubmitted prior to processing.

7.4 MINOR CHANGES IN THE WORK
7.4.1 The Design Professional will have authority to order Supplemental Instructions for minor changes in the work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8 TIME
8.1 DEFINITIONS
8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.2 The date of commencement of the Work is the date established in the Agreement.

8.1.3 The date of Substantial Completion is the date certified by the Design Professional in accordance with Paragraph 9.8.

8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION
8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents, a Notice to Proceed shall be given by the Owner that shall establish the commencement of the Contract Time as provided by the Contract Documents.

8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.2.4 The Owner shall not be liable to the Contractor for additional time or money if the Contractor submits a progress report or construction schedule expressing an intention to achieve completion of the Work prior to the Contract Time and then is not able to achieve intended accelerated schedule regardless of the reason.

8.3 DELAYS AND EXTENSIONS OF TIME
8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Design Professional, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Design Professional and the Owner determine may justify delay, then the Contract Time shall be extended by Modification in accordance with Article 7 for such reasonable time as the Design Professional in concurrence with the Owner may determine.

8.3.2 Extensions of time not associated with modifications or changes to the Work shall not be allowed to increase the Contract amount for overhead or for any other reason and shall strictly apply toward liquidated damages.

8.3.3 Claims relating to time shall be made in accordance with applicable provisions under Paragraph 4.3.

8.4 CONTRACT TIME AND LIQUIDATED DAMAGES
8.4.1 The Contractor agrees that the Work will be prosecuted regularly, diligently and without interruption at such rate of progress as will ensure completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Time is a reasonable time for completion of the Work, taking into consideration the average climate range and usual industrial conditions prevailing in the locality of the Project. If the Contractor neglects, fails or refuses to complete the Work within the Contract Time, or any proper extension granted by the Owner, then the Contractor agrees to pay the Owner the amount specified in the Contract Documents, not as a penalty, but as liquidated damages.
8.4.2 The parties agree that the amount of the likely damage to the Owner for such delay is difficult to ascertain at the time of execution of this Agreement, but that a reasonable estimate of such damages for delay is set forth in the contract Documents. Liquidated damages may be deducted from any monthly progress payments due to the Contractor or from other monies being withheld from the Contractor when a reasonable estimate of expected Substantial Completion can be determined by the Owner.

8.4.3 Final accounting of Liquidated Damages shall be determined at Substantial Completion and the Contractor and Surety are liable for any liquidated damages over and above unpaid balance held by the Owner.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Design Professional a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Design Professional may require. Support data shall include accounting of all Project costs distributed to Level 2 UniFormat™ convention. The schedule of values, upon acceptance by the Design Professional with the Owner's prior approval, shall be used as a basis for reviewing the Contractor's Application for Payment.

9.2.1.1 Gross Receipts Tax shall be indicated for the total amount of all items included in the Schedule of Values. Allowance items, such as Documentation and Close-Out amount, do not include GRT as listed in Subparagraph 9.2.2 and shall be included as Schedule of Values line items. In the event of a GRT rate change, the Contractor shall submit an MCR requesting an adjusted amount on balance to complete the Contract.

9.2.1.2 If Public Schools Capital Outlay Public School Facilities Authority (PSFA) funding is provided to the Project, individual line items of the Schedule of Values shall be allocated to the various portions of the PSFA Work, prepared in such form and supported by such data to substantiate its accuracy as the Design Professional and the PSFA may require.

9.2.2 To protect the Owner from the significant liability and arduous accounting efforts required by lingering documentation and close-out work, the Schedule of Values shall provide a separate line item titled "Documentation and Close-Out" to provide a value consistent with and appropriate to required documentation provisions throughout the Contract including those required by Subparagraph 4.2.4.3 and Paragraph 9.10. The value of the Documentation and Close-Out line item shall not be less than the following:
For a total Contract amount excluding tax of:

<table>
<thead>
<tr>
<th>Range</th>
<th>Documentation and Close-Out amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than $20,000</td>
<td>$0</td>
</tr>
<tr>
<td>20,001 - 75,000</td>
<td>6,000</td>
</tr>
<tr>
<td>75,001 - 100,000</td>
<td>8,000</td>
</tr>
<tr>
<td>100,001 - 200,000</td>
<td>10,000</td>
</tr>
<tr>
<td>200,001 - 350,000</td>
<td>15,000</td>
</tr>
<tr>
<td>350,001 - 500,000</td>
<td>25,000</td>
</tr>
<tr>
<td>501,001 - 1,000,000</td>
<td>50,000</td>
</tr>
<tr>
<td>1,000,001 - 1,500,000</td>
<td>70,000</td>
</tr>
<tr>
<td>1,500,001 - 2,000,000</td>
<td>90,000</td>
</tr>
<tr>
<td>2,000,001 - 3,000,000</td>
<td>120,000</td>
</tr>
<tr>
<td>for each additional million</td>
<td>add 30,000</td>
</tr>
</tbody>
</table>

9.2.2.1 If requested in writing by the Contractor, and in the sole opinion of the Owner, the Contractor is in full compliance with the documentation requirements of the Contract including the provisions of Subparagraph 4.2.4.3, the Documentation and Close-Out Schedule of Value line item may be reduced each month prior to Substantial Completion up to five percent (5%) of the originally scheduled amount or one thousand dollars ($1,000), whichever is greater, providing that the Documentation and Close-Out line item is not reduced to less than fifty percent (50%) of the original amount required until which time that Close-Out is complete as required by Paragraph 9.10.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 No later than the 25th of each month, the Contractor shall submit to the Design Professional an itemized Application for Payment for operations completed in accordance with the Schedule of Values for that month. Such application shall be supported by such data substantiating the Contractor's right to payment as the Owner or Design Professional may require such copies of requisitions from Subcontractors and material suppliers. No Applications for Payment will be processed until the initial Schedule of Values is received and approved by Design Professional with concurrence from the Owner and for subsequent payment applications; the Project Schedule has been updated in accordance with Subparagraph 3.10.1.

9.3.1.1 No Application for Payment may include more than:

1. ninety-five percent (95%) of the scheduled value of any work requiring testing prior to testing and verification of testing by the Design Professional to meeting requirements of the Contract Documents;

2. ninety percent (90%) of the scheduled value for systems that require, as a part of acceptance of the Work, testing or balancing including, but not limited to, mechanical heating, air-conditioning and electrical distribution until testing, balancing or other verification required by the Contract Documents has been completed and verified as acceptable by the Design Professional.
9.3.1.2 Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation into the Work. Any payments for such materials or equipment shall be conditioned upon the Contractor's demonstration that they are adequately protected from weather, damage, vandalism and theft and that such materials or equipment have been inventoried and stored in accordance with procedures established by or approved by the Owner. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing and with sufficient Contractor provided insurance against loss, and with Owner named as co-insured, to cover the value of stored materials and their transport to the Project.

9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, material suppliers and equipment relating to the Work. The Contractor additionally warrants that all As-Built drawings accurately depict completed Work covered by an Application for Payment, inclusive of all trades and inclusive of, but not be limited to, actual locations and installed types, brand, model number and similar of all Work including ducts, pipes, conduit, equipment, walls and site utilities.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 Application for Payment must be submitted to the Design Professional no later than the 25th of the month for which the application is being made. The Design Professional will review with the Owner the accuracy and appropriateness of the application and, within five (5) days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Design Professional determines is properly due, or notify the Contractor and Owner in writing of the Design Professional's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1. In no event will the Owner accept or process a Certification for Payment received after the 10th of the month following the month for which the application is being made. Certifications for Payment received after the 10th of the month "owner-cut-off-date" will be processed along with the following month's applications and will not be considered in default of the provisions of Subparagraph 9.4.3.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Design Professional to the Owner, based on the Design Professional's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Design Professional's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents and that As-Built drawings are current to actual Work completed. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Design Professional. The issuance of a Certificate for
Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified.

9.4.3 The Owner will issue payment to the Contractor in the amount certified in the approved Certificate for Payment within twenty-one (21) days from the end of the progress payment period which shall be the end of the month for which the Certificate of Payment is made. The five (5) days allowed the Design Professional for review in Subparagraphs 4.2.5 and 9.4.1 are partially included in the twenty-one (21) day period.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Design Professional may withhold a Certificate for Payment and may assess Liquidated Damages in accordance with Paragraph 8.4, in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Design Professional's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Design Professional is unable to certify payment in the amount of the Application, the Design Professional will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Design Professional cannot agree on a revised amount, the Design Professional will promptly issue a Certificate for Payment for the amount for which the Design Professional is able to make such representations to the Owner. The Design Professional may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Design Professional's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Subparagraph 3.3.2, because of:

1. defective Work not remedied;
2. third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
3. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
5. damage to the Owner or another contractor;
6. reasonable evidence that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
7. persistent failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Design Professional has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents.

9.6.2 The Contractor shall promptly pay each Subcontractor and supplier, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually
9.6.3 The Design Professional will on request, furnish to a Subcontractor information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Design Professional and Owner on account of portions of the Work done by such Subcontractor.

9.6.4 Neither the Owner nor Design Professional shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.6.2, 9.6.3 and 9.6.4.

9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.6.7 Payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, or create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

9.7 FAILURE OF PAYMENT

9.7.1 If the Owner does not pay the Contractor the amount approved by the Design Professional or the Design Professional does not approve the application for payment then, within forty-five (45) days from the end of the progress payment period, Contractor may, upon seven (7) additional days written notice to the Owner and Design Professional, stop the Work until payment of the amount owing has been received. Unless Contractor's action was improper or if the amount claimed is shown not to have been due, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents. In the event of a wrongful Stop-Work, the Contractor shall remain responsible to the Owner for delivering the Project in accordance with the Contract Documents.

9.8 SUBSTANTIAL COMPLETION

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is complete and in compliance with the Contract Documents except for minor items so that the Owner can completely occupy or fully utilize the Work for its intended use. Owner's Occupancy under conditional approval by public authorities having jurisdiction over the Work, or
occupancy of a facility or otherwise utilizing the Work under duress, shall not be considered Substantial Completion.

9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall promptly prepare and submit to the Design Professional a comprehensive Contractor's Punch List inclusive and all incomplete and non-compliant Work to be completed or corrected prior to final payment, as well as, the requirements of Subparagraph 9.10.2.

9.8.3 The Contractor shall submit along with the punch list a separate and detailed Closeout Schedule indicating the date of Final Completion and all work to be completed before Final Completion including Close-Out requirements as provided in Paragraph 9.10. Failure to include any item on punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Include in the Closeout Schedule an allowance of thirty (30) days to prepare Record Drawings from Contractor As-Builts to meet requirement of Subparagraph 9.10.1.7.

9.8.4 Upon receipt of the Contractor's Punch List and Closeout Schedule, the Design Professional will within ten (10) days make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Design Professional's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof, as it is fully intended and designed to be used, the Contractor shall complete or correct such item upon inspection by the Design Professional to determine Substantial Completion. In the event the Work does appear Substantially Complete, the Design Professional will review the Contractor's Punch List for completeness required for issuance of Substantial Completion. The Contractor shall be responsible for cost of excessive Design Professional time and effort in completing list of incomplete and non-compliant Work not included in Contractor's Punch List or otherwise due to Contractor's neglect of responsibilities of Subparagraph 9.8.2.

9.8.5 When the Work or designated portion thereof is substantially complete, the Design Professional will prepare a Certificate of Substantial Completion, with the Owner's prior approval, which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate in accordance with Subparagraph 9.8.2.

9.8.6 Warranties shall be in accordance with this Subparagraph 9.8.6 and Paragraph 12.2 and shall include all components and equipment required by the Contract Documents. All Work shall be warranted for the greater of:

1. a minimum of one (1) year from the date of Substantial Completion;
2. one (1) year from the date of first installation in accordance with Subparagraph 12.2.2.2;
3. one (1) year from the date of replacement due to failure such that; each component of the Work must not fail for a one (1) year period regardless of the date of Substantial Completion;
4. that required by the Contract Documents; or,
5. that provided in the Certificate of Substantial Completion that will become an addendum to the Contract.

Owner and Contractor may, by mutual agreement, amend the Contract at Substantial Completion to include Performance Bonding, extended warranty, on-site maintenance, subsequent testing, scheduled replacement or other mutually agreeable terms.

9.8.7 Any postponement(s) of inclusion(s) of adjustment(s) to Contract Time in accordance with Subparagraph 7.3.1.4 shall be included into a MCR for agreement and then into a Change Order prior to Certificate of Substantial Completion. If the Contractor and the Owner do not agree on Contractor proposal, the Design Professional on the basis of evidence that critical path of work flow was reduced or expanded attributable to the change(s) in the Work with evidence being differences in Contractor's initial and current schedules and other evidence, shall make an determination for purpose of settlement of dispute. That determination of adjustment to the Contract Time shall be presented to the Owner and the Contractor for consideration. When the Owner and Contractor agree with the determination made by the Design Professional concerning the adjustments in the Contract Time such agreement shall be effective immediately, upon Contractor's written approval, and shall be recorded by preparation and execution of an appropriate MCR that shall be approved by the Owner. If after five (5) days the Owner or Contractor cannot agree with the determination made by the Design Professional regarding adjustment to Contract Time, then the Design Professional may order the preparation and execution of an appropriate MCR and:

1. if the Contractor is in disagreement, the MCR shall be recorded as approved by the Owner to be included in a Change Order;
2. if the Owner is in disagreement, the MCR shall be recorded as "approved by dispute resolution authority of the Design Professional" in accordance with this Subparagraph 9.8.7 to be included into a Change Order; and,
3. either approval shall be subject to the right of either party to disagree and assert a claim in accordance with Article 4.

9.8.8 Liquidated Damages shall be determined in accordance with Paragraph 8.4.

9.8.9 The Certificate of Substantial Completion shall be submitted to the Contractor and Contractor shall submit for consent of surety, if required, for written acceptance and following acceptance, the Owner shall make payment to Substantial Completion. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

9.9 PARTIAL OCCUPANCY OR USE
9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage provided such occupancy or use is consented to by the insurer as required under Clause 11.4.1.3 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have communicated in writing the responsibilities for payments, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties, if different from the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Design Professional as provided under Subparagraph
9.8.2. The stage or the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, then by decision of the Design Professional.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Design Professional shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of work not complying with the requirements of the Contract Documents.

9.10 CLOSE-OUT REQUIREMENTS

9.10.1 Before final completion in accordance with Paragraph 9.11 can be achieved all Work must be complete and accepted including the requirements under Paragraph 9.10 including:

1. Work associated with Punch List(s);
2. testing, balance or performance operations complete and in agreement that associated work is in compliance with the Contract Documents and verified as such by the Design Professional;
3. one hard copy and one electronic copy in .pdf format of final approved test, balance or performance report(s) complete with directory of contents submitted to Owner;
4. Operation and Maintenance Manuals complete and verified as such by the Design Professional;
5. Owner sign-off of receipt of O&M Training on proper use, care and operation of all systems or components as required by the Contract Documents;
6. one hard copy set and one electronic copy in .pdf format of final approved Operation and Maintenance Manuals with directory of contents submitted to Owner and uploaded by Contractor into CIMS;
7. As-Built drawings converted to accurate Record Drawings and verified as such by the Design Professional using information provided by the Contractor and by other knowledge the Design Professional may possess;
8. written certification signed by Owner of delivery and stocking of extra material, equipment or components required by the Contract Documents at a location established by the Owner;
9. delivery of all warranties required by the Contract Documents;
10. all keys, passes, codes, software or other methods or components of control or security which have been correctly and adequately accounted for and closed-out; and,
11. up-loading of all Close-Out documents into CIMS including scans of Building Code Approvals and other code certifications, Substantial Completion documents, Punch Lists, Warranties, O&M Manuals, Training Sign-off, Extra Stock Sign-off, Record Drawings, Final Completion documents, Equipment inventory information as required in Division 01, Correction of Work Period documents and 11th month inspection.

Exception: Up-loading of Final Completion, Correction of Work Period and 11th month inspection documents shall be loaded into CIMS within seven (7) days of availability.

9.10.2 The Contractor shall prepare a separate Close-Out Punch List listing all requirements of Subparagraph 9.10.1 and the status of each, whether completed or not and the expected completed date of each component of the list. The Close-Out Punch List shall be a separate part and a subset of
the Contractor's Punch List required for Substantial Completion in accordance with Subparagraph 9.8.2. At completion of the List, the Contractor shall state in writing to the Design Professional that the Close-Out Punch List has been completed and request a Close-Out Meeting with the Design Professional and the Owner. The Design Professional shall schedule such meeting within ten (10) days of the request, or otherwise reply in writing to the Contractor why the request is premature. At the Close-Out Meeting, all requirements to achieve close-out will be verified, and if Work is found to be complete, the Design Professional, with concurrence from the Owner, shall provide written approval of Contractor's completion of close-out requirements within five (5) days of the conclusion of the meeting.

9.10.3 The balance at Substantial Completion of the Schedule of Values line item for Documents and Close-Out in accordance with Subparagraph 9.2.2 shall only be approved for payment when all requirements under Paragraph 9.10 are complete. No partial payment of the Close-Out balance will be considered. Contractor agrees that Close-Out Requirements, in accordance with Paragraph 9.10, are part of the value of Work defined by the Contract Documents and shall not be construed to mean retainage. Any variation or deviation from this Paragraph 9.10 shall be made through an appropriate Modification in accordance with Article 7.

9.11 FINAL COMPLETION AND FINAL PAYMENT

9.11.1 Following completion of close-out requirements in accordance with Paragraph 9.10, and upon receipt of a written notice from the Contractor that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Design Professional will promptly make such inspection and, when the Design Professional finds the Work acceptable under the Contract Documents and the Contract fully performed, the Design Professional will promptly, with the Owner's prior approval, issue a Certificate of Final Completion and following approval by all parties, a final Certificate for Payment each stating that to the best of the Design Professional's knowledge, information and belief and on the basis of the Design Professional's or Design Professional's Project Representative's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Design Professional's issuance of Certificate of Final Completion and final Certificate for Payment will constitute a further representation that conditions listed in Subparagraphs 9.10 and 9.11.2 have been fulfilled as precedent to the Contractor's being entitled to final payment.

9.11.2 Final payment shall not become due until the Contractor submits to the Design Professional:

1. an affidavit that payrolls, bills for subcontracts, materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied;

2. a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least forty-five (45) days following written notice to the Owner;

3. a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents;
4. consent of surety, if any, to final payment;
5. releases and waivers of claims of all Subcontractors, and suppliers; and,
6. if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor or other entity refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify and protect the Owner.

If any claim remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such claim, including all costs and reasonable attorney's fees.

9.11.3 If, after Substantial Completion of the Work, Final Completion thereof is materially delayed through no fault of the Contractor or by issuance of changes in the Work affecting Final Completion, and the Design Professional so confirms, the Owner shall, upon application by the Contractor and certification by the Design Professional, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Design Professional prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

9.11.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:
   1. Claims, security interests or encumbrances arising out of the Contract and unsettled;
   2. failure of the Work to comply with the requirements of the Contract Documents; or
   3. terms of special warranties required by the Contract Documents.

9.11.5 Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of Claims by that payee, except those previously made in writing and identified by the payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Owner may, but is under no obligation, point out unsafe conditions or operations.

10.1.2 The Contractor shall at all times conduct operations and take precautions under this Contract in a manner to avoid risk or bodily harm to persons on or around the Work site and to avoid risk of damage to any property. The Contractor shall continuously inspect the construction operations and shall cause Subcontractors and all other entities on or around the Project to be aware of dangers or risks and to comply with applicable health or safety laws, codes, standards and regulations applicable to the locale where the Project is located.
10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

1. employees on the Work and other persons who may be affected thereby and shall include clean work site, well maintained equipment, barricades, safety awareness programs or whatever effort that will best accomplish required protection;

2. students, staff and public either nearby or within the Project site that shall include re-routing pedestrian ways, re-routing traffic, providing signage, building of bridges, barricades, pedestrian tunnels, or whatever effort that will best accomplish required protection;

3. Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors; and

4. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contractor Documents) to property referred to in Subparagraphs 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible, except damage or loss attributable to acts or omissions of the Owner or Design Professional or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations stated throughout the Contract Documents.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent, unless otherwise designated by the Contractor in writing to the Owner and Design Professional.
10.2.7 The Contractor shall report in writing to the Owner and the Design Professional within five (5) days of an accident arising out of or in connection with the Work which caused lost time injury, personal injury, death or property damage, giving full details and statements of any witnesses. In cases of serious bodily injury, death or serious property damage, Contractor shall immediately contact the proper authorities, as well as, Owner and Design Professional by the most expeditious means.

10.3 HAZARDOUS MATERIALS

10.3.1 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and immediately report the condition to the Owner and Design Professional in writing.

10.3.2 The Owner shall obtain the services of a properly licensed testing laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to obtain the services of a remediation contractor to remove the hazard and to verify that it has been rendered harmless. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time adjusted as provided in Article 7. "Rendered Harmless" shall mean that the levels of such materials are less than any applicable exposure levels, including but not limited to EPA regulations.

10.4 The Owner shall not be responsible under Paragraph 10.3 for materials and substances brought to the site by the Contractor.

10.5 If, without negligence on the part of the Contractor, the Contractor is held liable for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Contract shall be equitably adjusted in accordance with Article 7.

10.6 EMERGENCIES

10.6.1 In an emergency affecting safety of persons or property, the Contractor shall use its best efforts to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

11.1 LIABILITY INSURANCE

11.1.1 The Contractor and Subcontractors shall purchase from and maintain in a company or companies lawfully authorized to transact insurance in New Mexico, insurance that shall protect the Contractor and Subcontractors from claims set forth below, which may arise out of or result from operations under the Contract and for which the Contractor and Subcontractors may be legally liable, whether such operations be by the Contractor and Subcontractors or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.
1. claims under Workers' Compensation, Disability Benefit and other similar Employee Benefit Acts, which are applicable to the Work to be performed;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. claims for damage for personal injury;
5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. claims for damages because of bodily injury, death of a person property damage arising out of ownership, maintenance or use of a motor vehicle;
7. claims for bodily injury or property damage arising out of completed operations; and
8. claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

Provision of insurance does not limit the liability of the Contractor under 3.18.1 herein.

11.1.2 The Contractor shall ensure that liability insurance is maintained in accordance with Article 11 and may, at Contractor's option, either insure the activities of Subcontractors or require them to maintain insurance to cover all claims in Article 11. If the Owner is damaged by the failure or neglect of the Contractor to maintain insurance as described above, then the Contractor shall be liable for all costs and damages properly attributable thereto.

11.1.3 The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified herein or required by law, whichever coverage is greater. Coverage shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until date of Final Payment and termination of any coverage required to be maintained after final payment.

11.1.4 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least forty-five (45) days prior written notice has been given to the Owner. If any of the foregoing insurance coverages are requested to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both shall be furnished by the Contractor with reasonable promptness.

11.1.4.1 The Certificates of Insurance shall clearly state the coverages, limits of liability, covered operations, effective dates and dates of expiration of policies of Insurance. The Contractor will promptly notify and furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. The Certificates of Insurance shall be in the appropriate ACORD form, or similar format acceptable to the Owner and shall include the following statements:

1. "The State of New Mexico, the (the name(s) of the Owner whose name(s) appear on the Agreement), its agents, servants and employees are recognized as Additionally Insured."
2. "The insurance coverage certified herein will not be canceled or materially changed, except after forty-five (45) days written notice has been provided to the Owner"
3. "The insured will not violate, or permit to be violated, any conditions of this policy, and will at all times satisfy the requirements of the insurance company transacting the policy."
4. "The coverage provided by this certificate is primary."
5. "Nothing in this certificate of coverage will be construed to affect the State of New Mexico or owner, agents, servants and employees defenses, immunities or limitations of liability under the New Mexico Tort Claims Act."

11.1.5 Minimum Required Coverages:

11.1.5.1 Worker's Compensation Insurance shall be provided as required by applicable State law for all employees engaged at the site of the Project under this Contract, including Subcontractor employees. In case any class of employee engaged in work on the Project under this Contract is not protected under the Worker's Compensation Statute, the Contractor shall provide, and cause each Subcontractor to provide Employer's Liability Insurance in an amount not less than five hundred thousand ($500,000). Failure to comply with the conditions of this Subparagraph 11.1.5.1 will subject this Contract to termination.

11.1.5.2 Public Liability Insurance shall not be less than the liability amounts set forth in the New Mexico Tort Claims Act, §41-4-1 et seq. NMSA 1978, as it now exists or may be amended.

11.1.5.3 Comprehensive Vehicle Liability Insurance, for both owned and non-owned vehicles, shall be one million dollars ($1,000,000) per occurrence combined single limit for both personal injury and property damage.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

11.3 PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE

11.3.1 Optionally, the Owner may provide Project Management Protective Liability Insurance, otherwise known as Project Insurance, as primary coverage for the Owner's, Contractor's and Design Professional's vicarious liability for construction operations under the Contract. The minimum limits of liability purchased with such coverage shall be equal to the limits required for Contractor's Liability Insurance under Clauses 11.1.1.2 through 11.1.1.5.

11.3.2 To the extent damages are covered by Project Management Protective Liability insurance, the Owner, Contractor and Design Professional waive all rights against each other for damages, except such rights as they may have to the proceeds of such insurance. The policy shall provide for such waivers of subrogation by endorsement or otherwise.

11.4 PROPERTY INSURANCE

11.4.1 Unless Builder's Risk coverage is furnished by the Owner as indicated in Paragraph 7.2 of the Agreement between the Owner and the Contractor, the Contractor shall provide insurance which will protect the interests of the Contractor and Subcontractors in the Work. Such property insurance shall
be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until Final Payment has been made as provided in Paragraph 9.11 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.4 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, and Subcontractors in the Project.

11.4.1.2 This property insurance may not cover portions of the Work stored off the site or any portions of the Work in transit. Insurance covering Work or materials stored off site shall be in accordance with sub-paragraph 9.3.2.

11.4.1.3 Partial occupancy or use in accordance with Paragraph 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

11.4.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain Equipment Breakdown Coverage if required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner, this insurance shall include interests of the Owner, Contractor and Subcontractors in the Work.

11.4.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

11.4.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Modification / Change Request Change Order.

11.4.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site, by property insurance under policies separate from those insuring through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive rights in accordance with the terms of Subparagraph 11.4.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

11.4.6 Before an exposure to loss may occur, the Contractor may review any Owner provided insurance required by this Paragraph 11.4. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least thirty (30) days prior written notice has been given to the Contractor.

11.4.7 Waivers of Subrogation. The Owner and Contractor waive all rights against each other and any of their subcontractors, agents and employees, for damages caused by fire or other causes of loss
to the extent covered by property insurance obtained pursuant to this Paragraph 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner. The Owner or Contractor, as appropriate, shall require of the Design Professional, Design Professional's consultants, separate contractors described in Article 6, if any, and the subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity that would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged. The provisions of this paragraph shall not include claims with respect to damages to non-work buildings or properties.

11.4.7.1 The provisions of Paragraph 11.4.7 shall not be effective as to a person or entity whose acts or failures to act cause the harm and rise to a level beyond mere negligence.

11.4.8 A loss insured under Owner's property insurance shall be adjusted by the Owner and made payable to the Owner for the insured’s, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.4.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity.

11.4.9 The Owner shall distribute in accordance with such agreement as the parties in interest may agree, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.6. If after such loss, no other special agreement is made, and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

11.4.10 The Owner shall have power to adjust and settle a loss with insurers.

11.5 PERFORMANCE BOND AND PAYMENT BOND

11.5.1 If the contract price exceeds $25,000, the Contractor shall furnish Labor, Material and Performance surety bonds covering faithful performance of the Contract in amounts not less than 100 percent of the Contract amount, exclusive of GRT, unless Owner or the Contract Documents require a lesser percentage, for payment of obligations arising there under. These Labor, Material and Performance bonds shall be delivered to the Owner within seven (7) days of the Notice of Award or evidence satisfactory to the Owner that such bonds are forthcoming. Said bonds must comply with the requirements of §13-4-18, NMSA 1978. If the amount of the Sum of the Work is increased, the amounts of the bonds shall be increased accordingly.

11.5.1.1 A Subcontractor shall provide a performance and payment bond on a public works building project if the subcontractor’s contract (to the Contractor) for work to be performed on a project is one hundred and twenty-five thousand dollars ($125,000) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to any substitution of an approved Subcontractor.
11.5.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered contrary to the Design Professional's or Owner's request or to requirements specifically expressed in the Contract Documents, it must be uncovered for the Design Professional's and Owner's examination and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered, which the Design Professional has not specifically requested to examine prior to its being covered, the Design Professional may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Modification in accordance with Article 7, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

12.2 CORRECTION OF WORK

12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

12.2.1.1 The Contractor shall promptly correct Work rejected by the Owner or Design Professional or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such defective Work, including additional testing and inspections and compensation for the Design Professional's services and expenses made necessary thereby, shall be at the Contractor's expense.

12.2.2 AFTER SUBSTANTIAL COMPLETION

12.2.2.1 In addition to the Contractor's obligations under Paragraph 3.5, if within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Subparagraph 9.8.6, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one year period for correction of the Work, if the Owner fails to notify the Contractor and gives the Contractor an opportunity to make the correction, the Owner waives the rights to require the correction by Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within reasonable time during that period after receipt of notice from the Owner or Design Professional, the Owner may correct it in accordance with Paragraph 2.4.
12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work and in accordance with all other requirements of Subparagraph 9.8.6.

12.2.2.3 The one-year period for correction of Work shall be extended by corrective Work performed by the Contractor pursuant to this Paragraph 12.2 and Sub-paragraph 9.8.6.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.5 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents or law. Establishment of the one-year period for correction of Work as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.2.6 Eleven (11) months after Substantial Completion, the Design Professional shall coordinate, with the Owner and the Contractor, an 11-Month Correction Period Inspection of all portions of the Work. Any Work found defective or needing adjustment or other correction in order to function and operate in accordance with the indication of the Contract Documents shall be promptly completed by the Contractor within twenty (20) days, or as otherwise agreed between the parties. The Owner may make such corrections or adjustments in accordance with Paragraph 2.4.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

13.1 LAW

13.1.1 The Contract shall be governed by the laws of the State of New Mexico and parties agree that the State of New Mexico District Court of the County, where the Project is located, shall have
exclusive jurisdiction to resolve all Claims, issues and disputes not otherwise resolved in accordance with the Contract Documents.

13.1.2 The Owner's total liability to Contractor or any other entity claiming by, through, or under Contractor for any Claim, cost, loss, expense or damage caused in part by the fault of the Owner and in part by the fault of the contractor or any other entity or individual shall not exceed the percentage share that Owner's fault bears to the total fault of Owner, Contractor and all other entities and individuals as determined on the basis of comparative fault principles.

13.1.3 All Work shall be completed in accordance with and shall be inspected within requirements of the Construction Industries Licensing Act, Chapter 60, Article 13 NMSA 1978.

13.2 SUCCESSORS AND ASSIGNS
13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.2.2 The Owner may, without consent of the Contractor, assign the Contract to an institutional lender providing construction financing for the Project. In such event, the lender shall assume the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

13.2.3 The Contractor shall not assign the Contract or proceeds hereof without written consent of the Owner. If contractor attempts to make such an assignment without such consent, it shall be void and confer no rights to third parties; the Contractor shall nevertheless remain legally responsible for all obligations under the Contract. Any consent of the Owner to such assignment shall be written and include "it is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor and to claims for services rendered or materials supplied for the performance and of the Work and other obligations of the Contract Documents in favor of any entity rendering such services or providing such materials".

13.3 WRITTEN NOTICE
13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by Registered or Certified Mail, Federal Express, or similar service with proof of delivery to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES
13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available there under, shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Design Professional or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act
13.4.3 Contractor shall carry out the Work without delay in accordance with the Contract Documents during any and all disputes or disagreements, unless otherwise agreed to by the Owner in writing.

13.5 TEST AND INSPECTIONS

13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided by Subparagraph 2.2.4 or elsewhere in the Contract Documents, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, provided by the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals unless otherwise provided in the Contract Documents. The Contractor shall give the Owner and Design Professional timely notice of when and where tests and inspections and approvals are to be made so that the Design Professional may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

13.5.2 If the Design Professional, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Design Professional will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Design Professional of when and where tests and inspections are to be made so that the Design Professional may be present for such procedures. Such costs, except as provided in Subparagraph 13.5.3, shall be at the Owner's expense.

13.5.3 If such procedures for testing, inspection, or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Design Professional's services and expenses shall be at the Contractor's expense.

13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Design Professional and to the Owner.

13.5.5 If the Design Professional is to observe tests, inspections or approvals required by the Contract Documents, the Design Professional will do so promptly and, where practicable, at the normal place of testing.

13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 INTEREST
13.6.1 Payments due and unpaid undisputed amounts, under the Contract Documents, shall bear interest from the date payment is due in accordance with State statute regulating prompt payment.

13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

13.7.1 As between the Owner and Contractor:

1. before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

2. between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment; and

3. after Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act of failure to act by the Contractor pursuant to any Warranty provided under Subparagraph 9.8.6, Paragraph 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

13.8 EMPLOYMENT

13.8.1 Equal Employment Opportunity

13.8.1.1 The Contractor agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or other in accordance with U.S. Executive Order 11246, as amended, and NM Executive Order 85-15. The Contractor and Subcontractors agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination. and shall in all solicitation or advertisement for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

13.8.1.2 If the Contract constitutes a federally assisted construction contract within the meaning of 41 CFR 60-1.3 (1987), then the equal opportunity clause of 41 CFR 60-1.4(b) is incorporated herein by reference.

13.8.2 Wage Rates

13.8.2.1 For Contracts in excess of $60,000, minimum wages will be paid as determined by the Department of Workforce Solutions in accordance with §50-4-20 to 50-4-30 NMSA 1978, entitled "Minimum Wage Act" The Contractor and Subcontractors shall deliver or mail copies of the certified weekly payrolls, prepared in accordance with regulations, to the Labor Commission and to the Design Professional.

13.8.2.2 The scale of wages to be paid will be posted by the Contractor in a prominent and easily accessible place on the job site.

13.8.3 Apprentices
13.8.3.1 Except as otherwise required by law, the number of apprentices in each trade or occupation employed by the Contractor and Subcontractors, material suppliers and equipment suppliers shall not exceed the number permitted by the applicable standards of the United States Department of Labor, or, New Mexico Construction Industries Division.

13.8.4 On-the-Job Relations with Contractor
13.8.4.1 The Contractor shall at all times have competent superintendent(s) or foremen on the job in immediate charge of the Work who shall receive communications from Design Professional or Owner in the prosecution of the Work, in accordance with the Contract Documents. Any person executing the Work, who in the opinion of the Design Professional or the Owner, appears to be incompetent or act in a disorderly or intemperate manner or violating provisions of the Contract Documents, shall upon written request, be immediately removed from the Project and not again be employed on any part of the Work. Failure to comply with this Subparagraph 13.8.4.1, shall upon the Owner’s decision, be cause to immediately stop the Work in accordance with Paragraph 14.2.

13.8.5 Employee Background Checks
13.8.5.1 The Contractor shall be responsible for complying with the provisions of §22-10.3.3.B NMSA 1978, regarding employees’ having unsupervised access to students. In the event that §22-10.3.3.B NMSA 1978 applies, and upon prior approval by the Owner, reasonable costs for background checks shall be reimbursed without mark-up or fee.

13.9 Records
13.9.1 In the even of a dispute between Owner and Contractor, the Owner shall have right to discovery and access to and the right to examine any accounting or other records of the Contractor involving transactions and Work related to this Contract for three (3) years after Final Payment or after final resolution of any disputes, whichever is later. The conditions of this paragraph apply equally to Subcontractors and suppliers.

Article 14 TERMINATION OR SUSPENSION OF THE CONTRACT
14.1 Termination by the Contractor
14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of thirty (30) consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or any other persons or entities performing portions of the Work under the contract with the Contractor, for any of the following reasons:

1. issuance of an order of a court or other public authority having jurisdiction which requires all Work to be stopped;
2. an act of government, such as a declaration or national emergency which requires all Work to be stopped;
3. because the Design Professional has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
4. the owner has failed to furnish to the Contractor promptly, upon the Contractor's written request, reasonable evidence as required by Subparagraph 2.2.1.

14.1.2 The Contractor may terminate the Contract if, through no act or no fault of the Contractor or a Subcontractor or their agents or employees or any other persons or entities performing portions of the Work under contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Paragraph 14.3 constitute in the aggregate more than one hundred percent (100%) of the total number of days scheduled for completion, or one hundred twenty (120) days in any 365-day period, whichever is less.

14.1.3 If one of the reasons described in Subparagraph 14.1.1 or 14.1.2 exists, the Contractor may, upon seven (7) days written notice to the Owner and Design Professional, terminate the Contract and recover from the Owner payment for Work executed, including overhead and profit in accordance with Article 7 for Work performed, and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery excluding, overhead and profit.

14.1.4 If the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portion of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven (7) additional days written notice to the Owner and the Design Professional, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.3.

14.2 TERMINATION BY THE OWNER FOR CAUSE

14.2.1 The Owner may terminate the Contract if the Contractor:
   1. refuses or fails to supply enough properly skilled workers or proper materials;
   2. fails to make payment to Subcontractors for material or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
   3. disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction;
   4. disregards the authority of the Owner or Design Professional;
   5. fails after commencement of the Work to proceed day-to-day continuously with the construction and completion of the Work for more than ten (10) days, except as permitted under the Contract Documents;
   6. fails to maintain owner approved schedule or owner approved recovery schedule; and,
   7. otherwise is guilty of substantial breach of a provision of the Contract Documents.

14.2.2 When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety notice, as required by the surety bonds, if any, seven (7) days written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:
   1. take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
   2. accept assignment of subcontracts pursuant to Paragraph 5.4; and
3. finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

14.2.3 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Professional's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owners as the case may be, shall be certified by the Design Professional, upon application, and this obligation for payment shall survive termination of the Contract.

14.2.5 In carrying out the Owner's right to complete the Work in accordance with Paragraph 14.2, the Owner shall have the right to exercise the Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the Work.

14.3 SUSPENSION BY THE OWNER BY CONVENIENCE

14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Subparagraph 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

1. that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
2. that an equitable adjustment is made or denied under another provision of the Contract.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

1. cease operation as directed by the Owner in the notice;
2. take action necessary, or that the Owner may direct, for the protection and the preservation of the Work; and
3. except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and Purchase Orders.

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work completed.
SUPPLEMENTARY CONDITIONS

MODIFICATION TO GENERAL CONDITIONS
1.0 None (add any modifications to the General Conditions here):

ADDITIONAL CONDITIONS
2.0 Stated Allowances
2.1 The Contractor shall include the cash allowances listed in Section 00 4113 or Section 00 4166 – BID FORM in his Bid.
2.2 The Contractor shall purchase the "Allowed Materials" as directed by the Owner through the Architect/Engineer on the basis of the lowest and best bid of at least three competitive bids. Unless specified by the Construction Documents otherwise, if the actual price for purchasing the "Allowed Materials" is more or less than the "Cash Allowance," the Contract Price shall be adjusted accordingly (see Subparagraph 3.8.4). 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 total cost of installation of the "Allowed Materials" shall be included in the Base Bid or Alternates as appropriate.
INSTRUCTIONS:
The State Minimum Wage Rate Determination and related documents issued for this specific project shall be inserted on this page.

NOTE: Not required if project is less than $60,000 (effective June 17, 2005)
NOTICE OF AWARD

TO:                        DATE:

PROJECT: Mountain View Middle School Mechanical Upgrades
PROJECT NO. 083105-16-001
ITB (or RFP) REF NO.: 2016-018-FAC

Ladies and Gentlemen:

This letter is to advise you that the Rio Rancho Public Schools District has approved award of the construction contract to your firm for:

The Contract Price is as follows:

Three (3) counterparts of each of the proposed Contract Documents (except Drawings) will be provided to you by the District for execution. Three sets of the Drawings will be delivered separately or otherwise made available to you by the Design Professional of Record.

You must comply with the following conditions within ten (10) calendar days of the date of this Notice of Award, that is, by:

1. You must deliver to the Owner three fully executed counterparts of the Agreement, including all Contract Documents. Each of the Contract Documents must bear your signature on the appropriate page. Provide both your State of New Mexico and Federal Tax Identification Numbers on the signature page.

2. You must deliver with the executed Agreement; the Contractor’s Performance Bond, Labor and Material Payment Bond; Agent's Affidavit; Subcontractors List, amount of costs of Contractor’s Bonds and Subcontractors’ Bonds, evidence of DOL registration, evidence of CID licensure; Assignment of Antitrust Claims (required for the Contractor, all Subcontractors, and all Suppliers); Certificate of Insurance; State W-9; evidence of other bonds or documents as specified in the Bidding Documents; and, Schedule of Values; and,
3. Provide a complete list of all employees for the General Contractor, and all Subcontractors, who will work on the project jobsite. Additionally, background check forms (completed in full) shall be provided.

4. OTHER CONDITIONS PRECEDENT (if none, write none)

   None

Failure to comply with these conditions within the time specified will entitle the Owner to consider your bid abandoned, to annul this Notice of Award, and to declare your bid security forfeited.

Within thirty (30) days after you comply with these conditions, the Owner will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

You are reminded that prior to the first Payment Application, the Project Schedule will be required and prior to the second Payment Application, a schedule of submittals will be required.

By: ________________________________
   TOM WEEKS
   CHIEF PROCUREMENT OFFICER
   RIO RANCHO PUBLIC SCHOOLS DISTRICT

Distribution to:
☐ Contractor
☐ Design Professional of Record
☐ Purchasing Coordinator
☐ Project Manager
☐ Contract Specialist
TO:  DATE: 
PROJECT: Mountain View Middle School Mechanical Upgrades
PROJECT NO.: 083105-16-001
CONTRACT NO.: 

Ladies and Gentlemen:

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______________, unless modified by Change Order.

It is essential that you make reference to the above stated project number on all documents sent to the Design Professional from your office. These documents shall include correspondence, modification change requests (MCR’s), change orders, payment request statements, and all other project related material which you forward to the Design Professional for information and processing.

Before you may start any Work at the site, off the site or otherwise incur any expenses or liabilities, you shall have delivered all documents required by the Construction Documents to proceed any Work that include, but are not limited to, the Labor Material and Performance Bonds and Certificate of Insurance, Verification of Background checks, and you must have received a Purchase Order for the Work.

In addition, you must deliver (add any other requirements):

Prior to invoicing for Work, you must have delivered all documents required by the Construction Documents. Under no circumstances shall an invoice be received prior to Contract date or prior to approval of Schedule of Values.

In addition, you must (add any other requirements): Perform work using only workers that have cleared the Rio Rancho Public Schools background check process.

OWNER: RIO RANCHO PUBLIC SCHOOLS
500 LASER ROAD NE
RIO RANCHO, NM 87124

By: __________________________
ALFRED R. SENA
EXECUTIVE DIRECTOR FACILITIES

Distribution To:  
☐ Contractor  
☐ Design Professional of Record  
☐ Purchasing Coordinator  
☐ Project Manager  
☐ Contract Specialist
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CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to NMSA 1978, § 13-1-191.1 (2006), any person 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 of 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 fifty dollars ($250) over the two year period.

Furthermore, the state agency or local public body shall void an executed contract or cancel a solicitation or proposed award for a proposed contract 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.

THIS FORM 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 either 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.

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

“Person” means any corporation, partnership, individual, joint venture, association or any other private legal entity.

“Prospective contractor” means a person who is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person 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.

DISCLOSURE OF CONTRIBUTIONS:

Contribution Made By: ____________________________________________________________

Relation to Prospective Contractor: ________________________________________________

Name of Applicable Public Official: _______________________________________________

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) __________________________________________________________________________
CERTIFICATE OF FINAL COMPLETION

PROJECT NUMBER: 083105-16-001

CONTRACT DATE:

PROJECT NAME: Mountain View Middle School Mechanical Upgrades

SUBSTANTIAL COMPLETION DATE:

FINAL COMPLETION is defined, in accordance with Article 9 of the General Conditions, as the date certified by the Design Professional when all the Work of the Project is fully complete, the Close-Out requirements of Paragraph 9.10 of the General Conditions have been completed, the Contract fully performed in accordance with the Contract Documents, and the Contractor entitled to final payment.

The DESIGN PROFESSIONAL has inspected the Work and has determined that the Date of Final Completion was __________ , 20__.

DESIGN PROFESSIONAL:

By: ___________________________ Date: ____________

ONE YEAR INSPECTION: Approximately thirty days prior to the one-year anniversary of the Date of Substantial Completion, the Design Professional, the Owner, and the Contractor shall conduct an inspection of the Project to determine any correction of the Work which may be required at that time.

The CONTRACTOR certifies that the Work is fully completed and was completed on or before __________ , and submits herewith:

- Application for Final Payment (AIA G702 or equal)
- Affidavit of Payments (AIA G706 or equal)
- Consent of Surety (AIA G707 or equal)
- Release of Liens (AIA G706A or equal)

CONTRACTOR:

By: ___________________________ Date: ____________

The OWNER hereby accepts the Work as fully complete and will make final payment.

By: ___________________________ Date: ____________

Alfred R. Sena, Executive Director, Facilities
RIO RANCHO PUBLIC SCHOOLS

Distribution to:
- Design Professional of Record
- Contractor
- Purchasing Agent
- Project Manager
- Contract Specialist

CERTIFICATE OF FINAL COMPLETION

Certificate of Final Completion_RRPS-Revised 4.7.16.doc
NOT VALID UNTIL SIGNED BY THE OWNER(S). Signature of the Contractor indicates agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The Original Contract Sum was ................................................................. $.  
Net change by previously authorized Change Orders ........................................... $.  
The Contract Sum prior to this Change Order was ................................................. $.  
The Contract Sum will be increased/decreased/unchanged by this Change Order in the amount of ................................................................. $.  
The new Contract Sum including this Change Order will be ...........................................  

The Contract Time will be increased/decreased/unchanged by ___ days  
The date of Substantial Completion as of the date of this Change Order therefore is ________________.

Otherwise Parties agree by checking here [ ] ; that at the time of this Change Order, there is no agreement on adjustment to the Contract Time related to MCR(s) (List MCR’s by their number or write all in this Change Order). The Contractor, without prejudice and without waiving any rights to such claim for adjustment to Contract Time in relation to these MCR(s), agrees to postpone claim in accordance with Paragraph 7.3 of the General Conditions.

<table>
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<tr>
<th>MCR #</th>
<th>SHORT DESCRIPTION</th>
<th>DISTRICT AMOUNT</th>
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TOTAL

By: __________________________
Alfred R. Sena
DISTRICT REPRESENTATIVE
Date: ________________________

By: __________________________
(NAME of Signatory)
NAME OF CONSTRUCTION CO.
Date: ________________________
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New Mexico Applicant Processing Service (NMAPS)  
Process Overview for Electronic Fingerprinting

Registration:

All applicants must register prior to being fingerprinted. You must be fingerprinted within 90 days of registration. (Must use Internet Explorer, Google Chrome will not access site properly).

· The applicant must register with 3M Cogent at www.cogentid.com.

Choose New Mexico and then click Register Online for a Background Check.
Click on ORI LOOK UP, find RIO RANCHO PUBLIC SCHOOLS ORI# NM930071Z and double click on it. It will automatically populate the ORI# in the required section. Finish filling out the online registration completely. Check to ensure you see ORI# NM930071Z.

· After registration is complete, the applicant will receive a Registration ID Number. PLEASE RETAIN THIS NUMBER; IT IS NEEDED IN ORDER TO BE FINGERPRINTED.
· While online registration (www.cogentid.com) is the preferred registration method, telephone registration is also available: 1-877-99NMAPS (1-877-996-6277).

Fees & Payment:

Electronic fingerprint and background check fees are $44.00.

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<th>Payment Methods</th>
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<td>Online</td>
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<tr>
<td>· Credit/Debit Card</td>
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<tr>
<td>At the Fingerprint Site</td>
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<tr>
<td>· Money order/cashier’s check made out to 3M Cogent</td>
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<tr>
<td>· NO cash</td>
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<tr>
<td>· NO checks</td>
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</table>

Fingerprinting:

· Proceed to one of the authorized fingerprinting sites listed at www.cogentid.com > New Mexico > under User Information section > Fingerprint Location Map.
· Applicants may visit any fingerprinting location during any of the site’s scheduled fingerprinting hours. Check the website for hours.
· Once you have completed the online registration. Bring your Registration ID Number and a valid photo ID.
· If you are paying by money order, bring a money order made out to 3M Cogent.

Results:

· Background check results will be sent directly to RRPS.
· 3M Cogent does not have access to background check results, or make employment determinations.
· RRPS will contact the applicant when background check results are received and additional information is needed.
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In accordance with Sections 13-1-21 and 13-1-22 NMSA 1978 resident veterans businesses are to receive the following preferences:

1. Resident veterans businesses with annual revenues of $1M or less are to receive a 10% preference discount on their bids and proposals.

2. Resident veterans businesses with annual revenues of more than $1M but less than $5M are to receive an 8% preference discount on their bids and proposals.

3. Resident veterans businesses with annual revenues of more than $5M are to receive a 7% preference discount on their bids and proposals.

This preference is separate from the current instate preference and is not cumulative with that preference. However, veteran businesses will still receive the in state preference once the veteran’s preference cap is exceeded. This law applies to all departments, commissions, councils, boards, committees, institutions, legislative bodies, agencies, government corporations, educational institutions or officials of the executive, legislative or judicial branches of the government of the state or political subdivisions of the state and agencies, instrumentalities and institutions thereof, including two-year post-secondary educational institutions, school districts, local school boards and all municipalities, including home-rule municipalities.

The Taxation and Revenue Department (TRD) will be issuing a three (3) year certificate to each qualified business. Businesses are required to reapply to TRD every three (3) years with the proper documentation to renew their certificate.

All public solicitations must contain the attached “Resident Veterans Preference Certification”.

All requests for proposals (RFP’s) must contain the following statement in the Evaluation and Points Summary:
New Mexico Business Preference

Points will be awarded based on Offerors ability to provide a copy of a current Resident Business Certificate or Resident Veterans Certificate.

In addition, the attached certification form must accompany any RFP and any business wishing to receive a resident veteran’s preference must complete and sign the form.

RFP’s are to be evaluated on preference as follows:

In addition to the total points on an RFP, 10% must be added for preference award. For example; an RFP has a total value of 1000 points. Five proposals are received; one from a resident business, one from a resident veterans business with an 8% preference and three non-resident businesses. The two preference businesses would receive 50 points and 80 points to their already evaluated score, making it possible for the highest score total 1080.

“I agree to submit a report, or reports, to the State Purchasing Division of the General Services Department declaring under penalty of perjury that during the last calendar year starting January 1 and ending on December 31, the following to be true and accurate:

“In conjunction with this procurement and the requirements of this business’ application for a Resident Veteran Business Preference/Resident Veteran Contractor Preference under Sections 13-1-21 or 13-1-22 NMSA 1978, when awarded a contract which was on the basis of having such veterans preference, I agree to report to the State Purchasing Division of the General Services Department the awarded amount involved. I will indicate in the report the award amount as a purchase from a public body, or as a public works contract from a public body, as the case may be.

“I understand that knowingly giving false or misleading information on this report constitutes a crime.”

I declare under penalty of perjury that this statement is true to the best of my knowledge. I understand that giving false or misleading statements about material fact regarding this matter constitutes a crime.

This policy is effective July 1, 2012. Procurements involving federal funds are excluded from in state preference laws.

[Signature]

Lawrence O. Maxwell
State Purchasing Agent
Resident Veterans Preference Certification

__________________________________________ (NAME OF CONTRACTOR) hereby certifies the following in regard to application of the resident veterans’ preference to this procurement:

Please check one box only

☐ I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is less than $1M allowing me the 10% preference discount on this solicitation. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

☐ I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is more than $1M but less than $5M allowing me the 8% preference discount on this bid or proposal. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

☐ I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is more than $5M allowing me the 7% preference discount on this bid or proposal. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

“"I agree to submit a report, or reports, to the State Purchasing Division of the General Services Department declaring under penalty of perjury that during the last calendar year starting January 1 and ending on December 31, the following to be true and accurate:

"In conjunction with this procurement and the requirements of this business’ application for a Resident Veteran Business Preference/Resident Veteran Contractor Preference under Sections 13-1-21 or 13-1-22 NMSA 1978, when awarded a contract which was on the basis of having such veterans preference, I agree to report to the State Purchasing Division of the General Services Department the awarded amount involved. I will indicate in the report the award amount as a purchase from a public body or as a public works contract from a public body as the case may be.

"I understand that knowingly giving false or misleading information on this report constitutes a crime.”

I declare under penalty of perjury that this statement is true to the best of my knowledge. I understand that giving false or misleading statements about material fact regarding this matter constitutes a crime.

__________________________________________ (Signature of Business Representative)*
__________________________________________ (Date)

*Must be an authorized signatory for the Business.

The representations made in checking the boxes constitutes a material representation by the business that is subject to protest and may result in denial of an award or unaward of the procurement involved if the statements are proven to be incorrect.
SECTION 01 1000

SUMMARY

***** The Design Professional shall include the following requirements as noted and complete this section with information for the specific project in coordination with PSFA Section 00 7200 - General Conditions*****

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Contractor use of site.
   2. Definitions.
   3. Abbreviations.

B. Related documents and sections:
   1. Document 00 7200 - General Conditions of the Contract
      a. [Article 2]: Basic responsibilities and rights of Owner.
      b. [Article 3]: Basic responsibilities of Contractor.
      c. [Article 6]: Owner's right to award separate contracts.
   2. Section 01 2300 - Alternates: Alternates which [decrease or] increase scope of Project.

1.2 CONTRACTOR USE OF SITE

A. Existing building and site will be partially occupied during construction. Cooperate with Owner to minimize conflict and to facilitate Owner's operations during regular and after-hours use.

B. Contractor will have restricted use of site to allow Owner to conduct normal operations.
3. Access to site by trucks, equipment, and automobiles: Limited to route and entrances designated in Section 01 5000 - Temporary Facilities and Controls. Schedule construction traffic and material deliveries to site during time periods coordinated in advance with Owner.

2. On-site construction vehicle and equipment traffic shall be limited to pathways, areas and time periods approved in advance by Owner to ensure safe site conditions. Special care shall be taken during change of class periods, student arrival/departure times and around playgrounds, bus zones and established student pathways. The Contractor shall strictly maintain close communication with designated school representative(s) on matters of on-site construction traffic scheduling and promptly inform them in advance of any significant changes to related pre-authorized arrangements. Do not proceed with altered arrangements prior to designated school representative(s) approval.

3. Parking: Contractor and work force [shall not use] [may use Owner-designated portions of] existing parking lots. [Do not interfere with Owner's parking requirements.]

4. Unless otherwise agreed to in advance by Owner, construction shall be performed only during these time periods:
   a. Normal working hours.

5. Construction activities shall be limited to areas of actual construction. Unless otherwise agreed to in advance by Owner, restrict workmen from entering adjacent restricted areas:

6. Existing student and staff toilet rooms are off-limits to Contractor unless they are not available for use by the school due to the approved schedule of work.

C. Contractor shall make arrangements with Owner to secure any keys necessary for access to existing building and site areas so that the work can be performed. The Contractor assumes sole responsibility for the security and use of school keys obtained from the Owner and shall not reproduce them nor lend them out during the progress of the work.

1.4 CONTRACTOR’S PERSONNEL JOBSITE RESTRICTIONS

A. Contractor shall enforce the following requirements on his entire workforce throughout the progress of the Work:

1. All personnel on site, directly or indirectly in the employ of Contractor, are restricted from any interaction with any Owner, Owner’s staff, students, or other
members of the public while on, or adjacent to Owner’s property except through jobsite meetings conducted by the Design Professional and the Owner or as otherwise determined by the Owner.

2. Contractor’s personnel shall remain in their designated work areas. Communications with any non-project related persons on or near the site shall be through Project Superintendent.

3. No firearms or other types of weapons, of any sort are allowed on site. If member of the Contractor’s workforce is found to be in possession of a firearm, of any kind, they will be directed to leave immediately and will not be allowed to return. This includes firearms found in company or private vehicles, tool boxes, or brought on site in any other manner;

4. Smoking is prohibited on any occupied school campus. Smoking shall be limited to designated areas on a new, or un-occupied, site, if allowed in advance by Owner.

5. There shall be no use, possession, sale, and distribution of alcohol, drugs, or other controlled substances on its premises. The Contractor shall also prohibit the presence of an individual with such substances in their body from the workplace.

6. Any employee who is found in violation of requirements of these restrictions, or of any others within the Contract Documents, or who refuses to permit inspection shall be barred from the Project site at the discretion of the Owner in accordance with Subparagraph 13.8.4.1 of the General Conditions.

7. Comply with Owner’s procedures for individual visual identification of Contractor’s workforce on school site and in occupied areas. If identification badges are required make sure that they are worn at all times on site during the work.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION
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SECTION 01 3100

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. General requirements for coordination of Work.

2. Field engineering.

3. Requirements for participation in and administration of:
   a. Pre-construction conference.
   b. Progress meetings.
   c. Pre-installation conferences.

4. Progress schedule.

B. Related documents and sections:

1. Document 00 0700 – General Conditions
   a. Paragraph 3.10 – Contractor’s Schedules, Logs, Meetings, and Reports

2. Document 00 2113 - Instructions to Bidders: Pre-Bid Conference.

3. Section 01 1000 - Summary: Work by others.

4. Section 01 4000 – Quality Requirements: Coordination with Owner’s project
   roof observer.

5. Section 01 1500 – Temporary Facilities and Controls

1.2 SUBMITTALS

A. Provide in accordance with Section 01 3300 - Submittal Procedures:

1. Site mobilization plan (See Section 01 1500 and Paragraph 3.13 in Document 00
0700 – General Conditions).

a. Submit for Owner’s approval prior to start of Work.

b. Update as necessary during progress of Work to adjust for changed conditions and as approved by Owner.

2. Coordination drawings:

b. Provide where coordination is critical for installation of components fabricated off site and where space is limited and maximum utilization of space is required.

c. Show relationship and integration of components and construction entities, required installation sequence, dimensions, and tolerances.

B. Staff assignment list and emergency contact information:

1. Prior to Pre-Construction Conference, provide to Design Professional a list of Contractor's principal staff assignments for Project. Indicate names, duties and responsibilities, addresses, emergency contact information and telephone numbers. Include resume of proposed Project Superintendent showing prior experience as superintendent on projects of similar size and scope. Naming more than one Project Superintendent to be in charge depending which is present at the site will not be acceptable. Design Professional shall be informed in writing prior to any proposed change in Project Superintendent during the progress of the Work. See also Paragraph 3.9 of the General Conditions.

2. Distribute contact information and post in field office coordination.

1.3 GENERAL COORDINATION REQUIREMENTS (See Article 3 in General Conditions).

A. Scheduling: Coordinate scheduling, submittals and work of various specification sections to ensure efficient and orderly sequence of installation of interdependent construction elements. Ensure that work of one specification section is not installed in such a manner as to limit, preclude, or restrict work of another section.

B. Coordinate completion and clean up of work of separate specification sections in preparation for final inspection specified in Section 01 7700 - Closeout Procedures.

C. After acceptance of Work, coordinate access to facility for required maintenance,
monitoring, adjusting, and correcting deficiencies to manner to minimize disruption of Owner's activities.

D. Coordinate with Owner regarding work of Owner’s forces and separate contractors. Ensure coordination of such work with Project Schedule.

1.4 FIELD ENGINEERING

A. Existing control datum for field engineering is indicated on Drawings.

B. Locate or establish survey control and reference points prior to starting site construction. Protect points during construction and record locations with horizontal and vertical data on Project Record Documents in accordance with Section 01 7800 - Closeout Submittals.

C. Prior to start of construction, verify location of control points and layout information on Drawings relative to property, setback, and easement lines.

D. Provide competent field engineering services. Establish elevations, lines, and levels utilizing recognized engineering survey practices. Periodically verify layouts.

E. Promptly replace dislocated control and reference points based on original survey control.

1.5 PROJECT COMMUNICATIONS SYSTEM (CIMS)

A. Utilize PSFA – CIMS for project communications. Refer to Document 00 7200 – General Conditions. Subparagraph 4.2.4.3.

B. Arrange with Owner as necessary to obtain PSFA - CIMS training for Contractor’s principal staff on Project.

1.6 PRE-CONSTRUCTION CONFERENCE

A. Conference will be held after execution of the Agreement and prior to issuance of Notice To Proceed. Time and location will be coordinated with Owner and Design Professional. Meet at the site or other location convenient to all parties.

B. Attendance: Owner, school principal or other designated school representative, Design Professional, consultants, Contractor, and major subcontractors and suppliers.

C. Agenda:
   1. Distribution of Contract Documents.
2. Designation and description of roles of responsible personnel representing Owner, Contractor, and Design Professional.


4. Site mobilization plan, use of premises by Contractor and Owner, Owner's occupancy requirements, work hours, regular school schedule and special school schedule considerations.

5. Construction schedule, work sequence, and delivery priorities.

6. Weekly job meeting schedule.

7. Owner’s right to salvage.

8. Presentation and discussion of site mobilization plan specified in Section 01 50 00 - Temporary Facilities and Controls.

9. Construction facilities, controls, and temporary utilities.

10. Procedures for processing submittals, applications for payment, substitution requests, field decisions and communications, and contract modifications.

11. PSFA - CIMS


15. Procedures for spotting of utility lines [by Owner’s forces].

16. Procedures for maintaining project record documents.

17. Requirements for start up of equipment.


19. Introduce Owner’s separate contractors and consultants.

20. Inspection and acceptance of equipment put into service during construction.


22. Emergency contact information.
23. Other pertinent items.

1.7 PROGRESS MEETINGS

A. Refer to Document 00 7200 General Conditions – Paragraph 3.10 for requirements.

1.8 PRE-INSTALLATION CONFERENCES

A. When required by an individual specification section, convene a pre-installation conference at site.

B. Require attendance of entities directly concerned with item of work.

C. Notify Design Professional 4 days in advance of meeting.

D. Prepare agenda and preside at conference. Record minutes, and distribute copies within 3 days to participants and Design Professional.

E. At meeting, review conditions of installation, preparation and installation procedures, and coordination with related work.

1.9 PROGRESS SCHEDULE

A. See Paragraph 3.10 in the General Conditions for requirements.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Verify utility requirements and characteristics of equipment are compatible with facility utilities. Coordinate work of various specification sections having interdependent requirements for installing, connecting to, and placing in service such equipment.

PART 3 - EXECUTION

3.1 COORDINATION WITH INSTALLED CONSTRUCTION

A. Cutting and patching of installed construction shall be accomplished in accordance with Section 01 7000 - Execution Requirements.

END OF SECTION
SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes submittal procedures for:

1. Shop drawings.
2. Product data.
3. Samples.
4. Manufacturer's instructions.
5. Design data and calculations.
6. Manufacturer's certificates.
7. Reports for testing, inspecting, and demonstrating.
   1. HVAC & controls construction checklists
   2. Equipment inventory and roofing data collection forms.

B. Related documents and sections:

1. Document 00 7200 - General Conditions, [Paragraph 3.12]: Contractor's responsibilities regarding submittals.
2. Section 01 3100 - Project Management and Coordination: Submittal of Progress Schedule and coordination drawings.
3. Section 01 4000 - Quality Requirements: Manufacturers' field services and reports.
2. Section 01 6300 - Product Substitution Procedures: Submittal of substitution requests.
3. Section 01 7800 - Closeout Submittals: Submittal of project record drawings, operation and maintenance manuals, warranties, certifications of inspection,
extra materials, and other closeout submittals.

7. Section 01 7801 – Equipment Inventory and Roofing Data Collection: Collection and submittal of data required by Owner for equipment and roof system(s) installed under the Contract.

8. Refer to individual specification sections for unique submittal requirements related to a specific product, system, or procedure.

1.2 HVAC & CONTROLS CONSTRUCTION CHECKLISTS

A. Submission:

1. Submit the checklists prior to TAB work as required by Division 23.

2. Submit reports as required by Division 23.

B. Form:

1. Bind with titled cover in folder, plastic binder, or three ring binder as appropriate for quantity of material.

C. Reports shall include:

a. Completion of all required checklist items.

b. Names of persons performing activity.

1.3 EQUIPMENT INVENTORY AND ROOFING DATA COLLECTION FORMS

A. Submission:

1. Submit completed forms for all categories of equipment and roofing installed under the Contract, and as required in Section 01 7801 – Equipment Inventory and Roofing Data Collection.

2. Submit forms at Project Closeout and as required by Section 01 7801.

B. Form:

1. Use electronic forms as required in Section 01 7801 and provided by PSFA on its web site at www.nmpsfa.org (“Maintenance Portal” page). for each type of equipment to be inventoried.
PART 2 - PRODUCTS
Not used.

PART 3 - EXECUTION
Not Used.

END OF SECTION
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SUBMITTAL TRANSMITTAL FORM

The undersigned, as Contractor for the above project, submits the following and certifies that submittal has been reviewed and it conforms with requirements of Contract Documents except as noted.

SUBMITTAL NUMBER: ___________________________  ____ RESUBMITTAL: YES  NO

DATE: ___________________________  NUMBER OF COPIES SUBMITTED: ________

DESCRIPTION: ______________________________________________________________________

ASSOCIATED SPECIFICATION SECTION NO: __________________________________________

REFERENCED DRAWING SHEET NO: _________________________________________________

NAME OF SUBCONTRACTOR/SUPPLIER: ____________________________________________

SUBMITTED
BY: ____________________________________  DATE: ______________________

SIGNATURE: _________________________________________________________________

DATE RECEIVED BY DESIGN PROFESSIONAL: ________________________________

DISTRIBUTED TO:
OWNER   CIVIL   LANDSCAPE   STRUCTURAL   MECHANICAL   ELECTRICAL
OTHER: ___________________________________________________________________

ACTION:     No exceptions taken    [   ]
             Make corrections noted   [   ]
             Revise and resubmit     [   ]
             Rejected        [    ]

COMMENTS:
______________________________________________________________________________

Submittal review corrections and comments by Design Professional do not relieve Contractor from compliance with Contract Documents. Review is only for general conformance with design concept and general compliance with information given in Contract Documents. Contractor is responsible for verifying dimensions, selecting fabrication processes and techniques of construction, coordination with other trades, and performing work in safe and satisfactory manner.

REVIEWED BY: ___________________________________  DATE: ________________

SIGNATURE: _________________________________________________________________
SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Installation quality control.
2. Reference standards.
4. Field samples.
5. Inspection and testing laboratory services.
6. Manufacturer's field services and reports.
7. 

B. Related requirements:

1. Document 00 7200 - General Conditions:
   a. Paragraph 3.3: Contractor's supervision and construction procedures.
   b. Subparagraph 2.2.4: Owner’s responsibilities for testing and inspections.
   c. Article 12: Contractor's responsibility for uncovering and correction of work.
   d. Paragraph 13.5: Requirements for tests and inspections.
2. Section 01 3100 – Project Management and Coordination: Requirements for coordination with Owner’s separate contractors.
3. Section 01 6000 - Product Requirements: Requirements for material and product quality.
1.2 INSPECTION AND TESTING LABORATORY SERVICES

A. Unless required otherwise in the Contract, Owner shall appoint, employ, and pay for services of an independent firm to perform routine inspections and compliance for:

   1. Other materials, components, and systems where routine testing to determine compliance with Contract Documents is required. See Article 2.2 of the General Conditions

B. Testing firm shall perform inspections, tests, and other services specified in individual specification sections and as required.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION
SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Site mobilization plan.
   2. Temporary services: Electrical, lighting, heating, ventilating, water, telephone, and facsimile.
   3. Fencing, barriers, and other temporary controls.
   4. Temporary erosion and sediment controls including NPDES-SWPPP requirements.
   5. Construction facilities: Temporary buildings, sanitary facilities, access, and parking.
   6. Protection of Work and existing facilities.
   7. Project sign.

B. Related documents and sections:
   1. Document 00 7200 - General Conditions:
      b. Paragraph 3.15: Contractor's responsibility for cleaning.
      c. Article 10: Safety precautions and programs.
   2. Section 01 3100: Project Management and Coordination
   2. Section 01 7000 - Execution Requirements: Progress cleaning.

1.2 REFERENCES
A. NFPA 10 - Standard for Portable Fire Extinguishers.


1.3 SITE MOBILIZATION PLAN

A. Coordinate locations for temporary facilities with Design Professional and Owner.

B. Based upon information indicated on Drawings, prepare site mobilization plan in accordance with requirements for site logistics plan in Subparagraph 3.13.14 in Document 00 7200 General Conditions.

C. Present 3 copies of plan at Pre-Construction Conference in accordance with Section 01 3100 - Project Management and Coordination.

D. Prior to mobilization, revise and resubmit to Design Professional site mobilization plan incorporating final revisions made at Pre-Construction Conference and approved by Design Professional and Owner.

1.4 TEMPORARY ELECTRICITY

A. Connect to existing power source at site. Do not disrupt Owner's need for continuous service. Provide service disconnect and overcurrent protection. Provide temporary feeder as required. Owner will pay cost of electricity used. Exercise measures to conserve power.

B. Provide power outlets for construction operations with branch wiring, distribution boxes, and flexible power cords as required.

C. Permanent convenience receptacles may be utilized during construction.

1.5 TEMPORARY LIGHTING

A. Provide lighting for construction operations in accordance with Paragraph 3.13 in the General Conditions. Lighting levels shall be appropriate for type and difficulty of work. Use these minimums as guidelines:

B. After dark, provide security lighting for interior and exterior work and storage areas.

C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
D. Maintain lighting and provide routine repairs.

E. Permanent building lighting may be utilized during construction. Document existing lighting system conditions at start of Work and submit report to Design Professional for approval before Work begins. Re-lamp, replace, or repair existing fixtures at end of job to return lighting to conditions documented prior to commencement of Work.

1.6 TEMPORARY HEATING AND VENTILATING

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, and gases.

B. Provide temporary fan units to maintain clean air for construction operations.

C. Maintain minimum ambient temperature of 50 degrees F in interior areas where construction is in progress.

D. Use Owner's existing HVAC system to maintain specified conditions. Owner will pay cost of energy used. Exercise measures to conserve energy.

E. If Owner’s existing HVAC system is temporarily insufficient or inoperable due to the Work, provide and pay for supplemental heating devices needed to maintain specified conditions and in such a manner as to prevent damage to existing building and systems.

F. Change all HVAC filters in existing system serving area of Work at end of Project.

1.7 TEMPORARY WATER SERVICE

A. Connect to existing water source at site for construction operations.

A. Assume responsibility for temporary connections and water lines. Upon completion, remove temporary facilities.

1.8 COMMUNICATIONS

A. Provide, maintain, and pay for telephone service to field office. School telephones will not be available to Contractor’s workforce unless for an emergency.

B. Provide, maintain, and pay for facsimile service to field office.

1.9 FENCING

A. Provide temporary fencing around new building and materials storage site.
Completely separate construction from existing facilities, student pathways and related exterior areas.

B. Type: Panelized 6 foot high commercial grade chain link fence. Equip with vehicular and pedestrian gates with locks.

1.10 BARRIERS AND PROTECTION

A. Security: Provide to protect Work [and existing facilities] from unauthorized entry, vandalism, and theft. [Coordinate with Owner's security program and personnel.]

B. Barriers: Provide to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from construction operations.

C. Barricades and covered walkways: As required by Design Professional, Owner and governing authorities for safe public access to existing buildings.

D. Enclosures: Provide temporary, insulated, weather tight closures of exterior openings to provide acceptable working conditions, protect Work, and prevent unauthorized entry. Fit with lockable doors.

E. Temporary partitions: Provide to separate work areas from [existing building at point of connection.] [completed Work.] Prevent penetration of dust and moisture into [existing] [completed portions of] building.

F. Emergency exits shall be maintained during construction. Provide separate barriers as appropriate.

G. Protect existing detection devices such as smoke detectors and sensors from construction dust.

H. Protect existing trees and plants designated to remain. Replace damaged plant material.

I. Hand-water existing trees, plants [and grass] as necessary to maintain them viable in the event that existing irrigation system is made temporarily inoperable due to the Work. Replace dead plant material as required in the event of failure to comply with this provision.

1.11 PROTECTION OF EXISTING AND INSTALLED WORK

A. Protect installed Work. Control activity in immediate work area.

B. Provide temporary and removable protection for installed products.
C. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, and movement of heavy objects with durable sheet materials.

D. Prohibit traffic and storage on roof surfaces and landscaped areas.

### 1.12 TEMPORARY FIRE PROTECTION

A. Install and maintain temporary fire protection components. Establish and follow procedures to protect against fire losses. Comply with NFPA 241.

B. Fire extinguishers: Provide hand carried, portable, UL rated fire extinguishers of type and size recommended by NFPA 10 for building exposure conditions. Place in accessible, convenient locations in clear view with a minimum of one extinguisher per floor.

C. Access: Maintain unobstructed access to fire hydrants, water supply, fire extinguishers, stairways, and access routes for fighting fires.

D. Heating devices: Exercise care and monitor use of temporary heaters to minimize fire risk.

E. Store combustible materials in fire-safe containers.

F. Volatile products: Do not store paints, varnishes, paint removers, solvents, adhesives, cleaning rags, and other volatile products in building. Take precautionary measures to prevent fire hazards and spontaneous combustion.

G. Cutting and welding: Approve in advance use of open flame cutting, welding, and soldering equipment. Ensure that safe conditions exist before granting approval.

### 1.13 ACCESS

A. Refer to Drawings for location of acceptable access routes and site entrances. Protect existing curbs and walks traversed by construction vehicles from damage.

B. Identify access to Contractor's work and office area with appropriate signs so that delivery personnel and others may contact Contractor. **School office shall not be used as destination for Contractor’s deliveries.**

C. Prevent unauthorized personnel from accessing school building or site through Contractor's work area.
1.15 FIELD FACILITIES

A. [Provide and maintain a weathertight, fully equipped field office.] [Provide work station for use of Design Professional during field inspections.]

B. Provide space for project meetings with table and chairs to accommodate 6 persons.

C. Provide and maintain storage sheds and other facilities as required.

D. Arrange for parking for work force in manner approved by Owner. [Do not limit Owner's requirements for parking.]

1.16 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required sanitary facilities for work force.

B. New and existing toilet facilities shall not be used by work force.

1.17 DRINKING WATER

A. Provide independent source of drinking water for workforce. School drinking fountains shall not be routinely available for Contractor’s use.

1.18 PROJECT SIGNS

A. PSFA Construction Sign. See Section 01 5001.

1. Furnish project sign and erect on site at location designated by Design Professional.

2. Construction: 4 by 5 feet constructed of 3/4 inch exterior plywood bolted to 4 by 4 inches treated wood posts.

3. Sign shall be prepared by professional sign painter using either painted exhibit lettering or die cut adhesive applied letters.

4. Design, style and proportional sizes of lettering, color, and text shall be as shown in Section 01 5001.

5. Allow no other signs to be displayed without approval of Design Professional or as required by Owner.
1.18 BULLETIN BOARD

A. Furnish and maintain bulletin board adjacent to field office. Display the following throughout construction period:

1. State wage rates.
2. Safety requirements.
3. Official notices and announcements.

1.19 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above grade and buried utilities, equipment, facilities, and excess materials prior to final inspection.

B. Clean and repair damage caused by installation of temporary facilities.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

[(PROJECT SIGN DRAWINGS FOLLOW)]
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STATE OF NEW MEXICO
Governor Susana Martinez

CAPITAL IMPROVEMENTS

DISTRICT: 
SCHOOL: 

FUNDED BY THE NEW MEXICO PUBLIC SCHOOL CAPITAL OUTLAY COUNCIL
VISIT: WWW.NMPSFA.ORG

ADMINISTERED BY THE NEW MEXICO PUBLIC SCHOOL FACILITIES AUTHORITY
PH: 505-988-5989

Your Tax Dollars at Work as Appropriated by Your State Legislature!

SIGN DIMENSIONS: 4’ W x 5’ L
Yellow: Dunn-Edwards DEA117
Red: Dunn-Edwards DEA104
White: Dunn-Edwards DEW380

01 5001-1
SECTION 01 6300

PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for product options and substitution procedures.

B. Related documents and sections:

1. Section 00 7200 General Conditions:
   a. Paragraph 3.4 – Labor and Materials

1.2 SUBSTITUTIONS

A. During bidding, Design Professional will consider written requests from qualified bidders, subcontractors, and manufacturers for substitutions.

2. Submit separate request for each substitution with Form 01 6301 - Prior Approval Substitution Request Form. Copy of form follows this Section.

3. Submit substitution request in accordance with procedures and time limitations stated in Document 00 2113 - Instructions to Bidders.

4. Substitutions approved during bidding will be listed in Addenda.

B. After Contract award:

1. After signing of Agreement Between Owner and Contractor, Design Professional will consider written requests for substitutions in accordance with Subparagraph 3.4.2 of the General Conditions.

2. Submit separate request for each substitution with Form 01 6302 - Contractor Substitution Request Form. Copy of form follows this Section. Provide data documenting need for substitution and substantiating compliance of proposed product with Contract Documents. Include proposed changes to contract amount and time if substitution is accepted.
PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION - FORMS FOLLOW
PRIOR APPROVAL SUBSTITUTION REQUEST FORM

The undersigned, qualified bidder, subcontractor, manufacturer, or supplier requests that the following product be accepted for use in the Project

PRODUCT: ________________________________________________________________
MODEL NO.: ______________________________________________________________
MANUFACTURER: _________________________________________________________
ADDRESS: _________________________________________________________________

The above product would be used in lieu of

PRODUCT: ________________________________________________________________

specified in

SECTION: __________________________________________________________________
PARAGRAPH: __________________________________________________________________

Attached are the following circled items:

1. Product description including specifications, performance and test data, and applicable reference standards.

2. Drawings.

3. Photographs.

4. Samples.

5. Tabulated comparison with specified product.

6. For items requiring color selections, full range of manufacturer's color samples.

7. Other: ___________________________________________________________________
The undersigned certifies that the following statements are correct. Explanations for all items which are not true are attached.

1. Proposed substitution has been thoroughly investigated and function, appearance, and quality meet or exceed that of specified product. TRUE  FALSE

2. Same warranty will be provided for substitution as for specified product. TRUE  FALSE

3. No aspect of Project will require re-design. TRUE  FALSE

4. Use of substitution will not adversely affect:
   a. Dimensions shown on Drawings. TRUE  FALSE
   b. Construction schedule and date of completion. TRUE  FALSE
   c. Work of other trades. TRUE  FALSE

5. Maintenance service and replacement parts for proposed substitution will be readily available in [Las Cruces] [El Paso] [Roswell] [Albuquerque] [Southern New Mexico] [Northern New Mexico] [_____] area. TRUE  FALSE

6. Proposed substitution does not contain asbestos in any form. TRUE  FALSE

Submitted By:

COMPANY: _______________________________________________________________
ADDRESS: _______________________________________________________________
TELEPHONE NUMBER: ______________________________________________________
NAME OF PERSON SUBMITTING REQUEST: ______________________________
TITLE: _________________________________________________________________
DATE: ___________________________________________________________________
CONTRACTOR SUBSTITUTION REQUEST FORM

The undersigned, as Contractor for the above Project, requests that the following product be accepted for use in the Project

PRODUCT: ________________________________________________________________
MODEL NO.: ______________________________________________________________
MANUFACTURER: _________________________________________________________
ADDRESS: _________________________________________________________________

The above product would be used in lieu of

PRODUCT: ________________________________________________________________
specified in

SECTION: ________________________________________________________________
PARAGRAPH: _____________________________________________________________

Reason for substitution request: ______________________________________________

Attached are the following circled items:

1. Product description including specifications, performance and test data, and applicable reference standards.
2. Drawings.
3. Photographs.
4. Samples.
5. Tabulated comparison with specified product.
6. For items requiring color selections, full range of manufacturer's color samples.
7. Documentation of reason for request.
8. Cost data for comparing proposed substitution with specified product.

9. Other: ______________________________________________________________

The undersigned certifies that the following statements are correct. Explanations for all items which are not true are attached.

1. Proposed substitution has been thoroughly investigated and function, appearance, and quality meet or exceed that of specified product.  TRUE  FALSE

2. Same warranty will be provided for substitution as for specified product.  TRUE  FALSE

3. No aspect of Project will require re-design.  TRUE  FALSE

4. Use of substitution will not adversely affect:
   a. Dimensions shown on Drawings.  TRUE  FALSE
   b. Construction schedule and date of completion.  TRUE  FALSE
   c. Work of other trades.  TRUE  FALSE

5. Maintenance service and replacement parts for proposed substitution will be readily available in [Las Cruces] [El Paso] [Roswell] [Albuquerque] [Southern New Mexico] [Northern New Mexico] [_____] area.  TRUE  FALSE

6. Proposed substitution does not contain asbestos in any form.  TRUE  FALSE

7. All changes to Contract Sum related to use of proposed substitution are included in price listed below. Contractor waives claims for additional costs related to acceptance of substitution which may subsequently become apparent.  TRUE  FALSE

8. Costs of modifying project design caused by use of proposed substitution which subsequently become apparent will be paid for by Contractor.  TRUE  FALSE

If substitution request is accepted:

Contract Sum will be [decreased] [increased] by $ _____________________________
Contract Time will be [decreased] [increased] by ______________________________
calendar days.

Submitted By:

CONTRACTOR: ________________________________________________________

ADDRESS: _____________________________________________________________

TELEPHONE NUMBER: _________________________________________________

NAME OF PERSON SUBMITTING REQUEST: ______________________________

TITLE: ________________________________________________________________

DATE: ___________________________________________________________________
SECTION 01 7000
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Basic requirements for examination, preparation and installation.

2. Requirements and limitations for cutting and patching incidental to work, including excavation and backfilling, and as required making several parts fit together.

3. Progress cleaning.

B. Related documents and sections:

1. General Conditions:
   a. Paragraph 3.13: Contractor's responsibilities regarding use of the site.
   b. Paragraph 3.14: Contractor's responsibilities regarding cutting and patching operations.
   c. Article 12: Uncovering and correction of work.

2. Section 01 5000 - Temporary Facilities and Controls: Temporary barriers and enclosures.

3. Section 01 7700 - Closeout Procedures: Final cleaning.

[4. Section 02 4120 - Selective Demolition: Minor demolition required to accommodate new construction and renovation.]

[3. Section 07 9000 - Joint Protection: Sealing of conduits, piping, and other items penetrating structure.]

1.2 LOCATION OF UNDERGROUND UTILITIES

A. The Contractor shall arrange for all spotting of lines by utility companies in advance
of any excavation work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Patching and replacement materials: Those used for original installation.

B. Product substitutions: For any proposed change in patching materials, submit request for substitution in accordance with Section 01 6300 - Product Substitution Procedures.

PART 3 - EXECUTION

3.1 ROOF PENETRATIONS

A. Existing roofing: The existing roof is under warranty. Contractor to employ roof contractor certified by manufacturer of roof system, make required inspections and notifications, and perform cutting and patching as required to ensure warranty is not violated. Protect building interior during operations and return roof to weathertight condition after the work is performed.

B. Copy of roof Warranty follows.

END OF SECTION
LIMITED WARRANTY FOR COMMERCIAL BUILDING

Building Owner: RIO RANCHO PUBLIC SCHOOLS
Building: EAGLE RIDGE MIDDLE SCHOOL
Location: 800 FRUTA ROAD NE, RIO RANCHO, NM
Warranty Effective Date (Substantial Completion): 12/23/2010
Date Warranty Terminates: 12/23/2030
Approved By: KEVIN WELTER

DOW ROOFING SYSTEMS ("DRS") warrants to the Building Owner, ("Owner"), of the building described above, that subject to the terms, conditions, and limitations stated herein, DRS will repair any leaks in the DOW Roofing System ("Roofing System") installed by a DRS Authorized Roofing Appraiser for a period of 20 years commencing with the date of the substantial completion (Warranty Effective Date) and acceptance of the Roofing System by DRS, (except as stated in paragraph No. 6).

TERMS, CONDITIONS, LIMITATIONS

1. DRS shall have no liability hereunder unless Owner shall first provide DRS with a written notice of leaks in the roofing system within 30 days of the discovery thereof. In all cases, such notice must be delivered to DRS warranty services department at the above stated address.

2. If, upon DRS inspection, DRS determines that such leaks must be repaired, but are caused by defects in the DRS Roofing systems, such repairs shall be at the expense of the Owner. DRS reserves the right to repair the defect as determined by DRS in its discretion. In such cases, subject to the limitations set forth herein.

3. This Warranty shall not be applicable, if, in the sole judgement of DRS any of the following shall occur:
   (a) The Roofing System is damaged by natural disasters, including, but not limited to, lightning, hurricanes, tornadoes, and earthquakes, or wind of peak gust speed of over 72 mph measured 10 meters above the ground, or
   (b) The Roofing System is damaged by any acts of negligence, accidents, or misuse, including, but not limited to vandalism, civil disobedience, or acts of war, or
   (c) Metal work, drain inserts, or other material not furnished by DRS are used in the Roofing System and causes leaks, or
   (d) Determination or failure of building components, including, but not limited to framing system, roof decks, mortar substrate, HVAC units, existing roof systems, or causes and causes leaks, or
   (e) The Owner refuses to pay any or all reasonable charges of DRS to repair or respond to a leak call and/or to repair said leak when the cause of the leak is not covered under this warranty.

4. This Warranty shall be null and void, if, in the sole judgement of DRS, any of the following shall occur:
   (a) If, after installation of the Roofing System by a DRS Authorized Roofing Appraiser, there are any alterations or repairs made on or through the roof or objects, such as, but not limited to, structures, fixtures, or utilities are placed upon or attached to the roof, without first obtaining written authorization from DRS, or
   (b) Failure by the Owner or lessee to use reasonable care in maintaining the roof, or as outlined in the DRS Owner's Maintenance Guidelines, or
   (c) Owner fails to comply with every term or condition stated herein.

5. During the term of this Warranty, DRS, its agents or employees, shall have free and unlimited access to the roof during regular business hours.

6. DRS shall have no obligation under this Warranty until all bills for installation, supplies and services have been paid for in full to the DRS Authorized Roofing Appraiser and all material suppliers, including DRS.

7. DRS failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.

8. If, upon DRS inspection, DRS determines that the leaks in the Roofing System are caused by workmanship of DRS Authorized Roofing Appraiser or caused by defects in the DRS Roofing materials, Owner's remedies and DRS liability shall be limited to DRS repair of the leaks in the Roofing System. However, DRS obligation over the life of the Warranty shall not exceed the Owner's original cost of the installed Dow Roofing System.

9. This Warranty is transferable, consult DRS for conditions of translatability. Conditions are noted in Dow Maintenance Instructions.

10. This Warranty does not include the insulation.

11. Any attempt at changing or defacing this Warranty prior to its return to DRS will immediately make it null and void.

12. Any controversy or claim arising out of or relating to this document, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Rules of the American Arbitration Association at the Boston, Mass., Regional Office and judgement upon the award rendered by the Arbitrators may be entered in any court having jurisdiction thereof.

THIS WARRANTY AND THE REMEDIES PROVIDED HEREUNDER ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER REMEDY OR WARRANTY, WHETHER WRITTEN, ORAL, IMPLIED OR STATUTORY. IT IS EXPRESSLY AGREED THAT ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS HEREBY EXCLUDED AND THAT DOW ROOFING SYSTEMS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR MISUSE OF THE DOW ROOFING SYSTEM. NO REPRESENTATIVE OF DRS HAS AUTHORITY TO MAKE ANY REPRESENTATIONS OR PROMISES, EXCEPT AS STATED HEREIN.

ACCEPTED BY

CRAIG BARNARD

DOW ROOFING SYSTEMS, LLC

Signature

Title: OWNER

Signature Date: 4/18-2011

Signature

Title: GENERAL MANAGER

Signature Date: FEBRUARY 10, 2011

Tel: 505-266-7157 x167 Fax:

Email: cbarnard@cops.net

Serial No. 57770

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SECTION 01 7500

STARTING AND ADJUSTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: General procedures for starting, monitoring, and adjusting items of equipment and complete systems.

B. Related sections:

1. Section 01 7800 - Closeout Submittals: Operation and maintenance manuals.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 STARTING OF SYSTEMS

A. Submit written report in accordance with Section 01 3300 - Submittal Procedures that equipment and systems have been properly installed and are functioning correctly.

END OF SECTION
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SECTION 01 7700
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Closeout procedures.
2. Final cleaning.
3. Final inspection.
4. Inspection held immediately prior to end of one year correction period.

B. Related documents and sections:

1. Document 00 7200 - General Conditions of the Contract,
   a. Paragraph 9.8: Substantial Completion.
   c. Paragraph 9.10: Closeout Requirements
   d. Paragraph 9.11: Final completion and final payment.
   e. Subparagraph 12.2.2.1: One year correction period for Contractor to correct defective work.

2. Section 01 7000 - Execution Requirements: Progress cleaning.

3. Section 01 7500 – Starting and Adjusting: Starting and adjusting items of equipment and complete systems.

4. Section 01 7800 - Closeout Submittals: Submittal of project record documents, operation and maintenance manuals, warranties, certificates of inspection, extra materials, and keys.
5. Section 01 7900 – Demonstration and Training: Demonstrations and training for Owner's personnel.

1.2 SUBSTANTIAL COMPLETION PROCEDURES

A. Prior to or in conjunction with submission of Contractor’s request for Substantial Completion, submit the items specified in Section 01 7800 - Closeout Procedures:

B. Comply with Document 00 7200 - General Conditions of the Contract, Paragraph 9.8 for issuance of Certificate of Substantial Completion.

1.3 FINAL COMPLETION PROCEDURES

A. Follow procedures as outlined in Article 9 of the General Conditions.

1.4 FINAL CLEANING

A. Execute final cleaning prior to final inspection by methods and with materials and equipment suitable for commercial/institutional building maintenance. See Paragraph 3.13 – General Conditions.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
SECTION 01 7800
CLOSEOUT SUBMITTALS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes procedures for preparing and submitting closeout submittals:

1. Project Record Documents.
2. Operation and maintenance manuals and data.
3. Warranties.
4. Insurance information.
5. Certificates of inspection and compliance.
7. Extra materials.

B. Related documents and sections:

1. Document 00 7200 - General Conditions of the Contract:
   a. Paragraph 3.5: Contractor's warranty that Work is of good quality and free from defects and conforms to Contract Documents.
   b. Subparagraph 9.9.1: Commencement of warranties and correction period.
   c. Subparagraph 9.10.1: Closeout requirements
   d. Paragraph 9.11: Affidavits and Certificates required before Final Payment
   e. Subparagraph 12.2.2.1: One year correction period for Contractor to correct defective work.

2. Section 01 3300 - Submittal Procedures: Submittal of shop drawings, product
data, samples, installation instruction, reports and other submittals during construction prior to closeout.

3 Section 01 7500 – Starting and Adjusting: Starting and adjusting items of equipment and complete systems.

4 Section 01 7500 – Starting and Adjusting: Starting and adjusting items of equipment and complete systems.

5 Section 01 7801 – Equipment Inventory and Roofing Data Collection: Requirements for completing equipment inventory and roofing data submittals.

6 Section 01 9310 – 3-Year Extended Service & Maintenance: Directory of service personnel and contact information for Owner’s reference; and fully-executed copy of 3-year extended warranty.

1.1 OPERATION AND MAINTENANCE DATA

A. Provide operation and maintenance data for:

1. Mechanical equipment, systems, and controls specified in Divisions 22, and 23.

12. Electrical equipment, systems, and controls specified in Division 26 and 28.

13. Other equipment and systems for which operation and maintenance data is requested in individual specification sections.

B. Provide written sequence of operations for each automated building system, including those related to the following:

2. Life safety system(s).

3. Electrical system(s).

3. Mechanical system(s).

4. Other automated building systems and components.

C. Submission:
1. Submit data to Design Professional in one or more binders.
2. Submit for review one draft copy 30 days prior to need date or as otherwise specified. This copy will be returned after review with Design Professional's comments. Revise content as required.

3. Once approved, submit 3 copies of final operation and maintenance manuals as follows:
   a. 2_hard copy(ies) and one 2 electronic disk(s) of entire manual to District.
   b. One (1) electronic disk of entire manual to PSFA.
   c. One electronic disk to Design Professional.

4. All manuals shall be submitted prior to or in conjunction with Contractor’s request for Substantial Completion and prior to demonstration and training session.

D. Contents:

1. Appropriate design criteria.
2. Equipment parts list.
3. Equipment inventory data (on Owner-provided electronic forms) and parts lists.
4. Roofing data (on Owner-provided electronic forms).
5. Operating instructions.
7. Shop drawings and product data.
8. Written sequence of operations for each automated building system [including those related to the following:]
   a. Life safety system(s).
   b. Electrical system(s).
c. Mechanical system(s).
9. Testing, balancing, and other field quality reports.


11. Directory listings

12. Other material and information as indicated in individual specification sections and as necessary for operation and maintenance by Owner's personnel.

E. Form:

1. Hard copies of manuals shall be 8-1/2 x 11 inch text pages bound in three ring expansion binders with a hard durable plastic cover. All documents to be originals unless otherwise noted.

2. Prepare binder covers with printed subject title of manual, title of project, date, and volume number when multiple binders are required. Printing shall be on face and spine.

3. Internally subdivide the binder contents with divider sheets with typed tab titles under reinforced plastic tabs. Place dividers at beginning of each chapter, part, section, and appendix.

4. Provide a table of contents for each volume.

5. Provide directory listing as appropriate with names addresses, and telephone numbers of Design Professional, Contractor, subcontractors, equipment suppliers, and nearest service representatives. Provide emergency 24-hour service contact information for all subcontractors, service contractors and principal vendors.

6. Provide electronic data disk(s) with each manual including all data required to be submitted electronically. Include hard copy with each manual.

1.2 WARRANTIES

A. Provide duplicate notarized copies of special and extended warranties as required by individual specifications sections.
B. Submit warranties to Design Professional prior to or in conjunction with submission of Notice of Substantial Completion.

C. Execute and assemble warranties from subcontractors, suppliers, and manufacturers.

D. Provide Table of Contents and assemble in three ring binder with a hard durable plastic cover. Internally subdivide the binder contents with permanent page dividers, with tab titling clearly typed under reinforced laminated plastic tabs.

E. For items of work delayed beyond date of Substantial Completion, provide updated warranty submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.3 CERTIFICATES OF INSPECTION AND COMPLIANCE

A. For inspections throughout the construction period required by regulatory agencies, obtain and maintain certificates issued to show compliance.

B. Assemble certificates and any formal written evidence of regulatory compliance in three ring binder with table of contents and submit to Design Professional prior to or in conjunction with submission of Notice of Substantial Completion.

C. Certificate of Occupancy: Prior to Substantial Completion, obtain from authorities having jurisdiction Certificate of Occupancy. Submit with Notice for Substantial Completion.

1.4 INSURANCE INFORMATION

A. Submit prior to or in conjunction with submission of Contractor’s request for Substantial Completion information regarding insurance including change over requirements and insurance extensions.

1.5 MAINTENANCE TOOLS

A. Provide all special tools, instruments, and other implements required for the functional operation and maintenance of equipment, systems, and other components installed as part of this project. Include screw drivers, crescent wrenches, pliers, and Allen wrenches as well as more unique and atypical tools.

B. Tools shall be as provided or recommended by manufacturers of installed equipment and systems. Types and sizes shall be as specifically required for installed products.
C. Tools shall be available and their use demonstrated during training sessions specified in Section 01 75 00 - Starting, Adjusting, and Demonstrating.

D. Prior to or concurrent with Contractor’s request for Substantial Completion, deliver maintenance tools to Owner's representative. Prepare inventory of tools provided and obtain receipt from Owner's representative.

1.6 EXTRA MATERIALS

A. Provide spare parts and maintenance materials in quantities specified in individual sections.

B. Extra materials shall be produced by the same manufacturer of and compatible with the installed products.

C. Prior to or concurrent with submission of Notice of Substantial Completion deliver extra materials in unopened containers to Owner's representative at designated storage area at project site and place in location as directed. Obtain receipt from Owner's representative.

D. During one year correction period:

1. Extra materials may be used by Contractor to replace expendable and normally worn parts.

2. Extra materials used by Contractor for replacement of defective products shall be replaced at no additional cost to Owner.

1.10 MISCELLANEOUS SECURITY-RELATED MATERIALS AND COMPONENTS

A. Prior to or in conjunction with Final Completion and in accordance with Article 9.10.1 – General Conditions of the Contract, deliver to Owner and obtain receipt for:

1. All miscellaneous security-related items loaned to Contractor during the progress of the job, including:

   a. Owner-furnished security badges and passes

2. All security software and codes.
PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for completion and submittal of forms containing detailed data related to items installed under the Contract in the following categories:

1. **Mechanical Systems**: air compressors, air conditioning units, air dryers, air handlers, boilers, chilled water units, condensate and vacuum pumps, condenser units, cooling towers, evaporative coolers, fan coil units, forced air furnaces, exhaust fans and ventilators, heat pumps, unit heaters.

2. **Electrical Systems**: differential relays, electrical panels, emergency generators, ground fault protection, transformers, uninterruptible power systems (UPS).

3. **Fire/Life Safety**: emergency lighting; fire alarm and protection systems, to include control panels, control valves, supervisory signals; fire extinguishers; heat detectors; smoke detectors.

B. Related documents and sections:

1. Document 00 7200 - General Conditions,
   a. Article [3.12]: Contractor's responsibilities regarding submittals.
   b. Article [9.10]: Project closeout and use of CIMS.

2. Section 01 3300 – Submittal Procedures: Submittal requirements.

3. Section 01 7800 - Closeout Submittals: Submittal of project record drawings, operation and maintenance manuals, warranties, certifications of inspection, extra materials and other closeout submittals.

1.2 FORMS

A. PSFA guidelines and Excel spreadsheet forms are available to the Contractor for equipment data collection necessary for importing into a computerized maintenance
management system. The following documents for completion electronically by Contractor are available on the PSFA website ("Maintenance Portal") at www.nmpsfa.org:

1. Equipment Data Collection Form and Guidelines.

2. Roof Data Collection Form and Guidelines.

1.3 PROCEDURES

A. The equipment data collection forms are to be filled out by the Contractor and submitted electronically at Project Closeout to the Design Professional, District Owner's Representative, and PSFA Regional Manager for forwarding to PSFA Maintenance Division.

B. One electronic compact data disk containing completed forms shall be included in each Operations & Maintenance manual at Project Closeout.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION
SECTION 01 7900

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Training of Owner's designated personnel in operation and maintenance of equipment and systems.

B. Related sections:

1. Section 01 7800 - Closeout Submittals: Operation and maintenance manuals.

1.2 SUBMITTALS

A. Provide in accordance with Section 01 3300 - Submittal Procedures:

1. List of names, resumes, and qualifications of personnel conducting training sessions.

2. Preliminary schedule listing times, dates, and outline showing organization and proposed contents of training sessions for approval by Design Professional and Owner.

3. Copies of training manuals and other materials to be used in training sessions for approval by Design Professional and Owner.

4. Provide Owner additional copy of audio visual material on the same media used in training sessions.

5. 3 Hard copies and 1 Electronic PDF format of training manuals for future use in training by Owner.

6. Submit report within 1 week after completion of training that sessions have been satisfactorily completed. Give times, dates, list of persons trained, and summary of instructions.

1.3 QUALITY ASSURANCE

A. Personnel conducting demonstration and training sessions shall be knowledgeable of installation, operation, sequence of operations, and maintenance of specific project equipment and systems. Where appropriate manufacturer's representatives shall conduct training.
PART 2- PRODUCTS

2.1 TRAINING MATERIALS

A. Training manuals: Loose leaf notebook format with agenda and objectives of each lesson.

1. Manuals shall describe function, operation, sequence of operations, and maintenance of various items of equipment and be suitable for personnel with high school education.

2. Manuals shall be suitable for future training of Owner personnel by Owner staff.

3. Manuals shall useful reference for staff maintaining facility.

B. Visual aids: Provide charts, handouts, overhead projector slides, electronic presentations, and other visual aids required to make effective presentation and facilitate training.

1. Equipment needed for showing visual training aids shall be provided by Contractor.

2. Visual aids shall be suitable for use by Owner's staff to train additional personnel in the future.

PART 3 - EXECUTION

2.1 SCHEDULING

A. Schedule demonstration and training sessions after equipment and systems have been completely installed, startup completed, and adjustments made. Single demonstration and training session shall be conducted of all items prior to substantial completion. Schedule with Design Professional to accommodate Owner's representatives.

2.2 DEMONSTRATION AND TRAINING

A. Provide demonstration and training session to emphasize operation, sequence of operations, use, and maintenance of installed items and systems:

1. Mechanical systems specified in Divisions 22 and 23.

2. Electrical systems specified in Division 26 and 28.

3. Other items and systems as designated by Design Professional or requested by Owner.

B. Conduct at project site using actual installed equipment and systems.

C. Owner shall be responsible for designating and notifying personnel to attend and ensuring attendance at scheduled sessions.
D. Have copies of operation and maintenance manuals specified in Section 01 7800 - Closeout Submittals available. Use as training aids. Include training on each of written sequence of operations contained in the Operations & Maintenance Manual.

E. Owner shall have right to record or video tape demonstration and training sessions.

END OF SECTION
SECTION 02 4100
DEMOlITION

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS
A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
B. Section 01 1000 - Summary: Sequencing and staging requirements.
C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
D. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS

2.01 MATERIALS
A. NOT USED.

PART 3 EXECUTION

3.01 SCOPE
A. Remove portions of existing building as shown on the drawings:

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS
A. Comply with other requirements specified in Section 01 7000.
B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Comply with applicable requirements of NFPA 241.
   3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   4. Provide, erect, and maintain temporary barriers and security devices.
   5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
   6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   7. Do not close or obstruct roadways or sidewalks without permit.
   8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
   9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
C. Do not begin removal until receipt of notification to proceed from Owner.

D. Protect existing structures and other elements that are not to be removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.03 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Separate areas in which demolition is being conducted from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.

D. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.

E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and ______): Remove existing systems and equipment as indicated.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
   2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   3. Verify that abandoned services serve only abandoned facilities before removal.
   4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
F. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL
   A. Remove debris, junk, and trash from site.
   B. Leave site in clean condition, ready for subsequent work.
   C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION
SECTION 07 5423
THERMOPLASTIC-POLYOLEFIN ROOFING (TPO)

PART 1 GENERAL

1.1 SECTION INCLUDES
   A. Thermoplastic membrane roofing system, including all components specified.
   B. Comply with the published recommendations and instructions of the roofing membrane manufacturer.
   C. Commencement of work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the project conditions.

1.2 RELATED REQUIREMENTS
   A. Section 07 7200 - Roof Accessories: Roof Penetration Housing.

1.3 REFERENCE STANDARDS
   B. ASTM D1004 - Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting; 2009.
   H. FM DS 1-29 - Roof Deck Securement and Above-Deck Roof Components; Factory Mutual System; 2006.

1.4 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data:
      1. Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.
      2. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used.
   C. Samples: Submit samples of each product to be used.
   D. Executed Warranty.
1.5 QUALITY ASSURANCE
   A. Installer Qualifications: Roofing installer shall have the following:
      1. Current approval, license, or authorization as applicator by the manufacturer.
      2. At least five years experience in installing specified system.

1.6 DELIVERY, STORAGE AND HANDLING
   A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and
to and legible.
   B. Store materials clear of ground and moisture with weather protective covering.
   C. Keep combustible materials away from ignition sources.

1.7 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Comply with all warranty procedures required by manufacturer, including notifications,
scheduling, and inspections.
   C. Existing Dow Roofing Systems, LLC roof is still under warranty. Coordinate with Owner so that
work of this project will not void the Owner's warranty.
   D. Warranty: Manufacturer's Roofing Membrane Limited Warranty covering new membrane only,
for the term indicated.
      1. Limit of Liability: Prorated based on original cost of membrane.
      2. Scope of Coverage: Provide replacement membrane material sufficient to replace the
affected area of membrane as a result of any manufacturing defect or ordinary exposure
to the elements.

PART 2 PRODUCTS

2.1 MANUFACTURERS
   A. Acceptable Manufacturer - Roofing System: Firestone Building Products LLC, Carmel, IN:

2.2 ROOFING SYSTEM DESCRIPTION
   A. Roofing System: Thermoplastic olefin (TPO) single-ply membrane.
      1. Membrane Attachment: Fully adhered.
      2. Warranty: Membrane warranty; 10 year Firestone Roofing Membrane Limited Warranty.
      3. Comply with applicable local building code requirements.
   B. Roofing System Components: Listed in order from the top of the roof down:
      1. Membrane: Thickness as specified.

2.3 MEMBRANE MATERIALS
   A. Curb and Parapet Flashing: Same material as membrane, with encapsulated edge which
eliminates need for seam sealing the flashing-to-roof splice; precut to 18 inches wide.
   B. Formable Flashing: Non-reinforced, flexible, heat weldable sheet, composed of thermoplastic
polyolefin polymer and ethylene propylene rubber.
      1. Thickness: 0.060 inch plus/minus 10 percent.
      2. Tensile Strength: 1550 psi, minimum, when tested in accordance with ASTM D638 after
heat aging.
      3. Elongation at Break: 650 percent, minimum, when tested in accordance with ASTM D638
after heat aging.
      4. Tearing Strength: 12 lbf, minimum, when tested in accordance with ASTM D1004 after
heat aging.

C. Tape Flashing: 5-1/2 inch nominal wide TPO membrane laminated to cured rubber polymer seaming tape, overall thickness 0.065 inch nominal; TPO QuickSeam Flashing by Firestone.

D. Cut Edge Sealant: Synthetic rubber-based, for use where membrane reinforcement is exposed; UltraPly TPO Cut Edge Sealant by Firestone.

E. General Purpose Sealant: EPDM-based, one part, white general purpose sealant; UltraPly TPO General Purpose Sealant by Firestone.

F. Molded Flashing Accessories: Unreinforced TPO membrane pre-molded to suit a variety of flashing details, including pipe boots, inside corners, outside corners, etc.; UltraPly TPO Small and Large Pipe Flashing by Firestone.

PART 3 INSTALLATION

3.1 GENERAL
A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.

B. Obtain all relevant instructions and maintain copies at project site for duration of installation period.

C. Do not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.

D. Perform work using competent and properly equipped personnel.

E. Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.

F. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80 degrees F.

G. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage caused by roofing work.
   1. Protect from spills and overspray from bitumen, adhesives, sealants and coatings.
   2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.
   3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

H. Until ready for use, keep materials in their original containers as labeled by the manufacturer.

I. Consult membrane manufacturer's instructions, container labels, and Material Safety Data Sheets (MSDS) for specific safety instructions. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition.

3.2 EXAMINATION
A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment and that deflection will not strain or rupture roof components or deform deck.
B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
C. Examine roof substrate to verify that it is properly sloped to drains.
D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptable of project conditions and requirements.

3.3 PREPARATION
A. Remove all of the existing roof system down to the roof deck including all existing composition base flashings. Dispose of all materials properly. Perform asbestos removal in accordance with federal, state and local regulations and dispose of waste in legal manner.
   1. At penetrations, remove all existing flashings, including lead, asphalt, mastic, etc.
   2. At walls, curbs, and other vertical and sloped surfaces, remove loose and unsecured flashings; remove mineral surfaced and coated flashings; remove excessive asphalt to provide a smooth, sound surface for new flashings.
B. Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes.
C. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease and other materials that may damage the membrane.
D. Fill all surface voids in the immediate substrate that are greater than 1/4 inch wide with fill material acceptable insulation to membrane manufacturer.
E. Seal, grout, or tape deck joints, where needed, to prevent bitumen seepage into building.

3.4 FLASHING AND ACCESSORIES INSTALLATION
A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's recommendations and details.
B. Flashing at Walls, Curbs, and Other Vertical and Sloped Surfaces: Install weathertight flashing at all walls, curbs, parapets, curbs, skylights, and other vertical and sloped surfaces that the roofing membrane abuts to; extend flashing at least 8 inches high above membrane surface.
   1. Use the longest practical flashing pieces.
   2. Evaluate the substrate and overlay and adjust installation procedure in accordance with membrane manufacturer's recommendations.
   3. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface.
   4. Provide termination directly to the vertical substrate as shown on roof drawings.

3.5 FIELD QUALITY CONTROL
A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person).
B. Perform all corrections necessary for issuance of warranty.

3.6 CLEANING
A. Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and coatings.
B. Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of manufacturers of components and surfaces.
C. Remove leftover materials, trash, debris, equipment from project site and surrounding areas.
3.7 PROTECTION

A. Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged roofing to original condition.

END OF SECTION
SECTION 07 9215
JOINT SEALERS

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Sealants and joint backing.
B. Precompressed foam sealers.

1.2 REFERENCE STANDARDS

1.3 ADMINISTRATIVE REQUIREMENTS
A. Coordinate the work with other sections referencing this section.

1.4 SUBMITTALS
A. See Section 01 3000 for submittal procedures.
B. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
C. Product Schedule: Provide schedule indicating manufacturer's products matched to the same Sealant Types (Type SIL-4, etc.) listed in Part 2 of this Section.
   1. Failure to provide product schedule will result in immediate rejection of the submittal.
D. Manufacturer's Installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.
E. Manufacturer's certification in accordance with Field Quality Control Article in Part 3 of this Section.

1.5 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

1.6 FIELD CONDITIONS
A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.7 COORDINATION
A. Coordinate the work with all sections referencing this section.
B. Do not apply concrete sealers until full sealant cure period recommended by manufacturers is attained.

1.8 WARRANTY
A. Correct defective work within a one year period after Date of Substantial Completion.
B. Warranty: Include coverage for installed sealants and accessories which fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.
   1. Provide the following warranties for specific types of sealants indicated:
      a. Exterior Building Silicones: 20 years.
      b. Building Urethane Sealants: 5 years.
PART 2 PRODUCTS

2.1 SEALANTS

A. Type ES-1 - General Purpose Exterior Sealant: Polyurethane; ASTM C 920, Grade NS, Class 25, Uses NT, M, G, A and O; multi-component.
   1. Manufacturers:
      b. Sika Corporation: www.sikausa.com
      c. Tremco, Inc: www.tremcosealants.com
   2. Volatile organic compound (VOC) content: 80 grams per liter, maximum.

B. Type AE-1 - General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
   2. Volatile organic compound (VOC) content: 35 grams per liter, maximum.

C. Type SIL-4: Single component silicone sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT, G, A, and O.
   1. Tensile Strength: 45 psi.
   2. Volatile Organic Content: 43 g/liter.

D. Type PL-1 - Nonsag Polyurethane Sealant: ASTM C920, Type S, Grade NS, Class 35, Uses T, NT, I, M, G, O; single component, chemical curing, non-staining, non bleeding, capable of continuous water immersion, non-sagging type.
   1. Color: Match adjacent finished surfaces.
   3. Service Temperature Range: -40 to 180 degrees F.
   5. Applications: Use for:
   6. Products:

2.2 JOINT BACKING

A. Applications: Use for:
   1. Control, expansion, and soft joints in masonry.
   2. Joints between concrete and other materials.
   3. Joints between metal frames and other materials.
   4. Other exterior joints for which no other joint backing is indicated.

B. Joint Backing: Non-gassing, round foam rod compatible and non-adhering with sealant; closed cell, polyethylene foam; non-gassing when punctured; oversized 30 to 50 percent larger than joint width.

C. Volatile organic compound (VOC) content: 0 grams per liter.

D. Color: As selected from manufacturer's standards.

E. Product and Manufacturer: Sonolastic Closed Cell and Soft Backer Rod, BASF Construction Chemicals, LLC: www.buildingsystems.basf.com or equal.
2.3 ACCESSORIES
   A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
   B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
   C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.
   D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION
   A. Verify that substrate surfaces and joint openings are ready to receive work.
   B. Verify that joint backing and release tapes are compatible with sealant.

3.2 PREPARATION
   A. Remove loose materials and foreign matter that could impair adhesion of sealant.
   B. Clean and prime joints in accordance with manufacturer's instructions.
   C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
   D. Protect elements surrounding the work of this section from damage or disfigurement.

3.3 INSTALLATION
   A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
   B. Completely seal joints indicated on Drawings and as required to render weathertightness, close openings, and allow movement of materials.
   C. Perform installation in accordance with ASTM C1193.
   D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
   E. Install bond breaker where joint backing is not used.
   F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
   G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
   H. Tool joints in accordance with manufacturer's instructions.
   I. Do not lap or feather onto adjacent surfaces.

3.4 FIELD QUALITY CONTROL
   A. The Architect reserves the right to test sealant products at any time and as often as the Architect deems necessary during the period when sealant is being applied.

3.5 CLEANING
   A. Clean adjacent soiled surfaces.
   B. Repair or replace defaced or disfigured finishes caused by work of this Section.

3.6 PROTECTION
   A. Protect sealants until cured.
3.7 SCHEDULE

A. Exterior Joint Sealants:
   1. Provide Sealant Type ES-1 at the following locations:
      a. Concealed joints between ductwork and walls.
      b. Concealed joints between piping and walls.
   2. Provide Sealant Type SIL-4 at the following locations:
      a. Exterior joints for which no other sealant type is indicated.
      b. Joints at above-grade, horizontal penetrations in exterior walls.
      c. Joints between metal frames and adjacent work.
      d. Joints between masonry and adjacent work.
      e. Joints between piping and masonry or concrete walls.
      f. Joints between light fixtures and electrical boxes and walls.
      g. Joints in sheet metal flashings and counterflashings.
      h. Joints in sheet metal fascias, copings, drip edges, and gravel stops.
      i. Joints between ductwork and masonry or concrete walls.

B. Interior Joint Sealants:
   1. Provide Sealant Type AE-1 at the following locations:
      a. Joints between metal frames and field-painted surfaces of adjacent work.
      b. Joints between painted plywood.
      c. Joints between painted plywood and adjacent surfaces.
      d. Joints between metal frames and painted gypsum board.
      e. Interior joints for which no other sealant is indicated.

C. Colors: Except as otherwise indicated and colors indicated below, provide colors that match adjacent surfaces.
   1. Expansion and control joints in concrete slabs: Match concrete color.

END OF SECTION
PART 1  GENERAL

1.1  SECTION INCLUDES

   A. Suspended metal grid ceiling system.
   B. Acoustical units.
   C. Perimeter trim system.

1.2  RELATED REQUIREMENTS

   A. Section 05 5000 - Metal Fabrications: Steel channels, supports and other components for suspension system bracing.
   B. Section 09 2116 - Gypsum Board Assemblies: Steel channels, supports and other components for suspension system bracing.

1.3  REFERENCE STANDARDS

   G. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2008e1.

1.4  ADMINISTRATIVE REQUIREMENTS

   A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
   B. Do not install acoustical units until after interior wet work is dry.
1.5 SUBMITTALS
   A. See Section 01 3000 for submittal procedures.
   B. Product Data: Provide data on suspension system components and acoustical units.
      1. Include product data for perimeter trim components.
   C. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
   D. Maintenance Materials: Furnish the following for City of Gallup, NM's use in maintenance of project.
      1. See Section 01 6000 - Product Requirements, for additional provisions.
      2. Extra Acoustical Units: 80 sq ft of each type and size.

1.6 QUALITY ASSURANCE
   A. Install suspension system in accordance with local authorities having jurisdiction.
   B. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.
   C. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

1.7 FIELD CONDITIONS
   A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.8 PROJECT CONDITIONS
   A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
   B. Install acoustical units after interior wet work is dry.

1.9 WARRANTY
   A. Grid: Provide manufacturer warranty ten years from date of substantial completion.
   B. Perimeter Trim: Provide manufacturer warranty ten years from date of substantial completion.

PART 2 PRODUCTS

2.1 ACOUSTICAL UNITS
   A. Manufacturers:
   B. Acoustical Units - General: ASTM E1264, Class A.
   C. Acoustical Panels Type APC-1: Painted mineral fiber, formaldehyde-free, ASTM E 1264 Type
III, with the following characteristics:
1. Size:  24 x 48 inches.
2. Thickness:  3/4 inches.
3. Composition:  Wet felted.
4. Weight:  1.30 lb/sq ft, minimum
5. Light Reflectance:  0.85 percent, determined as specified in ASTM E 1477.
6. Noise Reduction Coefficient (NRC): 0.70 determined as specified in ASTM C 423.
7. Ceiling Attenuation Class (CAC): 40, determined as specified in ASTM E 1414.
10. Surface Pattern:  Perforated, small holes.
11. Recycled Content: 48% - 51%.
13. Suspension System:  Exposed grid Type SS-1.

2.2 SUSPENSION SYSTEM(S)
A. Manufacturers:
1. Same as for acoustical units.

B. Suspension Systems - General:  ASTM C635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

C. Exposed Steel Suspension System Type SS-1:  Formed galvanized steel, commercial quality cold rolled; heavy-duty.
1. Profile:  Tee; 15/16 inch wide face.
2. Construction:  Double web.

2.3 ACCESSORIES
A. Support Channels and Hangers:  Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.
1. Hanger Wire: ASTM A 641, Class 1 zinc coating, soft temper, pre-stretched.
   a. Size:  Provide wire diameter so that its stress at 3 times the hanger design load (ASTM C 635, Table 1, Direct Hung) will be less than the yield stress of wire, but provide not less than 12 gage diameter wire.
2. Flat Hangers:  Mild steel, zinc coated or protected with rust inhibitive paint.

B. Perimeter Moldings:  Same material and finish as grid.
1. At Exposed Grid:  Provide L-shaped molding for mounting at same elevation as face of grid.
   a. Size:  7/8 x 7/8 inches.

C. Perimeter Trim:  Extruded aluminum trim system for use as an exposed custom decorative trim with suspended lay-in panels; compatible with tee suspension system.
1. At Exposed Grid:  Provide channel-shaped trim with factory-mitered corners, for mounting at same elevation as face of grid; factory finished.
   a. Configuration:  3-7/8 inch wide face x 3/4 inch horizontal legs; with formed bosses for attachment to the suspension system.
   b. Accessories:  Provide clips, corner posts, splice plates, hangar wire, and other
acoustical ceilings as required by manufacturer to provide locking mechanical attachment with no visible fasteners.

c. Location: As indicated on the Drawings.

1) Finish: Same finish as grid.

D. Acoustical Sealant For Perimeter Moldings: Specified in Section 07 9005.

E. Touch-up Paint: Type and color to match acoustical and grid units.

F. Hold-down Clips: Mechanical fastener that snaps over the bulb of a grid system to retain ceiling panels in place, designed to accommodate acoustical panel thickness.


PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

3.2 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:240.

1. Seismic Bracing: Refer to Section 09 2116 for bracing components not included in this Section.

a. Install seismic bracing in accordance with requirements of authorities having jurisdiction.

C. Locate system on room axis according to reflected plan.

D. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.

E. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required to meet design requirements.

F. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

1. Wind hanger wire to support above with a minimum of three turns.

2. Hanger wires shall not hang more than 1-in-6 out-of-plumb unless counter-sloping wires are provided.

3. Do not bend hanger wires around ductwork, piping, or conduits.

G. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

H. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

I. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
J. Do not eccentrically load system or induce rotation of runners.

K. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Install in bed of acoustical sealant at the following locations:
      a. Class Rooms.
      b. Music Rooms.
      c. Toilets.
      d. Rooms that include boilers, fans, furnaces, water heaters, or mechanical air handling equipment.
   2. Use longest practical lengths.
   3. Overlap and rivet corners.

L. Trim: Install in accordance with manufacturer's recommendations.

3.3 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install units after above-ceiling work is complete.

E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

F. Cutting Acoustical Units:
   1. Cut to fit irregular grid and perimeter edge trim.
   2. Make field cut edges of same profile as factory edges.
   3. Double cut and field paint exposed reveal edges.

G. Where round obstructions occur, provide preformed closures to match perimeter molding.

H. Install hold-down clips on panels within 6 ft of an exterior door.

3.4 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Pipe, pipe fittings, valves, and connections for piping systems.
   1. Condensate Drain pipe
   2. Gas.
   3. Flanges, unions, and couplings.
   4. Pipe hangers and supports.
   5. Valves.
   6. Regulators.

1.02 REFERENCE STANDARDS

A. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; The American Society of Mechanical Engineers; 2011.
B. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2012 (ANSI B16.18).
C. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; The American Society of Mechanical Engineers; 2013.
E. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2014 (ANSI/ASME B31.9).
F. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Welding, Brazing, and Fusing Qualifications; The American Society of Mechanical Engineers; 2015.
L. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2013.
1.03 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.
C. Shop Drawings: For non-penetrating rooftop supports, submit detailed layout developed for this project, with design calculations for loadings and spacings.

1.04 QUALITY ASSURANCE
A. Valves: Manufacturer's name and pressure rating marked on valve body.
B. Welding Materials and Procedures: Conform to ASME BPVC-IX and applicable state labor regulations.
C. Welder Qualifications: Certified in accordance with ASME BPVC-IX.
D. Identify pipe with marking including size, ASTM material classification, ASTM specification, potable water certification, water pressure rating.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS
2.01 CONDENSATE DRAIN PIPING
A. Copper Tube: ASTM B88 (ASTM B88M), Type L (B), Drawn (H).
1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
B. PVC Pipe: Schedule 80, ASTM D1785 or ASTM D2241.
1. Fittings: ASTM D2665, PVC.

2.02 NATURAL GAS PIPING, ABOVE GRADE
A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
2. Joints: Threaded or welded to ASME B31.1.

2.03 FLANGES, UNIONS, AND COUPLINGS
A. Unions for Pipe Sizes 3 Inches (80 mm) and Under:
1. Ferrous pipe: Class 150 malleable iron threaded unions.
B. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.04 PIPE HANGERS AND SUPPORTS
A. Provide hangers and supports that comply with MSS SP-58.
1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
2. Rooftop Supports for Low-Slope Roofs: Steel pedestals with bases that rest on top of roofing membrane, not requiring any attachment to the roof structure and not penetrating the roofing assembly, with support fixtures as specified; and as follows:
   b. Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
   c. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
   d. Attachment/Support Fixtures: As recommended by manufacturer, same type as indicated for equivalent indoor hangers and supports; corrosion resistant material.
   e. Height: Provide minimum clearance of 6 inches (150 mm) under pipe to top of roofing.
   f. Manufacturers:
      1) Model 3R by MIRO.
      2) Or equal.

2.05 PLUG VALVE (GAS COCK VALVE)
   A. General: CSA design certified for 1/2 psig and temperatures from 32° to 125°F. Complies to ANSI Z 21.15.CSA 9.1.
   B. Bronze construction, stainless steel springs.
   C. Factory tested 100% at 10 psig.
   D. Equal female inlet/outlet.
   E. Bosses on both sides are drilled and tapped. Only one side is plugged.
   F. Model 50 Series Manufactured by Apollo Valves, or equal.

2.06 PRESSURE REDUCING GAS REGULATOR
   B. Maximum Inlet Pressure: 175 PSIG
   C. Outlet Pressure Ranges: 3.5 inches w.c. to 2.0 PSIG.
   D. Model CS200 manufactured by Fisher, or equal.

3.01 PREPARATION
   A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
   B. Remove scale and dirt, on inside and outside, before assembly.
   C. Prepare piping connections to equipment with flanges or unions.

3.02 INSTALLATION
   A. Install in accordance with manufacturer's instructions.
   B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
   C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
   D. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.
   E. Pipe Hangers and Supports:
      1. Install in accordance with ASME B31.9.

3.03 APPLICATION
   A. Provide plug valves in natural gas systems for shut-off service.
3.04 SCHEDULES

A. Pipe Support Spacing:
   1. Metal Piping:
      a. Pipe size: 1/2 inches (15 mm) to 1-1/4 inches (32 mm):
         1) Maximum hanger spacing: 6.5 ft (2 m).
      b. Pipe size: 1-1/2 inches (40 mm) to 2 inches (50 mm):
         1) Maximum hanger spacing: 10 ft (3 m).

END OF SECTION 22 1005
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Basic Mechanical Requirements specifically applicable to Division 22 and 23 Sections, in addition to Division 01 - General Requirements.

1.02 SUBMITTALS
   A. Submit under provisions of Division 01, 22 0010 and 23 0010.
   B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal.
   C. Mark dimensions and values in units to match those specified.
   D. Submit published ratings or capacity; detailed equipment drawings for fabricated items.
   E. Submit complete electrical schematic and connection diagrams for each particular motor control or other electrical system. Generic diagrams are not acceptable.
   F. Submit manufacturer's printed instructions for installation.

1.03 REGULATORY REQUIREMENTS
   A. Conform to editions in effect on the date of advertisement for bids.
   B. Conform to applicable Building Code for all work specified herein.
   D. Plumbing: Conform to Uniform Plumbing Code.
   E. Obtain permits, and request inspections from authority having jurisdiction.

1.04 PROJECT/SITE CONDITIONS
   A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
   B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Engineer before proceeding.

1.05 SEQUENCING AND SCHEDULING
   A. Construct Work in sequence under provisions of Division 01.

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 INSTALLATION
   A. Drawings are diagrammatic in character. Exact locations of systems and their elements shall be as determined from the structure and the equipment, not from the Drawings.
   B. Verify space requirements of materials and equipment before ordering. Equipment that will not enter openings, or that will not fit the assigned space, will not be accepted.
   C. Prepare Record Documents under provisions of Division 01.
   D. Install mechanical equipment to facilitate maintenance and repair or replacement of equipment and components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
   E. Coordinate connection of mechanical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.
3.02 DEMOLITION
A. Protect existing equipment and installations indicated to remain. If damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.
B. Accessible Work: Remove exposed equipment and installations, indicated to be demolished, in their entirety.
C. Abandoned Work: Remove all abandoned wiring. In exposed locations, cut and remove buried piping 2 inches (50 mm) below the surface of adjacent construction. Cap piping and patch surface to match existing finish. In concealed locations, cut piping flush with surface. Plug or cap piping.
D. Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation.

3.03 EXISTING MECHANICAL WORK
A. Verify that abandoned piping, ductwork, and equipment serve only abandoned facilities.
B. Disconnect existing plumbing systems in walls, floors, and ceilings indicated for removal.
C. Existing HVAC and plumbing systems which are not scheduled for demolition, but which are inadvertently affected by demolition activities, will be restored to full function.
D. Coordinate utility service outages and reconnections with Utility Company and Owner.
E. Repair adjacent construction and finishes damaged during removal of existing mechanical work.
F. Maintain access to existing, active mechanical installations.
G. Clean and repair existing materials and equipment which remain or are to be reused.
H. Extend existing installations using materials and methods compatible with existing mechanical installations, and as specified.

3.04 CUTTING AND PATCHING
A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit mechanical and plumbing installations. Perform cutting by skilled mechanics of trades involved.
B. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

3.05 FIRESTOPPING
A. Apply U.L. listed firestopping to all penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly. See architectural drawings for locations of fire rated floors, walls, ceilings and partitions.

END OF SECTION 23 0010
SECTION 23 0553
IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Nameplates.
B. Tags.
C. Adhesive-backed duct markers.
D. Pipe Markers.

1.02 REFERENCE STANDARDS

1.03 SUBMITTALS
A. See Section 01 3300 - Submittal Procedures.
B. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification.
C. Product Data: Provide manufacturers catalog literature for each product required.
D. Manufacturer's Installation Instructions: Indicate special procedures, and installation.

PART 2 PRODUCTS

2.01 IDENTIFICATION APPLICATIONS
A. Air Handling Units: Nameplates. (Packaged Rooftop Units)
B. Automatic Controls: Tags. Key to control schematic.
C. Control Panels: Nameplates.
D. Ductwork: Nameplates.
E. Instrumentation: Tags.
F. Major Control Components: Nameplates.
G. Piping: Pipe markers.
H. Small-sized Equipment: Tags.
I. Thermostats: Nameplates.
J. Valves: Tags.

2.02 NAMEPLATES
A. Manufacturers:
   5. Substitutions: See Section 01 6000 - Product Requirements.
B. Description: Laminated three-layer plastic with engraved letters.
   2. Letter Height: 1/4 inch (6 mm).

2.03 TAGS
A. Manufacturers:
6. Substitutions: See Section 01 6000 - Product Requirements.

B. Plastic Tags: Laminated three-layer plastic with engraved black letters on light contrasting background color. Tag size minimum 1-1/2 inch (40 mm) diameter.

2.04 ADHESIVE-BACKED DUCT MARKERS
A. Manufacturers:
   2. Or Equal.
B. Material: High gloss acrylic adhesive-backed vinyl film; printed with UV and chemical resistant inks.

2.05 PIPE MARKERS
A. Manufacturers:
   6. Substitutions: See Section 01 6000 - Product Requirements.
B. Color: Conform to ASME A13.1.
C. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

PART 3 EXECUTION

3.01 PREPARATION
A. Degrease and clean surfaces to receive adhesive for identification materials.

3.02 INSTALLATION
A. Install nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.
B. Install tags with corrosion resistant chain.
C. Install plastic pipe markers in accordance with manufacturer's instructions.
D. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
E. Use tags on piping 3/4 inch (20 mm) diameter and smaller.
   1. Install in clear view and align with axis of piping.
   2. Locate identification not to exceed 20 feet (6 m) on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.
F. Identify air handling units, pumps, heat transfer equipment, tanks, roof hoods, packaged rooftop units, etc, with plastic nameplates. Small devices may be identified with tags.
G. Identify control panels and major control components outside panels with plastic nameplates.
H. Identify thermostats.
I. Tag automatic controls, instruments, and relays. Key to control schematic.
J. Identify piping, concealed or exposed, with plastic tape pipe markers. Use tags on piping 3/4 inch (20 mm) diameter and smaller. Identify service, flow direction, and pressure. Install in clear view and align with axis of piping. Locate identification not to exceed 20 feet (6 m) on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.

K. Install ductwork with plastic nameplates. Identify with air handling unit identification number and area served. Locate identification at air handling unit, at each side of penetration of structure or enclosure, and at each obstruction.

L. On all equipment requiring routine operations, identify simple operation procedures with plastic nameplates.

END OF SECTION 23 0553
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SECTION 23 0713
DUCT INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Duct insulation.
B. Duct Liner.

1.02 RELATED REQUIREMENTS
A. Section 23 3100 - HVAC Ducts and Casings: Glass fiber ducts.

1.03 REFERENCE STANDARDS
J. SMACNA (DCS) - HVAC Duct Construction Standards; Sheet Metal and Air Conditioning Contractors' National Association; 2005.

1.04 SUBMITTALS
A. See Section 01 3300 - Submittal Procedures.
B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.
C. Manufacturer's Instructions: Indicate installation procedures necessary to ensure acceptable workmanship and that installation standards will be achieved.

1.05 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section with not less than three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING
A. Accept materials on site in original factory packaging, labelled with manufacturer's identification, including product density and thickness.
B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.
1.07 FIELD CONDITIONS
   A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.
   B. Maintain temperature during and after installation for minimum period of 24 hours.

PART 2 PRODUCTS

2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION
   A. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84, NFPA 255, or UL 723.

2.02 GLASS FIBER, FLEXIBLE
   A. Manufacturer:
      5. Substitutions: See Section 01 6000 - Product Requirements.
   B. Insulation: ASTM C553; flexible, noncombustible blanket.
      1. 'K' ('Ksi') value: 0.36 at 75 degrees F (0.052 at 24 degrees C), when tested in accordance with ASTM C518.
      3. Maximum Water Vapor Sorption: 5.0 percent by weight.
   C. Vapor Barrier Jacket:
      1. Kraft paper with glass fiber yarn and bonded to aluminized film.
      2. Secure with pressure sensitive tape.
   D. Vapor Barrier Tape:
      1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber based adhesive.

2.03 GLASS FIBER, RIGID
   A. Manufacturer:
      5. Substitutions: See Section 01 6000 - Product Requirements.
   B. Insulation: ASTM C612; rigid, noncombustible blanket.
      1. 'K' ('Ksi') value: 0.24 at 75 degrees F (0.036 at 24 degrees C), when tested in accordance with ASTM C518.
      3. Maximum Water Vapor Sorption: 5.0 percent.
      4. Maximum Density: 8.0 lb/cu ft (128 kg/cu m).
   C. Vapor Barrier Jacket:
      1. Kraft paper with glass fiber yarn and bonded to aluminized film.
      2. Moisture Vapor Permeability: 0.058 ng/Pa s m, when tested in accordance with ASTM E96/E96M.
      3. Secure with pressure sensitive tape.

2.04 DUCT LINER
   A. Manufacturers:
5. Substitutions: See Section 01 6000 - Product Requirements.

B. Insulation: Non-corrosive, incombustible glass fiber complying with ASTM C1071; flexible blanket, rigid board, and preformed round liner board; impregnated surface and edges coated with poly vinyl acetate polymer, acrylic polymer, or black composite.

C. Insulation: Incombustible glass fiber complying with ASTM C 1071; flexible blanket, rigid board, and preformed round liner board; impregnated surface and edges coated with poly vinyl acetate polymer.
   1. Apparent Thermal Conductivity: Maximum of 0.31 at 75 degrees F (0.045 at 24 degrees C).
   2. Service Temperature: Up to 250 degrees F (121 degrees C).
   3. Rated Velocity on Coated Air Side for Air Erosion: 5,000 fpm (25.4 m/s), minimum.
   4. Rated Velocity on Coated Air Side for Air Erosion: 5,000 fpm (25.4 m/s), minimum.
   5. Minimum Noise Reduction Coefficients:
      6. 1-1/2 inches (40 mm) Thickness: 0.60.
      7. 2 inch (50 mm) Thickness: 0.70.

D. Adhesive: Waterproof, fire-retardant type, ASTM C916.

E. Liner Fasteners: Galvanized steel, self-adhesive pad, impact applied, or welded with integral head.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that ducts have been tested before applying insulation materials.
B. Verify that surfaces are clean, foreign material removed, and dry.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Install in accordance with NAIMA National Insulation Standards.
C. Insulated ducts conveying air below ambient temperature:
   1. Provide insulation with vapor barrier jackets.
   2. Finish with tape and vapor barrier jacket.
   3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.
   4. Insulate entire system including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.
D. Insulated ducts conveying air above ambient temperature:
   1. Provide with or without standard vapor barrier jacket.
   2. Insulate fittings and joints. Where service access is required, bevel and seal ends of insulation.
E. Exterior Applications: Provide insulation with vapor barrier jacket. Cover with with calked aluminum jacket with seams located on bottom side of horizontal duct section.
F. External Duct Insulation Application:
   1. Secure insulation with vapor barrier with wires and seal jacket joints with vapor barrier adhesive or tape to match jacket.
   2. Secure insulation without vapor barrier with staples, tape, or wires.
   3. Install without sag on underside of duct. Use adhesive or mechanical fasteners where necessary to prevent sagging. Lift duct off trapeze hangers and insert spacers.
   4. Seal vapor barrier penetrations by mechanical fasteners with vapor barrier adhesive.
   5. Stop and point insulation around access doors and damper operators to allow operation without disturbing wrapping.
G. Duct and Plenum Liner Application:
   1. Adhere insulation with adhesive for 90 percent coverage.
   2. Secure insulation with mechanical liner fasteners. Refer to SMACNA HVAC Duct
      Construction Standards for spacing.
   4. Seal liner surface penetrations with adhesive.
   5. Duct dimensions indicated are net inside dimensions required for air flow. Increase duct
      size to allow for insulation thickness.

END OF SECTION 23 0713
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Thermostats.
   B. Miscellaneous accessories.

1.02 RELATED REQUIREMENTS
   A. Section 23 3300 - Air Duct Accessories: Installation of automatic dampers.
   B. Section 23 0923 - Direct-Digital Control System for HVAC.
   C. Section 26 2726 - Wiring Devices: Elevation of exposed components.
   D. Section 26 2717 - Equipment Wiring: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS
   A. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2012.
   C. NEMA DC 3 - Residential Controls - Electrical Wall-Mounted Room Thermostats; National Electrical Manufacturers Association; 2008.
   D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); National Electrical Manufacturers Association; 2008.

1.04 ADMINISTRATIVE REQUIREMENTS
   A. Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.
   B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.05 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Provide description and engineering data for each control system component. Include sizing as requested. Provide data for each system component and software module.
   C. Shop Drawings: Indicate complete operating data, system drawings, wiring diagrams, and written detailed operational description of sequences. Submit schedule of valves indicating size, flow, and pressure drop for each valve. For automatic dampers indicate arrangement, velocities, and static pressure drops for each system.
   D. Manufacturer's Instructions: Provide for all manufactured components.
   E. Operation and Maintenance Data: Include inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.
   F. Project Record Documents: Record actual locations of control components, including panels, thermostats, and sensors. Accurately record actual location of control components, including panels, thermostats, and sensors.
      1. Revise shop drawings to reflect actual installation and operating sequences.
   G. Warranty: Submit manufacturers warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
B. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years experience approved by manufacturer.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.07 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
B. Correct defective Work within a 1 year period after Substantial Completion.

1.08 MAINTENANCE SERVICE
A. Provide service and maintenance of control system for one year from Date of Substantial Completion.
B. Provide complete service of controls systems, including call backs. Make minimum of 2 complete normal inspections of approximately 4 hours duration in addition to normal service calls to inspect, calibrate, and adjust controls, and submit written reports.

PART 2 PRODUCTS
2.01 MANUFACTURERS
   1. Integrated Control Systems, Inc. (505-884-3503)
B. Substitutions: Not allowed.

2.02 EQUIPMENT - GENERAL
A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.
B. Direct Digital Controls shall be employed.
C. Building occupancy and temperature over-ride shall be provided at room temperature sensor.
D. Duct smoke detectors shall stop the fans directly through the Unit/Fan (not through fire alarm system).
E. Freezestat shall be located in outside air intake in every packaged air handler. Set point to be 38F. The freezestat shall send an alarm to the packaged air handler and the unit shall follow its programming in the event of an alarm.
F. Provide a separate controller for each RTU or other HVAC system.

2.03 CONTROL PANELS
A. Unitized cabinet type for each system under automatic control with relays and controls mounted in cabinet and temperature indicators, pressure gages, pilot lights, push buttons and switches flush on cabinet panel face.
B. NEMA 250, general purpose utility enclosures with enamelled finished face panel.
C. Provide common keying for all panels.

2.04 INPUT/OUTPUT SENSORS
A. Temperature Sensors:
   1. Resistance temperature detectors with resistance tolerance of plus or minus 0.1 percent at 70 degrees F (21 degrees C), interchangeability less than plus or minus 0.2 percent, time constant of 13 seconds maximum for fluids and 200 seconds maximum for air.
   2. Room sensors: Locking cover.
B. Pressure Sensors:
   1. Unidirectional with ranges not exceeding 150 percent of maximum expected input.
   2. Temperature compensate with typical thermal error or 0.06 percent of full scale in temperature range of 40 to 100 degrees F (5 to 40 degrees C).
   3. Accuracy: One percent of full scale with repeatability 0.3 percent.
   4. Output: 0 - 5 vdc with power at 12 to 28 vdc.
C. Equipment Operation Sensors:
   1. Status Inputs for Fans: Differential pressure switch with adjustable range of 0 to 5 inches wg (0 to 1250 Pa).

2.05 THERMOSTATS
   A. Electric Room Thermostats:
      1. Type: NEMA DC 3, 24 volts.
      2. Service: cooling and heating.
   B. Room Thermostat Accessories:
      1. Insulating Bases: For thermostats located on exterior walls.
      2. Thermostat Guards (where requested by owner): Metal mounted on separate base.
      3. Adjusting Key: As required for device.
   C. Outdoor Reset Thermostat:
      1. Remote bulb or bimetal rod and tube type, proportioning action with adjustable throttling range, adjustable setpoint.
      2. Scale range: -10 to 70 degrees F (2 to 35 degrees C).

2.06 TRANSMITTERS
   A. Building Static Pressure Transmitter:
      1. One pipe, differential type with temperature compensation, scale range 0.01 to 6.0 inch wg (.0025 to 1.5 kPa) positive or negative, and sensitivity of 0.0005 inch wg (0.125 Pa). Transmit electronic signal to receiver with matching scale range.
   B. Temperature Transmitters:
      1. One pipe, directly proportional output signal to measured variable, linearity within plus or minus 1/2 percent of range for 200 degree F (93 degrees C) span and plus or minus 1 percent for 50 degree F (10 degrees C) span, with 50 degrees F (10 degrees C) temperature range, compensated bulb, averaging capillary, or rod and tube operation on 20 psig (138 kPa) input pressure and 3 to 15 psig (20 to 100 kPa) output.

PART 3 EXECUTION
3.01 EXAMINATION
   A. Verify existing conditions before starting work.
   B. Verify that systems are ready to receive work.
   C. Beginning of installation means installer accepts existing conditions.
   D. Sequence work to ensure installation of components is complementary to installation of similar components in other systems.
   E. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.
   F. Ensure installation of components is complementary to installation of similar components.
   G. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.

3.02 INSTALLATION
   A. Install in accordance with manufacturer's instructions.
   B. Check and verify location of thermostats and exposed control sensors with plans and room details before installation. Locate 48 inches (1200 mm) above floor. Align with lighting switches. Refer to Section 26 2726.
   C. Mount outdoor reset thermostats and outdoor sensors indoors, with sensing elements outdoors with sun shield.
   D. Provide guards on thermostats in entrances.
   E. Mount control panels adjacent to associated equipment on vibration free walls or free standing angle iron supports. One cabinet may accommodate more than one system in same equipment
room. Provide engraved plastic nameplates for instruments and controls inside cabinet and engraved plastic nameplates on cabinet face.

F. Install "hand/off/auto" selector switches to override automatic interlock controls when switch is in "hand" position.

G. Provide conduit and electrical wiring in accordance with Division 26. Electrical material and installation shall be in accordance with appropriate requirements of Division 26.

3.03 MAINTENANCE

A. Provide service and maintenance of control system for one year from Date of Substantial Completion.

B. Provide complete service of controls systems, including call backs, and submit written report of each service call.

END OF SECTION 23 0913
SECTION 23 0923
DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC

PART 1 GENERAL

1.01 SECTION INCLUDES
A. System Description
B. Operator Interface
C. Controllers
D. Power Supplies and Line Filtering
E. System Software
F. Controller Software
G. HVAC Control Programs
H. Control equipment
I. Software

1.02 RELATED REQUIREMENTS
A. Section 23 0913 - Instrumentation and Control Devices for HVAC.
B. Section 26 2717 - Equipment Wiring: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS
C. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS
A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

1.05 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data for each system component and software module.
C. Shop Drawings:
   1. Indicate trunk cable schematic showing programmable control unit locations, and trunk data conductors.
   2. List connected data points, including connected control unit and input device.
   3. Indicate system graphics indicating monitored systems, data (connected and calculated) point addresses, and operator notations. Provide demonstration diskette containing graphics.
   4. Show system configuration with peripheral devices, batteries, power supplies, diagrams, modems, and interconnections.
   5. Indicate description and sequence of operation of operating, user, and application software.
   6. All sequence of operation submittals shall be in the logic and verbal format with a (1) = on, start, alarm, etc. All digital signals drawn with a solid line, all analog signals with a dotted line. All submittals sizes shall not exceed 11 x 17 and shall become the property of RRPS.
   7. All points of entry shall be defined on a system architecture logic diagram.
   8. If system uses function blocks, documentation of function block operation shall be provided.
D. Manufacturer's Instructions: Indicate manufacturer's installation instructions for all manufactured components.

E. Project Record Documents: Record actual locations of control components, including control units, thermostats, and sensors.
   1. Revise shop drawings to reflect actual installation and operating sequences.
   2. Include submittals data in final "Record Documents" form.

F. Operation and Maintenance Data:
   1. Include interconnection wiring diagrams complete field installed systems with identified and numbered, system components and devices.
   2. Include keyboard illustrations and step-by-step procedures indexed for each operator function.
   3. Include inspection period, cleaning methods, cleaning materials recommended, and calibration tolerances.

G. Warranty: Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE
   A. Perform work in accordance with NFPA 70.
   B. Design system software under direct supervision of a Professional Engineer experienced in design of this Work and licensed at the State in which the Project is located.
   C. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 5 years documented experience.
   D. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years of documented experience and approved by manufacturer.
   E. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.07 PRE-INSTALLATION MEETING
   A. Convene one week before starting work of this Section.
   B. REQUIRE ATTENDANCE OF PARTIES DIRECTLY AFFECTING THE WORK OF THIS SECTION.

1.08 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Correct defective Work within a five year period after Substantial Completion.
   C. Provide five year manufacturer's warranty for field programmable micro-processor based units.

PART 2 PRODUCTS

2.01 MANUFACTURERS
      1. Integrated Control Systems, Inc. (505-884-3503)
   B. Substitutions: Not allowed.

2.02 SYSTEM DESCRIPTION
   A. Automatic temperature control field monitoring and control system using field programmable micro-processor based units.
   B. Base system on distributed system of fully intelligent, stand-alone controllers, operating in a multi-tasking, multi-user environment on token passing network, with central and remote hardware, software, and interconnecting wire and conduit.
   C. Include computer software and hardware, operator input/output devices, control units, local area networks (LAN), sensors, control devices, actuators.
   D. Controls for individual terminal units control is specified in Section 23 0913.
E. Include installation and calibration, supervision, adjustments, and fine tuning necessary for complete and fully operational system.

F. System shall be expandable. The system shall be required accept new input and output objects with additional controllers, associated devices, and wiring.

2.03 OPERATOR INTERFACE
A. PC Based Work Station: WEB based.
   1. Resides on high speed network with building controllers.
   2. Connected to server for full access to all system information.
B. Workstation, controllers, and control backbone to communicate using BACnet protocol and addressing.
C. BACnet protocol to comply with ASHRAE Std 135.
D. Hardware:
   1. Laptop:
      a. Laptop(s) to be provided by DDC controls manufacturer.
      b. Quantity: To be determined.
      c. Minimum RAM: 2 GB.
      d. Minimum Processing Speed: 3 GHz.
      e. Minimum Hard Drive Memory: 60 GB.
      f. Drives: DVD.
      h. Network Connection:
         1) Ethernet interface card.
         2) Minimum Speed: 1 GB.

2.04 MATERIALS
A. Use new products the manufacturer is currently manufacturing and selling for use in new installations. Do not use this installation as a product test site. Spare parts shall be available for at least five years after completion of this contract.

2.05 CONTROLLERS
A. General. Provide an adequate number of Building Controllers (BC), Advanced Application Controllers (AAC), Application Specific Controllers (ASC), Smart Actuators (SA), and Smart Sensors (SS) as required to achieve performance specified here in.

B. BUILDING CONTROLLERS
   1. General:
      a. Manage global strategies by one or more, independent, standalone, microprocessor based controllers.
      b. Provide sufficient memory to support controller's operating system, database, and programming requirements.
      c. Share data between networked controllers.
      d. Controller operating system manages input and output communication signals allowing distributed controllers to share real and virtual object information and allowing for central monitoring and alarms.
      e. Utilize real-time clock for scheduling.
      f. Continuously check processor status and memory circuits for abnormal operation.
      g. Controller to assume predetermined failure mode and generate alarm notification upon detection of abnormal operation.
      h. Communication with other network devices to be based on assigned protocol.
   2. Communication:
      a. Controller to reside on a BACnet network using ISO 8802-3 (ETHERNET) Data Link/Physical layer protocol.
      b. Perform routing when connected to a network of custom application and application specific controllers.
c. Provide service communication port for connection to a portable operator’s terminal or hand held device with compatible protocol.

3. Anticipated Environmental Ambient Conditions:
   a. Outdoors and/or in Wet Ambient Conditions:
      1) Mount within waterproof enclosures.
      2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
   b. Conditioned Space:
      1) Mount within dustproof enclosures.
      2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).

4. Provisions for Serviceability:
   a. Diagnostic LEDs for power, communication, and processor.
   b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.

5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.

6. Power and Noise Immunity:
   a. Maintain operation at 90 to 110 percent of nominal voltage rating.
   b. Perform orderly shutdown below 80 percent of nominal voltage.
   c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W. at 3 feet (1 m).

C. CUSTOM APPLICATION CONTROLLERS

1. General:
   a. Provide sufficient memory to support controller’s operating system, database, and programming requirements.
   b. Share data between networked, microprocessor based controllers.
   c. Controller operating system manages input and output communication signals allowing distributed controllers to share real and virtual object information and allowing for central monitoring and alarms.
   d. Utilize real-time clock for scheduling.
   e. Continuously check processor status and memory circuits for abnormal operation.
   f. Controller to assume predetermined failure mode and generate alarm notification upon detection of abnormal operation.
   g. Communication with other network devices to be based on assigned protocol.

2. Communication:
   a. Controller to reside on a BACnet network using MS/TP Data Link/Physical layer protocol.
   b. Provide service communication port for connection to a portable operator’s terminal or hand held device with compatible protocol.

3. Anticipated Environmental Ambient Conditions:
   a. Outdoors and/or in Wet Ambient Conditions:
      1) Mount within waterproof enclosures.
      2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
   b. Conditioned Space:
      1) Mount within dustproof enclosures.
      2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).

4. Provisions for Serviceability:
   a. Diagnostic LEDs for power, communication, and processor.
   b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.

5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.

6. Power and Noise Immunity:
   a. Maintain operation at 90 to 110 percent of nominal voltage rating.
   b. Perform orderly shutdown below 80 percent of nominal voltage.
c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W. at 3 feet (1 m).

D. APPLICATION SPECIFIC CONTROLLERS
1. General:
   a. Not fully user programmable, microprocessor based controllers dedicated to control specific equipment.
   b. Customized for operation within the confines of equipment served.
   c. Communication with other network devices to be based on assigned protocol.
2. Communication:
   a. Controller to reside on a BACnet network using MS/TP Data Link/Physical layer protocol.
   b. Provide service communication port for connection to a portable operator's terminal or hand held device with compatible protocol.
3. Anticipated Environmental Ambient Conditions:
   a. Outdoors and/or in Wet Ambient Conditions:
      1) Mount within waterproof enclosures.
      2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
   b. Conditioned Space:
      1) Mount within dustproof enclosures.
      2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).
4. Provisions for Serviceability:
   a. Diagnostic LEDs for power, communication, and processor.
   b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.
5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.
6. Power and Noise Immunity:
   a. Maintain operation at 90 to 110 percent of nominal voltage rating.
   b. Perform orderly shutdown below 80 percent of nominal voltage.
   c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W. at 3 feet (1 m).

E. INPUT/OUTPUT INTERFACE
1. Hardwired inputs and outputs tie into the DDC system through building, custom application, or application specific controllers.
2. All Input/Output Points:
   a. Protect controller from damage resulting from any point short-circuiting or grounding and from voltage up to 24 volts of any duration.
   b. Provide universal type for building and custom application controllers where input or output is software designated as either binary or analog type with appropriate properties.
3. Binary Inputs:
   a. Allow monitoring of On/Off signals from remote devices.
   b. Provide wetting current of 12 mA minimum, compatible with commonly available control devices and protected against the effects of contact bounce and noise.
   c. Sense dry contact closure with power provided only by the controller.
4. Pulse Accumulation Input Objects: Conform to all requirements of binary input objects and accept up to 10 pulses per second.
5. Analog Inputs:
   a. Allow for monitoring of low voltage 0 to 10 VDC, 4 to 20 mA current, or resistance signals (thermistor, RTD).
   b. Compatible with and field configurable to commonly available sensing devices.
6. Binary Outputs:
   a. Used for On/Off operation or a pulsed low-voltage signal for pulse width modulation control.
b. Outputs provided with three position (On/Off/Auto) override switches.
c. Status lights for building and custom application controllers to be selectable for normally open or normally closed operation.

7. Analog Outputs:
   a. Monitoring signal provides a 0 to 10 VDC or a 4 to 20 mA output signal for end device control.
   b. Provide status lights and two position (AUTO/MANUAL) switch for building and custom application controllers with manually adjustable potentiometer for manual override on building and custom application controllers.
   c. Drift to not exceed 0.4 percent of range per year.

8. Tri State Outputs:
   a. Coordinate two binary outputs to control three point, floating type, electronic actuators without feedback.
   b. Control algorithms run the zone actuator to one end of its stroke once every 24 hours for verification of operator tracking.

9. System Object Capacity:
   a. System size to be expandable to twice the number of input output objects required by providing additional controllers, including associated devices and wiring.
   b. Hardware additions or software revisions for the installed operator interfaces are not to be required for future, system expansions.

2.06 POWER SUPPLIES AND LINE FILTERING
   A. Power Supplies:
      1. Provide UL listed control transformers with Class 2 current limiting type or over-current protection in both primary and secondary circuits for Class 2 service as required by the NEC.
      2. Limit connected loads to 80 percent of rated capacity.
      3. Match DC power supply to current output and voltage requirements.
      4. Unit to be full wave rectifier type with output ripple of 5.0 mV maximum peak to peak.
      5. Regulation to be 1 percent combined line and load with 100 microsecond response time for 50 percent load changes.
      6. Provide over-voltage and over-current protection to withstand a 150 percent current overload for 3 seconds minimum without trip-out or failure.
      7. Operational Ambient Conditions: 32 to 120 degrees F (0 to 50 degrees C).
      8. EM/RF meets FCC Class B and VDE 0871 for Class B and MIL-STD 810 for shock and vibration.
      9. Line voltage units UL recognized and CSA approved.
      10. 120v terminals shall be shielded if located within equipment cabinets. Otherwise, a separate transformer of power supply enclosure shall be provided and mounted to the equipment cabinet or within 4' of the equipment served.
   B. Power Line Filtering:
      1. Provide external or internal transient voltage and surge suppression component for all workstations and controllers.
      2. Minimum surge protection attributes:
         a. Dielectric strength of 1000 volts minimum.
         b. Response time of 10 nanoseconds or less.
         c. Transverse mode noise attenuation of 65 dB or greater.
         d. Common mode noise attenuation of 150 dB or greater at 40 to 100 Hz.

2.07 OPERATOR STATION
   A. Work Station Minimum Requirements:
      1. Configuration: IBM-compatible Intel based microcomputer system or better.
      2. Minimum memory: 2 Gb RAM.
      3. MEMORY CLOCK SPEED: 3 GHZ.
4. Display: 18" LCD, 5ms response time, 1440x900 minimum resolution, 16:10 capable, DVI AND VGA INPUTS.
5. Video Adapter: Integrated, 512 MB Memory, with analog (VGA) and digital (DVI) output.
7. Network Controller: Dual port, Gigabit ethernet network interface card.
10. Compact Disc Drive: SATA 24x CD R/W and DVD drive.
11. Mouse: Software supported mouse with support software including self building menus and displays of system operations and functions.
12. SOFTWARE: WEBCTRL BUILDING AUTOMATION SYSTEM SOFTWARE BY AUTOMATED LOGIC CORPORATION.

2.08 LOCAL AREA NETWORK (LAN)
A. Provide communication between control units over local area network (LAN).
B. LAN Capacity: Not less than 60 stations or nodes.
C. Break in Communication Path: Alarm and automatically initiate LAN reconfiguration.
D. LAN Data Speed: Minimum 19.2 Kb.
E. Communication Techniques: Allow interface into network by multiple operation stations and by auto-answer/auto-dial modems. Support communication over telephone lines utilizing modems.
F. Transmission Median: Fiber optic or single pair of solid 24 gauge twisted, shielded copper cable.
G. Network Support: Time for global point to be received by any station, shall be less than 3 seconds. Provide automatic reconfiguration if any station is added or lost. If transmission cable is cut, reconfigure two sections with no disruption to system's operation, without operator intervention.

2.09 SYSTEM SOFTWARE
A. Operating System:
   1. Web server or workstation shall have an industry-standard professional-grade operating system. Operating system shall meet or exceed the DDC System manufacturers minimum requirements for their software. Typically acceptable systems include Microsoft Windows7, Microsoft Vista, Microsoft Windows XP Pro, Windows Server 2003 or 2008, Red Hat Enterprise Linux, or Ubuntu Desktop 10.04.
   2. System Graphics:
      a. Allow up to 10 graphic screens, simultaneously displayed for comparison and monitoring of system status.
      b. Animation displayed by shifting image files based on object status.
      c. Provide method for operator with password to perform the following:
         1) Move between, change size, and change location of graphic displays.
         2) Modify on-line.
         3) Add, delete, or change dynamic objects consisting of:
            (a) Analog and binary values.
            (b) Dynamic text.
            (c) Static text.
            (d) Animation files.
   3. Custom Graphics Generation Package:
      a. Create, modify, and save graphic files and visio format graphics in PCX, TIFF, GEM, and .dwg formats.
      b. HTML graphics to support web browser compatible formats.
      c. Capture or convert graphics from AutoCAD.
4. Standard HVAC Graphics Library:
   a. HVAC Equipment:
      1) Furnish a complete library of standard HVAC equipment graphics such as
         chillers, boilers, air handlers, package roof top units, terminals, fan coils, and
         unit ventilators. This library also shall include standard symbols for other
         equipment including fans, pumps, coils, valves, piping, dampers, and ductwork.
         The library shall be furnished in a file format compatible with the graphics
         generation package program.

B. Workstation System Applications:
1. Automatic System Database Save and Restore Functions:
   a. Current database copy of each Building Controller is automatically stored on hard
      disk.
   b. Automatic update occurs upon change in any system panel.
   c. In the event of database loss in any system panel, the first workstation to detect the
      loss automatically restores the database for that panel unless disabled by the
      operator.
2. Manual System Database Save and Restore Functions by Operator with Password
   Clearance:
   a. Save database from any system panel.
   b. Clear a panel database.
   c. Initiate a download of a specified database to any system panel.
3. Software provided allows system configuration and future changes or additions by
   operators under proper password protection.
4. On-line Help:
   a. Context-sensitive system assists operator in operation and editing.
   b. Available for all applications.
   c. Relevant screen data provided for particular screen display.
   d. Additional help available via hypertext.
5. Security:
   a. Operator log-on requires user name and password to view, edit, add, or delete data.
   b. System security selectable for each operator.
   c. System supervisor sets passwords and security levels for all other operators.
   d. Operator passwords to restrict functions accessible to viewing and/or changing
      system applications, editor, and object.
   e. Automatic, operator log-off results from keyboard or mouse inactivity during user-
      adjustable, time period.
   f. All system security data stored in encrypted format.
6. System Diagnostics:
   a. Operations Automatically Monitored:
      1) Workstations.
      2) Printers.
      3) Modems.
      4) Network connections.
      5) Building management panels.
      6) Controllers.
   b. Device failure is annunciated to the operator.
7. Alarm Processing:
   a. All system objects are configurable to "alarm in" and "alarm out" of normal state.
   b. Configurable Objects:
      1) Alarm limits.
      2) Alarm limit differentials.
      3) States.
      4) Reactions for each object.
8. Alarm Messages:
   b. Recognizable Features:
      1) Source.
      2) Location.
      3) Nature.

9. Configurable Alarm Reactions by Workstation and Time of Day:
   a. Logging.
   b. Printing.
   c. Starting programs.
   d. Displaying messages.
   e. Dialing out to remote locations.
   f. Paging.
   g. Providing audible annunciation.
   h. Displaying specific system graphics.

10. Custom Trend Logs:
    a. Definable for any data object in the system including interval, start time, and stop time.
    b. Trend Data:
        1) Sampled and stored on the building controller panel.
        2) Archivable on hard disk.
        3) Retrievable for use in reports, spreadsheets and standard database programs.
        4) Archival on LAN accessible storage media including hard disk, tape, Raid array drive, and virtual cloud environment.
        5) Protected and encrypted format to prevent manipulation, or editing of historical data and event logs.

11. Alarm and Event Log:
    a. View all system alarms and change of states from any system location.
    b. Events listed chronologically.
    c. Operator with proper security acknowledges and clears alarms.
    d. Alarms not cleared by operator are archived to the workstation hard disk.

12. Object, Property Status and Control:
    a. Provide a method to view, edit if applicable, the status of any object and property in the system.
    b. Status Available by the Following Methods:
       1) Menu.
       2) Graphics.
       3) Custom Programs.

13. Reports and Logs:
    a. Reporting Package:
       1) Allows operator to select, modify, or create reports.
       2) Definable as to data content, format, interval, and date.
       3) Archivable to hard disk.
    b. Real-time logs available by type or status such as alarm, lockout, normal, etc.
    c. Stored on hard disk and readily accessible by standard software applications, including spreadsheets and word processing.
    d. Set to be printed on operator command or specific time(s).

14. Reports:
    a. Standard:
       1) Objects with current values.
       2) Current alarms not locked out.
       3) Disabled and overridden objects, points and SNVTs.
       4) Objects in manual or automatic alarm lockout.
       5) Objects in alarm lockout currently in alarm.
6) Logs:
   (a) Alarm History.
   (b) System messages.
   (c) System events.
   (d) Trends.

b. Custom:
   1) Daily.
   2) Weekly.
   3) Monthly.
   4) Annual.
   5) Time and date stamped.
   6) Title.
   7) Facility name.

c. Tenant Override:
   1) Monthly report showing total, requested, after-hours HVAC and lighting services
      on a daily basis for each tenant.
   2) Annual report showing override usage on a monthly basis.

d. Electrical, Fuel, and Weather:
   1) Electrical Meter(s):
      (a) Monthly showing daily electrical consumption and peak electrical demand
          with time and date stamp for each meter.
      (b) Annual summary showing monthly electrical consumption and peak
          demand with time and date stamp for each meter.
   2) Fuel Meter(s):
      (a) Monthly showing daily natural gas consumption for each meter.
      (b) Annual summary showing monthly consumption for each meter.
   3) Weather:
      (a) Monthly showing minimum, maximum, average outdoor air temperature and
          heating/cooling degree-days for the month.

C. Workstation Applications Editors:
   1. Provide editing software for all system applications at the PC workstation.
   2. Downloaded application is executed at controller panel.
   3. Full screen editor for each application allows operator to view and change:
      a. Configuration.
      b. Name.
      c. Control parameters.
      d. Set-points.
   4. Scheduling:
      a. Monthly calendar indicates schedules, holidays, and exceptions.
      b. Allows several related objects to be scheduled and copied to other objects or dates.
      c. Start and stop times adjustable from master schedule.
   5. Custom Application Programming:
      a. Create, modify, debug, edit, compile, and download custom application programming
         during operation and without disruption of all other system applications.
      b. Programming Features:
         1) English oriented language, based on BASIC, FORTRAN, C, or PASCAL syntax
            allowing for free form programming.
         2) Alternative language graphically based using appropriate function blocks
            suitable for all required functions and amenable to customizing or compounding.
         3) Insert, add, modify, and delete custom programming code that incorporates
            word processing features such as cut/paste and find/replace.
         4) Allows the development of independently, executing, program modules
            designed to enable and disable other modules.
5) Debugging/simulation capability that displays intermediate values and/or results including syntax/execution error messages.

6) Support for conditional statements (IF/THEN/ELSE/ELSE-F) using compound Boolean (AND, OR, and NOT) and/or relations (EQUAL, LESS THAN, GREATER THAN, NOT EQUAL) comparisons.

7) Support for floating-point arithmetic utilizing plus, minus, divide, times, square root operators; including absolute value; minimum/maximum value from a list of values for mathematical functions.

8) Language consisting of resettable, predefined, variables representing time of day, day of the week, month of the year, date; and elapsed time in seconds, minutes, hours, and days where the variable values can be used in IF/THEN comparisons, calculations, programming statement logic, etc.

9) Language having predefined variables representing status and results of the system software enables, disables, and changes the set points of the controller software.

2.10 CONTROLLER SOFTWARE

A. All applications reside and operate in the system controllers and editing of all applications occurs at the operator workstation.

B. System Security:
   1. User access secured via user passwords and user names.
   2. Passwords restrict user to the objects, applications, and system functions as assigned by the system manager.
   3. User Log On/Log Off attempts are recorded.
   4. Automatic Log Off occurs following the last keystroke after a user defined delay time.

C. Object or Object Group Scheduling:
   1. Weekly Schedules Based on Separate, Daily Schedules:
      a. Include start, stop, optimal stop, and night economizer.
      b. 10 events maximum per schedule.
      c. Start/stop times adjustable for each group object.
   2. Holiday or Special Schedules:
      a. Capability to define up to 99 schedules.
      b. Repeated annually.
      c. Length of each period is operator defined.

D. Provide standard application for equipment coordination and grouping based on function and location to be used for scheduling and other applications.

E. Alarms:
   1. Binary object is set to alarm based on the operator specified state.
   2. Analog object to have high/low alarm limits.
   3. All alarming is capable of being automatically and manually disabled.
   4. Alarm Reporting:
      a. Operator determines action to be taken for alarm event.
      b. Alarms to be routed to appropriate workstation.
      c. Reporting Options:
         1) Start Programs.
         2) Logged.
         3) Custom messaging.
         4) Graphical displays.

F. Maintenance Management: System monitors equipment status and generates maintenance messages based upon user-designated run-time limits.

G. PID Control Characteristics:
   1. Direct or reverse action.
   2. Anti-windup.
3. Calculated, time-varying, analog value, positions an output or stages a series of outputs.

H. Staggered Start Application:
1. Prevents all controlled equipment from simultaneously restarting after power outage.
2. Order of equipment startup is user selectable.

I. Energy Calculations:
1. Accumulated instantaneous power or flow rates are converted to energy use data.
2. Algorithm calculates a rolling average and allows window of time to be user specified in minute intervals.
3. Algorithm calculates a fixed window average with a digital input signal from a utility meter defining the start of the window period that in turn synchronizes the fixed-window average with that used by the power company.

J. Anti-Short Cycling:
1. All binary output objects protected from short-cycling.
2. Allows minimum on-time and off-time to be selected.

K. On-Off Control with Differential:
1. Algorithm allows binary output to be cycled based on a controlled variable and set-point.
2. Algorithm to be direct-acting or reverse-acting incorporating an adjustable differential.

L. Run-Time Totalization:
1. Totalize run-times for all binary input objects.
2. Provides operator with capability to assign high run-time alarm.

2.11 HVAC CONTROL PROGRAMS

A. General:
1. Support Inch-pounds and SI (metric) units of measurement.
2. Identify each HVAC Control system.

B. Graphics:
1. All graphics shall be linked to allow easy mobility from page to page.
2. The minimum graphics requirements shall include:
   a. Building summary page.
   b. Complete graphics for each package air handler.

C. Optimal Run Time:
1. Control start-up and shutdown times of HVAC equipment for both heating and cooling.
2. Base on occupancy schedules, outside air temperature, seasonal requirements, and interior room mass temperature.
3. Start-up systems by using outside air temperature, room mass temperatures, and adaptive model prediction for how long building takes to warm up or cool down under different conditions.
4. Use outside air temperature to determine early shut down with ventilation override.
5. Analyze multiple building mass sensors to determine seasonal mode and worse case condition for each day.
6. Operator commands:
   a. Define term schedule
   b. Add/delete fan status point.
   c. Add/delete outside air temperature point.
   d. Add/delete mass temperature point.
   e. Define heating/cooling parameters.
   f. Define mass sensor heating/cooling parameters.
   g. Lock/unlock program.
   h. Request optimal run time control summary.
   i. Request optimal run time mass temperature summary.
   j. Request HVAC point summary.
7. Control Summary:
   a. HVAC Control system begin/end status.
   b. Optimal run time lock/unlock control status.
   c. Heating/cooling mode status.
   d. Optimal run time schedule.
   e. Start/Stop times.
   f. Selected mass temperature point ID.
   g. Optimal run time system normal start times.
   h. Occupancy and vacancy times.
   i. Optimal run time system heating/cooling mode parameters.

8. Mass temperature summary:
   a. Mass temperature point type and ID.
   b. Desired and current mass temperature values.
   c. Calculated warm-up/cool-down time for each mass temperature.
   d. Heating/cooling season limits.
   e. Break point temperature for cooling mode analysis.

9. HVAC point summary:
   a. Control system identifier and status.
   b. Point ID and status.
   c. Outside air temperature point ID and status.
   d. Mass temperature point ID and point.
   e. Calculated optimal start and stop times.
   f. Period start.

D. Supply Air Reset:
1. Monitor heating and cooling loads in building spaces, terminal reheat systems, both hot
dock and cold dock temperatures on dual duct and multizone systems, single zone unit
discharge temperatures.
2. Adjust discharge temperatures to most energy efficient levels satisfying measured load by:
   a. Raising cooling temperatures to highest possible value.
   b. Reducing heating temperatures to lowest possible level.
3. Operator commands:
   a. Add/delete fan status point.
   b. Lock/unlock program.
   c. Request HVAC point summary.
   d. Add/Delete discharge controller point.
   e. Define discharge controller parameters.
   f. Add/delete air flow rate.
   g. Define space load and load parameters.
   h. Request space load summary.
4. Control summary:
   a. HVAC control system status (begin/end).
   b. Supply air reset system status.
   c. Optimal run time system status.
   d. Heating and cooling loop.
   e. High/low limits.
   f. Deadband.
   g. Response timer.
   h. Reset times.
5. Space load summary:
   a. HVAC system status.
   b. Optimal run time status.
   c. Heating/cooling loop status.
d. Space load point ID.
e. Current space load point value.
f. Control heat/cool limited.
g. Gain factor.
h. Calculated reset values.
i. Fan status point ID and status.
j. Control discharge temperature point ID and status.
k. Space load point ID and status.
l. Air flow rate point ID and status.

E. Enthalpy Switchover:
1. Calculate outside and return air enthalpy using measured temperature and relative humidity; determine energy expended and control outside and return air dampers.
2. Control summary:
   a. HVAC control system begin/end status.
   b. Enthalpy switchover optimal system status.
   c. Optimal return time system status.
   d. Current outside air enthalpy.
   e. Calculated mixed air enthalpy.
   f. Calculated cooling cool enthalpy using outside air.
   g. Calculated cooling cool enthalpy using mixed air.
   h. Calculated enthalpy difference.
   i. Enthalpy switchover deadband.
   j. Status of damper mode switch.

2.12 DDC HARDWARE

A. All exposed control wiring up to 10 foot above any floor or access platform shall be in no less than ¾" conduit with compression type connectors. All flexible conduit shall be of the weatherproof type, no less that ¾" diameter and not longer than 5 feet in length and fittings of the same manufacture shall be used. All junction boxes within air handler plenums shall be weatherproof. All electrical local and state codes shall be enforced. Color of conduit shall be green. Coordinate color with facilities manager prior to ordering.

B. All CAT-5, 5e or 6 cable runs shall not exceed 300 feet.

C. All transducers or converters, D/A, A/D, electronic to pneumatic shall be mounted in the DDC control cabinet with the primary controller. When connecting DDC to existing pneumatic end devices a separate transducer is required for each AO control signal. A separate panel mounted adjacent to the primary control cabinet if more space is required is acceptable.

D. All converters, transducers, sensors, wire terminations and end devices shall be labeled according to UNM labeling standards for ease of troubleshooting. A point list and wiring table shall be installed on the inside door of each control cabinet.

E. All relays used shall have a lighted indicator as to when they are energized.

F. All control cabinets shall be labeled on the outside as to what equipment they control.

G. Under no circumstances shall any control cabinets contain voltages in excess of 50 volts and all control circuitry shall use voltages under 50 volts. Separate transformer or power supply enclosures shall be provided as required OR when located inside the control box the 120v terminals shall be shielded.

H. New installations shall use no more than 80% of a controllers I/O points and at least 2 spare I/O points shall be left for future expansion.

I. All DDC valves and damper motor operators shall be spring loaded and on a loss of power shall fail to the following positions:
   1. Outside air fail closed
   2. Return air fail open
   3. Relief fail closed
4. Heating water fail open, or to coil on 3-way valves
5. Chilled water fail open, or to coil on 3-way valves
6. Steam preheat fail open
7. All steam converter or generator valves fail closed

J. 110 volt AC outlet shall be installed outside and near each control cabinets and a service switch shall be mounted inside the cabinet.

K. A desktop or laptop computer point of entry and security key shall be provided for each new building system installed.

L. Capability of change of program, add sensors, and tune system shall be made available to RRPS.

M. All network system wiring shall have installed manufacturer specified surge protection located in the network as recommended by the manufacturer.

N. The following standard shall be used for the local area network (LAN):
   1. Wire shall be 22 AWG twisted pair black & white, shielded, plenum Rated, 300 vac insulated jacket, purple in color.
   2. Wiring product shall conform to standards written by the controls manufacturer and follow their recommended guidelines and not to exceed maximum lengths.
   3. Terminators, repeaters, and grounding shall be installed according to manufacturers specifications.
   4. All LAN wiring shall not be exposed, but shall be installed in raceway, ceiling plenum, or conduit (EMT).
   5. All LAN wiring shall not be in the same conduit as other power sources and never near panel breakers, contactors, etc.

O. No more than two wires shall terminate on a single terminal point

P. All control wiring to be copper

2.13 GENERAL COMMUNICATIONS

A. Each DDC building system controller will be completely stand-alone and all settings and trend data contained within a building computer with complete access by UNM maintenance personnel. The system shall not rely on a computer outside the building envelope to contain a database for its operation.

B. Two (2) data ports shall be provided for interface between the campus network and the DDC server. These are to be in the location specified by UNMH and will typically be located in a mechanical space or the building maintenance office. Note that there is a 300 limit on cabling runs from an IT closet to this location.

C. Two (2) Static IP addresses shall be provided for interface between the campus network and the DDC server.

D. The MAC address and physical location for each IP address shall be provided to UNM PPD Engineering & Energy Services and UMH facilities maintenance.

2.14 PROGRAMMING APPLICATION FEATURES

A. Alarm Messages:
   1. Assign alarm messages to system messages including point's alarm condition, point's off-normal condition, totaled point's warning limit, hardware elements advisories.
   2. Output assigned alarm with "message requiring acknowledgement".
   3. Operator commands include define, modify, or delete; output summary listing current alarms and assignments; output summary defining assigned points.
   4. There shall be a proofing function for all DO points to alarm if action does not take place where appropriate. Coordinate with facilities manager.

B. Weekly Scheduling:
   1. Automatically initiate equipment or system commands, based on preselected time schedule for points specified.
2. Provide program times for each day of week, per point, with one minute resolution.
3. Automatically generate alarm output for points not responding to command.
4. Provide for holidays, minimum of 366 consecutive holidays.
5. Operator commands:
   a. System logs and summaries.
   b. Start of stop point.
   c. Lock or unlock control or alarm input.
   d. Add, delete, or modify analog limits and differentials.
   e. Adjust point operation position.
   f. Change point operational mode.
   g. Open or close point.
   h. Enable/disable, lock/unlock, or execute interlock sequence or computation profile.
   i. Begin or end point totalization.
   j. Modify totalization values and limits.
   k. Access or secure point.
   l. Begin or end HVAC or load control system.
   m. Modify load parameter.
   n. Modify demand limiting and duty cycle targets.
6. Output summary: Listing of programmed function points, associated program times, and respective day of week programmed points by software groups or time of day.

C. Interlocking:
1. Permit events to occur, based on changing condition of one or more associated master points. Binary contact, high/low limit of analog point or computed point shall be capable of being utilized as master. Same master may monitor or command multiple slaves.
2. Operator commands:
   a. Define single master/multiple master interlock process.
   b. Define logic interlock process.
   c. Lock/unlock program.
   d. Enable/disable interlock process.
   e. Execute terminate interlock process.
   f. Request interlock type summary.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify existing conditions before starting work.
B. Verify that conditioned power supply is available to the control units and to the operator work station. Verify that field end devices, wiring, and pneumatic tubing is installed prior to installation proceeding.

3.02 INSTALLATION
A. Install control units and other hardware in position on permanent walls where not subject to excessive vibration.
B. Install software in control units and in operator work station. Implement all features of programs to specified requirements and appropriate to sequence of operation. Refer to Section 23 0993.
C. Provide with 120v AC, 15 amp dedicated emergency power circuit to each programmable control unit.
D. Provide conduit and electrical wiring in accordance with Section 26 2717. Electrical material and installation shall be in accordance with appropriate requirements of Division 26.

3.03 MANUFACTURER'S FIELD SERVICES
A. Start and commission systems. Allow sufficient time for start-up and commissioning prior to placing control systems in permanent operation.
B. Provide service engineer to instruct Owner's representative in operation of systems plant and equipment for 3 day period.

C. Provide basic operator training for 2 persons on data display, alarm and status descriptors, requesting data, execution of commands and request of logs. Include a minimum of 24 hours dedicated instructor time. Provide training on site.

3.04 DEMONSTRATION AND INSTRUCTIONS
   A. Demonstrate complete and operating system to Owner.

3.05 MAINTENANCE
   A. Provide service and maintenance of energy management and control systems for one year from Date of Substantial Completion.

   B. Provide two complete inspections, one in each season, to inspect, calibrate, and adjust controls as required, and submit written reports.

END OF SECTION 23 0923
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SECTION 23 3100
HVAC DUCTS AND CASINGS

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Metal ductwork.
   B. Nonmetal ductwork.
   C. Duct cleaning.

1.02 RELATED REQUIREMENTS
   A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
   B. Section 23 0593 - Testing, Adjusting, and Balancing for HVAC.
   C. Section 23 0713 - Duct Insulation: External insulation and duct liner.
   D. Section 23 3300 - Air Duct Accessories.
   E. Section 23 0593 - HVAC Testing, Adjusting, and Balancing.

1.03 REFERENCE STANDARDS
   G. SMACNA (DCS) - HVAC Duct Construction Standards; 2005.
   H. SMACNA (FGD) - Fibrous Glass Duct Construction Standards; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

1.04 PERFORMANCE REQUIREMENTS
   A. No variation of duct configuration or sizes permitted except by written permission. Size round ducts installed in place of rectangular ducts in accordance with ASHRAE table of equivalent rectangular and round ducts.

1.05 SUBMITTALS
   A. See Section 01 3300 - Submittal Procedures.
   B. Product Data: Provide data for duct materials and duct connections.
   C. Manufacturer's Installation Instructions: Indicate special procedures for glass fiber ducts.
   D. Project Record Documents: Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.
PART 2 PRODUCTS

2.01 DUCT ASSEMBLIES
A. Regulatory Requirements: Construct ductwork to NFPA 90A standards.

2.02 MATERIALS
A. Galvanized Steel for Ducts: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS Type B, with G60/Z180 coating.
B. Flexible Ducts:
   1. Two ply vinyl film supported by helically wound spring steel wire.
      a. Pressure Rating: 10 inches WG (2.50 kPa) positive and 1.0 inches WG (250 Pa) negative.
      b. Maximum Velocity: 4000 fpm (20.3 m/sec).
      c. Temperature Range: -10 degrees F to 160 degrees F (-23 degrees C to 71 degrees C).
C. Insulated Flexible Ducts:
   1. UL 181, Class 1, aluminum laminate and polyester film with latex adhesive supported by helically wound spring steel wire; fiberglass insulation; polyethylene vapor barrier film.
      a. Pressure Rating: 10 inches WG (2.50 kPa) positive and 1.0 inches WG (250 Pa) negative.
      b. Maximum Velocity: 4000 fpm (20.3 m/sec).
      c. Temperature Range: -20 degrees F to 210 degrees F (-28 degrees C to 99 degrees C).

2.03 DUCTWORK FABRICATION
A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards and as indicated.
B. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.

2.04 MANUFACTURED DUCTWORK AND FITTINGS
A. Manufacture in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
B. Flexible Ducts: Two ply vinyl film supported by helically wound spring steel wire.
   1. Pressure Rating: 10 inches WG (2.50 kPa) positive and 1.0 inches WG (250 Pa) negative.
   2. Maximum Velocity: 4000 fpm (20.3 m/sec).
   3. Temperature Range: Minus 10 degrees F to 160 degrees F (Minus 23 degrees C to 71 degrees C).

PART 3 EXECUTION

3.01 INSTALLATION
A. Install, support, and seal ducts in accordance with SMACNA HVAC Duct Construction Standards.
B. Install in accordance with manufacturer's instructions.
C. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.
D. Flexible Ducts: Connect to metal ducts with adhesive.
E. Duct sizes indicated are inside clear dimensions. For lined ducts, maintain sizes inside lining.
F. Install and seal metal and flexible ducts in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.
G. Provide openings in ductwork where required to accommodate thermometers and controllers. Provide pilot tube openings where required for testing of systems, complete with metal can with
spring device or screw to ensure against air leakage. Where openings are provided in insulated ductwork, install insulation material inside a metal ring.

H. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.

I. Use crimp joints with or without bead for joining round duct sizes 8 inch (200 mm) and smaller with crimp in direction of air flow.

J. Use double nuts and lock washers on threaded rod supports.

K. Connect terminal units to supply ducts directly or with one foot (300 mm) maximum length of flexible duct. Do not use flexible duct to change direction.

L. Connect diffusers or light troffer boots to low pressure ducts directly or with 5 feet (1.5 m) maximum length of flexible duct held in place with strap or clamp.

M. Connect flexible ducts to metal ducts with draw bands.

N. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

O. At exterior wall louvers, seal duct to louver frame and install blank-out panels.

3.02 CLEANING

A. Clean duct system and force air at high velocity through duct to remove accumulated dust. To obtain sufficient air, clean half the system at a time. Protect equipment that could be harmed by excessive dirt with temporary filters, or bypass during cleaning.

B. Clean duct systems with high power vacuum machines. Protect equipment that could be harmed by excessive dirt with filters, or bypass during cleaning. Provide adequate access into ductwork for cleaning purposes.

   1. Low Pressure Supply: Galvanized steel and insulated flexible duct.
   2. Return and Relief: Galvanized steel.
   4. Outside Air Intake: Galvanized steel.
   5. Supply: 2 inch (500 Pa).

END OF SECTION 23 3100
SECTION 23 3300
AIR DUCT ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Air turning devices/extractors.
B. Backdraft dampers - metal.
C. Flexible duct connections.

1.02 RELATED REQUIREMENTS
A. Section 22 0548 - Vibration and Seismic Controls for Plumbing Piping and Equipment.
B. Section 23 3100 - HVAC Ducts and Casings.

1.03 REFERENCE STANDARDS
B. SMACNA (DCS) - HVAC Duct Construction Standards; 2005.

1.04 SUBMITTALS
A. See Section 01 3300 - Submittal Procedures.
B. Product Data: Provide for shop fabricated assemblies including volume control dampers. Include electrical characteristics and connection requirements.
C. Manufacturer's Installation Instructions: Provide instructions for fire dampers.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Protect dampers from damage to operating linkages and blades.

PART 2 PRODUCTS

2.01 AIR TURNING DEVICES/EXTRACTORS
A. Manufacturers:
   4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 BACKDRAFT DAMPERS - METAL

2.03 BACKDRAFT DAMPERS
A. Manufacturers:
B. Gravity Backdraft Dampers, Size 18 x 18 inches (450 x 450 mm) or Smaller, Furnished with Air Moving Equipment: Air moving equipment manufacturer's standard construction.
C. Multi-Blade, Parallel Action Gravity Balanced Backdraft Dampers: Galvanized steel, with center pivoted blades of maximum 6 inch (150 mm) width, with felt or flexible vinyl sealed edges, linked together in rattle-free manner with 90 degree stop, steel ball bearings, and plated steel pivot pin; adjustment device to permit setting for varying differential static pressure.

2.04 FLEXIBLE DUCT CONNECTIONS
A. Manufacturers:
B. Fabricate in accordance with SMACNA HVAC Duct Construction Standards and as indicated.
C. Flexible Duct Connections: Fabric crimped into metal edging strip.
   1. Fabric: UL listed fire-retardant neoprene coated woven glass fiber fabric to NFPA 90A,
      minimum density 30 oz per sq yd (1.0 kg/sq m).
      a. Net Fabric Width: Approximately 2 inches (50 mm) wide.
      2. Metal: 3 inches (75 mm) wide, 24 gage (0.6 mm) thick galvanized steel.

2.05 MISCELLANEOUS PRODUCTS
   A. Internal Strut End Plugs: Combination end-mounting and sealing plugs for metal conduit used
      as internal reinforcement struts for metal ducts; plug crimped inside conduit with outside
      gasketed washer seal.
      1. Products:
         a. Carlisle HVAC Products; Dynair Internal Duct Reinforcement - Conduplugs:
         b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION
3.01 PREPARATION
   A. Verify that electric power is available and of the correct characteristics.

3.02 INSTALLATION
   A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow
      SMACNA HVAC Duct Construction Standards. Refer to Section 23 3100 for duct construction
      and pressure class.
   B. Provide backdraft dampers on exhaust fans or exhaust ducts nearest to outside and where
      indicated.
   C. Provide duct access doors for inspection and cleaning before and after filters, coils, fans,
      automatic dampers, at fire dampers, combination fire and smoke dampers, and elsewhere as
      indicated. Provide for cleaning kitchen exhaust ducts in accordance with NFPA 96. Provide
      minimum 8 x 8 inch (200 x 200 mm) size for hand access, size for shoulder access, and as
      indicated. Provide 4 x 4 inch (100 x 100 m) for balancing dampers only. Review locations prior
      to fabrication.
   D. Provide duct access doors for inspection and cleaning before and after filters, coils, fans,
      automatic dampers, at fire dampers, combination fire and smoke dampers, and elsewhere as
      indicated. Provide minimum 8 x 8 inch (200 x 200 mm) size for hand access, 18 x 18 inch (450
      x 450 mm) size for shoulder access, and as indicated. Provide 4 x 4 inch (100 x 100 m) for
      balancing dampers only. Review locations prior to fabrication.
   E. At fans and motorized equipment associated with ducts, provide flexible duct connections
      immediately adjacent to the equipment.
   F. At equipment supported by vibration isolators, provide flexible duct connections immediately
      adjacent to the equipment; see Section 22 0548, Vibration and Seismic Controls for Plumbing
      Piping and Equipment.
   G. Provide balancing dampers at points on supply, return, and exhaust systems where branches
      are taken from larger ducts as required for air balancing. Install minimum 2 duct widths from
      duct take-off.
   H. Use splitter dampers only where indicated.
   I. Provide balancing dampers on duct take-off to diffusers, grilles, and registers, regardless of
      whether dampers are specified as part of the diffuser, grille, or register assembly.

END OF SECTION 23 3300
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Diffusers.
   B. Registers/grilles.
   C. Roof hoods.

1.02 REFERENCE STANDARDS
   D. SMACNA (DCS) - HVAC Duct Construction Standards; 2005.

1.03 SUBMITTALS
   A. See Section 01330 - Submittal Procedures, for submittal procedures.
   B. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

1.04 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS
   D. Substitutions: See Section 01 6000 - Product Requirements.

2.02 RECTANGULAR CEILING DIFFUSERS
   A. Type: Provide square, stamped, multi-core, square, adjustable pattern, stamped, multi-core, square and rectangular, multi-louvered, square and rectangular, adjustable pattern, and multi-louvered diffuser to discharge air in 360 degree, one way, two way, three way, and four way pattern with sectorizing baffles where indicated.
   B. Connections: Round.
   C. Frame: Provide surface mount, snap-in, inverted T-bar, and spline type.
   D. Fabrication: Aluminum with baked enamel finish.
   E. Frame: Surface mount and/or T-bar lay-in type.
   F. Fabrication: Aluminum with baked enamel off-white finish.
   G. Accessories: Radial opposed blade damper and multi-louvered equalizing grid with damper adjustable from diffuser face.

2.03 ROOF HOODS
   A. MANUFACTURER: Greenheck, PO Box 410, Schofield, Wisconsin 54476. Phone (715) 359-6171.
B. **General Description:** Ventilator is low silhouette for relief applications with natural gravity or negative pressure system.

C. **Hood and Base:**
1. **Material Type:** Aluminum.
2. **Hood** Constructed of precision formed, arched panels with interlocking seams
3. **Vertical end panels** are fully locked into hood end panels
4. **Base height** is standard of 5 inches
5. **Curb cap** is six inches larger than throat size
6. **Curb cap** has pre-punched mounting holes for installation
7. **Birdscreen:** Constructed of ½ inch Aluminum mesh mounted horizontally across the intake area of the hood.
8. **Roof Curb Adaptor** is required. Field verify existing curb dimensions. **Material:** Aluminum.
   **Curb Seal:** Rubber seal between hood, curb adaptor and existing curb.
9. **Damper:** Type is counter balanced set to open at 0.05 inches w.c.
10. **Finish:** Permatector - thermo-setting polyester urethane.

**PART 3 EXECUTION**

**3.01 INSTALLATION**
A. Install in accordance with manufacturer's instructions.
B. Check location of outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.
C. Install diffusers to ductwork with air tight connection.
D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers.
E. Paint ductwork visible behind air outlets and inlets matte black.

**END OF SECTION 23 3700**
SECTION 23 8115
PACKAGED ROOF TOP AIR CONDITIONING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Packaged roof top unit.
   B. Unit controls.
   C. Maintenance service.
   D. Roof mounting frame and base.

1.02 REFERENCES
   A. AFBMA 9-Load Ratings and Fatigue Life for Ball Bearings.
   B. AMCA 99-Standards Handbook
   C. AMCA 210-Laboratory Methods of Testing Fans for Rating Purposes
   D. AMCA 300-Test Code for Sound Rating Air Moving Devices
   E. AMCA 500-Test Methods for Louver, Dampers, and Shutters.
   F. ARI 340/360-Unitary Large Equipment
   G. ARI 430-Central-Station Air-Handling Units.
   H. ARI 435-Application of Central-Station Air-Handling Units.
   I. IBC 2000 - International Building Code
   J. NEMA MG1-Motors and Generators
   K. National Electrical Code.
   L. NFPA 70-National Fire Protection Agency.
   M. SMACNA-HVAC Duct Construction Standards-Metal and Flexible.
   N. UL 900-Test Performance of Air Filter Units.

1.03 SUBMITTALS
   A. Submit shop drawings and product data under provisions of Division 01 for all products and assemblies required for this project. Clearly indicate on shop drawings and product data, and in narrative form, any deviations in products being submitted from specified products. Shop drawings and product data for all packaged roof top air conditioning equipment for the project shall be submitted as a bound set, using first quality originals or reproductions, of manufacturers published literature.
   B. Shop Drawings: Clearly indicate unit assembly, unit dimensions, weight loading, required clearances, unit operating controls, central facilities control system interface, unit accessories, construction details, field connection details, and electrical characteristics and connection requirements.
   C. Product Data:
      1. Provide literature which clearly indicates dimensions, weights, capacities, ratings, fan performance, gauges and finishes of materials, and electrical characteristics and connection requirements.
      2. Provide data of filter media, filter performance data, filter assembly, and filter frames.
      3. Provide fan curves with specified operating point clearly plotted, indicating cfm, static pressure, efficiency, and horsepower at the project site location and altitude.
      4. Submit sound power level data for both fan outlet and casing radiation at rated capacity.
      5. Submit electrical requirements for power supply wiring including wiring diagrams for interlock and control wiring, clearly indicating factory-installed and field-installed wiring.
      6. Include mounting and flashing details for unit and roof curb.
7. At project close, submit Commissioning Report to Engineer/Owner indicating start-up and testing results.
8. Submit warranty information clearly marked on submittal.
D. Submit manufacturer's installation and start-up instructions under provisions of Division 01.

1.04 OPERATION AND MAINTENANCE DATA
A. Submit operation and maintenance data and manuals under provisions of Division 01.
B. Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listing. Provide name and telephone number(s) of equipment and parts supplier of all equipment and accessories for all equipment included in project.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Deliver products to site under provisions of Division 01.
B. Store and protect products under provisions of Division 01.
C. Protect units from physical damage by storing off site until roof mounting frames are in place, ready for immediate installation of units.

1.06 WARRANTY
A. Provide manufacturer's standard one year full parts and labor warranty for entire unit, an extended five year parts only warranty for refrigeration compressor(s), and an extended 10 year parts only warranty for heat exchanger(s), under provisions of Division 01.

1.07 QUALITY ASSURANCE
A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience, who publishes and issues complete catalog with data on total product.
B. Refrigeration system to comply with ASHRAE 15, Safety Code for Mechanical Refrigeration.
C. Energy Efficiency Ratio: Equal to or greater than prescribed in ASHRAE 90.1, Energy Efficiency Design of New Buildings except Low-Rise Residential Buildings, or as shown on plans.
D. Provide electrically operated components specified in this Section that are listed and labeled as defined in the National Electrical Code.
E. Comply with NFPA 70.

1.08 MAINTENANCE SERVICE
A. Furnish complete service and maintenance of packaged roof top units for one year from Date of Substantial Completion.
B. Provide maintenance service with a two month interval as maximum time period between calls. Provide 24-hour emergency service on breakdowns and malfunctions.
C. Include maintenance items as outlined in manufacturer's operating and maintenance data, including minimum of six filter replacements, minimum of one fan belt replacement, and controls check-out, adjustments, and re-calibrations.
D. Submit to Owner and Engineer a copy of all service calls work orders or reports, and include description of work performed, date work was performed, and name of service technician. Submit within five days of completing work performed.

1.09 EXTRA MATERIALS
A. Provide one extra set of filters and belts for each unit under provisions of Division 01.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. The following manufacturers will be considered provided they comply with the contract documents.
1. Daikin Applied
2. Trane
3. Carrier
4. York
5. Or approved equal

2.02 FABRICATION

A. Units shall be roof-mounted, self-contained, packaged, factory assembled and pre-wired, consisting of cabinet and frame, weatherhood, discharge configuration as indicated on Drawings, return air connection, outside air connection, economizer hood, barometric relief, coil hail guard hood, supply fan, factory provided and field installed disconnect, unit mounted ground fault electrical service receptacle, lifting lugs, air filters, with heating and cooling equipment as specified, fully charged with refrigerant and filled with oil. Cooling capacity ratings shall be based on ARI Standard 360 testing requirements. Unit shall be 100% run-tested at the factory.

B. Cabinet: 18 GA single wall galvanized steel, with baked powder coat finish, discharge configuration as indicated on Drawings, weathertight access doors or removable access panels with locking door handle type quick fasteners with piano hinges, weatherproof, designed for mounting on roof curb. Structural members shall be minimum 14 gauge (1.80 mm), with access doors or removable panels of minimum 18 gauge (1.12 mm). All utility connections shall be provided within curb enclosures for downflow units. Cabinet shall be tested 1000 hours in salt spray in compliance with ASTM B117.

C. Insulation: Minimum 1/2-inch (13 mm) thick, noncombustible, fire resistant coated glass fiber insulation for all exposed vertical panels and top covers, 3.0 lb/cu ft (48 kg/cu m) density. Minimum 1/2-inch (13 mm) thick closed cell insulation for unit base, maximum flame spread/smoke developed: ASTM E84 25/50. Provide with edges protected from erosion.

D. Supply/Evaporator Fan: Forward curved centrifugal type, resiliently mounted with V-belt drive, adjustable variable pitch motor pulley and rubber isolated hinge mounted motor, or direct drive as indicated; permanently lubricated sealed ball bearings, solid hot rolled polished steel shaft with keyway and protective coating of oil, high efficiency motor. Isolate complete fan assembly.

E. Air Filters:
   1. 2-inch (50 mm) thick glass fiber disposable media with metal retaining grid.

F. ROOF MOUNTING CURB ADAPTOR: 24 INCHES (610 MM)
   1. The new rooftop equipment shall be located over the existing roof curb. A curb adapter shall be used to mate the new unit to the existing roof curb.
   2. The prefabricated, one-piece, rooftop adapters shall be 14 or 18 gauge aluminum / zinc coated steel construction as required by the size and configuration of the new equipment. The adapter shall comply with ASTM A-446, A-525 and A-527 standards. All corners and seams shall be joined with continuous water tight welds. Adapters shall be insulated with 1 ½", 3 pound density rigid insulation and internally reinforced with T-Bars 36" on center, and include necessary blank-offs to allow use of existing ductwork. Unit shall have integral counterflashing for weatherproof installation.
   3. The contractor shall field verify all existing rooftop (Length, Width, Height) unit curbs to insure proper fit between existing rooftop equipment base and new rooftop unit.
   4. Rooftop adapters shall be Thycurb Model Retro-Mate as manufactured by Thybar Corporation. Equivalent manufacturers shall be pre-approved by the engineer.

G. Hail Guard Hood: Minimum 18 gauge (1.12 mm) steel frame, expanded metal coil guard, color to match roof top unit.

H. Electrical Convenience Outlet: 115 VAC ground fault receptacle powered by others, non-fused disconnect, located in unit cabinet. Factory installed, wired, and unit powered.

I. Service Differential Pressure Switches: Provide differential pressure switches to allow individual fan failure and dirty filter indication on zone sensor service LED.
2.03 ELECTRIC COOLING / GAS HEATING

A. Compressor:
   1. Hermetic type or scroll type, 3600 rev/min maximum, suction gas cooled, resiliently mounted with positive lubrication, crankcase heater, internal temperature and current sensitive motor overloads.
      a. 7 Tons Capacity and Less: Single scroll compressor.
   2. Factory installed anti-short cycle timer, time delay relays, and minimum on-time controls.
   3. Outdoor thermostat to energize compressor and interface with low ambient control.

B. Condenser:
   1. Micro-channel condenser coil or seamless copper tubes, mechanically bonded to aluminum fins, brazed joints, galvanized steel casing, factory pressure tested with leak detection gas to 450 psig (3110 kPa).
   2. Provide direct drive propeller fans, permanently lubricated motor bearings, statically and dynamically balanced, resiliently mounted with fan guard, motor overload protection, wired to operate with compressor, NEMA MG-1.
   3. Provide refrigerant pressure switches to cycle condenser fans.

C. Evaporator Coil:
   1. Seamless copper tubes, mechanically bonded to aluminum fins, brazed joints, galvanized steel casing, factory pressure tested with leak detection gas to 450 psig (3110 kPa), galvanized drain pan and connection.
   2. Equalizing type, vertical distributor with independent expansion devices for each circuit.

D. Heating Section:
   1. Gas Burner: Forced or induced draft type burner with adjustable combustion air supply, aluminized steel construction, pressure regulator, redundant gas valves, manual shut-off, intermittent spark or hot surface ignition, flame sensing device, forced draft proving switch, and automatic 100 percent shut-off pilot. Single stage burners for units 5 tons capacity and less, two stage burners for units greater than 5 tons capacity.
   2. Heat Exchanger: Aluminized or stainless steel, of welded construction.
   3. Gas Burner Safety Controls: Energize ignition, limit time for establish-ment of flame, prevent opening of gas valve until pilot flame is proven, stop gas flow on ignition failure, energize blower motor, and after air flow proven and slight delay, allow gas valve to open.
   4. High Limit Control: Temperature sensor with fixed stop at maximum permissible setting, de-energize burner on excessive bonnet temperature and energize burner when temperature drops to lower safe value.
   5. Supply Fan Control: Temperature sensor sensing bonnet temperatures and independent of burner controls, or adjustable time delay relays with switch for continuous fan operation.

E. Economizer:
   1. Dampers: Provide outside, return, and barometric relief dampers with damper operator and control package to automatically vary outside air quantity. Outside air damper shall fail to closed position. Barometric relief dampers may be gravity balanced. Fully modulating (0 - 100%) motor and dampers, outdoor air filter, potentiometer to set minimum outdoor air position, spring return, solid state electronic control system.
   2. Gaskets: Provide tight fitting dampers with edge gaskets, maximum leakage 5 percent at 2-inches (500 Pa) pressure differential.
   3. Solid State Mixed Air Controls: Maintain selected supply air temperature and return dampers to minimum position on call for heating and when ambient air enthalpy exceeds return air enthalpy using comparative enthalpy control. Outdoor air damper shall be closed when unit fan is off.

2.04 UNIT CONTROLS:

A. 24 volt electro-mechanical controls with safeties for refrigerant high pressure, refrigerant low pressure, gas heating safeties, high discharge temperature and air proving. Terminal strip shall be provided for connecting to thermostat or DDC contractor provided and installed unit controller.
2.05 PERFORMANCE.
   A. As scheduled on Drawings rated in accordance with ARI 210/240 or 360.

2.06 ELECTRICAL CHARACTERISTICS AND COMPONENTS
   A. Motors: Open drip proof, NEMA MG1.
   B. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
   C. Furnish units with factory wired starters and non-fused disconnects for single point electrical connection.

PART 3 EXECUTION

3.01 EXAMINATION
   A. Verify all existing conditions prior to beginning work. Confirm roof and roof structure is suitable and ready for rooftop unit installation and performance. Notify Engineer of any unsatisfactory conditions, and do not install units until conditions have been corrected.
   B. Verify that roof is ready to receive work, and opening dimensions are as required by the manufacturer.
   C. Verify that proper power supply is available.

3.02 INSTALLATION
   A. Install in accordance with manufacturer's instructions.
   B. Install in accordance with NFPA 90A and NFPA 70.
   C. Mount units on factory built roof mounting frame, providing watertight enclosure to protect ductwork and utility services. Install roof mounting frame level and plumb maintaining manufacturers recommended clearances. Roof curb shall be pitched to accommodate roof slope so equipment is level.
   D. Roof cut-outs for ductwork penetrations shall be only as required for connecting ductwork to roof curb. Do not remove entire roof deck inside roof curb. Provide two layers of high density sound board insulation inside roof curb area, on top of roof deck between roof deck and bottom of rooftop unit. Sound board insulation shall be installed with maximum 1/8-inch (3 mm) gap between edge of sound board and roof curb. Provide glass fiber batt insulation on top of high density sound board between sound board and bottom of roof top unit.
   E. Install and secure rooftop units on curbs, and coordinate installation of all roof curbs, equipment supports, flashings, and roof penetrations with roof construction.
   F. All roof penetrations shall be within roof curb unless otherwise noted or indicated on Drawings.

3.03 CONNECTIONS
   A. Provide all utilities connections as necessary for operation of roof top unit, including gas piping, controls wiring, ductwork, and electrical connections. Drawings indicate general arrangement of piping, ductwork, and specialties. Install utilities to allow service and maintenance of unit, and meet all applicable building codes.
   B. Install duct to termination in roof mounting frames and insulate space between roof deck and bottom of unit.

3.04 MANUFACTURER'S FIELD SERVICES
   A. Provide initial start-up and shut-down during first year of operation, including routine servicing and check-out.
   B. Provide the services of a factory-authorized service representative to provide a minimum of 8 hours maintenance and operation instruction for Owners designated personnel as follows:
      1. Train Owner's maintenance personnel on unit operation, procedures and schedules related to startup and shutdown, trouble shooting, servicing, and preventive maintenance.
      2. Review data in Operation and Maintenance Manuals.
3. Schedule training with Owner, through Engineer, with at least seven days advance notice.

END OF SECTION 23 8115
SECTION 26 0050
BASIC ELECTRICAL MATERIAL AND METHODS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary
      Conditions and Division 1 Specification Sections, apply to this Section.
   B. Division 1 Section "Submittal Procedures" for submitting copies of submittals for operation and
      maintenance manuals.
   C. Division 1 Section "Summary" for coordinating operation and maintenance manuals covering
      the Work of multiple contracts.
   D. Division 1 Section "Closeout Procedures" for submitting operation and maintenance manuals.
   E. Division 1 Section "Project Record Documents" for preparing Record Drawings for operation
      and maintenance manuals.
   F. Electrical Division Sections for specific operation and maintenance manual requirements for the
      Work included in these Sections.

1.02 SUMMARY
   A. This Section includes the following:
      1. Raceways.
      2. Building wire and connectors.
      4. Electrical identification.
      5. Concrete equipment bases.
      6. Electrical demolition.
      7. Access Panels
      8. Cutting and patching for electrical construction.
      10. Temporary Power and Communication
      11. Permits and Fees
   B. Provide all labor, tools, materials, devices, appliances, and equipment shown on the Plans and
      required by the Specifications for a complete execution of the electrical work to insure that all
      systems function properly and operate completely in compliance with all applicable laws, codes,
      and regulations to satisfy the inherent design intent.
   C. This Section includes administrative and procedural requirements for preparing submittals and
      operation and maintenance manuals, including the following:
      1. Submittal preparation and procedure.
      2. Operation manuals for systems, subsystems, and equipment.
      3. Maintenance manuals for the care and maintenance of all devices, equipment, electrical
         gear and special systems.
      4. Electrical close-out procedures.

1.03 DEFINITIONS
   A. System: An organized collection of parts, equipment, or subsystems united by regular
      interaction.
   B. Sub-system: A portion of a system with characteristics similar to a system.
   C. EMT: Electrical metallic tubing.
   D. FMC: Flexible metal conduit.
   E. IMC: Intermediate metal conduit.
   F. LFMC: Liquid-tight flexible metal conduit.
   G. RNC: Rigid non-metallic conduit.
H. RMC: Rigid metallic conduit.

1.04 SUBMITTALS

A. Submittals shall include but may not be limited to the following documents:
   1. Product Data: Information and other related documents for all electrical devices, gear, fixtures and equipment to be provided for the project. The contractor will provide submittals for all major equipment.

B. Submittal Procedures: Submittal procedures are specified in Division 1.
   1. Prepare submittals in binders that indicate the project name and binder volume number shown on the front and on the binding of each volume, as applicable. Submittals for individual specification section numbers shall not be acceptable for initial reviews.
      a. Binder Types: Submittals shall be prepared in three-hole, hard-cover binders sized to hold 8.5" x 11" paper and with a thickness necessary to accommodate submittal contents. Provide clear plastic pockets to hold folded, oversize sheets. Binders more than 0.5" in thickness shall use heavy-duty, three-ring, vinyl-covered, loose-leaf binders with a thickness necessary to accommodate submittal contents.
      b. Binder Cover Pages: Provide a title page, a cover sheet and a table of contents for the binder showing the following information: date, project name, address and title. The cover page shall also include installer's name, address and phone number; project manager, engineering firm name and appropriate contact information. The table of contents shall indicate contents of the binder and be followed by the contents of the submittals.
      c. Binder Organization: Organize the binder into separate, tabbed sections numbered and arranged sequentially for each section of the Specifications. Each binder shall contain a title page, a cover page and a table of contents, followed by the submittal documents.
      d. Binder Volumes: If more than one volume is necessary to accommodate all items in the Specifications to be included in the manual, the table of contents shall be comprehensive for all volumes of the set of submittals. The same, comprehensive table of contents shall be included in all binders.

2. One (1) complete review of the electrical submittal documents shall be completed at no cost to the installer. Where re-submittals are required, one (1) review of these documents shall also be completed at no cost to the installer. All further reviews of submittal documents that are required to be re-submitted for review for a third occasion shall be completed and billed to the installer at the current prevailing hourly rate.

1.05 QUALITY ASSURANCE

A. Electrical Components, Devices, Gear and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a nationally recognized testing laboratory (NRTL) acceptable to the authority having jurisdiction (AHJ), and marked for intended use.


C. Comply with State of New Mexico Electrical Code: Title 14, Chapter 10.

D. Comply with Owner Standards:
   1. State of New Mexico design standards.
   2. Rio Rancho Public Schools design standards.

E. Installer Qualifications: All workmen doing electrical work shall be duly licensed with the required supervision in the state or local jurisdiction, as legally required.
   1. Installer or contractor shall have or demonstrate the following additional qualifications:
      a. Demonstrated experience of not less than 3 years in completing electrical installations in K-12 school facilities.
   2. All personnel shall be licensed for the work they are performing. A licensed Journeyman shall be present for ALL electrical work, and in no case will the Journeyman / Apprentice ratio exceed 2 Apprentices to 1 Journeyman. All personnel shall be trained for the hazards present in the tasks they are performing (e.g. confined spaces).
1.06 COORDINATION

A. Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow.
   1. Set inserts and sleeves in poured-in-place concrete, masonry work, and other structural components as they are constructed.

B. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Coordinate installing large equipment requiring positioning before closing in the building.

C. Coordinate electrical equipment installation with other building components.
   1. Verify all dimensions by field measurements.
   2. Minimize costs to resolve equipment and other conflicts by successfully concluding pre-installation conferences. Include the following:
      b. Determine whether lighting fixtures and other electrical items conflict with the location of structural members and mechanical or other equipment.
      c. Coordinate connecting electrical service to components furnished in other sections of the specification or by the User. Verify electrical requirements including voltage, full load amps, and minimum wire ampacity prior to installing or purchasing the associated electrical equipment and wiring.

D. Coordinate electrical service connections to components furnished by electric utility company at Owner's facilities.
   1. Coordinate installation and connection of exterior underground and overhead utilities and services, including provision for electricity-metering components.
   2. Comply with requirements of authorities having jurisdiction and utility company providing electrical power and other services at Owner's site.
   3. Notify Architect a minimum of seven days in advance of any proposed utility interruption and obtain approval prior to proceeding. Comply with requirements of the Owner, User, and Utility.
   4. Include all costs, including Owner, municipal or utility costs that will need to be paid to obtain electric service.

E. Coordinate communication service connections to components furnished by communication utility companies of Owner's facilities.
   1. Coordinate installation and connection of exterior underground and overhead utilities and services.
   2. Comply with requirements of authorities having jurisdiction.
   3. Notify Architect a minimum of seven days in advance of any proposed utility interruption and obtain approval prior to proceeding. Comply with requirements of the Owner, User, and Utility.
   4. Include all costs, including Owner, municipal or utility costs that will need to be paid to obtain communication services.

F. Temporary Power and Communication are specified in Division 1 Section "Construction Facilities and Temporary Controls".
   1. Comply with requirements for temporary electric and communication services with the proper utility at Owner's representative.
   2. Comply with Article 590 of the National Electrical Code (NEC).

G. Coordinate location of access panels and doors for electrical items that are concealed by finished surfaces. Access doors and panels are specified in Division 8 Section "Access Doors."
H. Coordinate with Authorities Having Jurisdiction including: city, county, state, university, federal and other governmental authorities.
1. Obtain all permits (including excavation permits) prior to beginning construction.
2. Pay all fees.
3. Request inspections required by Authorities Having Jurisdiction in a timely manner and in order to comply with sequencing requirements.
4. Display permit(s) in a conspicuous location on the jobsite for the job duration.

PART 2 - PRODUCTS

2.01 SUPPORTING DEVICES
A. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.
B. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel.
C. Slotted-Steel Channel Supports: Flange edges turned toward web, and 9/16-inch- (14-mm-) diameter slotted holes at a maximum of 2 inches (50 mm) on center (OC), in webs.
D. Slotted-Steel Channel Supports: Comply with Division 5 Section - Metal Fabrications for slotted channel framing.
   1. Channel Thickness: Selected to suit structural loading.
   2. Fittings and Accessories: Products of the same manufacturer as channel supports.
E. Nonmetallic Channel and Angle Systems: Structural-grade, factory-formed, glass-fiber-resin channels and angles with 9/16" (14 mm) diameter holes at a maximum of 8 inches (203 mm) OC, in at least one surface.
   1. Fittings and Accessories: Products of the same manufacturer as channels and angles.
   2. Fittings and Accessory Materials: Same as channels and angles, except metal items may be stainless steel.
F. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.
G. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
H. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for non-armored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.
I. Expansion Anchors: Carbon-steel wedge or sleeve type.
J. Toggle Bolts: All-steel spring head type.

2.02 CONCRETE BASES
A. Concrete Forms and Reinforcement Materials: As specified in Division 3 Section - Cast-in-Place Concrete.
B. Concrete: 3000-psi (20.7-MPa), 28-day compressive strength as specified in Division 3 Section - Cast-in-Place Concrete."

2.03 TOUCHUP PAINT
A. Equipment: Equipment manufacturer's paint selected to match installed equipment finish.
B. Surfaces Other Than Equipment: Matching type and color of undamaged, existing adjacent finish.
C. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.
PART 3 - EXECUTION

3.01 GENERAL

A. Drawings: The electrical drawings show the general arrangement of all conduit, equipment, etc. and shall be followed as closely as actual building construction and the work of other trades will permit.
   1. The contractor shall investigate the structural and finish conditions affecting the work and shall arrange his work accordingly, providing such fittings, elbows, pull-boxes, and accessories as may be required to meet such conditions.
   2. Where there are discrepancies between the electrical and architectural drawings showing elevations or locations of devices, fixtures or equipment, the location or elevation as shown on the architectural plans and drawings shall prevail. Notify the Engineer when these discrepancies are discovered.
   3. Mechanical equipment, such as HVAC units, and mechanical devices, such as thermostats, are shown on both the electrical and mechanical plans and drawings, but the locations as shown on the mechanical plans and drawings shall prevail, when there are discrepancies are between the two.
   4. Raceways and junction boxes for thermostats are part of this work but the devices and wiring for these devices shall be installed by others. Contractor shall coordinate location of these devices with mechanical plans. Refer to the above note regarding locations of mechanical equipment and devices.

B. Field Measurements: The Contractor shall verify the dimensions governing the electrical work at the building. No extra compensation shall be claimed or allowed on account of differences between actual dimensions and those indicated on the drawings.

C. Construction Area: The contractor is responsible for supplying the appropriate signs, flagging, and /or fencing to identify the construction area and to restrict entry. It is the duty of the contractor to ensure a safe environment to its staff, sub-contractors, and any occupants in the vicinity.

D. Contractor’s Electrical Safety Plan: Contractors doing work at RRPS must have a Safety Plan. Submit the plan to the RRPS Facilities Department for approval. The plan shall remain on file with RRPS Facilities. Any changes/updates shall be submitted to RRPS Facilities.

E. Lockout / Tagout Policy: All persons performing electrical work at RRPS must use and adhere to RRPS’s Electrical Safety Program, including their “Lock-out/Tag-out” and “Energized Electrical Work” policies.

F. At no time will a contractor leave any electrical switchgear, panels, or energized devices open or exposed in a public area without having qualified electrical personnel working on or guarding the exposed electrical components.

3.02 ELECTRICAL EQUIPMENT INSTALLATION

A. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.

B. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.

C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.

D. Right of Way: Give to raceways and piping systems installed at a required slope.

E. Existing Utilities: Locate and identify existing underground utilities in excavation areas or in demolition areas. Maintain services to areas outside demolition limits or excavated areas. When services must be interrupted, install temporary services for affected areas.

F. Manufacturer’s Instructions: Comply with manufacturer’s installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements indicated in the Contract Documents.
   1. All bolted pressure connections shall be torqued to manufacturer specifications.
G. Record drawings and Shop Drawings: Mark up drawings daily during construction with changes or deletions in the scope of the project.

3.03 ELECTRICAL SUPPORTING DEVICE APPLICATION

A. Damp Locations and Outdoors: Hot-dip galvanized materials or nonmetallic, U-channel system components.
B. Dry Locations: Steel materials.
C. Support Clamps for PVC Raceways: Click-type clamp system.
D. Selection of Supports: Comply with manufacturer's written instructions.
E. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four; minimum of 200-lb (90-kg) design load.

3.04 SUPPORT INSTALLATION

A. Install support devices to securely and permanently fasten and support electrical components.
   1. Comply with NFPA 70 (NEC). In addition, install supports within 12” of couplings, fittings, and boxes, with a minimum of two supports per 10-foot length of raceway. Install supports at each change of direction. Similarly support cables in cable trays or raceways as indicated; except, provide J-hooks to support cables.
   2. Support suspended conduit and cables independently from all other electrical or mechanical systems by attaching directly from building structure, unless prior approval in writing has been obtained from the Architect after engineering calculations have been submitted.
   3. Coordinate installation of supports so as not to interfere with the removal of ceiling tiles, the service of mechanical equipment, etc.
   4. Install bracing parallel to trusses, beams, joists, bridging, etc.
B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.
C. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
D. Support parallel runs of cables together on trapeze or bracket type hangers, either vertically or horizontally.
E. Size supports for multiple raceway and cable installations so capacity can be increased by a 25 percent minimum in the future.
F. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.
G. Install 0.25” (6 mm) diameter or larger threaded steel hanger rods, unless otherwise indicated.
H. Spring-steel fasteners specifically designed for supporting single conduits or tubing may be used instead of malleable-iron hangers for 1.5” (38 mm) and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to slotted channel and angle supports.
I. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.
J. Simultaneously install vertical conductor supports with conductors.
K. Separately support cast boxes that are threaded to raceways and used for fixture support. Support sheet-metal boxes directly from the building structure or by bar hangers. If supported directly from the building structure, attach box to framing on opposite sides of the box. If bar hangers are used, attach bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches (610 mm) from the box.
L. Install metal channel racks for mounting cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices unless components are mounted directly to structural elements of adequate strength.
M. Install sleeves for cable and raceway penetrations of concrete slabs and walls unless core-drilled holes are used. Install sleeves for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.

1. Install wrapped or coated RMC sleeves with 3 feet and extending on each side through penetrations of foundations or concrete walls by RNC.

N. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated:

1. Wood: Fasten with wood screws or screw-type nails.
2. Masonry: Toggle bolts on hollow masonry units and expansion bolts on solid masonry units.
3. New Concrete: Concrete inserts with machine screws and bolts.
4. Existing Concrete: When using expansion bolts, drill holes in concrete so holes do not cut main reinforcing bars. Fill and seal holes drilled in concrete and not used. Obtain prior approval from Structural Engineer prior to drilling pre-stressed or post-tension concrete slabs and beams.
5. Instead of expansion bolts, threaded studs driven by a powder charge and provided with lock washers may be used in existing concrete.
6. Steel: Welded threaded studs or spring-tension clamps on steel. When performing field welding, comply with AWS D1.1.
7. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or other items.
8. Light Steel: Sheet-metal screws.
9. Fasteners: Select so the load applied to each fastener does not exceed 25 percent (25%) of its proof-test load. Do not support electrical equipment or conduits with toggle bolts, molly-bolts, or screws in sheet rock or plaster. Do not support electrical equipment or conduit from tie wires.
10. Do not use wooden plugs in concrete or masonry units for fastening conduits, tubing, boxes, cabinets, etc.

3.05 TEMPORARY ELECTRIC AND COMMUNICATION SERVICES

A. Provide electric service, metering, main disconnect and distribution. Connect to temporary service location.

1. Where connecting to the Owner’s electric service, report initial meter reading and obtain written permission prior to energizing temporary facilities.
2. As soon as permanent power and metering is available, disconnect the temporary power supply and remove from the construction site.

B. Provide temporary wiring and light fixtures for temporary lighting.

C. Protect receptacles with 20 amp GFCI circuit breakers.

D. Provide temporary wiring for communication services and connect to temporary service location. Where connecting to the Owner’s communication service, obtain written permission prior to making any connections to temporary facilities.

3.06 ACCESS DOORS

A. Install access panels where required by accessibility requirements of National Electrical Code (NEC) for electrical installations such as junction boxes, ballasts, and other electrical equipment requiring access.

3.07 FIRE-STOPPING

A. Apply fire-stopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly. Fire-stopping materials and installation requirements are specified in Division 7 Section - Fire-Stopping.
B. Gypsum Board Tenting: Apply to lighting fixture or electrical equipment penetrations of fire rated floor, ceiling and wall assemblies, unless product is UL listed with integral fire rating. Perform tenting as specified in appropriate Division 9 section to reestablish the original fire-resistance rating of the assembly at the penetration.

3.08 CONCRETE BASES
A. Construct concrete bases of dimensions indicated for all floor mounted electrical equipment, but not less than 4 inches (100 mm) larger, in both directions, than supported unit and 3” above floor, unless indicated otherwise. Follow supported equipment manufacturer’s anchorage recommendations and setting templates for anchor-bolt and tie locations, unless otherwise indicated.
1. Use 3000 psi (20.7-MPa), 28-day compressive-strength concrete and reinforcement as specified in Division 3 Section - Cast-in-Place Concrete.
2. For equipment containing hazardous liquids, such as generators, oil-filled transformers, and similar equipment, include containment curb sized for quantity of liquid.

3.09 EARTHWORK
A. Excavating, filling, and grading: As specified in Division 2 Section - Earthwork.
1. Call local or state One-Call organization at 811 to start permitting process at least two (2) days before this work begins to permit all underground facility owners time to locate and correctly mark all underground facilities.
2. Obtain all required excavation permits at least two (2) days prior to beginning any excavation. Excavation permit shall include ticket number provided by local or state One-Call organization.
3. The Contractor shall repair any and all damaged utilities caused by excavation and spotting activities. Costs for this work shall be included in the Contract Price. Owner will not recognize claims for spotting or repairing concealed or unknown subsurface utilities. The Owner will process an appropriate Change Order if concealed or unknown subsurface utilities must be relocated in order to construct the project as indicated in the Contract Documents.
B. Fill: Backfill for underground raceways (not concrete encased) in roadways or parking lots with concrete encased slurry (1 bag concrete mix). Backfill underground raceway (not concrete encased with sand 6” above and below in other than roadways or parking lots.
C. Remove rubbish, waste, and excess soils.

3.10 DEMOLITION
A. Protect existing electrical equipment and installations indicated to remain. If damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.
1. Relocate existing electrical devices, conduit or equipment that for any reason obstructs construction. Include any equipment having electrical connections that requires disconnecting and reconnection at the same or another location throughout the course of construction.
2. All building power and utility outages must be coordinated and approved by the RRPS Facilities Department.
3. Maintain in working condition all electrical equipment and apparatus in areas not remodeled.
B. Accessible Work: Remove exposed electrical equipment and installations, indicated to be demolished, in their entirety. Include exposed equipment and installations made obsolete by new work.
C. Abandoned Work: Cut and remove buried raceway and wiring, indicated to be abandoned in place, 2 inches (50 mm) below the surface of adjacent construction. Cap raceways and patch surface to match existing finish.
1. Removal of abandoned conduit that is underground is at the discretion of UNM Physical Plant Department (PPD). Contractor shall coordinate with PPD on all underground conduit to be abandoned to determine if it is to be completely removed or abandoned in place.

D. Remove and legally dispose of demolished material from Project site.

E. Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation.

F. Remove conductors from raceway to the first active outlet or branch panels for vacated or unused circuits.

3.11 CUTTING AND PATCHING

A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations.
   2. Core drilling: X-Ray post-tension slabs prior to core drilling to assure that post-tension cables are not damaged.
   3. Concrete paving and sidewalks shall be replaced in full panel sizes. Other paving (brick, pavers, etc.) shall be replaced to match the existing in every way.

B. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing fire-stopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

3.12 FIELD QUALITY CONTROL

A. Inspect installed components for damage and faulty work, including the following:
   1. Supporting devices for electrical components.
   2. Concrete bases.
   3. Electrical demolition.
   4. Cutting and patching for electrical construction.
   5. Touchup painting.

B. Test all electrical work to ensure that they test free of mechanical and electrical defects.
   1. Comply with testing requirements of authorities having jurisdiction.
   2. Comply with Owner's standards for testing in documents listed in “Quality Assurance”.

C. Prior to working on any circuits that supply motorized equipment, the contractor shall verify the (clockwise or counterclockwise) rotation of the equipment, and ensure that when re-energized, the equipment maintains proper rotation.

3.13 REFINISHING AND TOUCHUP PAINTING

A. Refinish and touch up paint. Paint materials and application requirements are specified in Division 9 Section - Painting.
   1. Clean damaged and disturbed areas and apply primer, intermediate, and finish coats to suit the degree of damage at each location.
   2. Follow paint manufacturer’s written instructions for surface preparation and for timing and application of successive coats.
   3. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
   4. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

3.14 CLEANING AND PROTECTION

A. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.
   1. Remove labels that are not permanent labels.
   2. Wipe surfaces of electrical equipment. Remove excess lubrication and other substances.
   3. Clean exposed exterior and interior hard-surface finishes to a dust-free condition, free of stains, films and similar foreign substances.
B. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

3.15 CLOSE-OUT

A. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

B. Project Record Documents: Project Record Documents are specified in Division 1 and shall include the information shown below.
   1. Changes or other information recognized to be of importance to the Owner and include wiring changes, changes to electrical panel and switchboard schedules, etc.
   2. Dimensions of underground raceways, wiring and other concealed electrical features.
   3. Actual equipment electrical characteristics on panelboard and equipment schedules.

END OF SECTION 26 0050
PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Electrical demolition.

1.02 RELATED REQUIREMENTS
   A. Section 01 7000 - Execution and Closeout Requirements: Additional requirements for alterations work.

PART 2 PRODUCTS
2.01 MATERIALS AND EQUIPMENT
   A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION
3.01 EXAMINATION
   A. Verify field measurements and circuiting arrangements are as shown on Drawings.
   B. Verify that abandoned wiring and equipment serve only abandoned facilities.
   C. Demolition drawings are based on casual field observation and existing record documents.
   D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION
   A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
   B. Coordinate utility service outages with utility company.
   C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations. "Hot" electrical work (at greater than 250 volts) shall only be performed with the prior approval of the UNMH Facilities Department. Any time "Hot" electrical work is performed, 2 competent persons must be present at all times. An "Energized Electrical Work Permit" must be obtained.
   D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.
      1. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK
   A. Remove, relocate, and extend existing installations to accommodate new construction.
   B. Remove abandoned wiring to source of supply.
   C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
   D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
   E. Repair adjacent construction and finishes damaged during demolition and extension work.
   F. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
   G. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.
3.04 CLEANING AND REPAIR

A. See Section 01 7419 - Construction Waste Management and Disposal for additional requirements.

B. Clean and repair existing materials and equipment that remain or that are to be reused.

END OF SECTION 26 0501
SECTION 26 0519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 2 PRODUCTS

1.01 CONDUCTOR AND CABLE GENERAL REQUIREMENTS
   A. Provide products that comply with requirements of NFPA 70.
   B. Provide products listed, classified, and labeled as suitable for the purpose intended.
   C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
   D. Comply with NEMA WC 70.
   E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
   F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
   G. Conductor Material:
      1. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B 787M unless otherwise indicated.
      2. Tinned Copper Conductors: Comply with ASTM B33.
   H. Conductor Color Coding:
      1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
      2. Color Coding Method: Integrally colored insulation.
      3. Color Code:

1.02 WIRING CONNECTORS
   A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

END OF SECTION 26 0519
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PART 2 PRODUCTS

1.01 GROUNDING AND BONDING REQUIREMENTS
   A. Do not use products for applications other than as permitted by NFPA 70 and product listing.
   B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
   C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

1.02 GROUNDING AND BONDING COMPONENTS
   A. General Requirements:
      1. Provide products listed, classified, and labeled as suitable for the purpose intended.
      2. Provide products listed and labeled as complying with UL 467 where applicable.
   B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
      1. Use insulated copper conductors unless otherwise indicated.
      a. Exceptions:
         1) Use bare copper conductors where installed underground in direct contact with earth.
         2) Use bare copper conductors where directly encased in concrete (not in raceway).
   C. Connectors for Grounding and Bonding:
      1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
      2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
      3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

END OF SECTION 26 0526
SECTION 26 0529
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 2 PRODUCTS

1.01 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:
   1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of electrical work.
   2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
   3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported. Include consideration for vibration, equipment operation, and shock loads where applicable.
   4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
   5. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
      a. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
      b. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported.
   1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
   2. Conduit Clamps: Bolted type unless otherwise indicated.

C. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.

D. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.

E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.

F. Anchors and Fasteners:
   1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.

END OF SECTION 26 0529
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PART 2 PRODUCTS

1.01 CONDUIT REQUIREMENTS
   A. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
   B. Provide products listed, classified, and labeled as suitable for the purpose intended.
   C. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

1.02 ELECTRICAL METALLIC TUBING (EMT)
   A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
   B. Fittings:
      1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
      2. Material: Use steel or malleable iron.
      3. Connectors and Couplings: Use compression (gland) or set-screw type.
         a. Do not use indenter type connectors and couplings.

PART 3 EXECUTION

2.01 INSTALLATION
   A. Install products in accordance with manufacturer's instructions.
   B. Install conduit in a neat and workmanlike manner in accordance with NECA 1.
   C. Conduit Support:
      1. Secure and support conduits in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
      2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
   D. Connections and Terminations:
      1. Use suitable adapters where required to transition from one type of conduit to another.
      2. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
      3. Secure joints and connections to provide maximum mechanical strength and electrical continuity.
   E. Penetrations:
      1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
      2. Make penetrations perpendicular to surfaces unless otherwise indicated.
      3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
      4. Conceal bends for conduit risers emerging above ground.
      5. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
      6. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
      7. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty. Include proposed locations of penetrations and methods for sealing with submittals.
8. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.

F. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
   1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
   2. Where conduits are subject to earth movement by settlement or frost.

G. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
   1. Where conduits pass from outdoors into conditioned interior spaces.
   2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

H. Provide grounding and bonding in accordance with Section 26 0526.

END OF SECTION 26 0534
PART 2 PRODUCTS

1.01 BOXES

A. General Requirements:
   1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
   2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
   3. Provide products listed, classified, and labeled as suitable for the purpose intended.
   4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
   5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:
   1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
   2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
   3. Use suitable concrete type boxes where flush-mounted in concrete.
   4. Use suitable masonry type boxes where flush-mounted in masonry walls.
   5. Use raised covers suitable for the type of wall construction and device configuration where required.
   6. Use shallow boxes where required by the type of wall construction.
   7. Do not use “through-wall” boxes designed for access from both sides of wall.
   8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
   9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
   11. Wall Plates: Comply with Section 26 2726.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
   1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
   2. NEMA 250 Environment Type, Unless Otherwise Indicated:
   3. Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
      a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

END OF SECTION 26 0537
SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 2 PRODUCTS

1.01 IDENTIFICATION REQUIREMENTS
   A. Identification for Equipment:
      1. Use identification nameplate to identify each piece of electrical distribution and control
         equipment and associated sections, compartments, and components.
   B. Identification for Conductors and Cables:
      1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
      2. Use identification nameplate or identification label to identify color code for ungrounded
         and grounded power conductors inside door or enclosure at each piece of feeder or
         branch-circuit distribution equipment when premises has feeders or branch circuits served
         by more than one nominal voltage system.

1.02 IDENTIFICATION NAMEPLATES AND LABELS
   A. Identification Nameplates:
      1. Materials:
   B. Identification Labels:
      1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and
         abrasion resistant.
      2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless
         otherwise indicated.

1.03 WARNING SIGNS AND LABELS
   A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.
   B. Warning Signs:
      1. Materials:
      2. Minimum Size: 7 by 10 inches (178 by 254 mm) unless otherwise indicated.
   C. Warning Labels:
      1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-
         adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using
         materials recognized to UL 969.
      2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories
         recommended by label manufacturer.
      3. Minimum Size: 2 by 4 inches (51 mm by 102 mm) unless otherwise indicated.

END OF SECTION 26 0553
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SECTION 28 3101
FIRE DETECTION AND ALARM - EXISTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire alarm system design and installation, including all components, devices, wiring, and conduit.
B. Transmitters for communication with supervising station.
C. Replacement and removal of existing fire alarm system components, wiring, and conduit indicated.
D. Maintenance of fire alarm system under contract for specified warranty period.

1.02 RELATED REQUIREMENTS

A. Section 07 8400 - Firestopping: Materials and methods for work to be performed by this installer.
B. Section 23 3300 - Air Duct Accessory: Smoke dampers monitored and controlled by fire alarm system.
C. Section 26 0050 - Basic Electrical Materials and Methods.
D. Section 26 0526 - Grounding and Bonding for Electrical Systems.
E. Section 26 0529 - Hangers and Supports for Electrical Systems.
F. Section 26 0553 - Identification for Electrical Systems.
G. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables.
H. Section 26 0537 - Boxes.

1.03 REFERENCE STANDARDS


1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Proposal Documents: Submit the following with cost/time proposal:
   1. NFPA 72 "Record of Completion", filled out to the extent known at the time.
   2. Manufacturer's detailed data sheet for each control unit, initiating device, and notification appliance.
   3. Certification by Contractor that the system design will comply with the contract documents.
C. Evidence of designer qualifications.
D. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
   1. Copy (if any) of list of data required by authority having jurisdiction.
   2. NFPA 72 "Record of Completion", filled out to the extent known at the time with appropriate approvals by an authorized representative of the authority having jurisdiction (AHJ).
   3. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7.5-2.2(9), and complete listing of software required.
   4. System zone boundaries and interfaces to fire safety systems.
5. Location of all components, circuits, and raceways; mark components with identifiers used in control unit programming.

6. Circuit layouts; number, size, and type of raceways and conductors; conduit fill calculations; spare capacity calculations; notification appliance circuit voltage drop calculations.

7. List of all devices on each signaling line circuit, with spare capacity indicated.

8. Manufacturer's detailed data sheet for each component, including wiring diagrams, installation instructions, and circuit length limitations.

9. Description of power supplies; if secondary power is by battery include calculations demonstrating adequate battery power.

10. Detailed drawing of graphic annunciator(s).

11. Certification by either the manufacturer of the control unit or by the manufacturer of each other component that the components are compatible with the control unit.

12. Certification by the manufacturer of the control unit that the system design complies with the contract documents.

13. Certification by Contractor that the system design complies with the contract documents.

14. Do not show existing components to be removed.

E. Evidence of installer qualifications.

F. Evidence of maintenance contractor qualifications, if different from installer.

G. Inspection and Test Reports:
   1. Submit inspection and test plan prior to closeout demonstration.
   2. Submit documentation of satisfactory inspections and tests.
   3. Submit NFPA 72 "Inspection and Test Form," filled out.

H. Operating and Maintenance Data: See Section 01 7800 for additional requirements; revise and resubmit until acceptable; have one set available during closeout demonstration:
   1. Original copy of NFPA 72 with portions that are not relevant to this project neatly crossed out by hand; label with project name and date.
   2. Complete set of specified design documents, as approved by authority having jurisdiction (AHJ).
   3. Additional printed set of project record documents and closeout documents, bound or filed in same manuals.
   4. Contact information for firm that will be providing contract maintenance and trouble callback service.
   5. Detailed but easy to read explanation of procedures to be taken by non-technical administrative personnel in the event of system trouble, when routine testing is being conducted, for fire drills, and when entering into contracts for remodeling.

I. Project Record Documents: See Section 01 7800 for additional requirements; have one set available during closeout demonstration:
   1. Complete set of floor plans showing actual installed locations of components, conduit, and zones.
   2. "As installed" wiring and schematic diagrams, with final terminal identifications.
   3. "As programmed" operating sequences, including control events by device, updated input/output chart, and voice messages by event.

J. Closeout Documents:
   1. Certification by manufacturer that the system has been installed in compliance with his installation requirements, is complete, and is in satisfactory operating condition.
   2. NFPA 72 "Record of Completion", filled out completely and signed by installer and authorized representative of authority having jurisdiction.
   4. Report on training results, if applicable for this work.

K. Maintenance Materials, Tools, and Software: Furnish the following for Owner's use in maintenance of project.
1. In addition to the items in quantities indicated in PART 2, furnish the following:
   a. All tools, software, and documentation necessary to modify the fire alarm system using Owner's personnel; minimum modification capability to include addition and deletion of devices, circuits, and zones, and changes to system description, operation, and evacuation and instructional messages.
   b. One copy, on CD-ROM, of all software not resident in read-only-memory, if applicable to system installed.

1.05 QUALITY ASSURANCE
   A. Copies of Design Criteria Documents: Maintain at the project site for the duration of the project, bound together, an original copy of NFPA 72, the relevant portions of applicable codes, and instructions and guidelines of authorities having jurisdiction; deliver to Owner upon completion.
   B. Designer Qualifications: NICET Level III or IV (3 or 4) certified fire alarm technician or registered fire protection engineer, employed by fire alarm control panel manufacturer, Contractor, or installer, with experience designing fire alarm systems in the jurisdictional area of the authorities having jurisdiction (AHJ).
   C. Installer Qualifications: Firm with minimum 3 years documented experience installing fire alarm systems of the specified type and providing contract maintenance service as a regular part of their business.
      1. Authorized representative of control unit manufacturer; submit manufacturer's certification that installer is authorized; include name and title of manufacturer's representative making certification.
      2. Installer Personnel: At least 2 years of experience installing fire alarm systems.
      3. Supervisor: NICET level III or IV (3 or 4) certified fire alarm technician; furnish name and address.
      4. Contract maintenance office located within 50 miles (80 km) of project site.
      5. Certified within the jurisdiction of this job as a fire alarm installer.
   D. Maintenance Contractor Qualifications: Same entity as installer or different entity with specified qualifications.

1.06 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Provide control panel manufacturer's warranty that system components other than wire and conduit are free from defects and will remain so for 1 year after date of Substantial Completion.
   C. Provide installer's warranty that the installation is free from defects and will remain so for 1 year after date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS
   A. Initiating Devices, and Notification Appliances:
      1. Same manufacturer as control units.
      2. Provide all initiating devices and notification appliances made by the same manufacturer.

2.02 FIRE ALARM SYSTEM
   A. Fire Alarm System: Provide modifications and extensions to the existing automatic fire detection and alarm system:
      1. Provide all components necessary, regardless of whether shown in the contract documents or not.
      2. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
         a. The requirements of the State Fire Marshal.
         b. The requirements of the local authority having jurisdiction.
         c. Applicable local codes.
         d. The contract documents (drawings and specifications).
e. NFPA 101.

f. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.

g. NFPA 99, for healthcare occupancies.

3. Evacuation Alarm: Multiple smoke zones; allow for evacuation notification of any individual zone or combination of zones, in addition to general evacuation of entire premises.

4. General Evacuation Zones: Each smoke zone is considered a general evacuation zone unless otherwise indicated, with alarm notification in all zones on the same floor, on the floor above, and the floor below.

5. Combined Systems: Do not combine fire alarm system with other non-fire systems.

B. Supervising Stations and Fire Department Connections:
   1. Public Fire Department Notification: By on-premises supervising station.
   2. On-Premises Supervising Station: Existing proprietary station operated by Owner.
   3. Means of Transmission to On-Premises Supervising Station: Directly connected noncoded system.

C. Circuits:
   1. Initiating Device Circuits (IDC): Class B, Style A.
   2. Signaling Line Circuits (SLC) Within Single Building: Class B, Style 0.5.
   4. Notification Appliance Circuits (NAC): Class B, Style W.

D. Spare Capacity:
   1. Initiating Device Circuits: Minimum 25 percent spare capacity.
   4. Master Control Unit: Capable of handling all circuits utilized to capacity without requiring additional components other than plug-in control modules.

2.03 EXISTING COMPONENTS
   A. Existing Fire Alarm System: Remove existing components indicated and incorporate remaining components into new system, under warranty as if they were new; do not take existing portions of system out of service until new portions are fully operational, tested, and connected to existing system.
   B. On-Premises Supervising Station: Include as part of this work all modifications necessary to existing supervising station to accommodate new fire alarm work.
   C. Remove unused existing components and materials from site and provide to Owner as spare parts for existing system.

2.04 FIRE SAFETY SYSTEMS INTERFACES
   A. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following:
      1. Duct smoke detectors.
   B. HVAC:
      1. Duct Smoke Detectors: Close dampers indicated; shut down air handlers indicated.

2.05 COMPONENTS
   A. General:
      1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.
      2. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.
   B. Fire Alarm Control Units, Initiating Devices, and Notification Appliances: Analog, addressable type; listed by Underwriters Laboratories as suitable for the purpose intended.
   C. Master Control Unit: As specified for Basis of Design above, or equivalent.
D. Initiating Devices:
   1. Smoke Detectors: _______.
   2. Duct Smoke Detectors: _______.
   3. Heat Detectors: _______.
   4. Addressable Interface Devices: _______.

E. Circuit Conductors: Copper or optical fiber; provide 200 feet (60 m) extra; color code and label.

PART 3 EXECUTION

3.01 INSTALLATION
   A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.
   B. Conceal all wiring in conduit, boxes, and supports.
   C. Obtain Owner's approval of locations of devices, before installation.
   D. Install instruction cards and labels.

3.02 INSPECTION AND TESTING FOR COMPLETION
   A. Notify Owner 7 days prior to beginning completion inspections and tests.
   B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
   C. Provide the services of the installer's supervisor or person with equivalent qualifications to supervise inspection and testing, correction, and adjustments.
   D. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.
   E. Provide all tools, software, and supplies required to accomplish inspection and testing.
   F. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
   G. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.
   H. Diagnostic Period: After successful completion of inspections and tests, Operate system in normal mode for at least 14 days without any system or equipment malfunctions.
      1. Record all system operations and malfunctions.
      2. At end of successful diagnostic period, fill out and submit NFPA 72 "Inspection and Testing Form."

3.03 CLOSEOUT
   A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.
      1. Be prepared to conduct any of the required tests.
      2. Have at least one copy of operation and maintenance data, preliminary copy of project record drawings, input/output matrix, and operator instruction chart(s) available during demonstration.
      3. Have authorized technical representative of control unit manufacturer present during demonstration.
      4. Demonstration may be combined with inspection and testing required by authority having jurisdiction; notify authority having jurisdiction in time to schedule demonstration.
      5. Repeat demonstration until successful.
   B. Substantial Completion of the project cannot be achieved until inspection and testing is successful and:
      1. Specified diagnostic period without malfunction has been completed.
      2. Approved operating and maintenance data has been delivered.
      3. All aspects of operation have been demonstrated to Owner.
      4. Final acceptance of the fire alarm system has been given by authorities having jurisdiction.
      5. Occupancy permit has been granted.
3.04 MAINTENANCE

A. See Section 01 7000 - Execution Requirements, for additional requirements relating to maintenance service.

B. Perform routine inspection, testing, and preventive maintenance required by NFPA 72, including:
   1. Maintenance of fire safety interface and supervisory devices connected to fire alarm system.
   2. Repairs required, unless due to improper use, accidents, or negligence beyond the control of the maintenance contractor.
   3. Record keeping required by NFPA 72 and authorities having jurisdiction.

C. Provide trouble call-back service upon notification by Owner:
   1. Provide on-site response within 2 hours of notification.
   2. Include allowance for call-back service during normal working hours at no extra cost to Owner.
   3. Owner will pay for call-back service outside of normal working hours on an hourly basis, based on actual time spent at site and not including travel time; include hourly rate and definition of normal working hours in maintenance contract.

D. Provide a complete description of preventive maintenance, systematic examination, adjustment, cleaning, inspection, and testing, with a detailed schedule.

E. Maintain a log at each fire alarm control unit, listing the date and time of each inspection and call-back visit, the condition of the system, nature of the trouble, correction performed, and parts replaced. Submit duplicate of each log entry to Owner’s representative upon completion of site visit.

F. Comply with Owner's requirements for access to facility and security.

END OF SECTION 28 3101