

# PROJECT



## 9 Unit RHF Remodel Project with Deductive Alternatives

Pamela Marrjuo, Housing Director  
Las Vegas Public Housing Authority  
2400 Sagebrush Street  
Las Vegas, NM 87701

OCTOBER 1, 2014

Bid #2015-08

ARCHITECT  
Architectural Project #14C02

**CONRON & WOODS ARCHITECTS**

**1222 LUISA ST, SUITE A  
SANTA FE, NM 87505**

Fax 505-983-1721

[office@conronandwoods.com](mailto:office@conronandwoods.com)

GENERAL RENOVATION

5 0 5 9 8 3 - 6 9 4 8



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CALL FOR BID

The City of Las Vegas, New Mexico will open Sealed Bids at 2:00 p.m., October 22, 2014 at the City Council Chambers, 1700 North Grand Avenue, Las Vegas, New Mexico, or other designated area at the City Offices; ON THE FOLLOWING: 9 Unit RHF Remodel Project with Deductive Alternatives.

The BIDDING FORMS AND TECHNICAL SPECIFICATIONS may be examined at the following location:  
Construction Reporter, 1607 2<sup>nd</sup> Street NW, Albuquerque, NM, 505-243-9793 or Builders News & Plan Room, 3435 Princeton Dr. NE, Albuquerque, NM 505-884-1752.

Copies of the BIDDING FORMS AND TECHNICAL SPECIFICATIONS may be obtained at the office of : Construction Reporter or at the main offices of the Las Vegas Housing Authority, located at 2400 Sagebrush Avenue, Las Vegas, NM. Construction documents may be obtained upon deposit of \$50.00 per set, refundable. Checks to be made out to Las Vegas Housing Authority.

Mailed Bids should be addressed to the City Clerk, 1700 N. Grand Ave., Las Vegas, New Mexico 87701; with the envelope marked: 9 Unit RHF Remodel Project with Deductive Alternatives Bid #2015-08 on the lower left-hand corner of the submitted envelope. It shall be the responsibility of the bidder to see that their bid is delivered to the **City Clerk** by the date and time set for the bid request. If the mail or delivery of bid request is delayed beyond the opening date and time, bid thus delayed will not be considered. A public opening will be held and any bidder or their authorized representative is invited to attend.

Federal regulations prohibit the use of resident or local preferences.

A Mandatory Pre-Bid conference will be held at the Administration Office, Las Vegas Housing Authority located at 2400 Sagebrush Ave. Las Vegas, NM. At 10:00 a.m. on October 8, 2014. This will be the contractors' only opportunity to review dwelling interiors.

Any contractor awarded a contract for modernization shall comply with 24 CFR Part 35 prohibiting the use of lead-based paint. The use of asbestos-containing material in whatever shape or form is also prohibited in the construction project.

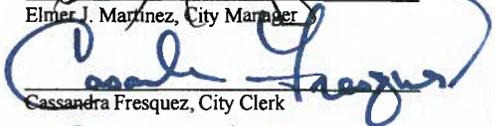
Any State labor wage rate that exceeds the corresponding Federal wage rate is inapplicable and shall not be enforced pursuant to 24 CFR Parts 905, 941, 965 and 968.

**OWNER'S RIGHTS RESERVED:** Las Vegas House Authority, hereinafter called the Owner, reserves the right to reject any or all Bids, to waive any formality or technicality in any Bid in the interest of the Owner.

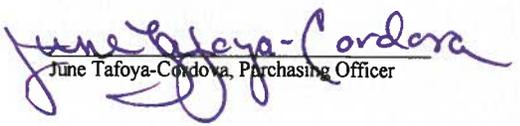
New Mexico Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico Criminal Statutes impose felony penalties for bribes, gratuities, and kick-backs.

City of Las Vegas

  
Elmer J. Martinez, City Manager

  
Cassandra Fresquez, City Clerk

  
Ann M. Gallegos, Finance Director

  
June Tafoya-Cordova, Purchasing Officer

Opening NO. #2015-08

Date Issued 9/29/14

Published: Las Vegas Optic, Albuquerque Journal, [www.lasvegasnm.gov](http://www.lasvegasnm.gov)

Advertise: October 1<sup>st</sup> & 5, 2014

**BID PACKAGE**

**Las Vegas Housing Authority**

**October 1, 2014**

***Conron & Woods Architects***

*1222 Luisa St. Suite A*

*Santa Fe, NM 87505*

*(505) 983-6948*

*Fax: (505) 983-1721*

*office@conronandwoods.com*

**U.S. Department of Housing and  
Urban Development**

Office of Public and Indian Housing

**Instructions to Bidders for Contracts  
Public and Indian Housing Programs**

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Previous edition is obsolete

form HUD-5369 (11/92)

# Instructions to Bidders for Contracts

## Public and Indian Housing Programs

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### 1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (see also the contract clause entitled **Site Investigation and Conditions Affecting the Work** of the *General Conditions of the Contract for Construction*). Failure to do so will be at the bidders' risk.

(b) All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA). Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.

### 2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

### 3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

### 4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

- (1) Integrity;
- (2) Compliance with public policy;
- (3) Record of past performance; and
- (4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

## 5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

## 6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

## 7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

Pamela Marrjuo, Housing Director  
Las Vegas Public Housing Authority  
2400 Sagebrush Avenue  
Las Vegas, NM 87701

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

## 8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, except other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

**9. Bid Guarantee** (applicable to construction and equipment contracts exceeding \$25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a certified check, bank draft, U.S. Government Bonds at par value, or a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

**10. Assurance of Completion**

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

[ X ] (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

[ ] (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

[ ] (3) a 20 percent cash escrow;

[ ] (4) a 25 percent irrevocable letter of credit; or,

[ ] (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Free copies of the circular may be obtained by writing directly to: U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, SW, 2nd Floor, West Wing, Washington, D.C. 20226.

(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the

bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.

(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.

**11. Preconstruction Conference** (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract (e.g., Equal Employment Opportunity, Labor Standards). The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

**12. Indian Preference Requirements** (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible

(1) Preference and opportunities for training and employment (other than crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,

(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.

(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.

(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.

(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is -

(1) Within the maximum HUD-approved budget amount established for the specific project or activity for which bids are being solicited; and

(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.

(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:

(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.

(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.

(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to be used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.

(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.

(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.

(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.

(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).

(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.

(k) The IHA [ ] does [ ] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.

## STANDARD BID CLAUSES

### AWARDED BID

Awarding of Bid shall be made to the responsible Bidder whose Bid meets the required specifications. The City of Las Vegas (City) reserves the right to reject or accept any of all Bid specifications and to waive any insubstantial irregularity in the form of the Bid.

The City of Las Vegas may make multiple awards of the bid, to those bidding in law enforcement related services. The City Reserves the right to award the bid to the most advantageous Bidder to the City.

### TIMETABLE

Bids pursuant to this request must be received at the City Clerk's Office at 1700 North Grand Avenue, Las Vegas, New Mexico, on or before 2:00 pm, October 22, 2014, at which time all bids received will be opened. An opening will occur at the City's Council Chambers or other designated area at the City Offices. Awarding of Bid is projected for October 23, 2014. The successful Bidder will be notified by E-mail.

### ENVELOPES

Sealed Bid envelopes shall be clearly marked on the lower left-hand corner, identified by the Bid Name (**9 Unit RHF Remodel Project with Deductive Alternatives**) and Opening Number (**2015-08**). Failure to comply with this requirement may result in the rejection of your submitted Bid. *Enclose one (1) original and two (2) copies of Bid.*

### BRIBERY AND KICKBACK

The Procurement Code of New Mexico; (Section 13-1-28 through 13-1-99 N.M.S.A. 1978), impose a third degree felony penalty for bribery of a public official or public employee. In addition the New Mexico Criminal Statutes (Section 30-4-1, N.M.S.A. 1978): state that it is a third degree felony to commit the offense of demanding or receiving a bribe by a public official of public employee. And (Section 30-24-2, N.M.S.A. 1978): it is a fourth degree felony to commit the offense of soliciting or receiving illegal kickbacks. Also (Section 30-41-1 through 30-41-3, N.M.S.A. 1978): states that it is a fourth degree felony to commit the offense of offering or paying illegal kickbacks.

### NON-COLLUSION

In signing their Bid and Affidavit, the Bidder certifies that he/she has not, either directly or indirectly entered into action of restraint of free competition, in the connection with the submitted bid.

### RESPONSIBILITY OF BIDDER

At all times it shall be the responsibility of the Bidder to see their bid is delivered to the City Clerk by the Date and Time scheduled for opening. If the mail or delivery of said Bid is delayed beyond the scheduled opening date and time set, bid this delayed will not be considered.

NEW MEXICO TAX IDENTIFICATION NO.  
(CRS):

CLARIFICATION OF BID

Bidder requiring clarification or interpretation of Bid specifications shall make a written request to the Department involved in this bid request at least five (5) days prior to the scheduled bid opening date with a copy forwarded to the Finance Department. Any interpretation, corrections or changes of said Bid Specifications, Opening Date, or Time Change will be made by Addendum only. Interpretations, Corrections or changes of said bid made in any other manner will not be binding and the Bidder shall not rely upon such interpretation, corrections and changes.

MODIFICATION OF BID

Bids may be withdrawn upon receipt of written request prior to the scheduled bid opening for the purpose of making any corrections or changes. Such corrections must be properly identified and signed or initialed by the Bidder. Resubmission must be prior to the scheduled bid opening time in order to be considered. After bid opening, no price modifications of submitted bids or other provisions shall be permitted.

WITHDRAWAL OF BID

A low Bidder alleging a material mistake of fact, after bids have been opened may request their bid be withdrawn upon receipt of a written request to the Finance Department prior to the scheduled awarding date.

INSPECTION

Final inspection and acceptance will be made at the City's destination. Products rejected for nonconformance with the specifications shall be removed by the Bidder; at his/her risk and expense promptly after notice of rejection.

FEDERAL TAX IDENTIFICATION NUMBER

Pursuant to IRS requirements, Bidder shall provide their Federal Tax ID Number if Bidder is incorporated. If Bidder is a sole proprietorship or partnership then they shall provide their Social Security Number.

FEDERAL TAX ID NUMBER:

SOCIAL SECURITY NUMBER:

NEW MEXICO TAX IDENTIFICATION NUMBER

Payment may be withheld under (Section 7-10-5, N.M.S.A. 1978) if you are subject to New Mexico Gross Receipts Tax and have not registered for a New Mexico (CRS) Tax Identification Number. Contact the New Mexico Taxation & Revenue Department at (505) 827-0700 for registering instructions.

## **BID PROPOSAL FORM**

**PROJECT IDENTIFICATION:** 9 Unit RHF Remodel Project with Deductive Alternatives

**THIS BID IS SUBMITTED TO:** Pamela Marrjuo, Housing Director  
Las Vegas Public Housing Authority  
2400 Sagebrush Street  
Las Vegas, NM 87701

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 Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

BIDDER accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER'S Notice of Award.

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

- a. BIDDER has examined and carefully studied the Bidding Documents and the following Addenda, receipt of all which is hereby acknowledged:  
(List Addenda by Number and Date; or if none, write none.)  
  
\_\_\_\_\_
- b. BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work;
- c. BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- d. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- e. BIDDER has given ARCHITECT written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ARCHITECT is acceptable to BIDDER, and the Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- 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; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
- g. BIDDER is aware of the general nature of Work to be performed by Owner and others at the site

that relates to Work for which this Bid is submitted as indicated in the Contract documents.

- h. BIDDER acknowledges that the entire Project is subject to a Wage Rate Decision issued specifically for this Project by the U.S. Department of Labor.

BIDDER acknowledges all Cash and Contingency Allowances included in the Base Bid.

BIDDER agrees that the work will be substantially complete within two hundred and forty (240) calendar days from date of Notice to Proceed and completed and ready for final payment in accordance with Paragraph 14.13 of the General Conditions within ten (10) calendar days of the date of Substantial Completion.

BIDDER accepts the provisions of the agreement as to liquidated damages in the event of failure to complete the work within the times specified in the Agreement.

BIDDER will complete the work in accordance with the Contract Documents for the following price provided below:

**LUMP SUM PRICE** (please use typewriter or print legibly)

**Brief Description of Work:**

The work consist of, briefly but not limited to, interior and exterior demolition and remodeling as required to provide the Owner with a "like new" dwelling unit. Units shall be emptied of all contents and all nonstructural (unless noted otherwise) materials replaced with new. Work includes exterior access path and concrete slab work, window and door replacements, roofing and stucco, interior flooring, gypsum board, insulation, cabinetry and appliances, mechanical, electrical, plumbing and all work as identified in construction documents. Contractor shall provide a complete and finished product ready for immediate use by Owner.

Base Bid, Lump Sum Price (use words) and (include contingency):

\_\_\_\_\_ / \$ \_\_\_\_\_

In accordance with the New Mexico Procurement Code, the Gross Receipts Taxes are excluded from the above bid prices and will be billed as a separate added amount at the time of each pay request, and in the percentile applicable at the time of billing.

New Mexico Gross Receipts Tax at \_\_\_\_\_ %, estimate \$ \_\_\_\_\_

**DEDUCTIVE ALTERNATES**

**ALT # SHEET # DESCRIPTION OF ALTERNATE**

**Deduct (amount, use words)**

Delete scope on a per building bases

Ded. Alt.1 Delete Roofing for Building Units 2421 and 2423

\_\_\_\_\_ / \$ \_\_\_\_\_

Ded. Alt.2 Delete Roofing for Building Units 406 and 408

\_\_\_\_\_ / \$ \_\_\_\_\_

- Ded. Alt.3 Delete Roofing for Building Units 411 and 413  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.4 Delete Concrete Work for Building Units 2421 and 2423  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.5 Delete Concrete Work for Building Units 2405 and 2407  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Ded. Alt.6 Delete Concrete Work for Building Units 406 and 408  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.7 Delete Concrete Work for Building Units 411 and 413  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.8 Delete Scope of Work for Building Unit 2423  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.9 Delete Scope of Work for Building Units 2421 and 2423  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.10 Delete Scope of Work for Building Unit 2421  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.11 Delete Scope of Work for Building Unit 2405  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.12 Delete Scope of Work for Building Unit 408  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.13 Delete Scope of Work for Building Unit 406  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.14 Delete Scope of Work for Building Unit 413  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.15 Delete Scope of Work for Building Unit 411  
\_\_\_\_\_/ \$ \_\_\_\_\_
- Ded. Alt.16 Delete Scope of Work for Building Units 2421 and 2423  
\_\_\_\_\_/ \$ \_\_\_\_\_

Ded. Alt 17 Delete Scope of Work for Building Units 2405 and 2407

\_\_\_\_\_  
/\$

Ded. Alt. 18 Delete Scope of Work for Building Units 406 and 408

\_\_\_\_\_  
/\$

Ded. Alt. 19 Delete scope of work for Building Units 411 and 413

\_\_\_\_\_  
/\$

**PRICES SHOULD REFLECT A PER UNIT NOT A PER BUILDING COST.**

The following documents are attached to and made a condition of this Bid:

- a. Bid security is due at time of bid submission in the form of a Bid Bond in an amount equal to at least five (5) percent of the amount of the Bid payable to the OWNER as a guaranty that if the Bid is accepted, the BIDDER will execute the Agreement and present the required Performance and Payment Bonds within 15 days of receipt of Notice of Award.
- b. In accordance with the New Mexico Subcontractors Fair Practice Act of 1988, a list of Subcontractors who will provide labor for the project in excess of \$5,000.00
- c. In accordance with the requirements of the Las Vegas Housing Authority the following:
  - Bid Bond (5%) or Cashier's Check
  - Subcontractor's List (over \$5,000.00)
  - Previous Participation (can be submitted within 3 days of bid opening).
  - Representation, Certifications and other Statements of Bidders (HUD-5369A
  - Campaign Contribution Disclosure Form

Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

The Undersigned understands that the Owner reserves the right to reject any or all Proposals or to waive any formality or technicality in any Proposal in the interest of the Owner.

SUBMITTED ON: \_\_\_\_\_, 20\_\_.

SUBMITTED BY:

\_\_\_\_\_  
signature

\_\_\_\_\_  
title

Firm Name:

Firm Address:

(Seal, if bid is by a corporation)

New Mexico Contractor's License No. \_\_\_\_\_

Public Works ID NO. \_\_\_\_\_

**BIDDER INFORMATION**

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

AUTHORIZED AGENT: \_\_\_\_\_

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

TELEPHONE NUMBER (\_\_\_\_) \_\_\_\_\_

FAX NUMBER (\_\_\_\_) \_\_\_\_\_

DELIVERY: \_\_\_\_\_

STATE PURCHASING RESIDENT CERTIFICATION NO.: \_\_\_\_\_

NEW MEXICO CONTRACTORS LICENSE NO.: \_\_\_\_\_

BID ITEM (S): 9 Unit RHF Remodel Project with Deductive Alternates

ITEM (S) UNDER THIS BID ARE TO BE F.O.B. LAS VEGAS, NEW MEXICO 87701. THE CITY OF LAS VEGAS RESERVES THE RIGHT REJECT ANY OR ALL BIDS AND TO WAIVE ANY TECHNICAL IRREGULARITY IN THE FORM OF THE BID.

**AFFIDAVIT FOR FILING WITH COMPETITIVE BID**

STATE OF \_\_\_\_\_ }

COUNTY OF \_\_\_\_\_ }

I \_\_\_\_\_, of lawful age, being of first duly sworn in oath, say that I am the agent authorized by the bidder to submit the attached bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any city official or employee as to the terms of said prospective contract, or any other terms of said prospective contract; or in any discussion between bidders with any city official concerning an exchange of money or any other thing of value for special consideration in the letting of a contract.

\_\_\_\_\_  
Signature

Subscribed and sworn to before me, this \_\_\_ day of \_\_\_\_\_, 20\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public Signature

My Commission Expires: \_\_\_\_\_

# DRAFT AIA® Document A310™ - 2010

## Bid Bond

**CONTRACTOR:**

(Name, legal status and address)

« »« »  
« »

**SURETY:**

(Name, legal status and principal place of business)

« »« »  
« »

**OWNER:**

(Name, legal status and address)

« »« »  
« »

**BOND AMOUNT:** \$ « »

**PROJECT:**

(Name, location or address, and Project number, if any)

«Dummy»  
« »  
« »

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

**ADDITIONS AND DELETIONS:**  
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

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Signed and sealed this « » day of « », « »

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Witness)

« »  
\_\_\_\_\_  
(Contractor as Principal) (Seal)

« »  
\_\_\_\_\_  
(Title)

« »  
\_\_\_\_\_  
(Surety) (Seal)

« »  
\_\_\_\_\_  
(Title)



## PROPOSED SUBCONTRACTOR LIST

This project is subject to the provisions of the State of NM Subcontractor's Fair Practice Act.

Listing Threshold            \$5,000.00                            Five Thousand Dollars

For each category of the project list all subcontractors, sub-subcontractors, other organizations and/or persons which the BDDER shall define the subcontracting categories and list only one subcontractor, sub-subcontractor, other organization and/or person for each category. The listing shall be in the format indicated on the following page, and shall be completed and submitted with the Bid.

No CONTRACTOR whose Bid is accepted shall sublet or subcontract any portion of the Work of the Project in an amount exceeding the threshold amount given above, where the original bid amount did not designate a subcontract, unless 1) the CONTRACTOR received no bid for that category (note: the BIDDER must designate on the list of subcontractors that "no bid was received"), or 2) the Work is pursuant to a change order that causes changes or deviations from the original contract.

No CONTRACTOR whose Bid is accepted shall substitute any subcontractor in place of the subcontractor listed in the Bid except as provided for in the

If awarded the Contract, I propose to use the following Subcontractor(s) if I am awarded the contract. Write "None" if no subcontractors will perform any work.

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_

-----  
Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_

-----  
Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_  
-----

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_  
-----

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_  
-----

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_  
-----

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_  
-----

Subcontractor's Business Name \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

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

NM Contractor's License No. (If applicable) \_\_\_\_\_

Type of Work \_\_\_\_\_

## STATEMENT OF BIDDER'S QUALIFICATIONS

(To be submitted by the Bidder upon the specific request of the Local Public Authority) This information data shall also be submitted by all Sub-Contractors after Bid Date upon request.

All questions must be answered and the data given must be clear and comprehensive. This statement must be NOTARIZED. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he/she desires:

- 1) Name of Bidder.
- 2) Permanent Main Office Address.
- 3) When organized.
- 4) If a Corporation, where Incorporated, date.
- 5) How many years have you been engaged in the contracting business under your present firm or trade name?
- 6) Contracts on hand: (Schedule these, showing amounts of each contract, and the appropriate anticipated dates of completion)
- 7) General character of work performed by your company.
- 8) Have you ever failed to complete any work awarded to you? If so, where and why?
- 9) Have you ever defaulted on a contract, and/or had a Bond revoked? If so, where and why?
- 10) Have you ever been sued or questioned on any of the work performed by your company? If so, where and why?
- 11) List the more important projects recently completed by your company, stating the approximate cost for each, and the months and year completed.
- 12) List your major equipment available for this contract.
- 13) Background and experience of the principal members of your organization including officers.
- 14) Credit Available: \$ \_\_\_\_\_
- 15) Given Bank Reference: \_\_\_\_\_
  - a) Will you have the necessary Funds or a Line of Credit to complete this project? Yes: \_\_\_\_\_  
No: \_\_\_\_\_
- 16) Upon request, will you fill out a detailed financial statement and furnish any other information that may be required by the PHA?
- 17) The undersigned authorizes and requests any person, firm or corporation to furnish any information requested by the PHA in verification of the recitals comprising this statement of Bidder's Qualifications.
- 18) Is the Current NM Contractor's License you are holding adequate to perform the required work under the bid proposal? Please attach a current copy of NM Contractor's License.



**U.S. Department of Housing  
and Urban Development**  
Office of Public and Indian Housing

**Representations, Certifications,  
and Other Statements of Bidders**  
**Public and Indian Housing Programs**

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Previous edition is obsolete

form HUD-5369-A (11/92)

# Representations, Certifications, and Other Statements of Bidders

## Public and Indian Housing Programs

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### 1. Certificate of Independent Price Determination

#### (a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

[insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

[ ] [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding \$50,000)

(1) Each bidder shall execute, in the form provided by the PHA/IHA, an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [ ] is, [ ] is not included with the bid.

### 2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [ ] has, [ ] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [ ] has, [ ] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

### 3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding \$100,000)

(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.

#### 4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

- (a) Result in an unfair competitive advantage to the bidder; or,
- (b) Impair the bidder's objectivity in performing the contract work.

[ ] In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

#### 5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

#### 6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

#### 7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) [ ] is, [ ] is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) [ ] is, [ ] is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) [ ] is, [ ] is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

- |                        |                              |
|------------------------|------------------------------|
| [ ] Black Americans    | [ ] Asian Pacific Americans  |
| [ ] Hispanic Americans | [ ] Asian Indian Americans   |
| [ ] Native Americans   | [ ] Hasidic Jewish Americans |

#### 8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

The bidder represents and certifies that it:

(a) [ ] is, [ ] is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.

(b) [ ] is, [ ] is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or

community including Native villages and Native groups (including corporations organized by Kenai, Unalaska, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

**9. Certification of Eligibility Under the Davis-Bacon Act** (applicable to construction contracts exceeding \$2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

**10. Certification of Nonsegregated Facilities** (applicable to contracts exceeding \$10,000)

(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed \$10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

- (1) Obtain identical certifications from the proposed subcontractors;
- (2) Retain the certifications in its files; and
- (3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

**Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities**

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

**Note:** The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

**11. Clean Air and Water Certification** (applicable to contracts exceeding \$100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [ ] is, [ ] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

**12. Previous Participation Certificate** (applicable to construction and equipment contracts exceeding \$50,000)

(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.

(b) A fully executed "Previous Participation Certificate" [ ] is, [ ] is not included with the bid.

**13. Bidder's Signature**

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

\_\_\_\_\_  
(Signature and Date)

\_\_\_\_\_  
(Typed or Printed Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Company Address)

**Previous Participation Certification**

U.S. Department of Housing and Urban Development  
Office of Housing/Federal Housing Commissioner

U.S. Department of Agriculture  
Farmers Home Administration

OMB Approval No. 2502-0118  
(exp 11/30/2012)

**Part I To be completed by Principals of Multifamily Projects. See Instructions Reason for Submitting Certification**

For HUD HQ/FmHA use only

<p>1. Agency Name and City where the application is filed</p>	<p>2. Project Name, Project Number, City and Zip Code contained in the application</p>	
<p>3. Loan or Contract Amount</p>	<p>4. Number of Units or Beds</p>	<p>5. Section of Act</p>
<p>6. Type of Project (check one) <input type="checkbox"/> Existing <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Proposed (New)</p>		<p>7. Names and Addresses of All Known Principals and Affiliates (people, businesses &amp; organizations) proposing to participate in the project described above. (list names alphabetically; last, first, middle initial)</p>
<p>8. Role of Each Principal in Project</p>	<p>9. Expected % Ownership Interest in Project</p>	<p>10. Social Security or IRS Employer Number</p>
<p><b>List of all proposed Principal Participants and attach organization chart for all organizations.</b></p> <p>7. Names and Addresses of All Known Principals and Affiliates (people, businesses &amp; organizations) proposing to participate in the project described above. (list names alphabetically; last, first, middle initial)</p> <p><b>Certifications:</b> I (meaning the individual who signs as well as the corporations, partnerships or other parties listed above who certify) hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as a principal in the role and project listed above based upon my following previous participation record and this Certification. Verify that neither you nor any of your principals or affiliates have ever been found to be in noncompliance with any applicable fair housing and civil rights requirements in 24 CFR 5.105 (e). If you or any of your principals or affiliates have been found to be in noncompliance with any such requirements, attach a signed statement explaining the relevant facts, circumstances, and resolution, if any. I certify that all the statements made by me are true, complete and correct to the best of my knowledge and belief and are made in good faith, including the data contained in Schedule A and Exhibits signed by me and attached to this form. Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802) I further certify that:</p> <ol style="list-style-type: none"> <li>Schedule A contains a listing of every assisted or insured project of HUD, USDA FmHA and State and local government housing finance agencies in which I have been or am now a principal.</li> <li>For the period beginning 10 years prior to the date of this certification, and except as shown by me on the certification.             <ol style="list-style-type: none"> <li>No mortgage on a project listed by me has ever been in default, assigned to the Government or foreclosed, nor has mortgage relief by the mortgagee been given;</li> <li>I have not experienced defaults or noncompliances under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;</li> <li>To the best of my knowledge, there are no unresolved findings raised as a result of HUD audits, management reviews or other Governmental investigations concerning me or my projects;</li> <li>There has not been a suspension or termination of payments under any HUD assistance contract in which I have had a legal or beneficial interest;</li> <li>I have not been convicted of a felony and am not presently, to my knowledge, the subject of a complaint or indictment charging a felony. (A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a State and punishable by imprisonment of two years or less);</li> <li>I have not been suspended, debarred or otherwise restricted by any Department or Agency of the Federal Government or of a State Government from doing business with such Department or Agency.</li> <li>I have not defaulted on an obligation covered by a surety or performance bond and have not been the subject of a claim under an employee fidelity bond.</li> <li>All the names of the parties, known to me to be principals in this project(s) in which I propose to participate, are listed above.</li> <li>I am not a HUD/FmHA employee or a member of a HUD/FmHA employee's immediate household as defined in Standards of Ethical Conduct for Employees of the Executive Branch in 5 C.F.R. Part 2635 (57 FR 35006) and HUD's Standard of Conduct in 24 C.F.R. Part 0 and USDA's Standard of Conduct in 7 C.F.R. Part 0 Subpart B.</li> </ol> </li> <li>I am not a Member of Congress or a Resident Commissioner nor otherwise prohibited or limited by law from contracting with the Government of the United States of America.</li> <li>Statements above (if any) to which I cannot certify have been deleted by striking through the words with a pen. I have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances which I think helps to qualify me as a responsible principal for participation in this project.</li> </ol>		

**Schedule A: List of Previous Projects and Section 8 Contracts.** By my name below is the complete list of my previous projects and my participation history as a principal; in Multifamily Housing programs of HUD/FmHA, State, and Local Housing Finance Agencies. Note: Read and follow the instruction sheet carefully. Abbreviate where possible. Make full disclosure. Add extra sheets if you need more space. Double check for accuracy. If you have no previous projects write, by your name, "No previous participation, First Experience."

1. List each Principal's Name (list in alphabetical order, last name first)	2. List Previous Projects (give the I.D. number, project name, city location, & government agency involved if other than HUD)	3. List Principal's Role(s) (Indicate dates participated, and if fee or identity of interest participant)	4. Status of Loan (current, defaulted, assigned, or foreclosed)	5. Was Project ever in Default, during your participation? Yes <input type="checkbox"/> No <input type="checkbox"/> If "Yes," explain	6. Last Mgmt. and/or Physical Inspchn Rating and Date

**Part II - For HUD Internal Processing Only**

Received and checked by me for accuracy and completeness; recommend approval or transfer to Headquarters as checked below:

Date (mm/dd/yyyy)	Telephone Number and Area Code	<input type="checkbox"/> A. No adverse information; form HUD-2530 approval is recommended. <input type="checkbox"/> B. Name match in system	<input type="checkbox"/> C. Disclosure or Certification problem <input type="checkbox"/> D. Other, our memorandum is attached.
Staff	Processing and Control	Approved <input type="checkbox"/> Yes <input type="checkbox"/> No	
Supervisor	Director of Housing / Director, Multifamily Division	Date (mm/dd/yyyy)	

### Instructions for Completing the Previous Participation Certificate, form HUD-2530

Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. 200.210 to 200.245 can be obtained from the Multifamily Housing Representative at any HUD Office. Type or print neatly in ink when filling out this form. Mark answers in all blocks of the form. If the form is not filled completely, it will delay approval of your application.

Attach extra sheets as you need them. Be sure to indicate "Continued on Attachments" wherever appropriate. Sign each additional page that you attach if it refers to you or your record. If you have many projects to list (20 or more) and expect to be applying frequently for participation in HUD projects, you should consider filing a Master List. See Master List instructions below under "instructions for Completing Schedule A."

Carefully read the certification before you sign it. Any questions regarding the form or how to complete it can be answered by your HUD Office Multifamily Housing Representative.

**Purpose:** This form provides HUD with a certified report of all previous participation in HUD multifamily housing projects by those parties making application. The information requested in this form is used by HUD to determine if you meet the standards established to ensure that all principal participants in HUD projects will honor their legal, financial and contractual obligations and are acceptable risks from the underwriting standpoint of an insurer, lender or governmental agency. HUD requires that you certify your record of previous participation in HUD/USDA-FmHA, State and Local Housing Finance Agency projects by completing and signing this form, before your project application or participation can be approved.

HUD approval of your certification is a necessary precondition for your participation in the project and in the capacity that you propose. If you do not file this certification, do not furnish the information requested accurately, or do not meet established standards, HUD will not approve your certification.

Note that approval of your certification does not obligate HUD to approve your project application, and it does not satisfy all other HUD program requirements relative to your qualifications.

**Who Must Sign and File Form HUD-2530:** Form HUD-2530 must be completed and signed by all parties applying to become principal participants in HUD multifamily housing projects, including those who have no previous participation. The form must be signed and filed by all principals and their affiliates who propose participating in the HUD project. Use a separate form for each role in the project unless there is an identity of interest.

Principals include all individuals, joint ventures, partnerships, corporations, trusts, non-profit organizations, any other public or private entity, that will participate in the proposed project as a sponsor, owner, prime contractor, turnkey developer, managing agent, nursing home administrator or operator, packager, or consultant. Architects and attorneys who have any interest in the project other than an arms length fee arrangement for professional services are also considered principals by HUD.

In the case of partnerships, all general partners regardless of their percentage interest and limited partners having a 25 percent or more interest in the partnership are considered principals. In the case of public or private corporations or governmental entities, principals include the president, vice president, secretary, treasurer and all other executive officers who are directly responsible to the board of directors, or any equivalent governing body, as well as all directors and each stockholder having a 10 percent or more interest in the corporation.

Affiliates are defined as any person or business concern that directly or indirectly controls the policy of a principal or has the power to do so. A holding or parent corporation would be an example of an affiliate if one of its subsidiaries is a principal.

**Exception for Corporations** - All principals and affiliates must personally sign the certificate except in the following situation. When a corporation is a principal, all of its officers, directors, trustees and stockholders with 10 percent or more of the common (voting) stock need not sign personally if they all have the same record to report. The officer who is authorized to sign for the corporation or agency will list the names and title of those who elect not to sign. However, any person who has a record of participation in HUD projects that is separate from that of his or her organization must report that activity on this form and sign his or her name. The objective is full disclosure.

**Exemptions** - The names of the following parties do not need to be listed on form HUD-2530: Public Housing Agencies, tenants, owners of less than five condominium or cooperative units and all others whose interests were acquired by inheritance or court order.

**Where and When Form HUD-2530 Must Be Filed:** The original of this form must be submitted to the HUD Office where your project application will be processed at the same time you file your initial project application. This form must be filed with applications for projects, or when otherwise required in the situations listed below:

- Projects to be financed with mortgages insured under the National Housing Act (FHA).
- Projects to be financed according to Section 202 of the Housing Act of 1959 (Elderly and Handicapped).
- Projects in which 20 percent or more of the units are to receive a subsidy as described in 24 C.F.R. 200.213.

- Purchase of a project subject to a mortgage insured or held by the Secretary of HUD.

- Purchase of a Secretary-owned project.

- Proposed substitution or addition of a principal, or principal participation in a different capacity from that previously approved for the same project.

- Proposed acquisition by an existing limited partner of an additional interest in a project resulting in a total interest of 25 percent or more, or proposed acquisition by a corporate stockholder of an additional interest in a project resulting in a total interest of 10 percent or more.

- Projects with U.S.D.A., Farmers Home Administration, or with state or local government housing finance agencies that include rental assistance under Section 8 of the Housing Act of 1937. For projects of this type, form HUD-2530 should be filed with the appropriate applications directly to those agencies.

**Review of Adverse Determination:** If approval of your participation in a HUD project is denied, withheld, or conditionally granted on the basis of your record of previous participation, you will be notified by the HUD Office. You may request reconsideration by the HUD Review Committee. Alternatively, you may request a hearing before a Hearing Officer. Either request must be made in writing within 30 days from your receipt of the notice of determination.

If you do request reconsideration by the Review Committee and the reconsideration results in an adverse determination, you may then request a hearing before a Hearing Officer. The Hearing Officer will issue a report to the Review Committee. You will be notified of the final ruling by certified mail.

### Specific Line Instructions:

**Reason for submitting this Certification:** e.g., refinancing, management, change in ownership, transfer of physical assets, etc.

**Block 1:** Fill in the name of the agency to which you are applying. For example: HUD Office, Farmers Home Administration District office, or the name of a State or local housing finance agency. Below that, fill in the name of the city where the office is located.

**Block 2:** Fill in the name of the project, such as "Greenwood Apts." if the name has not yet been selected, write "Name unknown." Below that, enter the HUD contract or project identification number, the Farmers Home Administration project number, or the State or local housing finance agency project or contract number. Include all project or contract identification numbers that are relevant to the project. Also enter the name of the city in which the project is located, and the ZIP Code of the site location.

**Block 3:** Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.

**Block 4:** Fill in the number of apartment units proposed, such as "40 units." For hospital projects or nursing homes, fill in the number of beds proposed, such as "100 beds."

**Block 5:** Fill in the section of the Housing Act under which the application is filed.

**Block 7:** Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File..."

**Block 8:** Beside the name of each principal, fill in the role that each will perform. The following are possible roles that the principals may perform: Sponsor, Owner, Prime Contractor, Turnkey Developer, Managing Agent, Packager, Consultant, General Partner, Limited Partner (include percentage), Executive Officer, Director, Trustee, Major Stockholder, or Nursing Home Administrator. Beside the name of each affiliate, write the name of the person or firm of affiliation, such as "Affiliate of Smith Construction Co."

**Block 9:** Fill in the percentage of ownership in the proposed project that each principal is expected to have. Also specify if the participant is a general or limited partner. Beside the name of those parties who will not be owners, write "None."

**Block 10:** Fill in the Social Security Number or IRS employer number of every party listed, including affiliates.

**Instructions for Completing Schedule A:**

Be sure that Schedule A is filled-in completely, accurately and the certification is properly dated and signed, because it will serve as a legal record of your previous experience. All Multifamily Housing projects involving HUD/FmHA, and State and local Housing Finance Agencies in which you have previously participated must be listed. Applicants are reminded that previous participation pertains to the individual principal within an entity as well as the entity itself. A newly formed company may not have previous participation, but the principals within the company may have had extensive participation and disclosure of that activity is required. To avoid duplication of disclosure, list the project and then the entities or individuals involved in that project. You may use the name or a number code to denote the entity or individual that participated. The number code can then be used in column 3 to denote role.

**Column 2** List the project or contract identification of each previous project. All previous projects must be included or your certification cannot be processed. Include the name of all projects, the cities in which they are located and the government agency (HUD, USDA-FmHA or State or local housing finance agency) that was involved. At the end of your list of projects, draw a straight line across the page to separate your record of projects from that of others signing this form who have a different record to report.

The Department of Housing and Urban Development (HUD) is authorized to collect this information by law (42 U.S.C. 3535(d) and 24 C.F.R. 200.217) and by regulation at 24 CFR 200.210. This information is needed so that principals applying to participate in multifamily programs can become HUD-approved participants. The information you provide will enable HUD to evaluate your record with respect to established standards of performance, responsibility and eligibility. Without prior approval, a principal may not participate in a proposed or existing multifamily project. HUD uses this information to evaluate whether or not principals pose an unsatisfactory underwriting risk. The information is used to evaluate the potential principals and approve only individuals and organizations who will honor their legal, financial and contractual obligations.

**Privacy Act Statement:** The Housing and Community Development Act of 1987, 42 U.S.C. 3543 requires persons applying for a Federally-insured or guaranteed loan to furnish his/her Social Security Number (SSN). HUD must have your SSN for identification of your records. HUD may use your SSN for automated processing of your records and to make requests for information about you and your previous records with other public agencies and private sector sources. HUD may disclose certain information to Federal, State and local agencies when relevant to civil, criminal, or regulatory investigations and prosecutions. It will not be otherwise disclosed or released outside of HUD, except as required and permitted by law. You must provide all of the information requested in this application, including your SSN.

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number. A response is mandatory. Failure to provide any of the information will result in your disapproval for participation in this HUD program.

**Column 3** List the role(s) of your participation, dates participated, and if fee or identity of interest with owners.

**Column 4** Indicate the current status of the loan. Except for current loans, the date associated with the status is required. Loans under a workout arrangement are considered as signed. An explanation of the circumstances surrounding the status is required for all non-current loans.

**Column 5** Explain any project defaults during your participation.

**Column 6** Enter the latest Management and/or Physical Inspection Review rating. If either of the ratings are below average, the report issued by HUD is required to be submitted along with the applicant's explanation of the circumstances surrounding the rating.

**No Previous Record:** Even if you have never participated in a HUD project before, you must complete form HUD-2530. If you have no record of previous projects to list, fill in your name in column 1 of Schedule A, and write across the form by your name -- "No previous participation, first experience."

**Master List System:** If you expect to file this form frequently and you have a long list of previous projects to report on Schedule A, you should consider filling a Master List. By doing so, you will avoid having to list all your previous projects each time you file a new application.

To make a Master List, use form HUD-2530. On page 1, in block 1, enter (in capital letters) the words "Master List." In blocks 2 through 6 enter in "N.A." meaning Not Applicable. Complete blocks 7 through 10.

In the box below the statement of certification, fill in the names of all parties who wish to file a Master List together (type or print neatly). Beside each name, every party must sign the form. In the box titled "Proposed Role," fill in "N.A." Also, fill in the date you sign the form

and provide a telephone number where you can be reached during the day. No determinations will be made on these certificates.

File one copy of the Master List with each HUD Office where you do business and mail one copy to the following address:

HUD-2530 Master List  
Participation and Compliance  
Division - Housing  
U.S. Department of Housing and  
Urban Development  
451 Seventh Street, S.W.  
Washington, D.C. 20410

Once you have filed a Master List, you do not need to complete Schedule A when you submit form HUD-2530. Instead, write the name of the participant in column 1 of Schedule A and beside that write "See Master List on file." Also give the date that appears on the Master List that you submitted. Below that, report all changes and additions that have occurred since that date. Be sure to include any mortgage defaults, assignments or foreclosures not listed previously.

If you have withdrawn from a project since the date the Master List was filed, be sure to name the project. Give the project identification number, the month and year your participation began and/or ended.

**Certification:**

After you have completed all other parts of form HUD-2530, including Schedule A, read the Certification carefully. In the box below the statement of certification, fill in the name of all principals and affiliates (type or print neatly). Beside the name of each principal and affiliate, each party must sign the form, with the exception in some cases of individuals associated with a corporation (see "Exception for Corporations" in the section of the Instructions titled "Who Must Sign and File form

HUD-2530"). Beside each signature, fill in the role of each party (the same as shown in block 8). In addition, each person who signs the form should fill in the date that he or she signs, as well as providing a telephone number where he or she can be reached during business hours. By providing a telephone number where you can be reached, you will help to prevent any possible delay caused by mailing and processing time in the event HUD has any questions.

If you cannot certify and sign the certification as it is printed because some statements do not correctly describe your record, use a pen and strike through those parts that differ with your record, then sign and certify to that remaining part which does describe you or your record.

Attach a signed letter, note or an explanation of the items you have struck out on the certification and report the facts of your correct record. Item A(2)(e) relates to felony convictions within the past 10 years. If you have been convicted of a felony within 10 years, strike out all of A(2)(e) on the certificate and attach your statement giving your explanation. A felony conviction will not necessarily cause your participation to be disapproved unless there is a criminal record or other evidence that your previous conduct or method of doing business has been such that your participation in the project would make it an unacceptable risk from the underwriting standpoint of an insurer, lender or governmental agency.

## **Bid Documents Required**

### **Check List**

The following certifications and executed documents are required as part of a valid bid.

- Bid Proposal Form
- Bid Bond
- Representations, Certifications, and other Statements of Bidders (HUD 5369a)
- Campaign Contribution Disclosure Form
- Sub Contractor Listing
- Acknowledgements to any Addendums
- Public Works ID Number
- Previous Participation Certifications (HUD 2530) [may be submitted within 3 working days of bid openings.]
- Statement of Bidder's Qualifications (if specifically requested by Owner).

## 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 must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body 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.



The current edition of AIA contract documents will be utilized for this contract, as listed in the Table of Contents, and are available at  
Conron & Woods Architects, 1222 Luisa St., Suite A Santa Fe, New Mexico 87505  
Phone 505-983-6948  
Fax 505-983-1721  
office@conronandwoods.com

*Contractors are encouraged to review these forms.*

## CONTRACT DOCUMENTS

**The following documents are the "Contract Requirements":**

Bid Bond (from Bid Proposal)  
Proposed Subcontractor List (from Bid Proposal)  
Statement of Bidder's Qualifications (from Bid Proposal)  
Representations, Certifications and Other Statements of Bidders (HUD 5369-A) (from Bid Proposal)  
Standard Form of Agreement Between Owner and Contractor (Available upon request)  
General Conditions of the Contract (HUD5370)  
Previous Participation Certification (HUD 2530)  
Supplementary Conditions of the Contract (If any)  
Wage Rate Decision  
Construction Performance Bond and Labor and Material Payment Bond (AIA A311)  
Assignment of Antitrust Claims  
Non-collusive Affidavit of Subcontractors  
Certification Regarding Drug-free Workplace Requirements (HUD 50070)  
Schedule of Amounts for Contract Payments (HUD-51000)  
Construction Progress Schedule (HUD-5372)  
Certificate of Completion-Consolidated  
Contractor's Certificate and Release  
Statement of Compliance with Section 3 of the Housing and Urban Development Act of 1968 (required on contracts over \$500,000)

**The following documents are to be utilized as required by Construction:**

Notice of Award  
Notice to Proceed  
Application for Payment  
Certificate of Substantial Completion (AIA G704)  
Close Out Check List

*Originals of HUD Forms can be found on the Internet at:*

[http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/administration/hudclips/forms](http://portal.hud.gov/hudportal/HUD?src=/program_offices/administration/hudclips/forms)

# General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing  
OMB Approval No. 2577-0157 (exp. 01/31/2014)

**Applicability. This form is applicable to any construction/development contract greater than \$100,000.**

This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 24 CFR 85.36, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 135. The form is required for construction contracts awarded by Public Housing Agencies (PHAs).

The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, HAs would be unable to enforce their contracts.

Public reporting burden for this collection of information is estimated to average 1.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Responses to the collection of information are required to obtain a benefit or to retain a benefit.

The information requested does not lend itself to confidentiality.

HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB number.

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## 1. Definitions

- (a) "Architect" means the person or other entity engaged by the PHA to perform architectural, engineering, design, and other services related to the work as provided for in the contract. When a PHA uses an engineer to act in this capacity, the terms "architect" and "engineer" shall be synonymous. The Architect shall serve as a technical representative of the Contracting Officer. The Architect's authority is as set forth elsewhere in this contract.
- (b) "Contract" means the contract entered into between the PHA and the Contractor. It includes the forms of Bid, the Bid Bond, the Performance and Payment Bond or Bonds or other assurance of completion, the Certifications, Representations, and Other Statements of Bidders (form HUD-5370), these General Conditions of the Contract for Construction (form HUD-5370), the applicable wage rate determinations from the U.S. Department of Labor, any special conditions included elsewhere in the contract, the specifications, and drawings. It includes all formal changes to any of those documents by addendum, change order, or other modification.
- (c) "Contracting Officer" means the person delegated the authority by the PHA to enter into, administer, and/or terminate this contract and designated as such in writing to the Contractor. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer also designated in writing. The Contracting Officer shall be deemed the authorized agent of the PHA in all dealings with the Contractor.
- (d) "Contractor" means the person or other entity entering into the contract with the PHA to perform all of the work required under the contract.
- (e) "Drawings" means the drawings enumerated in the schedule of drawings contained in the Specifications and as described in the contract clause entitled Specifications and Drawings for Construction herein.
- (f) "HUD" means the United States of America acting through the Department of Housing and Urban Development including the Secretary, or any other person designated to act on its behalf. HUD has agreed, subject to the provisions of an Annual Contributions Contract (ACC), to provide financial assistance to the PHA, which includes assistance in financing the work to be performed under this contract. As defined elsewhere in these General Conditions or the contract documents, the determination of HUD may be required to authorize changes in the work or for release of funds to the PHA for payment to the Contractor. Notwithstanding HUD's role, nothing in this contract shall be construed to create any contractual relationship between the Contractor and HUD.
- (g) "Project" means the entire project, whether construction or rehabilitation, the work for which is provided for in whole or in part under this contract.
- (h) "PHA" means the Public Housing Agency organized under applicable state laws which is a party to this contract.
- (i) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (j) "Work" means materials, workmanship, and manufacture and fabrication of components.
- (a) The Contractor shall furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work. The Contractor shall also furnish all necessary water, heat, light, and power not made available to the Contractor by the PHA pursuant to the clause entitled Availability and Use of Utility Services herein.
- (b) The Contractor shall perform on the site, and with its own organization, work equivalent to at least [ ] (12 percent unless otherwise indicated) of the total amount of work to be performed under the order. This percentage may be reduced by a supplemental agreement to this order if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the PHA.
- (c) At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.
- (d) The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the PHA, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.
- (e) The Contractor shall lay out the work from base lines and bench marks indicated on the drawings and be responsible for all lines, levels, and measurements of all work executed under the contract. The Contractor shall verify the figures before laying out the work and will be held responsible for any error resulting from its failure to do so.
- (f) The Contractor shall confine all operations (including storage of materials) on PHA premises to areas authorized or approved by the Contracting Officer.
- (g) The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. After completing the work and before final inspection, the Contractor shall (1) remove from the premises all scaffolding, equipment, tools, and materials (including rejected materials) that are not the property of the PHA and all rubbish caused by its work; (2) leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer; (3) perform all specified tests; and, (4) deliver the installation in complete and operating condition.
- (h) The Contractor's responsibility will terminate when all work has been completed, the final inspection made, and the work accepted by the Contracting Officer. The Contractor will then be released from further obligation except as required by the warranties specified elsewhere in the contract.

## 2. Contractor's Responsibility for Work

## 3. Architect's Duties, Responsibilities, and Authority

- (a) The Architect for this contract, and any successor, shall be designated in writing by the Contracting Officer.

- (b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, engineering, and design matters related to the work performed under the contract. The Architect may provide direction on contract performance. Such direction shall be within the scope of the contract and may not be of a nature which: (1) institutes additional work outside the scope of the contract; (2) constitutes a change as defined in the Changes clause herein; (3) causes an increase or decrease in the cost of the contract; (4) alters the Construction Progress Schedule; or (5) changes any of the other express terms or conditions of the contract.
- (c) The Architect's duties and responsibilities may include but shall not be limited to:
- (1) Making periodic visits to the work site, and on the basis of his/her on-site inspections, issuing written reports to the PHA which shall include all observed deficiencies. The Architect shall file a copy of the report with the Contractor's designated representative at the site;
  - (2) Making modifications in drawings and technical specifications and assisting the Contracting Officer in the preparation of change orders and other contract modifications for issuance by the Contracting Officer;
  - (3) Reviewing and making recommendations with respect to - (i) the Contractor's construction progress schedules; (ii) the Contractor's shop and detailed drawings; (iii) the machinery, mechanical and other equipment and materials or other articles proposed for use by the Contractor; and, (iv) the Contractor's price breakdown and progress payment estimates; and,
  - (4) Assisting in inspections, signing Certificates of Completion, and making recommendations with respect to acceptance of work completed under the contract.

#### 4. Other Contracts

The PHA may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with PHA employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by PHA employees

### Construction Requirements

#### 5. Pre-construction Conference and Notice to Proceed

- (a) Within ten calendar days of contract execution, and prior to the commencement of work, the Contractor shall attend a preconstruction conference with representatives of the PHA, its Architect, and other interested parties convened by the PHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract. The PHA will provide the Contractor with the date, time, and place of the conference.
- (b) The contractor shall begin work upon receipt of a written Notice to Proceed from the Contracting Officer or designee. The Contractor shall not begin work prior to receiving such notice.

#### 6. Construction Progress Schedule

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring labor, materials, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments or take other remedies under the contract until the Contractor submits the required schedule.
- (b) The Contractor shall enter the actual progress on the chart as required by the Contracting Officer, and immediately deliver three copies of the annotated schedule to the Contracting Officer. If the Contracting Officer determines, upon the basis of inspection conducted pursuant to the clause entitled Inspection and Acceptance of Construction, herein that the Contractor is not meeting the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the PHA. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the Default clause of this contract.

#### 7. Site Investigation and Conditions Affecting the Work

- (a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is

reasonably ascertainable from an inspection of the site, including all exploratory work done by the PHA, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the PHA.

- (b) The PHA assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the PHA. Nor does the PHA assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

### 8. Differing Site Conditions

- (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site(s), of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
- (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. Work shall not proceed at the affected site, except at the Contractor's risk, until the Contracting Officer has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contractor shall file a claim in writing to the PHA within ten days after receipt of such instructions and, in any event, before proceeding with the work. An equitable adjustment in the contract price, the delivery schedule, or both shall be made under this clause and the contract modified in writing accordingly.
- (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.
- (d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

### 9. Specifications and Drawings for Construction

- (a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be required in the planning and production of the work. Such

promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

- (b) Wherever in the specifications or upon the drawings the words 'directed', 'required', 'ordered', 'designated', 'prescribed', or words of like import are used, it shall be understood that the 'direction', 'requirement', 'order', 'designation', or 'prescription', of the Contracting Officer is intended and similarly the words 'approved', 'acceptable', 'satisfactory', or words of like import shall mean 'approved by', or 'acceptable to', or 'satisfactory to' the Contracting Officer, unless otherwise expressly stated.
- (c) Where 'as shown', 'as indicated', 'as detailed', or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word 'provided' as used herein shall be understood to mean 'provide complete in place' that is 'furnished and installed'.
- (d) 'Shop drawings' means drawings, submitted to the PHA by the Contractor, subcontractor, or any lower tier subcontractor, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials of equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The PHA may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.
- (e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with other contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the PHA's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.
- (f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation and the Contracting Officer concurs, the Contracting Officer shall issue an appropriate modification to the contract, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.
- (g) It shall be the responsibility of the Contractor to make timely requests of the PHA for such large scale and full size drawings, color schemes, and other additional information, not already in his possession, which shall be requests may be submitted as the need arises, but each

such request shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

- (h) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the PHA and one set will be returned to the Contractor. As required by the Contracting Officer, the Contractor, upon completing the work under this contract, shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the work is completed and accepted.
- (i) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all shop drawings prepared by subcontractors are submitted to the Contracting Officer.

#### 10. As-Built Drawings

- (a) 'As-built drawings,' as used in this clause, means drawings submitted by the Contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract. 'As-built drawings' shall be synonymous with 'Record drawings.'
- (b) As required by the Contracting Officer, the Contractor shall provide the Contracting Officer accurate information to be used in the preparation of permanent as-built drawings. For this purpose, the Contractor shall record on one set of contract drawings all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks.
- (c) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all as-built drawings prepared by subcontractors are submitted to the Contracting Officer.

#### 11. Material and Workmanship

- (a) All equipment, material, and articles furnished under this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the contract to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of, and as approved by the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.
- (b) Approval of equipment and materials.
- (1) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. Before installing the work, the Contractor shall

When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

- (2) When required by the specifications or the Contracting Officer, the Contractor shall submit appropriately marked samples (and certificates related to them) for approval at the Contractor's expense, with all shipping charges prepaid. The Contractor shall label, or otherwise properly mark on the container, the material or product represented, its place of origin, the name of the producer, the Contractor's name, and the identification of the construction project for which the material or product is intended to be used.
- (3) Certificates shall be submitted in triplicate, describing each sample submitted for approval and certifying that the material, equipment or accessory complies with contract requirements. The certificates shall include the name and brand of the product, name of manufacturer, and the location where produced.
- (4) Approval of a sample shall not constitute a waiver of the PHA right to demand full compliance with contract requirements. Materials, equipment and accessories may be rejected for cause even though samples have been approved.
- (5) Wherever materials are required to comply with recognized standards or specifications, such specifications shall be accepted as establishing the technical qualities and testing methods, but shall not govern the number of tests required to be made nor modify other contract requirements. The Contracting Officer may require laboratory test reports on items submitted for approval or may approve materials on the basis of data submitted in certificates with samples. Check tests will be made on materials delivered for use only as frequently as the Contracting Officer determines necessary to insure compliance of materials with the specifications. The Contractor will assume all costs of retesting materials which fail to meet contract requirements and/or testing materials offered in substitution for those found deficient.
- (6) After approval, samples will be kept in the Project office until completion of work. They may be built into the work after a substantial quantity of the materials they represent has been built in and accepted.
- (c) Requirements concerning lead-based paint. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35.

#### 12. Permits and Codes

- (a) The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules and regulations. Notwithstanding the requirement of the Contractor to comply with the drawings and specifications in the contract, all work installed shall comply with all applicable codes and regulations as amended by any
- examine the drawings and the specifications for

compliance with applicable codes and regulations bearing on the work and shall immediately report any discrepancy it may discover to the Contracting Officer. Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contracting Officer shall modify the contract by change order pursuant to the clause entitled Changes herein to conform to the code or regulation.

- (b) The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the PHA can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount shall be reduced accordingly.

### 13. Health, Safety, and Accident Prevention

(a) In performing this contract, the Contractor shall:

- (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;
- (2) Protect the lives, health, and safety of other persons;
- (3) Prevent damage to property, materials, supplies, and equipment; and,
- (4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

- (1) Comply with regulations and standards issued by the Secretary of Labor at 29 CFR Part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96), 40 U.S.C. 3701 et seq.; and
- (2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904.

(d) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as the PHA, the Secretary of Housing and Urban Development, or the Secretary of Labor shall direct as a means of enforcing such provisions.

(f) New work which connects to existing work

### 14. Temporary Heating

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work, and to facilitate the completion of the work. Any permanent heating equipment used shall be turned over to the PHA in the condition and at the time required by the specifications.

### 15. Availability and Use of Utility Services

(a) The PHA shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the PHA or, where the utility is produced by the PHA, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the PHA, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

### 16. Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed under this contract, and which do not unreasonably interfere with the work required under this contract.

(b) The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this contract, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(c) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Prior to disturbing the ground at the construction site, the Contractor shall ensure that all underground utility lines are clearly marked.

(d) The Contractor shall shore up, brace, underpin, secure, and protect as necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected by the excavations or other operations connected with the construction of the project.

(e) Any equipment temporarily removed as a result of work under this contract shall be protected, cleaned, and replaced in the same condition as at the time of award of this contract.

shall correspond in all respects with that to which it

connects and/or be similar to existing work unless otherwise required by the specifications.

- (g) No structural members shall be altered or in any way weakened without the written authorization of the Contracting Officer, unless such work is clearly specified in the plans or specifications.
- (h) If the removal of the existing work exposes discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished, or the material replaced as necessary to make the continuous work uniform and harmonious. This, however, shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, or finished surfaces in good condition, but in different planes or on different levels when brought together by the removal of intervening work, unless such refinishing or reconstruction is specified in the plans or specifications.
- (i) The Contractor shall give all required notices to any adjoining or adjacent property owner or other party before the commencement of any work.
- (j) The Contractor shall indemnify and save harmless the PHA from any damages on account of settlement or the loss of lateral support of adjoining property, any damages from changes in topography affecting drainage, and from all loss or expense and all damages for which the PHA may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- (k) The Contractor shall repair any damage to vegetation, structures, equipment, utilities, or improvements, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

#### 17. Temporary Buildings and Transportation of Materials

- (a) Temporary buildings (e.g., storage sheds, shops, offices, sanitary facilities) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the PHA. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- (b) The Contractor shall, as directed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

#### 18. Clean Air and Water

The contractor shall comply with the Clean Air Act, as

- (f) The PHA may conduct routine inspections of the construction site on a daily basis.

amended, 42 USC 7401 et seq., the Federal Water Pollution Control Water Act, as amended, 33 U.S.C. 1251 et seq., and standards issued pursuant thereto in the facilities in which this contract is to be performed.

#### 19. Energy Efficiency

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under the contract is performed.

#### 20. Inspection and Acceptance of Construction

- (a) Definitions. As used in this clause -
- (1) "Acceptance" means the act of an authorized representative of the PHA by which the PHA approves and assumes ownership of the work performed under this contract. Acceptance may be partial or complete.
- (2) "Inspection" means examining and testing the work performed under the contract (including, when appropriate, raw materials, equipment, components, and intermediate assemblies) to determine whether it conforms to contract requirements.
- (3) "Testing" means that element of inspection that determines the properties or elements, including functional operation of materials, equipment, or their components, by the application of established scientific principles and procedures.
- (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. All work is subject to PHA inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- (c) PHA inspections and tests are for the sole benefit of the PHA and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for loss or damage of the material before acceptance; (3) constitute or imply acceptance; or, (4) affect the continuing rights of the PHA after acceptance of the completed work under paragraph (j) below.
- (d) The presence or absence of the PHA inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer's written authorization. All instructions and approvals with respect to the work shall be given to the Contractor by the Contracting Officer.
- (e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The PHA may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The PHA shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.
- (g) The Contractor shall, without charge, replace or correct work found by the PHA not to conform to

contract requirements, unless the PHA decides that it is in its interest to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

- (h) If the Contractor does not promptly replace or correct rejected work, the PHA may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor, or (2) terminate for default the Contractor's right to proceed.
- (i) If any work requiring inspection is covered up without approval of the PHA, it must, if requested by the Contracting Officer, be uncovered at the expense of the Contractor. If at any time before final acceptance of the entire work, the PHA considers it necessary or advisable, to examine work already completed by removing or tearing it out, the Contractor, shall on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray all the expenses of the examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the Contracting Officer shall make an equitable adjustment to cover the cost of the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
- (j) The Contractor shall notify the Contracting Officer, in writing, as to the date when in its opinion all or a designated portion of the work will be substantially completed and ready for inspection. If the Architect determines that the state of preparedness is as represented, the PHA will promptly arrange for the inspection. Unless otherwise specified in the contract, the PHA shall accept, as soon as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines and designates can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the PHA's right under any warranty or guarantee.

## 21. Use and Possession Prior to Completion

- (a) The PHA shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the PHA intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The PHA's possession or use shall not be deemed an acceptance of any work under the contract.
- (b) While the PHA has such possession or use, the Contractor shall be relieved of the responsibility for (1) the loss of or damage to the work resulting from the PHA's possession or use, notwithstanding the terms of the clause entitled Permits and Codes herein; (2) all maintenance costs on the areas occupied; and, (3) furnishing heat, light, power, and water used in the areas occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of the
- (h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the

work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

## 22. Warranty of Title

The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto.

## 23. Warranty of Construction

- (a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of \_\_\_\_\_ (one year unless otherwise indicated) from the date of final acceptance of the work. If the PHA takes possession of any part of the work before final acceptance, this warranty shall continue for a period of (one year unless otherwise indicated) from the date that the PHA takes possession.
- (b) The Contractor shall remedy, at the Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at the Contractor's expense, any damage to PHA-owned or controlled real or personal property when the damage is the result of—
- (1) The Contractor's failure to conform to contract requirements; or
  - (2) Any defects of equipment, material, workmanship or design furnished by the Contractor.
- (c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for (one year unless otherwise indicated) from the date of repair or replacement.
- (d) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect or damage.
- (e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the PHA shall have the right to replace, repair or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- (f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:
- (1) Obtain all warranties that would be given in normal commercial practice;
  - (2) Require all warranties to be executed in writing, for the benefit of the PHA; and,
  - (3) Enforce all warranties for the benefit of the PHA.
- (g) In the event the Contractor's warranty under paragraph (a) of this clause has expired, the PHA may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.
- Contractor shall not be liable for the repair of any defect of material or design furnished by the PHA nor for the

repair of any damage that results from any defect in PHA furnished material or design.

- (i) Notwithstanding any provisions herein to the contrary, the establishment of the time periods in paragraphs (a) and (c) above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract 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 its obligation other than specifically to correct the work.
- (j) This warranty shall not limit the PHA's rights under the Inspection and Acceptance of Construction clause of this contract with respect to latent defects, gross mistakes or fraud.

#### 24. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

#### Administrative Requirements

#### 25. Contract Period

The Contractor shall complete all work required under this contract within 40 calendar days of the effective date of the contract, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

#### 26. Order of Provisions

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

#### 27. Payments

- (a) The PHA shall pay the Contractor the price as provided in this contract.
- (b) The PHA shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The PHA may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.
- (c) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has

acceptable to HUD. If the contract covers more than one project, the Contractor shall furnish a separate breakdown for each. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.

- (d) The Contractor shall submit, on forms provided by the PHA, periodic estimates showing the value of the work performed during each period based upon the approved breakdown of the contract price. Such estimates shall be submitted not later than 10 days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the Architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.
- (e) Along with each request for progress payments and the required estimates, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that:
  - (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
  - (2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements; and,
  - (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

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

Title: \_\_\_\_\_

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

- (f) Except as otherwise provided in State law, the PHA shall retain ten (10) percent of the amount of progress payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, the PHA may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, the PHA shall reinstate the ten (10) percent (or other percentage as provided in State law) retainage until such time as the Contracting Officer determines that performance and progress are satisfactory.
- (g) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments.

acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting

Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of the PHA's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the PHA.

- (h) All material and work covered by progress payments made shall, at the time of payment become the sole property of the PHA, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of the PHA to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of the PHA in the course of their employment, the Contractor shall restore such damaged work without cost to the PHA and to seek redress for its damage only from those who directly caused it.
- (i) The PHA shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against the PHA arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.
- (j) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.
- (k) The PHA shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of the PHA to withhold moneys from the Contractor shall in no wise impair the obligations of any surety or sureties under any bonds furnished under this contract.

## 28. Contract Modifications

- (a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.
- (b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which do not change the rights or responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the
- (1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor breakdowns by hours or unit

Contractor and the Contracting Officer.

- (c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

## 29. Changes

- (a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:
- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) PHA-furnished facilities, equipment, materials, services, or site; or,
- (4) Directing the acceleration in the performance of the work.
- (b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.
- (c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.
- (d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
- (e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.
- (f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:
- costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's

Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs when size of change warrants revision.

- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change.

The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.

- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

### 30. Suspension of Work

- (a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the PHA.
- (b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified (or within a reasonable time if not specified) in this contract an adjustment shall be made for any increase in the cost of performance of the contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have

been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or for which any equitable adjustment is provided for or excluded under any other provision of this contract.

- (c) A claim under this clause shall not be allowed (1) for any proceed with the work (or separable part of the work) that has been delayed. In this event, the PHA may take over the work and complete it, by contract or otherwise, and

costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and, (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

### 31. Disputes

- (a) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- (b) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
- (c) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (d) The Contracting Officer shall, within 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (e) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) days after receipt of the Contracting Officer's decision.
- (f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

### 32. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to

may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall

be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

(b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if—

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God, or of the public enemy, (ii) acts of the PHA or other governmental entity in either its sovereign or contractual capacity, (iii) acts of another contractor in the performance of a contract with the PHA, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within days (10 days unless otherwise indicated) from the beginning of such delay (unless extended by the Contracting Officer) notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the Disputes clause of this contract.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been for convenience of the PHA.

### 33. Liquidated Damages

(a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the PHA as liquidated damages, the sum of \$ 150.00 [Contracting Officer insert amount] for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the PHA. The Contractor remains liable for damages caused other than by delay.

(b) If the PHA terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final

completion of the work together with any increased costs occasioned the PHA in completing the work.

(c) If the PHA does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

### 34. Termination for Convenience

(a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.

(b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.

(c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.

(d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

### 35. Assignment of Contract

The Contractor shall not assign or transfer any interest in this contract; except that claims for monies due or to become due from the PHA under the contract may be assigned to a bank, trust company, or other financial institution. Such assignments of claims shall only be made with the written concurrence of the Contracting Officer. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership as approved by the Contracting Officer.

### 36. Insurance

(a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:

(1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.

(2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$ 500,000 [Contracting Officer insert amount]

500,000.00

per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims-made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.

- (3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$500,000.00 [Contracting Officer insert amount] per occurrence.

(b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.

(c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

### 37. Subcontracts

(a) Definitions. As used in this contract -

- (1) "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime contract or a subcontract.

(2) "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another subcontractor.

- (b) The Contractor shall not enter into any subcontract with any subcontractor who has been temporarily denied participation in a HUD program or who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or of the state in which the work under this contract is to be performed.
- (c) The Contractor shall be as fully responsible for the acts or omissions of its subcontractors, and of persons either directly or indirectly employed by them as for the acts or omissions of persons directly employed by the Contractor.
- (d) The Contractor shall insert appropriate clauses in all subcontracts to bind subcontractors to the terms and conditions of this contract insofar as they are applicable to the work of subcontractors.
- (e) Nothing contained in this contract shall create any contractual relationship between any subcontractor and the PHA or between the subcontractor and HUD.

### 38. Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms

The Contractor shall take the following steps to ensure that, whenever possible, subcontracts are awarded to small business firms, minority firms, women's business enterprises, and labor surplus area firms:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (b) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;
- (d) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises; and
- (e) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies.

### 39. Equal Employment Opportunity

During the performance of this contract, the Contractor agrees as follows:

- (a) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or handicap.
- (b) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, or handicap. Such action shall include, but not be limited to, (1) employment, (2) upgrading, (3) demotion, (4) transfer, (5) recruitment or recruitment advertising, (6) layoff or termination, (7) rates of pay or other forms of compensation, and (8) selection for training, including apprenticeship.

- (c) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.
- (d) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, or handicap.
- (e) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
- (f) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.
- (g) The Contractor shall furnish all information and reports required by Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto. The Contractor shall permit access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (h) In the event of a determination that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts, or Federally assisted construction contracts under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.
- (i) The Contractor shall include the terms and conditions of this clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as the Secretary of Housing and Urban Development or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.
- (j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.
- 40. Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968.**
- (a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- (d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.
- (e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

**41. Interest of Members of Congress**

No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

#### **42. Interest of Members, Officers, or Employees and Former Members, Officers, or Employees**

No member, officer, or employee of the PHA, no member of the governing body of the locality in which the project is situated, no member of the governing body of the locality in which the PHA was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

#### **43. Limitations on Payments made to Influence Certain Federal Financial Transactions**

- (a) The Contractor agrees to comply with Section 1352 of Title 31, United States Code which prohibits the use of Federal appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) The Contractor further agrees to comply with the requirement of the Act to furnish a disclosure (OMB Standard Form LLL, Disclosure of Lobbying Activities) if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

#### **44. Royalties and Patents**

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and shall save the PHA harmless from loss on account thereof; except that the PHA shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified and the Contractor has no reason to believe that the specified design, process, or product is an infringement. If, however, the Contractor has reason to believe that any design, process or product specified is an infringement of a patent, the Contractor shall promptly notify the Contracting Officer. Failure to give such notice shall make the Contractor responsible for resultant loss.

#### **45. Examination and Retention of Contractor's Records**

be posted at all times by the Contractor and its

- (a) The PHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until 3 years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.
- (b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders not exceeding \$10,000.
- (c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the Disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the PHA, HUD, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

#### **46. Labor Standards - Davis-Bacon and Related Acts**

If the total amount of this contract exceeds \$2,000, the Federal labor standards set forth in the clause below shall apply to the development or construction work to be performed under the contract.

- (a) Minimum Wages.
  - (1) All laborers and mechanics employed under this contract in the development or construction of the project(s) involved will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the regular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall subcontractors at the site of the work in a prominent and

accessible place where it can be easily seen by the workers.

(2) (i) Any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met: (A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and (B) The classification is utilized in the area by the construction industry; and (C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employee Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized

representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.

(iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.

(iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in classification.

(3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the

amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or

program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(b) Withholding of funds. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.

(c) Payrolls and basic records.

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

- (2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)
- (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c) (1) of this clause and that such information is correct and complete;
- (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
- (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to

make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

- (d) (1) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship and Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (2) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under

- the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (3) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.
- (f) Contract termination; debarment. A breach of this contract clause may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.
- (g) Compliance with Davis-Bacon and related Act requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (h) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this clause shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.
- (i) Certification of eligibility.
- (1) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.
- (j) Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.
- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in subparagraph (j)(1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic (including watchmen and guards) employed in violation of the provisions set forth in subparagraph (j)(1) of this clause, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in subparagraph (j)(1) of this clause.
- (3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in subparagraph (j)(2) of this clause.
- (k) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

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#### 47. Non-Federal Prevailing Wage Rates

- (a) Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State or tribal law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds: (1) The applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;
- (b) An applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or
- (c) An applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

#### 48. Procurement of Recovered Materials.

- (a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.
- (b) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.

General Decision Number: NM140004 01/03/2014 NM4

Superseded General Decision Number: NM20130004

State: New Mexico

Construction Types: Residential

Counties: Cibola, Colfax, Guadalupe, Harding, McKinley, Mora, Quay, Rio Arriba, San Juan, San Miguel, Taos, Torrance and Union Counties in New Mexico.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Modification Number      Publication Date  
0                              01/03/2014

SUNM1999-003 08/05/1999

	Rates	Fringes
Carpenter (excluding installation of soft floors and batt and blown insulation).....	\$ 10.85	.30
Cement Mason.....	\$ 10.91	
Drywall Finisher.....	\$ 8.00	
Electrician.....	\$ 12.00	.23
Laborer, Unskilled.....	\$ 8.13	
Painter (excluding drywall finishing).....	\$ 9.00	
Plumber Including HVAC work.....	\$ 16.07	.65
Roofer.....	\$ 9.87	
Sheet metal worker (Setting of HVAC unit and duct work installation only).....	\$ 14.43	.58
Soft Floor Layer.....	\$ 10.00	

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

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

-----  
The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

#### Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

#### Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

-----  
**WAGE DETERMINATION APPEALS PROCESS**

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

\* an existing published wage determination

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

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

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

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

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

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

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

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

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

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

=====

END OF GENERAL DECISION

# DRAFT AIA Document A312™ - 1984

## Performance Bond

**CONTRACTOR** (Name, Legal Status and Address):

« » « »  
« »

**SURETY** (Name, Legal Status and Principal Place of Business):

« » « »  
« »

**OWNER** (Name, Legal Status and Address):

« » « »  
« »

### CONSTRUCTION CONTRACT

Date: « »

Amount: \$ « »

Description (Name and Location):

« (Dummy) »  
« »

### BOND

Date (Not earlier than Construction Contract Date): « »

Amount: \$ « »

Modifications to this Bond:  None  See Section 13

**CONTRACTOR AS PRINCIPAL**  
Company: (Corporate Seal)

**SURETY**  
Company: (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title: « » « »

Signature: \_\_\_\_\_  
Name and Title: « » « »

(Any additional signatures appear on the last page)

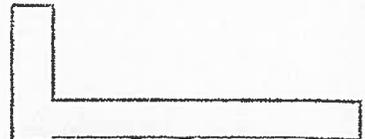
(FOR INFORMATION ONLY - Name, Address and Telephone)

**AGENT or BROKER:**

« »  
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« »

**OWNER'S REPRESENTATIVE**  
(Architect, Engineer or other party):

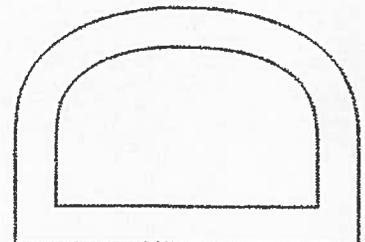
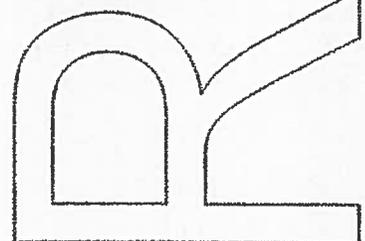
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**ADDITIONS AND DELETIONS:**  
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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



**ELECTRONIC COPYING** of any portion of this AIA Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

**§ 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 Section 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 Section 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 Section 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 Section 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 equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 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 Section 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 Section 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 Section 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 mitigation of 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 Section 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 available 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 signature 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 here from and provisions conforming 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 Contractor 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, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

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

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

§ 13 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)

Signature:  
Name and Title:  
Address:

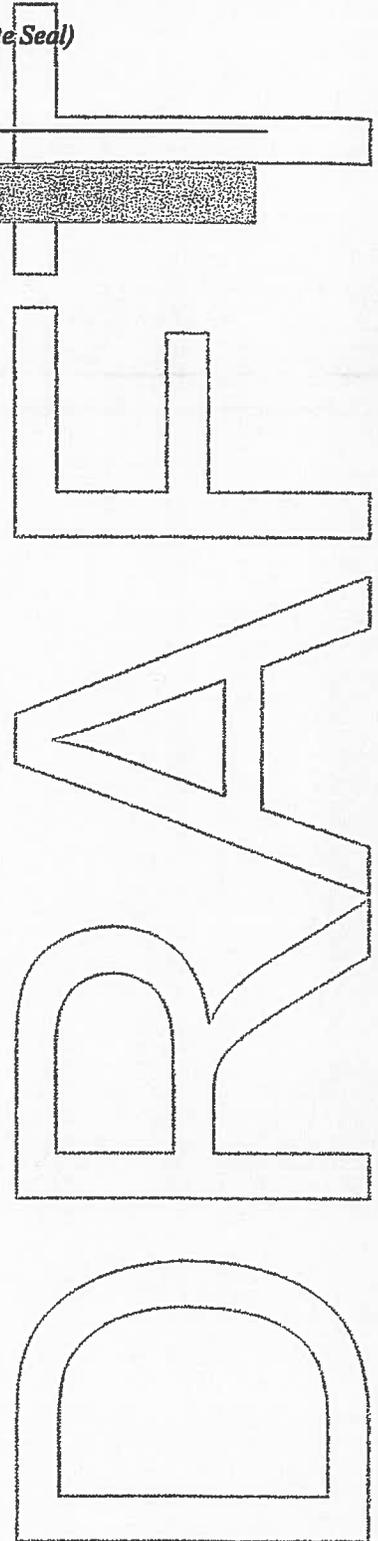
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SURETY

Company: (Corporate Seal)

Signature:  
Name and Title:  
Address:

\_\_\_\_\_  
« »  
« »



# DRAFT AIA Document A312™ - 1984

## Payment Bond

**CONTRACTOR** (Name, Legal Status and Address):

« »  
« »

**SURETY** (Name, Legal Status and Principal Place of Business):

« »  
« »

**OWNER** (Name, Legal Status and Address):

« »  
« »

### CONSTRUCTION CONTRACT

Date: « »

Amount: \$ « »

Description (Name and Location):

«Dummy»  
« »

### BOND

Date (Not earlier than Construction Contract Date): « »

Amount: \$ « »

Modifications to this Bond:  None  See Section 16

**CONTRACTOR AS PRINCIPAL**  
Company: (Corporate Seal)

**SURETY**  
Company: (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title: « »

Signature: \_\_\_\_\_  
Name and Title: « »

(Any additional signatures appear on the last page)

(FOR INFORMATION ONLY - Name, Address and Telephone)

**AGENT or BROKER:**

« »  
« »  
« »

**OWNER'S REPRESENTATIVE**  
(Architect, Engineer or other party):

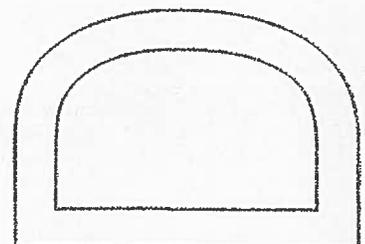
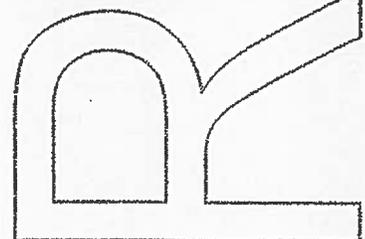
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**ADDITIONS AND DELETIONS:**  
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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



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**§ 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 Section 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 Section 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 Section 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 Section 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 Section 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 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.

**§ 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 Section 4.1 or Section 4.2.3, 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 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.

§ 16 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

SURETY

Company: (Corporate Seal)

Company: (Corporate Seal)

Signature:  
Name and Title:  
Address:

« »  
« »

Signature:  
Name and Title:  
Address:

« »  
« »

**ASSIGNMENT OF ANTITRUST CLAIMS**

TO BE EXECUTED BY GENERAL CONTRACTORS AND SUBCONTRACTORS, AS WELL AS  
ALL SUPPLIERS FOR ITEMS IN EXCESS OF \$10,000.00

PROJECT:

PROJECT NO:

\_\_\_\_\_ Agrees that any and all claims which it may have or may insure 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 undersigned retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the Owner, including the right to any treble damages attributable thereto.

FIRM: \_\_\_\_\_

BY: \_\_\_\_\_

Signed by Individual Empowered to Obligate Supplier, General Contractor or Sub-Subcontractor

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



# Certification for a Drug-Free Workplace

U.S. Department of Housing  
and Urban Development

Applicant Name

Program/Activity Receiving Federal Grant Funding

Acting on behalf of the above named Applicant as its Authorized Official, I make the following certifications and agreements to the Department of Housing and Urban Development (HUD) regarding the sites listed below:

I certify that the above named Applicant will or will continue to provide a drug-free workplace by:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Applicant's workplace and specifying the actions that will be taken against employees for violation of such prohibition.

b. Establishing an on-going drug-free awareness program to inform employees ---

(1) The dangers of drug abuse in the workplace;

(2) The Applicant's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

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

d. Notifying the employee in the statement required by paragraph a. that, as a condition of employment under the grant, the employee will ---

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

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

f. Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph d.(2), with respect to any employee who is so convicted ---

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

g. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs a. thru f.

2. Sites for Work Performance. The Applicant shall list (on separate pages) the site(s) for the performance of work done in connection with the HUD funding of the program/activity shown above: Place of Performance shall include the street address, city, county, State, and zip code. Identify each sheet with the Applicant name and address and the program/activity receiving grant funding.)

Check here  if there are workplaces on file that are not identified on the attached sheets.

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.  
Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties.  
(18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Name of Authorized Official	Title
Signature	Date
X	

# Schedule of Amounts for Contract Payments

U.S. Department of Housing  
and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0157  
(Exp. 1/31/2017)

No progress payments shall be made to the contractor unless a schedule of amounts for contract payments in accordance with the construction contract is received.

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Construction practices and HUD administrative requirements establish the need that HAs maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule and schedule of amounts for contract payments. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality.

Project Name and Location	Project Number
---------------------------	----------------

Name, Address, and Zip Code of Contractor

Nature of Contract	Contract Number
--------------------	-----------------

Approved for Contractor by	Title	Date (mm/dd/yyyy)
----------------------------	-------	-------------------

Approved for Architect by	Title	Date (mm/dd/yyyy)
---------------------------	-------	-------------------

Approved for Owner by	Title	Date (mm/dd/yyyy)
-----------------------	-------	-------------------

Item No. (1)	Description of Item (2)	Quantity (3)	Unit of Measure (4)	Unit Price in Place (5)	Amount of Sub-Item (6)	Amount of Principal Item (7)

<b>Total Amount of Contract or Carried Forward</b>	\$
--	----

To the best of my knowledge, all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate. **Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Signature of authorized representative	Date signed (mm/dd/yyyy)
--	--------------------------

**Instructions for Preparation of form HUD-51000**

1. A separate breakdown is required for each project and prime contract instructions for preparation are given below.
  - a. **Heading.** Enter all identifying information required for both forms.
  - b. **Columns 1 and 2.** In column 1, enter the item numbers starting with No. 1, and in column 2 enter each principal division of work incorporated in the contract work.
    - (1) **Master List.** The Master list contains the basic items into which any construction contract may be subdivided for the purpose of preparing the Construction Progress Schedule and the Periodical Estimates for Partial Payments. Only those items shall be selected which apply to the particular contract. To ensure uniformity, no change shall be made in the item numbers. Generally, about 25 to 40 major items appear in a contract.
    - (2) **Items Subdivided.** In the Contractor's breakdown, against which all periodical estimates will be checked prior to payment, each major item must be subdivided into sub-items pertinent to the project involved and in agreement with the Contractor's intended basis for requesting monthly payments.
  - c. **Column 3.** Enter the total quantity for each sub-item of each principal division of work listed in the breakdown.
  - d. **Column 4.** Enter the appropriate unit of measure for each sub-item of work opposite the quantities described in column 3, such as "sq. ft.," "tons," "lb.," "lumber per M/BM," "brickwork per M," etc., applicable to the particular sub-item. Items shown on "lump sum" or equivalent basis will be paid for only on completion of the whole item and not on a percentage of completion basis.
  - e. **Column 5.** Enter the unit price, in place, of each sub-item of work.
  - f. **Column 6.** Enter the amount of each sub-item obtained by multiplying the quantities in column 3 by the corresponding unit prices in column 5.
  - g. **Column 7.** Enter the amount of principal item only, obtained by adding the amounts of all sub-items of each principal division of work listed in column 6. Continue with the breakdown on form HUD-51000.
  - h. The "Schedule of Amounts for Contract Payments" shall be signed and dated in the space provided at the bottom of each sheet of the form by the individual who prepared the breakdown for the Contractor.
2. The minimum number of copies required for each submission for approval is an original and two copies. When approved, one fully approved copy will be returned to the Contractor.

**Master List of Items**

Item No.	Division of Work	Item No.	Division of Work	Item No.	Division of Work
	Bond	20	Rough Carpentry		<b>Site Improvements</b>
21	General Conditions 1	21	Metal Bucks	44	Retaining Walls
	Demolition & Clearing	22	Caulking	45	Storm Sewers
	<b>Structures</b>	23	Weatherstripping	46	Sanitary Sewers
	General Excavation	24	Lath & Plastering-Drywall	47	Water Distribution System
	Footing Excavation	25	Stucco	48	Gas Distribution System
	Backfill	26	Finishing Carpentry	49	Electrical Distribution System
	Foundation Piles & Caissons	27	Finish Hardware	50	Street & Yard Lighting Fire &
	Concrete Foundations	28	Glass & Glazing	51	Police Alarm System Fire
	Concrete Superstructures	29	Metal Doors	52	Protection System Street
	Reinforcing Steel	30	Metal Base & Trim	53	Work
	Waterproofing & Dampproofing	31	Toilet Partitions	54	Yard Work
21	Spandrel Waterproofing	32	Floors	55	(Other)
	Structural Steel	33	Painting & Decorating	56	(Other)
	Masonry	34	Screens		<b>Equipment</b>
	Stonework	35	Plumbing	57	Shades & Drapery Rods
	Miscellaneous & Ornamental Metal	36	Heating	58	Ranges
1	Metal Windows	37	Ventilating System	59	Refrigerators
	Roofing	38	Electrical	60	Kitchen Cabinets & Work Tables
	Sheet Metal	39	Elevators	61	Laundry Equipment
		40	Elevator Enclosures—Metal	62	(Other)
		41	Incinerators—Masonry & Parts		
		42	(Other)	63	<b>Punch List 12</b>
		43	(Other)	64	Lawns & Planting

1 General Conditions should be 3% to 5% of contract amount.

2 Punch List should be approximately 1/2 of 1% or \$30 per dwelling unit, whichever is greater.

# Construction Progress Schedule

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0157 (Exp. 1/31/2017)

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

Construction practices and HUD administrative requirements establish the need that HAs maintain certain records or submit certain documents in conjunction with the oversight of the award of construction contracts for the construction of new low-income housing developments or modernization of existing developments. These forms are used by HAs to provide information on the construction progress schedule and schedule of amounts for contract payments. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality.

1. Name of Public Housing Agency/Indian Housing Authority (PHA/IHA)		
2. City	3. State	5. Project Name
4. Location		6. Project Number
7. Contract For		8. Contract Time (Days)
9. From (mm/dd/yyyy)	To (mm/dd/yyyy)	10. Contract Price \$
11. Number of Buildings	12. Number of Dwelling Units	13. Number of Rooms

(Submit as many pages as necessary to cover the construction period.)	Year						
	(www)	Month					
Actual Monthly Value, Work in Place	(\$)						
Actual Accumulated Progress	(%)						
Anticipated Monthly Value	(\$)						
Accumulated Scheduled Progress	(%)						

Submitted by	Contractor's Name		
	Title	Signature	Date (mm/dd/yyyy)
Approved by	PHA/IHA		
	Title		Date (mm/dd/yyyy)
Approved by	Architect		Date (mm/dd/yyyy)

**Instructions for Preparation of Construction Progress Schedule  
Form HUD-5372**

**General.** The information required for items 1 through 6 can be obtained from the contract documents. (7.) Enter the type of work awarded by the PHA/IHA. This may be "general construction," "plumbing," "heating," "electrical," etc., depending upon prime contract awards. (8.) Enter the contract time in calendar days (unless otherwise stated). (9.) Enter the starting and completion dates as established by the Notice to Proceed.

**Year and Month.** At the top of the Schedule, space is provided for inserting the "Year" and "Month" to identify the times during which the work is to be performed.

**Year.** Enter the year when the Notice to Proceed was issued. If the starting date of the contract is such that the time assigned for completion will be carried into a succeeding year, two yearly designations will be shown, each centered over the applicable spread of time for each year.

**Month.** The body of the Schedule is divided into Columns, each representing a period of one month. Starting in the Column with the month stated in the Notice to Proceed, enter at the top of each column the successive months corresponding to the entire spread of the total contract time. The Schedule must contain monthly columns to cover the entire active period of contract, with extra columns for possible overruns in contract time.

**Computation of Anticipated Monthly Value of Work in Place**

Before presenting the form for approval, enter in each monthly column the dollar value (omit cents) of the increment of work anticipated to be put in place during that interval of time. This shall be the Contractor's best estimate of the rate of progress for each month. This section contains a suggested guide for the elapsed contract time vs. progress percentages.

The horizontal total of the monthly dollars shown for "Anticipated Monthly Value" must equal the contract price shown in the heading.

**Accumulated Scheduled Progress - %**

Entries on this line shall show in percentage of total completion the cumulative stage of progress that is scheduled to be reached at the end of each monthly interval. It is generally sufficient to state this anticipated progress to the nearest tenth of one percent, but for very large contracts it may be advisable to extend computations to the nearest hundredth.

The entry for the first month's column should be the % obtained by the anticipated monthly dollar value of work in place at the close of the first month being divided by the contract price.

The entry for the second month's column is obtained by the sum of the anticipated monthly dollar values of work in place for Columns 1 and 2 being divided by the contract price.

Enter in the third month's column the percentage computed similarly, using the sum of dollar values of work in place for Columns 1, 2, and 3. Continue in this manner for the succeeding monthly columns until "100" is reached in the final column.

**Charting Actual Progress.** The horizontal space extending through the monthly columns is divided into "Actual Monthly Value of Work in Place - \$" and "Actual Accumulated Progress - %." In each monthly column show the actual accumulated % of progress and the actual value of work in place for that month, as the work progresses. An anticipated complete shutdown at some stage in the work because of adverse seasonal weather or otherwise, as may occur in road work, excavation (grading), etc., is readily shown by a gap.

The Contractor's name shall be placed in the lower left-hand corner of the form, together with the signature and title of the employee who prepared the Schedule and the date. The form then shall be sent to the Architect for review. If the Architect considers that changes are necessary to make the Schedule more realistic, it will withhold approval and so advise the Contractor. When the form is acceptable and approved by the Architect, and the PHA/ IHA, it will be returned to the Contractor, who shall reproduce and submit the number and style of prints required by the PHA/ IHA.

Normal building construction experience has proved that the rate of overall progress (as measured by work in place) accelerates slowly at the start, reaches its peak in the middle third of the construction period, and tapers down at the close. The data following illustrate the general average expectancy of a well-balanced operation and may be used as a guide. If the proposed progress lies within reasonable range of these check points, the Schedule may be considered satisfactory insofar as the time-performance feature is involved.

<b>% of Contract Time</b>	<b>% of Accumulated Progress</b>
0	
10	
20	<b>28</b>
30	20
40	37
50	57
60	75
70	89
80	96
90	99
100	100

The foregoing percentages must be tempered by consideration of seasonal weather conditions and other known conditions which may affect the progress of the work. These percentages are offered for information only.

**CERTIFICATION OF COMPLETION - CONSOLIDATION**

THIS IS TO CERTIFY that all work and materials have been carefully inspected by a duly authorized representative or agent of The Housing Authority of the \_\_\_\_\_, New Mexico, hereinafter called the local authority, and that, \_\_\_\_\_ hereinafter called the CONTRACTOR, has furnished all labor, materials and services required for the Modernization of PROJECT NM: \_\_\_\_\_, located in \_\_\_\_\_, New Mexico, in accordance with the requirements of the Specifications and Drawings and Contract No.: \_\_\_\_\_ dated \_\_\_\_\_ between the Local Authority and the Contractor.

**THIS IS TO CERTIFY**

1. That all work by this contract, originally required to be completed on: \_\_\_\_\_, 20\_\_\_\_, was actually completed on \_\_\_\_\_, 20\_\_\_\_.
2. That all changes permitted or required to be made except minor modifications and field adjustments, have been authorized by written and duly approved Change Orders, and all stop orders have been confirmed and listed in writing.
3. That all Proceed Orders have been supported by approved Change Orders equally adjusting the Contract Price and/or time, where adjustment is indicated.
4. that Change Orders No. # \_\_\_\_\_, constitute the only amendments to the Contract price and/or time, and that all change Orders issued in connection with this Contract are listed on the attached schedule.
5. That all Certificates, bonds, guarantees, warranties, insurance, and tests required under this Contract have been furnished or performed.
6. That the Local Authority has obtained from the Contractor the attached Certificate and release, releasing the Local Authority in full from all further claims under this Contract.
7. That all Laborers and Mechanics have been paid not less than the Minimum Wage rates as established in said contract, and that there have been no claims made for infringement of any patent.
8. That no claims of any nature by any Laborer, Mechanic, Subcontractor, Material man, or vender are outstanding against the Local Authority; and \_\_\_\_\_.

9. THAT:

Date for Completion fixed in Contract:	_____	
Date for Completion as Extended:	_____	
Actual Completion Date of Contract Work:	_____	
Original Contract Price	\$ _____	
Authorized Additions:	\$ _____	
Subtotal:	\$ _____	
Authorized Deductions Excluding Liquidated Damages:	\$ _____	
<b>ADJUSTED CONTRACT PRICE:</b>	<b>\$ _____</b>	
<b><u>LESS</u> Total Payments to Contractor:</b>	<b>\$ _____</b>	<b>Total</b>

Amount of liquidated \$ \_\_\_\_\_

Damages Assessed: \$ \_\_\_\_\_

BALANCE DUE: \$ \_\_\_\_\_

AND

\_\_\_\_\_ % GRT \$ \_\_\_\_\_

10. That Voucher for Final Payment in the amount of \$ \_\_\_\_\_ is due and payable.

**THE HOUSING AUTHORITY OF**

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

Title: \_\_\_\_\_

Date: \_\_\_\_\_, 20\_\_

**CONCURRED IN:**

\_\_\_\_\_  
(C.I.A.P. Coordinator )

**CONTRACTOR**

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

Title: \_\_\_\_\_

Date: \_\_\_\_\_, 20\_\_

\_\_\_\_\_, 20\_\_  
Labor Relations

APPROVED BY HUD: \_\_\_\_\_ /S/ \_\_\_\_\_, 20\_\_

**CONTRACTOR'S CERTIFICATE AND RELEASE**

From: \_\_\_\_\_  
(Name of Contractor)

To: \_\_\_\_\_  
(Name of PHA)

Reference: Contract No. \_\_\_\_\_ Entered into this \_\_\_\_\_ day of \_\_\_\_\_ -20 \_\_\_\_\_

Between the Housing Authority of \_\_\_\_\_ -New Mexico,

HEREINAFTER Called the LOCAL AUTHORITY, and

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
Address City State Zip Code

HEREINAFTER CALLED THE CONTRACTOR, for the Comprehensive Improvement Assistance Program of the

Housing Authority of \_\_\_\_\_, New Mexico:

Project #NM \_\_\_\_\_ located in \_\_\_\_\_, New Mexico.  
City

**KNOWN ALL BY THESE PRESENTS:**

- 1 The undersigned hereby certifies there is due and payable under the contract and duly approved Change Orders and modifications the undisputed balance of \$ \_\_\_\_\_.
- 2 The undersigned further certifies that in addition to the amount in paragraph #1 hereof there are outstanding and unsettled the following items which he claims are just and due and owing by the Local Authority to the contractor.  
(a) \_\_\_\_\_ (b) \_\_\_\_\_  
(c) \_\_\_\_\_ (d) \_\_\_\_\_  
(ITEMIZED CLAIMS AND AMOUNTS ABOVE, IF NONE SO STATE)
- 3 The undersigned further certifies that all work required under this contract including work required under Change Orders No. \_\_\_\_\_, has been performed in accordance with the terms thereof, and that there are no claims of Laborers or Mechanics for unpaid wages arising out of the performance of this Contract, and that the wage rates paid by the provisions relating to said wage rates.
- 4 Except for the amounts stated in paragraphs 1 and 2 hereof the undersigned has received for the Local Authority all sums of money payable to the undersigned under or pursuant to the aforementioned contract or any change or modification thereof.
- 5 That in consideration of the payment of the amount stated in paragraph 1 hereof the undersigned does hereby release the Local Authority from any and all claims arising under or by virtue of the contract except the amounts listed in paragraph 2 hereof: provided, however, that if for any reason the Local Authority does not pay in full

the amount stated in paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof. The Contractor further certifies that upon payment of the amount listed in paragraph 2 hereof, and of any amount which may be deducted from paragraph 1 hereof, he will release the Local Authority from any and all claims of any nature whatsoever arising out of said Contract or Modification thereof, and will execute such further releases or assurances as the Local Authority may request.

6 **WARRANTY PERIOD:** The Warranty period for all construction work (Workmanship and materials shall be 365 calendar days from the date specified on this certificate of completion that is applicable to the work in question or such longer period as otherwise specified in the contract, or manufacturers warranty period.

**IN WITNESS WHEREOF**, THE UNDERSIGNED HAS SIGNED AND SEALED THIS INSTRUMENT THIS

\_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_ being duly first duly sworn under oath deposes and says, first that he/she is the  
\_\_\_\_\_ of \_\_\_\_\_ second he/she has read the foregoing  
Certificate and Release by him/her subscribed as  
\_\_\_\_\_ of \_\_\_\_\_

Affiant further states that the matters and things stated therein are true to the best of his/her knowledge and behalf.

\_\_\_\_\_  
(Signature of Affiant)

Subscribed and Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

My Commission Expires \_\_\_\_\_  
NOTARY PUBLIC

**STATEMENT OF COMPLIANCE WITH SECTION 3 OF THE  
HOUSING AND URBAN DEVELOPMENT ACT OF 1968**

**EMPLOYMENT OPPORTUNITIES FOR BUSINESSES AND LOWER INCOME PERSONS IN CONNECTION  
WITH THE COMPREHENSIVE IMPROVEMENT PROJECT OF CONTRACTING AGENCY.**

The Contractor/Subcontractor hereby recognizes that:

- a. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968 as amended (12 U.S.C. 1701u.). Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in or owned in substantial part by persons residing in the area of the project.
- b. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
- c. The contracting agency will require the Contractor to send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising that said labor organization or workers representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
- d. The contracting agency will require the contractor to include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for a recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of the regulations issued by the Secretary of Housing and Urban Development, 24 CFR 135. The contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 135.30 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
- e. Compliance with the provisions of Section 3, regulations set forth in 24 CFR 135, and all applicable rules and orders of the Department issued hereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project binding upon the applicant or recipient for such assistance, its successors, and assigns. Failure to fulfill successors, and assigns to those sanctions, specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR 135.135.

Furthermore, the Contractor agrees to comply with the provisions of Section 3 as stated above and that he/she will not perform or subcontract any work in connection with this project, unless he/she and his/her subcontracts first submit an Affirmative Action Plan for utilizing lower income area residents of the Section 3 covered project area and small businesses located in the target area to the contracting agency for approval by the Housing Authority.

Contractor's Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

## Notice of Award

**TO:**

**DATE:**

**PROJECT:** City of Las Vegas Housing Authority  
9 Unit RHF Remodel Project with Deductive Alternatives

Ladies and Gentlemen:

This letter is to advise you that the Las Vegas Housing Authority at its \_\_\_\_\_, 20\_\_ meeting, approved award of the construction contract to your firm for the above-referenced project.

The Contract Price is as follows:

Two (2) counterparts of each of the proposed Contract Documents (except drawings) will be provided to you by the City of Las Housing Authority for execution. Two (2) sets of the Drawings will be delivered separately or otherwise made available to you.

- 1) You must deliver to the Owner two (2) fully executed counterparts of the Agreement including all Contract Documents within three days of date of this Notice of Award. 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 Performance Bond, Labor and Material Payment Bond, Agent's Affidavit, Subcontractors' List, and Assignment of Antitrust Claims (required for the Contractor, and all Subcontractors, and all Suppliers over \$10,000.00), Non Collusion Affidavit of Subcontractors (over \$10,000.00), Certificate of Insurance and other bonds and documents as specified in the Bidding Documents.
- 3) OTHER CONDITIONS PRECEDENT: None.

Failure to comply with these conditions within the time specified will entitled 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.

City of Las Vegas

Las Vegas Housing Authority

---

Elmer J. Martinez  
Acting City Manager  
City of Las Vegas  
1700 North Grand Avenue  
Las Vegas, New Mexico

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Pamela Marrujo  
Housing Director  
Las Vegas Public Housing Authority  
2400 Sagebrush Street  
Las Vegas, NM 87701

## NOTICE TO PROCEED

**BONDS, CERTIFICATES AND NOTICES**  
Section 00680

**TO:**

**DATE:**

**PROJECT:** City of Las Vegas Housing Authority  
9 Unit RHF Remodel Project with Deductive Alternatives

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 as directed by the General Contractor within ten (10) calendar days of the above date and shall achieve Substantial Completion not later two hundred and forty (240) calendar days from the above date ( ) and full completion not later than thirty (30) calendar days after date of Substantial Completion unless, modified by Change Order. Please note Page 1, DIV. 1 of the Specs for sequencing and Substantial Completion for individual parts of the project.

It is essential that you make reference to the above-stated contract number on all documents sent to the Housing Authority City of Artesia from your office. These documents shall include correspondence, change order proposals, change orders, payment request statements and all other project-related material which you forward to the Housing Authority City of Artesia for information and processing.

Also, before you start any work at the site, you must:

- 1) Schedule a Pre-Construction Conference with the Architect and Owner.
- 2) Give the Owner seventy-two (72) hours' prior notice before occupying the site.

City of Las Vegas

Las Vegas Housing Authority

---

Elmer J. Martinez  
Acting City Manager  
City of Las Vegas  
1700 North Grand Avenue  
Las Vegas, New Mexico

---

Pamela Marujo  
Housing Director  
Las Vegas Public Housing Authority  
2400 Sagebrush Street  
Las Vegas, NM 87701

**APPLICATION AND CERTIFICATE FOR PAYMENT**

reserves the right to be notified immediately by telephone or fax if changes or revisions to this pay application are made by the Architect/Owner.

**TO (OWNER):** PROJECT: **VIA CONSTRUCTION**

**APPLICATION NO:** One (1)  
 DISTRIBUTION TO:  
 OWNER  
 CONTRACTOR  
 ARCHITECT

**FROM (CONTRACTOR):** **VIA CONSTRUCTION** Contract #

**CONTRACT FOR:** General Construction  
**VIA (ARCHITECT)** Conron & Woods Architects  
 1222 Luisa St. Suite A  
 Santa Fe, NM 87505  
**Modified for NMGRT**

**CONTRACTOR'S APPLICATION FOR PAYMENT**  
 Application for Payment, as shown below, in connection with the contract.  
 continuation Sheet, AIA Document G703, is attached

CHANGE ORDER SUMMARY		ADDITIONS	DEDUCTIONS
CHANGE ORDER APPROVED IN PREVIOUS MONTHS TO OWNER		\$0.00	\$0.00
TOTAL		\$0.00	\$0.00
APPROVED THIS MONTH		\$0.00	\$0.00
CHANGE ORDER #1		\$0.00	\$0.00
CHANGE ORDER #2		\$0.00	\$0.00
CHANGE ORDER #3		\$0.00	\$0.00
CHANGE ORDER #4		\$0.00	\$0.00
TOTALS		\$0.00	\$0.00
NET CHANGE BY CHANGE ORDERS		\$0.00	\$0.00

- 1 ORIGINAL CONTRACT WITHOUT TAX \$0.00
- 2 Net Change by Change Orders \$0.00
- 3 CONTRACT SUM TO DATE (1 PLUS 2) \$0.00
- 4 TOTAL COMPLETED AND STORED TO DATE \$0.00
- 5 Close Out Package
- 5a 5.00% of Completed Work \$0.00
- 5b 5.00% of Stored Materials \$0.00
- 6 Total Retainage (line 5a-5b or total in column I of G703) \$0.00
- 7 TOTAL EARNED LESS RETAINAGE \$0.00
- 8 LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 7 from prior certificates) \$0.00
- 9 CURRENT PAYMENT DUE \$0.00
- 10 Current Gross Receipts Tax 7.6250% \$0.00
- 11 TOTAL PAYMENT DUE \$0.00
- 12 BALANCE TO FINISH, PLUS RETAINAGE (LINE 3-LINE 7) \$0.00

The undersigned Contractor certifies that to the best of the Contractors knowledge, information and belief, the work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for payment were issued and payments received from the Owner, and that the current payment shown herein is now due

**CONTRACTOR:** \_\_\_\_\_ Date: \_\_\_\_\_  
 State of: \_\_\_\_\_ County of: \_\_\_\_\_  
 Subscribed and Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 200\_\_\_\_  
 Notary Public: \_\_\_\_\_  
 My Commission Expires: \_\_\_\_\_

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Architect certifies to the Owner that to the best of the Architects knowledge, information and belief, the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the **AMOUNT CERTIFIED** \$ \_\_\_\_\_  
 (Attach explanation if amount certified differs from the amount applied. Initial all figures on this application and on the continuation sheet that are changed to conform with the amount certified.)  
**CONSTRUCTION MANAGER:** \_\_\_\_\_ By: \_\_\_\_\_ Date: \_\_\_\_\_

**ARCHITECT:** \_\_\_\_\_ Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment is without prejudice to any rights of the Owner or Contractor under this Contract

# DRAFT AIA Document G703™ - 1992

## Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT,

containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 001

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C-G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)						
		\$ 0.00	\$ 0.00		\$ 0.00	\$ 0.00	\$ 0.00	0.00 %	\$ 0.00
	<b>GRAND TOTAL</b>	\$ 0.00	\$ 0.00		\$ 0.00	\$ 0.00	\$ 0.00	0.00 %	\$ 0.00

## **Contract Documents Checklist**

**The following documents are the "Contract Requirements"**

- 1. Bid Bond (from Bid Proposal)
- 2. Proposed Subcontractor List (from Bid Proposal)
- 3. Statement of Bidder's Qualifications (from Bid Proposal)
- 4. Representations, Certifications and Other Statements of Bidders (HUD 5369-A) (from Bid Proposal).
- 5. General Conditions of the Contract (HUD 5370)
- 6. Previous Participation Certification
- 7. Supplementary Conditions of the Contract (if any)
- 8. Wage Rate Decision
- 9. Performance bond and Labor Bond
- 10. Assignment of Antitrust Claims
- 11. Non-collusive Affidavit of Subcontractors
- 12. Certification Regarding Drug-free Workplace Requirements
- 13. Construction Progress Schedule (form HUD-5372)
- 14. Statement of Compliance with Section 3 of the Housing and Urban Development Act of 1968 (required on Contracts over \$500,000)

**The following documents are to be utilized as required by Construction:**

- 1. Notice of Award
- 2. Notice to Proceed
- 3. Construction Contract
- 4. Application for Payment
- 5. Schedule of Amounts for Contract payments (form HUD-51000)

**The following documents are required for Project Closeout:**

- 1. Certificate of Substantial Completion
- 2. Final Pay Application
- 3. Contractors Warranty
- 4. Certification of Completion-Consolidation
- 5. Contractors Certificate and Release
- 6. Lien Release from Sub Contractors (over \$5,000)
- 7. Warranties
- 8. O & M Manuals
- 9. Surplus/replacement materials
- 10. As-built drawings
- 11. Training Sessions
- 12. Close Out Check list signed with all paper work attached.

# PROJECT SPECIFICATIONS

for

**Las Vegas Housing Authority**  
**9 Unit RHF Remodel Project with Deductive Alternatives**



**Conron & Woods Architects**  
1222 Luisa St., Suite A  
Santa Fe, New Mexico 87505  
(505) 983-6948 Fax (505) 983-1721  
office@conronandwoods.com

**October 1, 2014**

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**DIVISION 1 - GENERAL REQUIREMENTS**

**SECTION 01100 - SUMMARY**

**PART 1 - GENERAL**

**1.1 SUMMARY OF WORK**

**A Project Identification:**

Project: 9 Unit RHF Remodel Project with Deductive Alternatives.

Owner: Las Vegas Public Housing Authority  
2400 Sagebrush Street  
Las Vegas, NM 87701

- B.** Contract Documents, dated 10/1/2014 were prepared by Conron and Woods Architects, 1222 Luisa Street, Suite A, Santa Fe, New Mexico 87505.
- C.** The work consist of, briefly but not limited to, interior and exterior demolition and remodeling as required to provide the Owner with a "like new" dwelling unit. Units shall be emptied of all contents and all nonstructural (unless noted otherwise) materials replaced with new. Work includes exterior access path and concrete slab work, window and door replacements, roofing and stucco, interior flooring, gypsum board, insulation, cabinetry and appliances, mechanical, electrical, plumbing and all work as identified in construction documents. Contractor shall provide a complete and finished product ready for immediate use by Owner.
- D.** Work Not Included: The following will be provided by others:
1. N/A
- E.** ADDITIONAL WARRANTY PROVISIONS. In addition to the warranty language contained elsewhere in the Contract Documents, the following warranties shall apply to the work.
1. All subcontractor's, manufacturers', and suppliers' warranties and guaranties, express or implied, respecting any part of the Work and any materials used therein shall be deemed obtained by Contractor for the benefit of the Owner without the necessity of separate transfer or assignment thereof. Contractor shall require such subcontractors, manufacturers, and suppliers to execute such warranties and guaranties in writing to the Owner.
  2. All Warranties will include repair or replacement of all defective materials, labor expenses and covered items. All warranty periods are to be backed by the General Contractor.
  3. The General Contractor shall be the Owner's point of contact in the event warranty work of any type is required.

**1.2 WORK RESTRICTIONS**

- I.** Contractor's Use of Premises: During construction, Contractor shall have limited use of site indicated. Contractor's use of premises is limited only by Owner's right to perform work or employ other contractors on portions of Project and as follows:
1. Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in project construction.

2. Keep existing driveways and entrances serving the premises and neighboring property clear and available to the Owner, his employees, and the public at all times. Use only designated areas for parking, which will be jointly determined by the Architect, Owner and Contractor prior to the start of work.
3. Protect all surrounding construction and site improvements that are to remain. Maintain portions of existing building affected by construction operations in a weather tight condition throughout construction period. Repair or replace any elements damaged or destroyed with like materials to match adjacent surfaces.
4. Protect all plant material that is to remain. Any plant material, or landscape elements damaged or destroyed as a result of the Work of this Contract shall be repaired or replaced with materials of a like nature as judged by the Architect.
5. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of immediately needed materials to the areas determined by the Architect and the Owner prior to the start of the Work. For additional storage, Contractor shall provide or obtain and pay for such storage off site unless prior written approval for additional on site storage is obtained from the Architect and Owner.
6. Lock automotive-type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.
7. Contractor to furnish toilet facilities which are to be located within the designated storage area. Use of toilets within the dwelling unit by the Contractor and his personnel will not be permitted without prior written approval from the Owner.
8. The Contractor shall provide temporary fencing and all facilities and services as necessary to effectively protect from losses and protect persons from injury during the course of construction.
9. Dispose of removed and demolished items, including trash and debris, off the Owner's property at the end of each work day. Burning of waste materials on the site is **not** permitted.
10. If Owner occupies portions of the premises during construction cooperate with the Owner to minimize conflicts and facilitate Owner usage. Perform work so as not to maintaining paths of exit. Provide not less than 72 hours notice to Owner of activities that will affect Owner's operations.
11. Coordinate operations that may result in high levels of noise, vibration, odors, dust and other disruption with Owner.
12. Smoking is not permitted within the building or within twenty five feet of building.
13. Use of alcohol and other controlled substances on the Project site is not permitted.
14. Comply with Owner's requirements regarding employee identification and screening.
15. Limit work hours to 8 to 5

**PART 2 PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01100**

**DIVISION 1 - GENERAL REQUIREMENTS**

**SECTION 01200 - PRICE AND PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.1 ALLOWANCES**

- A. Include the following allowances in Contract Sum:
  - 1. **Contingency allowance:** The contractor shall include in the Base Bid a contingency allowance of thirty six thousand dollars (\$36,000.00) for use according to Owner's instructions.
- B. Use the contingency allowance only as directed for the Owner's purposes and only by Field Orders that indicate amounts to be charged to the allowance.
- C. Contractor to include insurance, taxes, bonding, overhead and profit in Base Bid. These items will not be included in expenditures of funds from this allowance.
- D. Contractor's costs for Products, delivery, installation, labor, payroll, and equipment rental will be included in authorized expenditures of funds from the Allowance.
- E. **New Mexico Gross Receipts Tax is not included in allowance but shall be included in the base bid.**
- F. Obtain two proposals for each allowance and submit to Architect with recommendations. Purchase products and systems selected by Architect.
- G. Submit within 15 days after date established for Commencement of Work (Notice to Proceed) an allowance schedule. Architect of the date when selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- H. Submit invoices to show cost of products furnished under each allowance. Reconciliation of Allowance amounts with actual costs will be by Change Order. At project close out credit all unused amounts remaining in all allowances to the Owner by Change Order.

**1.2 ALTERNATES**

- A. An Alternate is an amount proposed by Bidder for certain work that may be added to or deducted from the Base Bid amount if Owner accepts the Alternate. The cost or credit for each Alternate is the net addition to or deduction from Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to Contract Sum.
- B. Indicate on the Bid Form amounts to be deducted from the Contract Sum for the following alternates:
 

Ded. Alt.1	Delete Roofing for Building Units 2421 and 2423
Ded. Alt.2	Delete Roofing for Building Units 406 and 408
Ded. Alt.3	Delete Roofing for Building Units 411 and 413
Ded. Alt.4	Delete Concrete Work for Building Units 2421 and 2423
Ded. Alt.5	Delete Concrete Work for Building Units 2405 and 2407
Ded. Alt.6	Delete Concrete Work for Building Units 406 and 4
Ded. Alt.7	Delete Concrete Work for Building Units 411 and 413
Ded. Alt.8	Delete Scope of Work for Building Unit 2423
Ded. Alt.9	Delete Scope of Work for Building Units 2421 and 2423

Ded. Alt.10	Delete Scope of Work for Building Unit 2421
Ded. Alt.11	Delete Scope of Work for Building Unit 2405
Ded. Alt.12	Delete Scope of Work for Building Unit 408
Ded. Alt.13	Delete Scope of Work for Building Unit 406
Ded. Alt.14	Delete Scope of Work for Building Unit 413
Ded. Alt.15	Delete Scope of Work for Building Unit 411
Ded. Alt.16	Delete Scope of Work for Building Units 2421 and 2423
Ded. Alt.17	Delete Scope of Work for Building Units 2405 and 2407
Ded. Alt.18	Delete Scope of Work for Building Units 406 and 408
Ded. Alt.19	Delete scope of work for Building Units 411 and 413

**1.3 UNITS PRICES**

- A. A unit price is an amount proposed by Bidders and stated on the Bid Form for certain work that is paid for per unit of measure. Bidders shall indicate on the Bid Form unit prices for the following items of work: None
- A. Changes to the Work incorporating Unit Prices will be made by Change Order.

**1.4 CONTRACT MODIFICATION PROCEDURES**

- A. It is solely the Contractor's responsibility to provide written notice to the Owner and the Architect of any decision, instruction or condition that affects the cost or time of the Project. Additional time or monetary consideration will not be given unless a Change Order is signed by the Owner and has been executed prior to doing the work. If the Contractor proceeds without the receipt of a signed change order from the Owner prior to the commencement of the change, then the Contractor shall have been deemed to waive any right to claim any additional time to accomplish the change or any additional compensation to accomplish the change.
- B. The Contractor shall submit a detailed proposal for any requested Change Order. Include information clearly describing materials, installation a complete cost breakdown listing materials and labor quantities.
- C. On Owner's approval of a proposal from Contractor, Architect will issue a Change Order on AIA Document G701, for all changes to Contract Sum or Contract Time.
- D. When Owner and Contractor disagree on the terms of a proposal, Architect may issue a Construction Change Directive on AIA Document G714, instructing Contractor to proceed with the change. Construction Change Directive will contain a description of the change and designate the method to be followed to determine changes to Contract Sum or Contract Time.
- E. Weather days must be reported in writing at the next project meeting. (at the latest) and effect of all aspects of the work to be considered.

**1.5 PAYMENT PROCEDURES**

- A. Submit a Schedule of Values not later than 15 days from the date of the Notice to Proceed. In Schedule of Values, break down Contract Sum into at least one line item for each Specification Section. Correlate the Schedule of Values with Contractor's Construction Schedule.
- B. Submit 3 copies of each application for payment on AIA Document G702/703, according to the schedule established in Owner/Contractor Agreement. Submit updated construction schedule attached to each application for payment. Any application for payment without an updated Construction Schedule attached will be deemed incomplete and returned to the Contractor for re-submittal.

1. For the second Application for Payment through the Application for Payment submitted at Substantial Completion, submit partial releases of liens from each subcontractor or supplier for whom amounts were requisitioned in the previous Application for Payment.
2. Submit final Application for Payment after completion of Project closeout procedures with release of liens and supporting documentation. Include consent of surety to final payment and insurance certificates.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 - EXECUTION** (Not Applicable)

**END OF SECTION 01200**

**DIVISION 1 - GENERAL REQUIREMENTS****SECTION 01300 - ADMINISTRATIVE REQUIREMENTS****PART 1 - GENERAL****1.1 PROJECT MANAGEMENT AND COORDINATION**

- A. Verify layout information shown on Drawings, in relation to property survey and existing benchmarks, before laying out the Work.
- B. The contractor shall field verify all existing conditions including but not limited to conditions, model numbers, dimension and sizes prior to proceeding with ordering materials and proceeding with the work.
- C. Coordinate construction to ensure efficient and orderly execution of each part of the Work. The General Contractor shall hold a coordination meeting within thirty (30) days of the Notice to Proceed. All Sub-contractors shall be required to attend. Prior to the meeting the General Contractor and all Sub-contractors shall thoroughly review ALL drawings and specifications related to the entire Project. Each contractor shall coordinate its Work with that of others. Review space limitations and restrictions. Prepare coordination drawings are required for proper coordination of the work. The General Contractor and Sub-contractors shall resolve any coordination issues. The General Contractor shall prepare meeting notes.
- D. Progress meetings will be held at Project site as established at the pre-construction meeting. Each subcontractor or other entity concerned with current progress or involved with planning or coordination of future activities, shall attend.

**1.2 CONSTRUCTION SCHEDULE**

- A. Prepare a horizontal bar-chart construction schedule. Provide a separate time bar for each activity and a vertical line to identify the first workday of each week. Use same breakdown of Work indicated in the Schedule of Values. As Work progresses, mark each bar to indicate actual completion.
  - 1. Submit within 15 days after date established for Commencement of the Work (Notice to Proceed).
  - 2. Coordinate each element with other activities. Show each activity in proper sequence. Indicate sequences necessary for completion of related Work.
  - 3. Indicate Substantial Completion and allow time for Architect's procedures necessary for certifying Substantial Completion.
  - 4. Schedule Distribution: Distribute copies to Owner, Architect, subcontractors, and parties required to comply with dates.
  - 5. Updating: Revise the schedule after each meeting or activity where revisions have been made. Distribute revised copies to Owner, Architect, subcontractors, and parties required to comply with dates. As a minimum, submit revised schedule with each application for payment.

**1.3 REQUEST FOR INFORMATION (RFI's)**

- A. The Contractor may, after exercising due diligence to locate required information, request clarification or interpretation of the requirements of the Contract Documents. However, if the information requested by the Contractor is apparent from field observations, is contained in the Contract Documents or is reasonably inferable from them, as judged by the Architect, the Contractor shall be responsible for all reasonable costs associated with the Architects response to the RFI.

Contractor shall include in the Base Bid all costs fro General Conditions and/or Field Overhead for the total number of days specified in the Project Manual.

### 1.3 SUBMITTAL PROCEDURES

- A. Submit within 15 days after date established for Commencement of the Work (Notice to Proceed) a Submittal Schedule listing all required submittals and anticipated date of submission.
- B. Coordinate submittal preparation with construction schedule, fabrication lead-times, other submittals, and activities that require sequential operations.
  - 1. No extension of Contract Time will be authorized due to failure to transmit submittals in time to permit processing sufficiently (including possible rejection and re-submittals) in advance of when materials are required in the Work.
  - 2. Architect will not accept submittals from sources other than Contractor.
  - 3. All information on all submittals must be clearly legible. If, in Architect's sole judgment, any submittals are deemed illegible they will be returned to Contractor for re-submittal.
  - 4. All submittals are to be accompanied by a letter, signed by the Contractor clearly stating that he has reviewed the submittal and to the best of his knowledge the materials, procedures, systems, etc. comply with the Contract requirements and are appropriate for the intended use and are coordinated with other Work. The Architect's review is only for general conformance with the design concept.
  - 5. Clearly indicate any substitutions or deviations from the Contract Documents.
  - 6. Provide the number of copies requested at the start of the Project (1 hard copy, one digital copy posted on the FTP site).
- C. Prepare submittals by placing a permanent label on each for identification. Provide a 5-inch space on the label or beside title block to record review and approval markings and action taken. Include the following information on the label:
  - 1. Project name.
  - 2. Date.
  - 3. Name and address of Contractor.
  - 4. Name and address of subcontractor or supplier.
  - 5. Number and title of appropriate Specification Section.
  - 6. Contractor's certification that materials comply with specified requirements.
- D. Coordinate each submittal with other submittals and with work that does not require submittals. Submit all related submittals together.
- E. Product Data: Mark each copy to show clearly applicable choices and options. Include the following:
  - 1. Data indicating compliance with specified standards and requirements.
  - 2. Notation of coordination requirements.
  - 3. For equipment data, include rated capacities, dimensions, weights, required clearances, and furnished specialties and accessories.
- F. Shop Drawings: Submit newly prepared information drawn to scale. Do not reproduce Contract Documents or copy standard information. Submit 1 reproducible print and 3 blue- or black-line print on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. (Digital) Architect will return the reproducible print. Include the following:
  - 1. Dimensions, profiles, methods of attachment, coordination with adjoining work, large scale details, and other information, as appropriate for the Work.
  - 2. Identification of products and materials.
  - 3. Notation of coordination requirements.
  - 4. Notation of dimensions established by field measurement.
  - 5. Identification of deviations from Contract Documents.

- G. **Samples:** Submit Samples finished as specified and identical with the material proposed. Where variations are inherent in the material, submit sufficient units to show limits of the variations. Include product name or name of the manufacturer.
- H. Architect will review each submittal, in a reasonable period of time mark as appropriate to indicate action taken, and post copies on the FTP Site. Coordination with other work and field conditions and compliance with specified requirements remains Contractor's responsibility.

**1.5 APPROVALS**

- A. All approvals required by the Contract Documents from the Architect shall be in writing regardless of whether or not the approval is specifically called out to be in writing. If the Contractor proceeds without written approval then he does so at his own risk.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 - EXECUTION** (Not Applicable)

**END OF SECTION 01300**

**DIVISION 1 - GENERAL REQUIREMENTS****SECTION 01400 - QUALITY REQUIREMENTS****PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Quality-control services include inspections, tests, and related actions including reports. Quality-control services are further specified in other Sections of these Specifications and shall be performed by independent testing agencies provided by Contractor or Owner, as specified.
  - 1. Unless otherwise indicated, quality-control services required by authorities having jurisdiction will be provided by Owner.
- B. Contractor is responsible for scheduling inspections and tests.
- C. **Testing and Retesting:** Contractor shall pay for Testing, and retesting, where results of inspections and tests prove unsatisfactory and indicate non compliance with requirements.
- D. **Auxiliary Services:** Cooperate with agencies performing inspections and tests. Provide auxiliary services as requested. Notify agency in advance of operations requiring tests or inspections, to permit assignment of personnel. Auxiliary services include the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities to assist inspections and tests.
  - 3. Adequate quantities of materials that require testing, and assisting in taking samples.
  - 4. Facilities for storage and curing of test samples.
  - 5. Security and protection of samples and test equipment
- E. **Duties of Testing Agency:** Testing agency shall cooperate with Architect and Contractor in performing its duties. Agency shall provide qualified personnel to perform inspections and tests.
  - 1. Agency shall promptly notify Architect and Contractor of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Agency shall not release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
  - 3. Agency shall not perform duties of Contractor.
- F. **Submittals:** Testing agency shall submit a certified written report of each inspection and test to the following:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
  - 4. Structural engineer.
  - 5. Authorities having jurisdiction, when authorities so direct.
- G. **Report Data:** Reports of each inspection, test, or similar service shall include at least the following:
  - 1. Name, address, and telephone number of testing agency.
  - 2. Project title and testing agency's project number.
  - 3. Designation (number) and date of report.
  - 4. Dates and locations where samples were taken or inspections and field tests made.
  - 5. Names of individuals taking the sample or making the inspection or test.
  - 6. Designation of the product and test method.
  - 7. Complete inspection or test data including an interpretation of test results.
  - 8. Ambient conditions at the time of sample taking and testing.

9. Comments or professional opinion on whether inspected or tested Work complies with requirements.
  10. Recommendations on retesting or reinspection.
  11. Name and signature of laboratory inspector.
- H. Testing Agency Qualifications: Engage inspection and testing agencies that are prequalified as complying with the American Council of Independent Laboratories' "Quality Assurance Manual" and that specialize in the types of inspections and tests to be performed.
1. Each testing agency shall be authorized by authorities having jurisdiction to operate in the state where Project is located.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 - EXECUTION** (Not Applicable)

**END OF SECTION 01400**

**DIVISION 1 - GENERAL REQUIREMENTS****SECTION - 01500 - TEMPORARY FACILITIES AND CONTROLS****PART - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Standards: Comply with NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations"; ANSI A10 Series standards for "Safety Requirements for Construction and Demolition".
- B. Remove temporary facilities and controls before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

**PART 2 - PRODUCTS** (Not Applicable)**PART 3 - EXECUTION****3.1 TEMPORARY UTILITIES**

- A. Provide temporary utility services to any existing facilities during interruptions of permanent utilities and the Project site for use during construction. Arrange for and coordinate utility services with local utility companies.
  - 1. Contractor shall also pay use charges for temporary utilities. If existing facilities are present and in use by the owner than use charges for temporary utilities will be prorated between Contractor and Owner.
  - 2. Provide a minimum of 72 hours written notice prior to any interruptions of utilities.
- B. Provide temporary heat for curing or drying of work, and for protection of new and existing, if preset, construction from adverse effects of low temperatures. Use of gasoline-burning heaters and open-flame heaters is not permitted.

**3.2 CONSTRUCTION FACILITIES**

- A. Provide field offices, storage trailers, and other support facilities as necessary for efficient prosecution of the Work.
  - 1. Temporary facilities located within the construction area or within 30 feet (9 m) of building lines shall be of noncombustible construction.
- B. Provide temporary sanitary facilities. Comply with regulations and health codes for type, number, location, and maintenance of facilities.
- C. Provide temporary enclosures for protection of construction and workers from exposure and inclement weather and for containment of heat.
- D. Install project identification and other signs in locations approved by Owner to inform the public and persons seeking entrance to Project.
- E. Collect waste daily and, when containers are full, legally dispose of waste off-site.
  - 1. Handle hazardous, dangerous, or unsanitary waste materials in separate closed waste containers. Dispose of material according to applicable laws and regulations.

**3.3 TEMPORARY CONTROLS**

- A. Provide temporary fire protection until permanent systems supply fire-protection needs.
  - 1. Provide adequate numbers and types of fire extinguishers.
  - 2. Store combustible materials in fire-safe containers in fire-safe locations.
  - 3. Prohibit smoking in hazardous fire-exposure areas.
  - 4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
  
- B. Provide temporary fencing, barricades, warning signs, lights and security to protect the public and construction personnel from construction hazards as required by all authorities having jurisdiction, and to ensure the protection of the project.
  
- C. Provide all plans, submissions, permits and temporary environmental controls as required by all authorities having jurisdiction including, but not limited to, erosion and sediment control, dust control, noise control, and pollution control.

**END OF SECTION 01500**

**GENERAL REQUIREMENTS****SECTION 01600 - PRODUCT REQUIREMENTS****PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Provide products of same kind from a single source. The term "product" includes the terms "material," "equipment," "system," and similar terms.
- B. Deliver, store, and handle products according to manufacturer's written instructions, using means and methods that will prevent damage, deterioration, and loss, including theft.
  - 1. Schedule delivery to minimize long-term storage and to prevent overcrowding construction spaces.
  - 2. Deliver in manufacturer's original sealed packaging with labels and written instructions for handling, storing, protecting, and installing.
  - 3. Inspect products at time of delivery for compliance with the Contract Documents and to ensure items are undamaged and properly protected.
  - 4. Store heavy items in a manner that will not endanger supporting construction.
  - 5. Store products subject to damage on platforms or pallets, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required.
- C. Product Substitutions: Reasonable and timely requests for substitutions may, at Owners and Architects sole discretion, be considered. Substitutions include products and methods of construction differing from that required by the Contract Documents and proposed by Contractor after award of Contract.
  - 1. Submit four copies of each request for product substitution. Identify product to be replaced and provide complete documentation showing compliance of proposed substitution with applicable requirements. Include a full comparison with the specified product, a list of changes to other Work required to accommodate the substitution, and any proposed changes in Contract Sum or Contract Time should the substitution be accepted.
  - 2. All request for product substitutions shall be accompanied by a letter, signed by the Contractor, clearly stating that he has reviewed the proposed substitution and substitution complies with the Contract requirements and are appropriate for the intended use.
  - 3. Submit requests for product substitution in time to permit processing of request and subsequent Submittals, if any, sufficiently in advance of when materials are required in the Work. Do not submit unapproved substitutions on Shop Drawings or other submittals.
  - 4. Architect will review the proposed substitution and notify Contractor of its acceptance or rejection.

**PART 2 - PRODUCTS****2.1 PRODUCT OPTIONS**

- A. Do not attach manufacturer's labels or trademarks, except for required nameplates, on surfaces exposed to view in occupied spaces or on the exterior.
- B. Select products as follows:
  - 1. Where only a single product or manufacturer is named, provide the item indicated. No substitutions will be permitted.
  - 2. Where two or more products or manufacturers are named, provide one of the items indicated. No substitutions will be permitted.

3. Where products or manufacturers are specified by name, accompanied by the term "or equal," provide the named item or comply with provisions concerning "product substitutions" to obtain approval for use of an unnamed product or manufacturer.
  4. Where a product is described with required characteristics, with or without naming a brand or trademark, provide a product that complies with those characteristics and other Contract requirements.
  5. Where compliance with performance requirements is specified, provide products that comply and are recommended in writing by the manufacturer for the application.
  6. Where compliance with codes, regulations, or standards, is specified, select a product that complies with the codes, regulations, or standards referenced.
- C. Unless otherwise indicated, Architect will select color, pattern, and texture of each product from manufacturer's full range of options.

**2.2 OWNER-FURNISHED PRODUCTS**

- A. The following products will be furnished by Owner and shall be installed by Contractor as part of the Work:

**PART 3 - EXECUTION** (Not Applicable)

**END OF SECTION 01600**

**GENERAL REQUIREMENTS**

**SECTION 01700 - EXECUTION REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 CLOSEOUT SUBMITTALS**

- A. Record Drawings: Maintain a set of Contract Drawings as Record Drawings. Mark to show installation that varies from the Work originally shown. Provide electronic copies clearly delineated at Project Closeout.
- B. Record Specifications: Maintain one copy of the Project Manual, including addenda, as Record Specifications. Mark to show variations in Work performed in comparison with the text of the Specifications and modifications. Provide electronic copies clearly delineated at Project Closeout.
- C. Contractor to keep Record Drawings and Specifications updated at all times and have them available for Architect's review at all project meetings. Pay Applications will not be processed if Record Drawings and Specifications are not kept updated and made available for Architects review.
- D. Operation and Maintenance Data: Organize data into three-ring binders, with pocket folders for folded sheet information. Provide a minimum of two complete sets. Mark identification on front and spine of each binder. Include the following:
  - 1. Emergency instructions.
  - 2. Spare parts list.
  - 3. Copies of warranties.
  - 4. Wiring diagrams.
  - 5. Shop Drawings and Product Data.
- E. Provide fully executed copy of Architect's checklist for Project Closeout Requirements with all information indicated in check list. Submit all closeout submittals together at one time. Submission of complete closeout documents shall be no later than 30 days after Date of Final Completion.

**PART 2 - PRODUCTS** (Not Applicable)

**PART 3 - EXECUTION**

**3.1 EXAMINATION AND PREPARATION**

- A. Examine substrates and conditions for compliance with manufacturer's written requirements including, but not limited to, surfaces that are sound, level, and plumb; substrates within installation tolerances; surfaces that are smooth, clean, and free of deleterious substances; and application conditions within environmental limits. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Prepare substrates and adjoining surfaces according to manufacturer's written instructions, including, but not limited to, filler and primer application.
- C. Where Drawings indicate dimensions of existing construction verify by field measurement. Where fabricated products are to be fitted to other construction verifies dimensions by field measurement before fabricating and, when possible, allow for fitting and trimming during installation.

### 3.1 CUTTING AND PATCHING

- A. Do not cut structural members without prior written approval of Architect.
- B. For patching, provide materials whose installed performance will equal or surpass that of existing materials. For exposed surfaces, provide or finish materials to visually match existing adjacent surfaces to the fullest extent possible.

### 3.2 INSTALLATION

- A. Comply with manufacturer's written instructions and recommendations for highest quality installation. Anchor each product securely in place, accurately located and aligned. Clean exposed surfaces and protect from damage. If applicable, prepare surfaces for field finishing.
- B. Comply with NFPA 70 for installation of electrically operated equipment and electrical components and materials.

### 3.3 FINAL CLEANING

- A. Clean each surface or item as follows before requesting inspection for certification of Substantial Completion:
  1. Remove labels that are not permanent.
  2. Clean transparent materials, including mirrors. Remove excess glazing compounds. Replace chipped or broken glass.
  3. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Leave concrete floors broom clean.
  4. Vacuum carpeted surfaces and wax resilient flooring.
  5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean plumbing fixtures. Clean light fixtures and lamps.
  6. Clean the site. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds to a smooth, even-textured surface.

### 3.4 CLOSEOUT PROCEDURES

- A. Request Substantial Completion review once the following are complete:
  1. Advise Owner of pending insurance changeover requirements.
  2. Submit review copies of Record Drawings and Specifications, maintenance manuals, warranties, and similar record information.
  3. Deliver spare parts, extra materials, and similar items.
  4. Complete startup testing of systems and instruction of operation and maintenance personnel.
  5. Remove temporary facilities and controls.
  6. Complete final cleanup.
  7. Touch up, repair, and restore marred, exposed finishes.
- B. On receipt of a request for review, Architect will proceed with review or advise Contractor of any observed unfilled requirements. Architect will prepare the Certificate of Substantial Completion after review or advise Contractor of items that must be completed or corrected before the certificate will be issued.
- C. Arrange for each installer of equipment that requires operation and maintenance to provide instruction to Owner's personnel. At Contractor's expense video training sessions and turn over to Owner. Include a detailed review of the following:
  1. Startup and shutdown.
  2. Emergency operations and safety procedures.
  3. Noise and vibration adjustments.

4. Maintenance manuals.
  5. Spare parts, tools, and materials.
  6. Lubricants and fuels.
  7. Identification systems.
  8. Control sequences.
  9. Hazards.
  10. Warranties and bonds.
- D. Request review for final acceptance, once the following are complete:
1. Submit a copy of the Substantial Completion review list, signed by the contractor, stating that each item has been completed or otherwise resolved for acceptance.
  2. Submit final meter readings for utilities, a record of stored fuel, and similar data as of the date of Substantial Completion.
- E. Architect will review the Work on receipt of notice that the Work has been completed.
1. On completion of the Work and review, Architect will establish a Date of Final Acceptance or prepare a Certificate of Final Acceptance. If the Work is incomplete, Architect will advise Contractor of the Work that is incomplete or obligations that have not yet been fulfilled.
- F. Submit fully executed checklist for Project Closeout Requirements.
- G. **Special Note to Contractor, Review Policy:** If at any time during the course of the Project, the Contractor schedules a review by the Architect, and through no fault of the Architect the Work is not completed and ready for review, then the Contractor will be billed for re-inspection or additional reviews at the Architect's normal hourly rate.
- G. Liquidated Damages, as described in the Contract Documents, shall apply to Substantial Completion, Final Completion, and submission of complete, approved Close Out Documents.

**END OF SECTION 01700**

## CONRON &amp; WOODS ARCHITECTS

**PROJECT:  
CHECKLIST FOR PROJECT CLOSEOUT REQUIREMENTS**

All Closeout documents must be turned into the Architects office within ten days of receipt of this check list. Any materials or services that have performed for, or turned over to the Owner, should be documented in the form of a transmittal, dated with the recipient's name included. A copy of the transmittal should be turned into the Architects office as part of the closeout package. Any items that are not applicable per the contract requirements should be noted.

- Certificate of Substantial Completion
- Pending insurance changeovers
- Record Drawings and Specifications
- Changeover locks and transmit keys to Owner
- Startup testing of systems and instruction of operation and maintenance personnel
- Remove temporary facilities and controls
- Complete final cleanup
- Touch up, repair, and restore marred, exposed finishes
- Final inspections from authorities having jurisdiction
- Certificate of Occupancy
- Final Pay Application
- Contractors Warranty
- Certificate of Final Completion
- Lien Release from General Contractor
- Lien Release from Sub-Contractors and Suppliers ( over \$5,000)
- Consent of Surety for Final Payment
- O & M manuals (2 copies, 3 ring binders)
  - Spare parts list
  - Warranties
  - Wiring diagrams
  - Shop Drawings and Product Data
- Surplus/replacement materials
- Training Sessions

**SECTION 01800**  
**ASBESTOS - BASIC REQUIREMENTS, MATERIALS AND METHODS**

**1.0 GENERAL**

SUMMARY OF WORK

1.1 Description of Work

CONTRACT CONSIDERATIONS

1.2 Inspection

SUBMITTALS

1.3 Submittal Procedures

QUALITY CONTROL

1.4 Quality Assurance/Control of Installation

1.5 Training

1.6 Medical Monitoring

1.7 Emergency Planning

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.8 Site Security

CONTRACT CLOSEOUT

1.9 Contract Closeout Procedures

1.10 Project Record Documents

**2.0 PRODUCTS**

GENERAL

2.1 Material: Delivery and Storage

MATERIALS

2.2 Enclosures, Critical Barrier Materials, Disposal Bags

2.3 Removal Materials

2.4 Encapsulation Materials

EQUIPMENT

2.5 Equipment

2.6 Table 1 29 CFR 1926.1101

**3.0 METHODS**

WORK ACTIVITIES

3.1 Workplace Entry and Exit

PERSONNEL PROTECTION REQUIREMENTS

3.2 Training

3.3 Respiratory Protection

3.4 Protective Clothing

REMOVAL METHODS

3.5 Glove Bag Method

3.6 Full Containment Abatement Projects

3.7 Exterior Abatement Projects

AIR MONITORING

3.8 Final Clearance

DISPOSAL

3.9 Disposal

1.0 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work specified herein shall be the removal and encapsulation of asbestos containing materials by competent persons trained, knowledgeable and qualified in the techniques of abatement, handling and disposal of asbestos-containing and asbestos-contaminated materials and the subsequent cleaning of contaminated areas, who comply with all applicable Federal, State, and Local regulations and are capable of and willing to perform the work of this Contract.
- B. The Contractor is responsible for restoring the work area and auxiliary areas utilized during the abatement to conditions equal to or better than original unless indicated otherwise on the Drawings. Any damages caused during the performance of abatement activities shall be repaired by the Contractor (e.g. paint peeled off by barrier tape, nail holes, water damage, broken glass) at no additional expense to the Owner.
- C. All materials in this project are to be removed utilizing Full Enclosures, Critical Barriers, High Efficiency Particulate Air (HEPA) vacuums, wet wiping techniques and scraping methods.
- D. Work is to be completed One Bedroom Units 411 and 413 Yucca Street, Two Bedroom Units 2405, 2407, 2421, 2423 Yucca Street, and 406 and 408 Sandoval Street.
- E. Remove asbestos containing floor tile which contains 2% Chrysotile asbestos and dispose of as asbestos containing materials. Removal to be within a contained regulated area.
- F. Once floor tile is removed and Final Air Clearance satisfactorily completed, contractor to remove sheet rock and texture, which contains less than 1% Chrysotile asbestos, and any wall insulation and dispose of as non-asbestos containing material. Worker protection is required and removal of sheet rock, texture and any wall insulation within the contained area. until the contractor conducts a Negative Exposure Assessment to determine workers will not be exposed to asbestos exceeding the Permissible Exposure Limit.

1.2 INSPECTION

- A. Visual inspections will be performed by the Environmental Consultant at his/her convenience. Visual inspections for Asbestos Containing Material (ACM) removal may be conducted (1) prior to encapsulation, (2) after encapsulation, (3) at air clearance prior to containment removal, (4) after containment removal, or (5) after clean-up. Visual inspections do not waive Contractor's responsibility for completing Scope of Work.
- B. One visual inspection for ACM removal and one final inspection for completion of project will be performed by the Environmental Consultant. Any additional inspections requested by the Contractor or required because of Contractor's failure to complete Scope of Work shall be paid for by the Contractor. The cost of additional inspection(s) shall be deducted from the contract amount stated in the agreement between the Owner and the Contractor. Costs for additional inspections shall be assessed at the Environmental Consultant's hourly rates and administered by Deductive Change Order.

1.3 SUBMITTAL PROCEDURES

- A. The Contractor shall submit three (3) copies of the Project Submittal Records. Prepare a three (3) ring binder with PROJECT TITLE, "PROJECT SUBMITTAL RECORDS" and

"CLOSEOUT DOCUMENTS" printed on the front cover. Binder shall be large enough to include Closeout Documents once work is complete. All close out information shall be submitted within 10 calendar days of removal of ACM from job site.

Internally subdivide the binder contents with tabbed permanent page dividers into two main parts, one labeled "Submittals" and the other labeled "Closeout Documents", include a table of contents for each. Subdivide each part with the necessary dividers for each item specified, or supplied, for both the submittals and close out documents. Environmental Consultant shall provide review comments and return documents if not accepted. Once the submittals have been accepted, all three documents will be retained by the Environmental Consultant for the inclusion of the daily and close out information.

Divisions or Subdivisions that have no documentation shall include a single page after the divider stating justification for Contractor not providing the specified information.

B. Prior To Commencement of Work the Contractor shall submit as part of the submittal section and subdivisions, the following items in the three (3) ring binder:

1. PROPOSAL AND/OR CONTRACTS: Submit copies of Proposal and/or Contract Documents.
2. LICENSE AND INSURANCE: Submit copies of Contractor's Licenses, Certificate of Liability Insurance and Bonds required by Specifications.
3. NOTIFICATION: Using current National Emission Standard for Hazardous Air Pollutants (NESHAPs) notification format send written notification in accordance with 40 CFR Part 61.146 of Subpart M, to the appropriate State or Federal air pollution control agency responsible for the enforcement of the National Emission Standard for Asbestos at least ten (10) working days prior to the commencement of any on-site removal activity. Provide Environmental Consultant with a copy of the notice.
4. DISPOSAL: Submit proof satisfactory to the Environmental Consultant that required permits, site location and arrangements for transport and disposal of asbestos containing waste materials have been made.
5. TRAINING: Submit documentation satisfactory to the Environmental Consultant that the Contractor's employees, including foremen, supervisors and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received adequate training.
6. MEDICAL RECORDS: Submit documentation from a physician that all employees or agents who may be exposed to airborne asbestos in excess of background level have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the required respirator without suffering adverse health effects. Document that personnel have received medical monitoring required in OSHA 29 CFR 1926.1101 (m). The Contractor must be aware of and provide information to examining physician about unusual conditions in workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact employee's ability to perform work activities.
7. DECONTAMINATION UNIT SHOP DRAWING: Submit to the Environmental Consultant, shop drawings for layout and construction of decontamination enclosure

- systems and barriers for isolation of the work area as detailed in this specification and required by applicable regulations. Design documents, if available, may be submitted as shop drawings if no changes or alterations will be made.
8. **EQUIPMENT CERTIFICATION:** Submit manufacturer's certification that HEPA vacuums, pressure differential ventilation units and other local exhaust ventilation equipment conform to ANSI Z9.2-79 and other applicable standards.
  9. **RENTAL EQUIPMENT:** When rental equipment is to be used in abatement areas or to transport asbestos contaminated waste, a written notification concerning intended use of the rental equipment must be provided to the rental agency with a copy submitted to the Environmental Consultant.
  10. **NIOSH STANDARDS:** Document National Institute for Occupational Safety and Health, NIOSH, approvals for all respiratory protective devices utilized on site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.
  11. **RESPIRATION FIT TESTING:** Submit documentation of respirator fit-testing for all Contractor employees and agents who must enter the work area. This fit-testing shall be in accordance with qualitative procedures as detailed in the OSHA 29 CFR 1910.134.
- C. During Abatement Activities for projects longer than ten (10) days, the Contractor shall submit the following items for inclusion in the three ring binder:
1. **WEEKLY REPORTS:** Submit weekly job progress reports detailing abatement activities.
  2. **DISPOSAL:** Submit, within ten (10) calendar days of removal of ACM from job site, copies of all transport manifests, trip tickets and disposal receipts for all asbestos waste materials removed from the work area during the abatement process.
  3. **ACCESS:** Submit daily, copies of work site entry logbooks with information on worker and visitor access.
  4. **SAMPLING & ANALYSIS:** Submit weekly, results of bulk material analysis and air sampling data collected during the course of the abatement including OSHA compliance air monitoring results and background air sampling.
  5. **AS-BUILT DRAWINGS:** Document actual removal and as-built conditions on reproducible plans provided by Environmental Consultant.
- D. For projects less than ten (10) days, the Contractor should include the above items C1 through C5 as part of the Close Out Documents.
- 1.4 **QUALITY ASSURANCE/CONTROL OF INSTALLATION**
- A. **Standards and Guidelines - General Requirements**
1. All work under this contract shall be done in strict accordance with all applicable Federal, State and Local regulations, standards and codes governing asbestos abatement and any other trade work done in conjunction with the abatement.

2. The most recent edition on any relevant regulation, standard, document or code shall be in effect. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be utilized.
3. Copies of all standards, regulations, codes and other applicable documents, including this specification, shall be available at the work site in the clean change area of the worker decontamination system.

B. Standards and Guidelines - Specific Requirements

1. Occupational Safety and Health Administration (OSHA)

Title 29 Code of Federal Regulations Section 1910.1001 - General Industry Standard For Asbestos.

Title 29 Code of Federal Regulations Section 1910.134 General Industry Standard For Respiratory Protection.

Title 29 Code of Federal Regulations Section 1926.1101 Construction Industry Standard for Asbestos.

Title 29 Code of Federal Regulations Section 1910.1020 Access to Employee Exposure and Medical Records.

Title 29 Code of Federal Regulations Section 1926.59 Hazard Communication Standard.

C. Environmental Protection Agency (EPA)

Title 40 Code of Federal Regulations Part 61 Subparts A and M (Revised Subpart B) - National Emission Standard For Asbestos.

Title 40 Code of Federal Regulations Part 763, Subpart E - Asbestos Hazard Emergency Response Act, (AHERA); October 17, 1987.

- D. Post in the clean room area of the worker decontamination enclosure a list containing the names, addresses, and telephone numbers of the Contractor, the Building Owner, the Environmental Consultant, the General Superintendent, the Air Sampling Professionals, the testing laboratory and any other personnel who may be required to assist during abatement activities (e.g. Safety Officer, Building Maintenance Supervisor, Energy Conservation Officer).

1.5 TRAINING

- A. Training shall be provided by the Contractor to all employees or agents of the Contractor who may be required to disturb asbestos contaminated materials for abatement and auxiliary purposes and to all supervisory personnel who may be involved in planning, execution or inspection or abatement projects.
- B. Training shall be provided in accordance with AHERA Asbestos Abatement Worker Training.
- C. Training is to have occurred within twelve (12) months prior to the initiation of abatement

activities.

- D. Contractor must document training by providing date of training, training entity, course outline, and names and qualifications of trainers.

#### 1.6 MEDICAL MONITORING

- A. Medical Monitoring must be provided by the Contractor to any employee or agent that may be exposed to asbestos in excess of background levels during any phase of the abatement project.
- B. Medical monitoring shall include at a minimum:
  - 1. A work-medical history to elicit symptomology of respiratory disease.
  - 2. A chest x-ray (posterior - anterior, 14 x 13 inches) evaluated by a Certified B-reader, (or approved equal).
  - 3. A pulmonary function test, including forced vital capacity (FVC) and forced expiratory volume at one second (FEV) administered and interpreted by a Certified Pulmonary Specialist.
- C. Employees shall be given an opportunity to be evaluated by a physician to determine their capability to work safely while breathing through the added resistance of a respirator. (Examining physicians shall be aware of the nature of respiratory protective devices and their contributions to breathing resistance. They shall also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform, as well as special workplace conditions such as high temperatures, high humidity, and chemical contaminants to which he/she may be exposed.)

#### 1.7 EMERGENCY PLANNING

- A. Emergency planning shall be developed prior to abatement initiation and agreed to by Contractor and Environmental Consultant.
- B. Emergency procedures shall be in written form and prominently posted in the clean change area and equipment room of the worker decontamination area. Everyone, prior to entering the work area, must read and sign these procedures to acknowledge receipt and understanding of work site layout and location of emergency exits and emergency procedures. Exits and exit routes shall be marked with materials visible when power fails.
- C. Emergency planning shall include written notification of police, fire and emergency medical personnel of planned abatement activities, work schedule and layout of work area, particularly barriers that may affect response capabilities.
- D. Emergency planning shall include consideration of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided.
- E. Employees shall be trained in evacuation procedures in the event of workplace emergencies.

1. For non-life-threatening situations, employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the workplace to obtain proper medical treatment.
  2. For life-threatening injury or illness, worker decontamination shall take least priority after measures to stabilize the injured worker, remove him/her from the workplace and secure proper medical treatment.
- F. Telephone numbers of all emergency response personnel shall be posted in the clean change area and equipment room with the location of the nearest telephone.

#### 1.8 SITE SECURITY

- A. The work area is to be restricted to authorized, trained, and protected personnel. These may include the Contractor's employees, employees of Subcontractors, Owner employees and representatives, State and Local inspectors and any other designated individuals. A list of authorized personnel shall be established prior to job start and posted in the clean room of the worker decontamination facility.
- B. Entry into the work area by unauthorized persons shall be reported immediately to the Environmental Consultant by the Contractor.
- C. A log book shall be maintained in the clean-room area of the worker decontamination system. Anyone who enters the work area must record name, affiliation, time in, and time out for each entry.
- D. Access to the work area shall only be through a single worker decontamination system at one time, located as shown on the plans. Other means of access (doors, windows, hallways, etc.) shall be blocked or locked so as to prevent entry to or exit from the work area. The only exceptions for this rule are the waste pass-out airlock which shall be sealed except during the removal of containerized asbestos waste from the work area, and emergency exits in case of fire or accident. Emergency exits shall not be locked from the inside, however, they shall be sealed with polyethylene sheeting and tape until needed.
- E. Contractor should have control of site security during abatement operations whenever possible, in order to protect work efforts and equipment.
- F. Owner will be responsible for notifying building occupants of impending activity and enforcement of restricted access by Owner's employees.

#### 1.9 CONTRACT CLOSEOUT PROCEDURES

- A. Prior to the Request for Final Payment all items required by Submittal Procedures must be in the three (3) ring "Project Submittal Record" binder, submitted and approved.
- B. All items required during abatement activities on a daily or weekly basis for projects longer than ten days shall be completed for all projects and included in the closeout document section of the Three (3) ring binder.

- C. All disposal manifests, air monitoring results or other documents should be included in the three (3) ring binder prior to final payment.

#### 1.10 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of Contract Documents to be utilized for record documents.
- B. Record actual revisions to the Work. Legibly record information concurrent with construction progress.
- C. Submit documents to Environmental Consultant with claim for final Application for Payment.

### 2.0 PRODUCTS

#### 2.1 MATERIAL: DELIVERY AND STORAGE

- A. Deliver all materials in the original packages, containers or bundles bearing the name of the manufacturer and the brand name (where applicable).
- B. Store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient enough to prevent damage or contamination. Replacement materials shall be stored outside of the work area until abatement is completed.
- C. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the work site and disposed of properly.

#### 2.2 ENCLOSURES, CRITICAL BARRIER MATERIALS, DISPOSAL BAGS

- A. Polyethylene sheeting
  - 1. Walls, floors, stationary objects and all other surfaces shall be covered with a minimum 6-mil thick.
  - 2. All sheeting shall be opaque white or black in color unless otherwise specified on the drawings.
- B. Disposal Bags: 6-mil polyethylene, pre-printed with labels as required by applicable regulation.
- C. Disposal drums: Metal or fiberboard with locking ring tops.
- D. Stick-on labels: Labels shall be printed in accordance with EPA or OSHA requirements for disposal containers.
- E. Warning signs: Warning signs as required by EPA 40 CFR 763 - AHERA, or shall be printed in accordance with applicable regulations.

#### 2.3 REMOVAL MATERIALS

- A. Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of 1 fluid ounce to 5 gallons of

water or as specified by manufacturer. (An equivalent surfactant shall be understood to mean a material with a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-56- "Surface and Interfacial Tension of Solutions of Surface Active Agents"). Where work area temperature may cause freezing of the amended water solution, the addition of ethylene glycol in amounts sufficient to prevent freezing is permitted.

- B. Encapsulant: "ASPLINDH" Spray adhesive or equal.
- C. Replacement: Replacement or spray-back materials will be required on this project as described in the plans and specifications.

## 2.4 ENCAPSULATION MATERIALS

- A. Encapsulation materials: "ASPLINDH" or "SERPIFLEX" spray adhesive type and conform with the following characteristics:
  - 1. Encapsulant should not be solvent-based or utilize a vehicle (the liquid in which the solid parts of the encapsulant are suspended) consisting of hydrocarbons, nor shall encapsulants be flammable.

## 2.5 EQUIPMENT

- A. Glove bags: "American" or equal, shall be six (6) mil, transparent bags with air tight seals.
- B. Respirators: "3-M," "Wilson" or equal, NIOSH rated per Table 1 29 CFR 1926.1101 as following Table, Section 2.6. Atmosphere supplied respirators will be required until fiber count has been established. Air purifying respirators will be permitted once air borne particulate is established within the protection factor of the mask.
- C. Clothing: "Tyvek," "Kleenguard" or equal. Full body disposable protective clothing, including head, body and foot coverings consisting of material impenetrable by asbestos fibers shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing.
- D. Additional safety equipment (e.g. hard hats meeting the requirements of ANSI Standard Z89.1-1979, safety shoes meeting the requirements of ANSI Standard Z41.1-1967, disposable PVC, (Polyvinyl Chloride), gloves, as necessary, shall be provided to all workers and authorized visitors.
- E. Non-skid footwear shall be provided to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
- F. A sufficient supply of disposable mops, rags and sponges for work area decontamination shall be available.
- G. Support Equipment: A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g. scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed.
- H. Water Sprayers: Sprayers with pumps capable of providing 500 pounds per square inch (psi) at the nozzle tip at a flow rate of 2 gallons per minute for spraying amended water.
- I. Brushes: Brushes utilized for removing loose asbestos containing material shall have nylon or fiber bristles, not metal.
- J. A sufficient supply of HEPA filtered vacuum systems shall be available during cleanup.
- K. Encapsulants: Encapsulants shall be sprayed using airless spray equipment. Nozzle pressure should be adjustable within the 400 to 1500 psi range.
- L. A Magnehelic gauge, Manometer or other instrument is to be used and maintained throughout the abatement project to measure the static pressure differential across the containment barrier. The device must be sensitive enough to detect a relatively low pressure drop and should have a scale of 0 - 0.25 or 0.50 inch of water and 0.005 or 0.01 inch graduations is generally adequate. A pressure drop of 0.02 - 0.03 inches of water should be

maintained throughout the asbestos abatement portion of the project. An audible and/or visible alarm should be used to alert the project manager of a severe pressure drop.

**TABLE 1 - RESPIRATORY PROTECTION FOR ASBESTOS FIBERS**

Airborne concentrations of asbestos or conditions of use.	Required respirator
Not in excess of 1 f/cc (10xPEL), or otherwise as required independent of exposure pursuant to paragraph (h)(2)(iv) of this section.	Half mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters
Not in excess of 5 f/cc (50xPEL)	Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100xPEL)	Any powered air-purifying respirator equipped with high efficiency filter or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1,000xPEL) or unknown concentration.	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (1,000xPEL) or unknown concentrations	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

- Note:**
- a. Respirators assigned for high environmental concentrations may be used at lower concentrations, or when required respirator use is independent of concentration.
  - b. A high efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

### 3.0 METHODS

#### 3.1 WORKPLACE ENTRY AND EXIT

- A. All workers and authorized personnel shall enter the work area through the worker decontamination enclosure system.
- B. All personnel who enter the work area must sign the entry log, located in the clean room, upon entry and exit.
- C. All personnel, before entering the work area, shall read and be familiar with all posted regulations, personal protection requirements (including workplace entry and exit procedures) and emergency procedures. A sign-off sheet shall be used to acknowledge that these have been reviewed and understood by all personnel prior to entry.
- D. All personnel shall proceed first to the clean room, remove all street clothes and appropriately don respiratory protection, disposable coveralls, head covering and foot covering. Hard hats, eye protection and gloves shall also be utilized if required. Clean respirators and protective clothing shall be provided and utilized by each person for each separate entry into the work area.
- E. Personnel wearing designated personal protective equipment shall proceed from the clean room through the shower room and equipment room to the main work area.

- F. Before leaving the work area all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet wiping procedures. (Small HEPA vacuums with brush attachments may be utilized for this purpose, however, larger machines may tear the suits) Each person shall clean bottoms of protective footwear prior to entering the equipment room.
- G. Personnel shall proceed to equipment room where they remove all protective equipment except respirators. Deposit disposable clothing into appropriately labeled containers for disposal.
- H. Reusable, contaminated footwear shall be stored in the equipment room when not in use in the work area. Upon completion of abatement it shall be disposed of as asbestos contaminated waste. (Rubber boots may be decontaminated at the completion of the abatement for reuse.)
- I. Still wearing respirators, personnel shall proceed to the shower area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator, and shower and shampoo to remove residual asbestos contamination. Various types of respirators will require slight modification of these procedures. An ASR respirator with HEPA filtered disconnect protection may be disconnected in the equipment room and worn into the shower. A powered air-purifying respirator face-piece will have to be disconnected from the Filter/Power pack assembly, which is waterproof, prior to entering the shower. A dual cartridge respirator may be worn into the shower. Cartridges must be replaced for each new entry into the work area according to the contractors written Respiratory Protection Program.
- J. After showering and drying off, proceed to the clean room and don clean clothing.
- K. These procedures shall be posted in the clean room and equipment room.

### 3.2 TRAINING

- A. Prior to commencement of abatement activities all personnel who will be required to enter the work area or handle containerized asbestos containing materials must have received adequate training in accordance with Section 1.5 of this document.
- B. Special on-site training on equipment and procedures unique to this job site shall be performed as required.
- C. Training in emergency response and evacuation procedures shall be provided.

### 3.3 RESPIRATORY PROTECTION

- A. All respiratory protection shall be provided to workers in accordance with the submitted written respiratory protection program, which includes all items in OSHA 29 CFR 1910.134 (b) (1-11). This program shall be posted in the clean room of the worker decontamination enclosure system.
- B. Workers shall be provided with personally issued, individually identified (marked with waterproof designations) respirators.
- C. Respirators shall be selected that meet the level of protection requirements per Section 2.6, Table 1 29 CFR 1926.1101. Atmosphere Supplied respirators are required until fiber levels are established by personnel air monitoring.
- D. Fit Testing
  - 1. Workers must perform positive and negative air pressure fit checks each time a respirator is put on, whenever the respirator design so permits. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
  - 2. Workers shall be given a qualitative fit test in accordance with procedures detailed in the OSHA Standard 29 CFR 1910.134, for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.
  - 3. Documentation of adequate respirator fit must be provided to the Environmental Consultant.

### 3.4 PROTECTIVE CLOTHING

- A. Disposable clothing including head, foot and full body protection shall be provided in sufficient quantities and adequate sizes for all workers and authorized visitors.
- B. Hard hats, protective eye wear, gloves, rubber boots and/or other footwear shall be provided as required for workers and authorized visitors. Safety shoes may be required for some activities.

### 3.5 GLOVE BAG METHOD: N/A

### 3.6 FULL CONTAINMENT ABATEMENT PROJECTS

#### A. Work Area Preparation

1. **Signage:** Post danger signs meeting the requirements of OSHA 29 CFR 1926.1101 (k) (7) at any location and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of workplace enclosure barriers.
2. **Power Shut Down:** Shut down and lock out electric power to all work areas. Provide temporary power and lighting. Ensure safe installation (including ground faulting) of temporary power sources and equipment by compliance with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. All costs for power consumption shall be paid for by the Owner.
3. **HVAC Shutdown:** Shut down and lock out all heating, cooling and air conditioning systems (HVAC) components that are in, supply or pass through the work area. Seal all intake and exhaust vents in the work area with tape and two layers of 6-mil polyethylene. Also seal any seam in system components that pass through the work area. Remove all HVAC system filters and place in labeled 6-mil polyethylene bags for staging and eventual disposal as asbestos contaminated waste.
4. **Precleaning**
  - a. **Movable Objects:** Preclean all movable objects within the work area using a HEPA filtered vacuum and/or wet cleaning methods as appropriate. After cleaning, these objects shall be removed from the work area and carefully stored in an uncontaminated location. (Carpeting, drapes, clothing, upholstered furniture and other fabric items may be disposed of as asbestos contaminated waste or cleaned as asbestos contaminated items utilizing HEPA vacuum techniques and off-premises steam cleaning.)
  - b. **Fixed Objects:** Preclean all fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning techniques as appropriate. Careful attention must be paid to machinery behind grills or grating where access may be difficult but contamination significant. Also pay particular attention to wall, floor and ceiling penetrations behind fixed items. After precleaning, enclose fixed objects in two layers of 6-mil polyethylene sheeting and seal securely in place with tape. Objects (e.g. permanent fixtures, shelves, electronic equipment, laboratory tables, sprinklers, alarm systems, closed circuit TV equipment, and computer cables) which must remain in the work area and that require special ventilation or enclosure requirements should be designated here along with specified means of protection. (Contact the manufacturer for special protection requirements.) Control panels, gauges, etc., in the work area may require Owner access during abatement. These shall be designated and enclosures constructed with access flaps sealed with waterproof tape.
  - c. **Surfaces:** Preclean all surfaces in the work area using HEPA filtered vacuums and/or wet cleaning methods as appropriate. Do not use methods

that would raise dust such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not disturb asbestos containing materials during the precleaning phase.

**B. Containment Construction**

1. **Sealed Openings:** Seal off all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and any other openings between the work area and uncontaminated areas outside of the work area (including the outside of the building, tunnels and crawl spaces) with 6-mil polyethylene sheeting and tape.
2. **Floors:** N/A
3. **Walls:** N/A

**C. Worker Decontamination Enclosure Systems.**

1. **Required:** Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. Only one worker decontamination system is to be utilized at a time.
2. **Materials:** Worker decontamination enclosure systems constructed at the work site shall utilize 6 mil opaque black or white polyethylene sheeting or other acceptable materials for privacy. Detailed descriptions of portable, prefabricated units, if used, must be submitted for the Environmental Consultant's approval. Plans must include floor plan with dimensions, materials, size, thickness, plumbing and electrical utilities.
3. **Layout:** The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room, each separated from each other and from the work area by airlocks.
4. **Access:** Entry to and exit from all airlocks and decontamination enclosure system chambers shall be through curtained doorways consisting of two sheets of overlapping polyethylene sheeting. One sheet shall be secured at the top and left side, the other sheet at the top and right side. Both sheets shall have weights attached to the bottom to insure that they hang straight and maintain a seal over the doorway when not in use.
5. **Air Locks:** Access between any two rooms in the decontamination enclosure system shall be through an airlock with at least 3 feet separating each curtained doorway. Pathways into (from clean to contaminated) and out of (contaminated to clean) the work area shall be clearly designated.
6. **Clean Room:** Clean room shall be sized to accommodate the work crew. Benches shall be provided as well as hooks for hanging up street clothes. Shelves for storing respirators shall also be provided in this area. Clean work clothes (if required under disposable), clean disposable clothing, replacement filters for respirators, towels and other necessary items shall be provided in adequate supply at the clean room. A location for postings shall also be provided in this area. Whenever possible, a lockable door shall be used to permit access into the clean room from outside the work area. Lighting, heat and electricity shall be provided as necessary for comfort.

This space shall not be used for storage of tools equipment or materials, (except as specifically designated) or as office space.

7. **Shower:** Shower room shall contain one or more showers as necessary to adequately accommodate workers. Each shower head shall be supplied with hot and cold water adjustable at the tap. The shower enclosure shall be constructed to ensure against leakage of any kind. An adequate supply of soap, shampoo and towels supplied by the Contractor and shall be available at all times. Shower water shall be drained, collected and filtered through a system with at least 0.5-1.0 micron particle size collection capability.
8. **Equipment Room:** The equipment room shall be used for storage of equipment and tools at the end of a shift once they have been decontaminated using a HEPA filtered vacuum and/or appropriate wet cleaning techniques. A walk-off pan filled with water shall be located in the work area just outside the equipment room for workers to clean off foot coverings after leaving the work area and prevent excessive contamination of the worker decontamination enclosure system. A drum lined with a labeled 6 mil polyethylene bag for collection of disposable clothing shall be located in this room. Contaminated footwear (e.g. rubber boots, other reusable footwear) shall be stored in this area for reuse the following workday.
9. **Waste Pass Out and Emergency Exits**
  - a. **Location:** The waste container pass-out airlock shall be constructed away from the worker area to the outside of the building.
  - b. **Construction:** This airlock system shall consist of an airlock, a container staging area, and another airlock with access to outside the work area, all constructed of two layers of 6-mil polyethylene sheeting.
  - c. **Emergency Exits:** Emergency exits shall be established and clearly marked with duct tape arrows or other effective designations to permit identification from anywhere within the work area. They shall be secured to prevent access from uncontaminated areas yet permit emergency exiting. Exits shall be properly sealed with polyethylene sheeting which can be cut to permit egress if needed. Exits may be the worker decontamination enclosure, the waste pass-out airlock and/or other alternate exits satisfactory to fire officials.

**D. Critical Barriers**

1. **Isolation:** The contaminated work area shall be separated from uncontaminated, occupied areas of the building by the construction of air tight barriers.
2. **Construction:** Walls shall be constructed of wood or metal framing to support barriers in all openings larger than 4' x 8'. Sheathing material (plywood, drywall) of at least 3/8" thickness shall be applied to work side of barrier. Cover both sides of partition with two layers of 6-mil polyethylene sheeting with staggered joints and seal in place. Caulk edges of partition at floor, ceiling, walls and fixtures to form an air tight seal.
3. **Attachment:** Method of attaching polyethylene sheeting shall be submitted for approval in advance by the Contractor and selected to minimize damage to equipment and surfaces. Method of attachment may include any combination of waterproofing tape, furring strips, spray glue, staples, nails, screws or other effective

procedures capable of sealing adjacent sheets of polyethylene and capable of sealing polyethylene to dissimilar finished or unfinished surfaces under both wet and dry conditions (including the use of amended water).

4. **Settling:** Following completion of the construction of all polyethylene barriers and decontamination system enclosures, allow overnight settling to ensure that barriers will remain intact and secured to walls and fixtures before beginning actual abatement activities.
5. **Inspection:** All polyethylene barriers inside the workplace, in the worker decontamination enclosure system, in the waste container pass-out airlock and at partitions constructed to isolate the work area from occupied areas shall be inspected twice daily, prior to the start of each day's abatement activities and following the completion of the day's abatement activities. Document inspections and observations in the daily project log.
6. **Repair:** Damage and defects in the enclosure system are to be repaired immediately upon discovery.
7. **Breach of Containment Barrier:** If air samples collected outside of the work area during abatement activities indicate airborne fiber levels greater than 0.01 f/cc or pre-measured background levels, whichever is lower, work shall immediately stop for inspection and repair of barriers. Cleanup of surfaces outside of the work area using HEPA vacuums or wet cleaning methods may be necessary.
8. **Pressure Differential Equipment:** Install and initiate operation of pressure differential ventilation equipment as needed to provide one air change in the work area every 15 minutes. Openings made in the enclosure system to accommodate these units shall be made airtight with tape and/or caulking as needed. If more than one unit is installed, they should be turned on one at a time, checking the integrity of wall barriers for secure attachment and need for additional reinforcement. Insure that adequate power supply is available to satisfy the requirements of the ventilating units. Pressure differential ventilation units shall be exhausted to the outside of the building whenever feasible. They shall not be exhausted into occupied areas of the building. Twelve inch round extension ducting shall be used to reach from the work area to the outside when required. Careful installation, air monitoring and daily inspections shall be done to insure that the ducting does not release fibers into uncontaminated building areas.
9. **Testing Enclosure:** Once constructed and reinforced as necessary, with required pressure differential ventilation units in operation, test enclosure for leakage utilizing smoke tubes. Repair as needed.
10. **Removal:** Remove and clean the ceiling mounted objects such as lights and other items that may interfere with the abatement process and were not previously cleaned and sealed off. Utilize localized spraying of amended water and/or HEPA vacuums to reduce fiber dispersal during the removal of these fixtures. Enclose the openings left by removing these ceiling mounted objects with two layers of 6-mil polyethylene.

E. Removal

1. All removal projects shall be completed utilizing EPA guidelines defined in 40CFR,  
Prepared by M & E Engineering, Inc. 01800-17

Part 61. These methods require wet removal in all cases. No alternate method of removal may be utilized without the written approval of the Environmental Consultant.

2. All Projects will be completed according to 29CFR 19.26.1101.

F. Clean-up Procedures

1. Remove and containerize all visible accumulations of asbestos containing material and asbestos contaminated debris utilizing rubber dust pans and rubber squeegees to move material around. Do not use metal shovels to pick up or move accumulated waste. Special care shall be taken to minimize damage to floor sheeting.
2. Wet clean all surfaces in the work area using rags, mops or sponges as appropriate. Contractor may use vacuum equipment approved for wet areas. Such vacuums shall be included in equipment section of project submittal.
3. Remove the cleaned outer layer of plastic sheeting from walls and floors. Windows, doors, HVAC system vents and all other openings shall remain sealed. The pressure differential ventilation units shall remain in continuous operation. Decontamination enclosure systems shall remain in place and be utilized.
4. After cleaning the work area, wait at least 24 hours to allow fibers to settle and HEPA vacuum and wet clean all objects and surfaces in the work area again.
5. Remove all containerized waste from the work area and waste container pass-out airlock.
6. Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.
7. Inspect the work area for visible residue. If any accumulation of residue is observed, it will be assumed to be asbestos and the 24 hour settling period/cleaning cycle repeated.
8. The work area shall be cleaned until it is in compliance with State and Local requirements and any more stringent criteria agreed upon by the Contractor and Owner prior to initiation of abatement activities. Criteria should be in the form of visual inspections and airborne fiber concentrations. Additional cleaning cycles shall be provided, as necessary, at no cost to the Owner until these criteria have been met.
9. Following the satisfactory completion of clearance air monitoring, remaining barriers shall be removed and properly disposed of. A final visual inspection by the Environmental Consultant shall ensure that no contamination remains in the work area. Unsatisfactory conditions may require additional cleaning and air monitoring.

G. Waste Pass Out

1. Asbestos contaminated waste that has been containerized shall be transported out of the work area through the waste container pass-out procedures utilizing two teams of workers, an "inside" team and an "outside" team.

2. The inside team wearing appropriate protective clothing and respirators for inside the work area shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet wiping techniques and transport them into the waste container pass-out airlock. No worker from the inside team shall further exit the work area through this airlock.
3. The outside team, wearing a different color protective clothing and appropriately assigned respirators, shall enter the airlock from outside the work area, enclose the bags in clean, labeled, 6 mil polyethylene bags and remove them from the airlock to the outside. No worker from the outside team shall further enter the work area through this airlock.
4. The exit from this airlock shall be secured to prevent unauthorized entry.

H. Encapsulation and Lock Down Procedures

1. Penetrating-type encapsulants: Apply penetrating-type encapsulant to penetrate existing sprayed asbestos materials uniformly to substrate to a depth of (1/16) inches. During treatment with a penetrating-type encapsulant, the Contractor shall remove selected random core samples of the asbestos containing materials in the presence of the Environmental Consultant to check the depth of penetration.
2. Apply encapsulant using airless spray equipment.
3. Encapsulated asbestos containing materials shall be designated appropriately in order to warn building maintenance personnel in the event that they are required to disturb the materials.

I. Reestablishment of the Work Area and Systems

1. Reestablishment of the work area shall only occur upon completion of clean-up procedures and after clearance air monitoring has been performed to the satisfaction of the Environmental Consultant.
2. Polyethylene barriers shall be removed from walls and floors at this time, maintaining decontamination enclosure systems and barriers over doors, windows, etc. as required.
3. The Contractor and Owner shall visually inspect the work area for any remaining visible residue. Evidence of contamination will necessitate additional cleaning requirements.
4. Additional air monitoring shall be performed at the Contractor's expense if additional clean-up is necessary.
5. Following satisfactory clearance of the work area, remaining polyethylene barriers may be removed and disposed of as asbestos contaminated waste.
6. At the discretion of the Contractor, mandatory requirements for personal protective equipment may be waived following the removal of all barriers.

7. Re-secure mounted objects removed from their former positions during area preparation activities if required by plans.
8. Relocate objects that were removed to temporary locations back to their original positions if required by plans.
9. Repair all areas of damage that occurred as a result of abatement activities.

3.7 EXTERIOR ABATEMENT PROJECTS - NON-FRIABLE MATERIALS: N/A

3.8 FINAL CLEARANCE

A. Clearance Air Monitoring

1. Following the completion of clean-up operations, the Contractor shall notify the Environmental Consultant that work areas are ready for clearance air monitoring.
2. The Owner shall then arrange for an Air Monitoring Professional to sample the air inside the containment for airborne fiber concentrations.
3. Air Samples shall be analyzed by Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) as determined by the Environmental Consultant or governing regulations. The use of TEM is highly recommended and may be required for clearance air monitoring. Volume requirements for TEM methods shall be those specified by AHERA TEM methodology. The air sampling for PCM shall be conducted using pumps calibrated at a flow rate of NIOSH Standard Analytical Method 7400.
4. Owner, or Consultant, shall establish number and specific locations required for air sampling.
5. Aggressive sampling shall be performed with portable fans circulating air in the work area to simulate actual use conditions. Pressure differential ventilation units shall not be utilized for this purpose.
6. For PCM, all samples at all locations shall indicate concentrations of airborne fibers less than 0.01 f/cc for release of the work area.
7. For TEM, all samples at all locations shall indicate concentrations of airborne fibers less than an average of 70 structures per square millimeter, (Z-Test Calculations will not be considered).
8. Areas exceeding these levels shall be re-cleaned using defined procedures and retested at the Contractor's direction and cost.

3.9 DISPOSAL

A. Disposal Procedures

1. As the work progresses, to prevent exceeding available storage capacity on site, sealed and labeled containers of asbestos containing waste shall be removed and transported to the prearranged disposal location. Waste will not be allowed within the building for a period exceeding 8 hours. Contractor will secure a locked storage

trailer to be parked outside of enclosure area. Waste will be removed to the locked storage trailer daily.

2. Disposal must occur at an authorized site in accordance with regulatory requirements of NESHAP and applicable State and Local regulations.
3. All dump receipts, trip tickets, transportation manifests or other documentation of disposal shall be delivered to the Building Owner for his records. The required record keeping format utilizes a chain of custody form which includes the names and addresses of the Generator (Building Owner), Contractor, pickup site, and disposal site, the estimated quantity of the asbestos waste and the type of containers used. The form should be signed by the Generator, the Contractor, and the Disposal Site Operator, as the responsibility for the material changes hands. If a separate hauler is employed, his/her name, address, telephone number and signature should also appear on the form.

**B. Transportation to the Landfill**

1. Once drums, bags and wrapped components have been removed from the work area, they shall be loaded into an enclosed truck for transportation.
2. When moving containers, utilize hand trucks, carts and proper lifting techniques to avoid back injuries.
3. The enclosed cargo area of the truck shall be free of debris and lined with 6-mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapped and taped into place.
4. Drums shall be placed on level surfaces in cargo area and packed tightly together to prevent shifting and tipping. Structural components shall be secured to prevent shifting with bags placed on top. Do not throw containers into truck cargo area.
5. Personnel loading asbestos containing waste shall be protected by disposable clothing including head, body and foot protection and at a minimum, half-facepiece, air-purifying, dual cartridge respirators equipped with high efficiency filters.
6. Any debris or residue observed on containers or surfaces outside of the work area resulting from clean-up using HEPA filtered vacuum equipment and/or wet methods as appropriate.
7. Large metal dumpsters are sometimes used for asbestos waste disposal. These should have doors or tops that can be closed and locked to prevent vandalism or other disturbance of the bagged asbestos debris and wind dispersion of asbestos fibers. Unbagged material shall not be placed in these containers, nor shall they be used for non-asbestos waste. Bags shall be placed, not thrown, into these containers to avoid splitting.

**C. Disposal at the Landfill**

1. Upon reaching the landfill, trucks are to drive to the dump location as close as possible for unloading of the asbestos containing waste.

2. Bags, drums and components shall be inspected as they are off-loaded at the disposal site. Material in damaged containers shall be repacked in empty drums or bags as necessary. (Local requirements may not allow the disposal of asbestos waste in drums. Check with appropriate agency and institute appropriate alternative procedures.)
3. Waste containers shall be placed on ground at the disposal site, not pushed or thrown out of trucks. Weight of wet material may rupture containers.
4. Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body and foot protection and, at a minimum, half-facepiece, air-purifying, dual cartridge respirators equipped with HEPA filters.
5. Following the removal of all containerized waste, the truck cargo area shall be decontaminated using HEPA vacuums and/or wet methods to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.
6. If landfill personnel have not been provided with personal protective equipment for the compaction operation by the landfill operator, Contractor shall supply protective clothing and respiratory protection for the duration of this operation.

**END OF SECTION**

**DIVISION 2 - SITEWORK**

**SECTION 02070 - SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications sections, as well as asbestos-related specification sections and drawings, apply to this Section.

**1.2 SUMMARY**

- A. This Section requires the selective removal and subsequent off site disposal of the following:
  - 1. Portions of existing buildings and site improvements indicated on drawings and as required to accommodate new construction.
  - 2. Removal of doors, ceilings, walls, flooring, plumbing and other items indicated "remove," and as required to accommodate new construction.
- B. Related work specified elsewhere:
  - 1. Remodeling construction work and patching are included within the respective sections of specifications, including removal of materials for reuse and incorporation into remodeling or new construction.
  - 2. Relocation of pipes, conduits, ducts, and other mechanical and electrical work is specified in other Divisions.

**Contractor to refer to abatement drawings prepared by others prior to proceeding with any demolition under this contract.** Conron and Woods Architects is not an expert in Regards to Hazardous Materials.

**1.3 SUBMITTALS**

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
  - 1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations and occupancy of the building.
  - 2. Coordinate with Owner's continuing occupation of the existing building.
- C. Photograph existing conditions of structure surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. File with Owner's Representative prior to start of work.

**1.4 JOB CONDITIONS**

- A. Occupancy: See Division 1 of these specifications. Conduct selective demolition work in manner that will minimize need for disruption of Owner's and Occupant's normal operations. Provide minimum of 72 hours' advance notice to Owner of demolition activities that will affect Owner's or

Occupant's normal operations.

- B. Condition of Structures:** Owner assumes no responsibility for actual condition of items or structures to be demolished.
  - 1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structures may occur.
- C. Partial Demolition and Removal:** Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.
  - 1. Storage or sale of removed items on site will not be permitted.
- D. Protections:** Provide temporary barricades and other forms of protection to protect Owner's personnel, building occupants and general public from injury due to selective demolition work.
  - 1. Provide protective measures as required to provide free and safe passage of Owner's personnel, building occupants, and general public to occupied portions of buildings.
  - 2. Erect temporary covered passageways as required by authorities having jurisdiction.
  - 3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
  - 4. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
  - 5. Protect floors with suitable coverings when necessary.
  - 6. Construct temporary insulated dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks.
  - 7. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing buildings.
  - 8. Remove protections at completion of work.
- E. Traffic:** Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- F.** Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- G.** Flame Cutting: Not Allowed.
- H. Utility Services:** Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
- I.** Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
- J.** Maintain fire protection services during selective demolition operations.
- K. Environmental Controls:** Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
- L.** Do not use water when it may create hazardous or objectionable conditions such as ice, flooding,

and pollution.

- M. Environmental Protection: It is the Contractor's responsibility to review all exposure to possible environmental problems with the Owner and the Architect in writing. Establish procedures and discipline among tradesmen and provide needed facilities which will protect against environmental problems (pollution of air, water and soil, excessive noise and similar problems).

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION**

**3.1 PREPARATION**

- A. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.
  1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
  2. Cover and protect furniture, equipment, and fixtures from soilage or damage when demolition work is performed in areas where such items have not been removed.
  3. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
  4. Provide weatherproof closures and building security for exterior openings resulting from demolition work.
- B. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.
  1. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72' hours advance notice to Owner if shutdown of service is necessary during changeover.

**3.2 DEMOLITION**

- A. General: Perform selective demolition work in a systematic manner. Demolish all items indicated on drawings and as required to complete the work. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
- B. Demolish concrete and masonry in small sections. Cut concrete, asphalt, and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
- C. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.
- D. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
- E. For interior slabs on grade, use removal methods that will not crack or structurally disturb adjacent slabs or partitions. Use power saw where possible.
- F. Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel, or sand, free of trash and debris, stones over 6 inches in diameter, roots, or other organic matter.
- G. Schedule all demolition and new work in such a manner that no dwelling units are left vulnerable

to vandalism or other intruders, or other risks to the occupants and their possessions.

- H. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

### **3.3 SALVAGED MATERIALS**

- A. Salvaged Items: Where indicated on Drawings as "Salvage - Deliver to Owner," carefully remove indicated items, clean, store, and turn over to Owner and obtain receipt.

### **3.4 DISPOSAL OF DEMOLISHED MATERIALS**

- A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.
  - 1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
  - 2. Burning of removed materials is not permitted on project site.

### **3.5 CLEANUP AND REPAIR**

- A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
- B. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

**END OF SECTION 02070**

**DIVISION 2 - SITE CONSTRUCTION**

**SECTION 02300 - EARTHWORK**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Extent of earthwork is as indicated on the drawings and as required to accommodate the Work.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Satisfactory Soil: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.
- B. Unsatisfactory Soil: ASTM D 2487 Soil Classification Groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.
- C. Backfill and Fill: Satisfactory soil materials.

**PART 3 - EXECUTION**

**3.1 EARTHWORK**

- A. Remove vegetation, debris, unsatisfactory soil materials, obstructions and deleterious materials from ground surface prior to placement of fill.
- B. When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface, pulverize, moisture-condition or aerate soil, and recompact.
- C. Compact all subgrade, fill, etc. to be compacted to minimum densities noted elsewhere but not less than 95% under all construction / paving and 90% in lawn areas.
- D. Grade areas to a smooth surface to cross sections, lines, and elevations indicated. Grade lawns, walkways, and unpaved subgrades to tolerances of plus or minus 1-1/4 inch and pavements and areas within building lines to plus or minus 1/2 inch.
- E. Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.
- F. Where settling is measurable or observable at excavated or fill areas during the general project warranty period (1 year min.) remove surface (pavement, lawn or other finish), add backfill material, compact and replace surface treatment to appearance, quality and condition of adjacent work or original work if like surface treatment not adjacent.

**END OF SECTION 02300**

**DIVISION 3 - CONCRETE**

**SECTION 03300 - CAST-IN-PLACE CONCRETE**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: **Product Data concrete mix designs.**
- B. Comply with ASTM C 94; ACI 301, "Specification for Structural Concrete"; ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"; and CRSI's "Manual of Standard Practice."
- C. Engage a qualified independent testing agency to design concrete mixes.
- D. **FIELD QUALITY CONTROL:**

The Contractor shall employ the services of a qualified testing laboratory to perform tests and submit test reports.

Sampling Fresh Concrete: ASTM C 172

Slump: ASTM C 143; one test for each set of compressive strength test specimens.

Air Content: ASTM C 173 or C 231 for each set of compressive strength test specimens.

Concrete Temperature: Test hourly when air temperature is 40 degrees F. and below, when 80 degrees F and above; and when compression test specimens are made.

Compression Test Specimen: ASTM C 31, one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field cure test specimens are required. Mold one set of standard cylinders for volume of concrete specified below or fraction there of.

1	Slabs on Grade or Metal Deck	30 cubic yards
2	Footings and stem walls	50 cubic yards
3	All other locations (unless noted otherwise)	30 cubic yards

Compressive Strength Tests: ASTM C 39; test 1 specimen at 7 days, 2 specimens at 28 days, and retain one specimen in reserve for later testing. Additional Tests; the testing laboratory will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure as directed by the Architect. The testing laboratory may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by the Architect or Engineer. The Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

- E. For Project requiring a total of less than 30 cubic yards the Contractor to provide all batch tickets for all concrete for the Architect's review within 5 working days of date of said work. Architect may require concrete testing upon Contractor's failure to submit batch tickets in a timely manner. (Any testing required will be the Contractor's financial responsibility.)

**PART 2 - PRODUCTS****2.1 MATERIALS**

- A. Deformed Reinforcing Bars: ASTM A 615/A 615M, Grade 60 Grade 40 for stirrups and ties.
- B. Plain Steel Wire: ASTM A 82, as drawn.
- C. Steel Welded-Wire Fabric: ASTM A 185, flat sheets not rolls.
- D. Portland Cement: ASTM C 150, Type I unless otherwise acceptable to Architect.
- E. Fly Ash: ASTM C 618, Type C or F.
- F. Aggregates: ASTM C 33, uniformly graded. For exterior exposed surfaces, do not use aggregates containing spalling causing deleterious surfaces.
- G. Fiber Reinforcement: ASTM C 1116, Type III, synthetic fibers, 1/2 to 1 inch.
- H. Air-Entraining Admixture: ASTM C 260.
- I. Chemical Admixtures: ASTM C 494, water reducing, Type A, and not containing more than 0.1% chloride ions. Calcium chloride not permitted.
- J. Water Stops: Flat dumbbell or center-bulb type, of either rubber (CRD C 513) or PVC (CRD C 572).
- K. Vapor Retarder: Clear 10-mil-thick polyethylene sheet.
- L. Liquid Membrane-Forming Curing Compound: ASTM C 309, clear, Type I, Class B, waterborne.
- M. Liquid Membrane-Forming Curing and Sealing Compound: ASTM C 1315, clear, Type I, Class A, waterborne.
- N. Slip-Resistive Aggregate: Factory-produced, rustproof, nonglazing, fused aluminum-oxide granules or crushed emery, unaffected by freezing, moisture, and cleaning materials.
- O. Mineral Dry-Shake Floor Hardener: Packaged, dry combination of portland cement, graded quartz aggregate, and plasticizing admixture, unpigmented unless otherwise noted.
- P. Joint-Filler Strips: ASTM D 1751, cellulosic fiber, or ASTM D 1752, cork.

**2.2 MIXES**

- A. Proportion normal-weight concrete mixes to provide the following properties:
  1. Compressive Strength: 3000 psi at 28 days.
  2. Slump Limit: 4 inches at point of placement.
  3. Air Content: 5.5 to 7.0 percent for concrete exposed to freezing and thawing, 2 to 4 percent elsewhere.

**PART 3 - EXECUTION**

**3.1 CONCRETING**

- A. Construct formwork and maintain tolerances and surface irregularities within ACI 117 limits of Class A for concrete exposed to view and Class C for other concrete surfaces.
- B. Set water stops where indicated to ensure joint water tightness.
- C. Place vapor retarder on prepared subgrade, with joints lapped 6 inches and sealed.
- D. Accurately position, support, and secure reinforcement.
- E. Install construction, isolation, and contraction joints where indicated. Install full-depth joint-filler strips at isolation joints.
- F. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.
- G. Protect concrete from physical damage, premature drying, and reduced strength due to hot or cold weather during mixing, placing, and curing.
- H. Formed Surface Finish: Smooth-formed finish for concrete exposed to view, coated, or covered by waterproofing or other direct-applied material; rough-formed finish elsewhere.
- I. Slab Finishes: To match existing.
- J. Cure formed surfaces by moist curing for at least seven days.
- K. Begin curing concrete slabs after finishing. Keep concrete continuously moist for at least seven days.
- L. Protect concrete from damage. Repair surface defects in formed concrete and slabs.
- M. Repair slabs not meeting surface tolerances by grinding high areas and by applying a repair underlayment to low areas receiving floor coverings and a repair topping to low areas to remain exposed.

**END OF SECTION 03300**

**DIVISION 5 - METALS**

**SECTION 055213 - PIPE AND TUBE RAILINGS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Steel pipe and tube railings.

**1.2 ACTION SUBMITTALS**

- A. Product Data: For the following:
  - 1. Manufacturer's product lines of mechanically connected railings.
  - 2. Railing brackets.
  - 3. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each type of exposed finish required.
- D. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

**1.3 INFORMATIONAL SUBMITTALS**

- A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. Steel Pipe and Tube Railings: Realiance Steel Corp, Trittech Inc., or approved equal

**2.2 PERFORMANCE REQUIREMENTS**

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design railings, including attachment to building construction.
- B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails and Top Rails of Guards:

- a. Uniform load of 50 lbf/ ft. applied in any direction.
- b. Concentrated load of 200 lbf applied in any direction.
- c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

- a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
- b. Infill load and other loads need not be assumed to act concurrently.

**2.3 METALS, GENERAL**

- A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

**2.4 STEEL AND IRON**

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

- B. Tubing: ASTM A 500 (cold formed).

- C. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.

1. Provide galvanized finish for exterior installations and where indicated.

- D. Plates, Shapes, and Bars: ASTM A 36/A 36M.

- E. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

- F. Expanded Metal: ASTM F 1267, Type I (expanded), Class 1 (uncoated).

1. Style Designation: 1-1/2 number 10.

- G. Woven-Wire Mesh: Intermediate-crimp, [diamond] [square] pattern, 2-inch woven-wire mesh, made from 0.134-inch-diameter wire complying with ASTM A 510.

**2.5 FASTENERS**

- A. General: Provide the following:

1. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/M or Astm F 2329 for zinc coating.

- B. Post-Installed Anchors: Torque-0controlled expansion anchors capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency..

## 2.6 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Low-Emitting Materials: Paints and coatings shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- E. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
- F. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
- G. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

## 2.7 FABRICATION

- A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- B. Form work true to line and level with accurate angles and surfaces.
- C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove flux immediately.
  - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- D. Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.
- E. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- F. Form changes in direction by bending.
- G. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

- H. Close exposed ends of railing members with prefabricated end fittings.
- I. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.
- J. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

## **2.8 STEEL AND IRON FINISHES**

- A. Galvanized Railings:
  - 1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
  - 2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
  - 3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
- B. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION, GENERAL**

- A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
  - 1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
  - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

### **3.2 ANCHORING POSTS**

- A. Use metal sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members.

**3.3 ATTACHING RAILINGS**

- A. Attach railings to concrete steps with embedded steel sleeve. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
  - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.

**3.4 ADJUSTING AND CLEANING**

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.

**END OF SECTION 055213**

**DIVISION 6 - WOOD & PLASTICS****SECTION 06100 - ROUGH CARPENTRY****PART 1 - GENERAL** (Not Applicable)**PART 2 - PRODUCTS****2.1 LUMBER, GENERAL**

- A. Dressed lumber, S4S, 19 percent maximum moisture content for 2-inch thickness or less, marked with grade stamp of inspection agency.
- B. Coordinate with drawings. Most stringent applies.

**2.2 TREATED MATERIALS**

- A. Preservative-Treated Materials: AWWA C2 lumber and AWWA C9 plywood, labeled by an inspection agency approved by ALSC's Board of Review. After treatment, kiln-dry lumber and plywood to 19 and 15 percent moisture content, respectively. Treat indicated items and the following:
  - 1. Wood members in connection with roofing, flashing, vapor barriers, and waterproofing.
  - 2. Concealed members in contact with masonry or concrete.
  - 3. Wood framing members less than 18 inches above grade.
  - 4. Wood floor plates installed over concrete slabs directly in contact with earth.
  - 5. Where required by applicable codes.

**2.3 LUMBER**

- A. Dimension Lumber: The following grades per inspection agency indicated.
  - 1. For light (non-structural) framing provide "Stud" or "Standard" grade lumber for stud framing (2" to 4" thick, 2" to 4" wide, 10' and shorter) and "Standard" grade for other light framing (2" to 4" wide), any species.
  - 2. For structural framing (2" to 4" thick, 5" and wider), provide No. 2 grade HEM Fir (WCLIB or WWPA), factory marked. Fb (minimum extreme fiber stress in bending) = 850 psi. min. E (minimum modulus of elasticity) = 1,300,000 psi, Fv (horizontal shear) = 150 psi min.).
  - 3. Exposed framing (2" to 4" thick 2" and wider) exposed framing scheduled for stain finish shall be species as approved by Architect with the following min. properties Fb (minimum extreme fiber stress in bending)=850 psi, E (minimum modulus of elasticity = 1300,000 psi, Fv (horizontal shear) = 150 psi.
- B. Timbers 5-Inch Nominal Size and Thicker: Provide No. 2 grade HEM Fir (WCLIB or WWPA), factory marked. Fb (minimum extreme fiber stress in bending) = 850 psi. min. E (minimum modulus of elasticity) = 1,300,000 psi, Fv (horizontal shear) = 150 psi. min.
- C. Concealed Boards: 19 percent maximum moisture content: Southern pine: No. 2 per SPIB rules; or any species graded construction boards (WCLIB or WWPA).
- D. 1 X 6 T&G Planks: Hem-fir, select decking, complying with AITC 112, "Standard for Tongue-and-Gove Heavy Timber Roof Decking"
- E. Miscellaneous Lumber: No. 3 or Standard grade of any species for nailers, blocking, and similar

members.

## 2.5 PANEL PRODUCTS

- A. Wood-Based Structural-Use Panels: DOC PS 2. Provide plywood complying with DOC PS 1, where plywood is indicated.
  - 1. Factory mark panels evidencing compliance with grade requirements.
  - 2. Provide panels with span ratings required by support spacing indicated.
  - 3. Wall Sheathing: APA-rated Structural I sheathing, Exposure 1.
  - 4. Roof Sheathing: APA-rated Structural I sheathing, Exterior.
- B. Particle board underlayment: ANSI A208.1, Grade PBU.
- C. Hardboard Underlayment: ANSI/AHA A135.4, Class 4 (Service), S1S; with back side sanded.
- D. Fiberboard Sheathing: ANSI/AHA A194.1, Type IV, Class 1, ½ inch thick.
- E. Gypsum Sheathing Board: ASTM C 79, water-resistant core.
- F. Glass-Fiber-Surfaced Gypsum Sheathing Board: ASTM C 79, water-resistant core, surfaced on face and back with glass-fiber mats with alkali-resistant coating.

## 2.6 MISCELLANEOUS PRODUCTS

- A. Air-Infiltration Barrier: Grade D asphalt saturated felt as specified in Section 04810 and Section 07411.
- B. Fasteners: Size and type indicated. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A 153 or of Type 304 stainless steel.
  - 1. Power-Driven Fasteners: CABO NER-272.
  - 2. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- C. Metal Framing Anchors: Hot-dip galvanized steel of structural capacity, type, and size indicated.
- D. Sill-Sealer: Glass-fiber insulation, 1-inch thick, compressible to 1/32 inch.
- E. Adhesives for Field Gluing Panels to Framing: APA AFG-01.

## **PART 3 - EXECUTION**

### 3.1 INSTALLATION

- A. Fit rough carpentry to other construction; scribe and cope for accurate fit. Correlate location of furring, blocking, and similar supports to allow attachment of other construction.
- B. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. CABO NER-272 for power-driven staples, P-nails, and allied fasteners.
  - 2. Published requirements of metal framing anchor manufacturer.

3. Nailing Schedule as required by Building Code.
- C. Installation of Structural-Use Panels: Comply with applicable recommendations contained in APA Form No. E30 and as follows:
1. Combination Subflooring-Underlayment: Glue and nail to framing.
  2. Subflooring: Glue and nail to framing.
  3. Sheathing: Nail to framing.
  4. Underlayment: Nail or staple to subflooring.
- D. Install decking in lengths for 2-span continuous lay-up. Apply joint sealant between decking and supports and between tongues and grooves at outside wall supports. Nail each course of decking at each support and slant nail each course to the tongue of the adjacent course at 30-in. on centers and within 12-in of the end.

**END OF SECTION 06100**

**DIVISION 6 - WOOD & PLASTICS**

**SECTION 061600 - SHEATHING**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: Model code evaluation reports for preservative-treated plywood.

**PART 2 - PRODUCTS**

**2.1 WOOD PANEL PRODUCTS, GENERAL**

- A. Plywood: DOC PS 1.
- B. Oriented Strand Board: DOC PS 2.

**2.2 TREATED PLYWOOD**

- A. Preservative-Treated Plywood: AWPA C9.
  - 1. Use treatment containing no arsenic or chromium.
  - 2. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- B. Provide preservative treated plywood for items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

**2.3 WALL SHEATHING**

- A. Oriented-Strand-Board Wall Sheathing: Exposure 1, Structural I sheathing.

**2.4 ROOF SHEATHING**

- A. Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing.

**2.5 SUBFLOORING AND UNDERLAYMENT**

- A. Subflooring:
  - 1. Plywood Subflooring: Exterior, Structural I single-floor panels or sheathing.

**2.6 MISCELLANEOUS PRODUCTS**

- A. Fasteners: Size and type indicated.
  - 1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
  - 2. Power-Driven Fasteners: CABO NER-272.
- B. Weather-Resistant Sheathing Paper:

1. Building Paper: ASTM D 226, Type 1 (No. 15 asphalt-saturated organic felt), unperforated.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

A. Securely attach to substrates, complying with the following:

1. CABO NER-272 for power-driven fasteners.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

B. Fastening Methods:

1. Subflooring:
  - a. Glue and nail to wood framing.
2. Wall and Roof Sheathing:
  - a. Nail to wood framing.

**END OF SECTION 061000**

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

**SECTION 07210 - BUILDING INSULATION**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data for each type of insulation product specified.

Surface-Burning Characteristics: ASTM E 84, flame-spread ratings of 75 or less and smoke-developed ratings of 450 or less.

**PART 2 - PRODUCTS**

**2.1 INSULATION PRODUCTS**

- A. General: Provide insulating materials which comply with requirements indicated for materials, compliance with reference standards and other characteristics.
- B. Mineral/Glass Fiber Blanket/Batt Insulation (Walls, Ceilings and Roof): Inorganic (non-asbestos) fiber formed with binders into resilient flexible blankets or semi-rigid batts; FS HH-I-521, Type as indicated, densities of not less than 0.5 lb. per cu. ft. for glass fiber units and not less than 2.5 lb. per cu. ft. for mineral wool units, k-value of 0.27; manufacturer's standard lengths as required to coordinate with spaces to be insulated.

1. Flame Spread Rating; Provide units with ratings of 25 ASTM E 84.
2. Fire Resistance Ratings: Where units are included in rated wall/ceiling/floor construction, provide mineral wool units which have been tested as required for the indicated assembly.
3. Minimum acceptable "R" values for installed insulation shall be as shown on drawings, but not less than:

Slab/Foundation	R-10 (See Drawings)
Walls	R-19
Roof-rigid	See roofing spec. and drawings
Roof-batt	R-38

**2.2 ACCESSORIES**

- A. Vapor Retarder: Polyethylene 6 mill. thick.
- B. Anchor Pins: As recommended by the Insulation Manufacturer of anchoring insulation below roof sheathing.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Install insulation in areas and in thicknesses indicated or required to produce R-values indicated. Cut and fit tightly around obstructions and fill voids with insulation.
- B. Extend vapor retarder, where required, to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage.

**END OF SECTION 07210**

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION****SECTION 07920 - JOINT SEALANTS****PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data and color Samples.

**PART 2 - PRODUCTS****2.1 JOINT SEALANTS**

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- B. Elastomeric Sealants: Comply with ASTM C 920.
1. Single-component, neutral-curing silicone sealant, Type S; Grade NS; Class 25; Uses T, M, and O, with the additional capability to withstand 50 percent movement in both extension and compression for a total of 100 percent movement Use for building expansion joints.
  2. Single-component, nonsag polysulfide sealant, Type S; Grade NS; Class 12-1/2; Uses NT, M, G, A, and O. For general exterior use.
  3. Single-component, neutral-curing silicone sealant, Type S; Grade NS; Class 25; Uses T, NT, M, G, A, and O. For general exterior use.
  4. Single-component, nonsag urethane sealant, Type S; Grade NS; Class 25; and Uses NT, M, A, and O. For general exterior use.
  5. Single-component, nonsag urethane sealant, Type S; Grade NS; Class 25; Uses T, NT, M, G, A, and O. Use for exterior traffic-bearing joints, where slope precludes use of pourable sealant.
  6. Single-component, pourable urethane sealant, Type S; Grade P; Class 25; Uses T, M, G, A, and O. Use for exterior traffic-bearing joints.
  7. Single-component, mildew-resistant silicone sealant, Type S; Grade NS; Class 25; Uses NT, G, A, and O; formulated with fungicide. Use for interior sealant joints in ceramic tile, stone, and other hard surfaces in kitchens and toilet rooms and around plumbing fixtures.
- C. Latex Sealant: Single-component, nonsag, mildew-resistant, paintable, acrylic-emulsion sealant complying with ASTM C 834. For interior use only at perimeters of door and window frames.
- D. Acoustical Sealant for Exposed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834. For interior use only at acoustical assemblies.
- E. Acoustical Sealant for Concealed Joints: Nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound. For interior use only at acoustical assemblies.

**PART 3 - EXECUTION****3.1 INSTALLATION**

- A. Comply with ASTM C 1193.
- B. Comply with ASTM C 919 for use of joint sealants in acoustical applications.

**END OF SECTION 07920**

**DIVISION 7 – THERMAL AND MOISTURE PROTECTION**

**SECTION 076100 - SHEET METAL ROOFING**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data and color Samples.
- B. Comply with SMACNA's "Architectural Sheet Metal Manual" unless otherwise indicated.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. Acceptable Manufacturer: Metal Sales Manufacturing Corporation or approved equal.

**2.2 PRODUCTS**

- A. Pro-Panel II Roofing System:
  - 1. Profile: 36 inch width with a three evenly spaced 5/8 inch high trapezoid ribs at 9 inches on center. Stiffened pans.
  - 2. Seam Type: Overlap.
  - 3. Fastening System: Exposed, direct fastened. Screws as determined by manufacturer for performance requirements. Color shall match panel.
  - 4. Prefinished Galvalume sheet, ASTM A792, 29 gauge (0.014 inches).
  - 5. Finish: Prefinished with manufacturer's MS Colorfast45 System.
  - 6. Color: As selected by Architect / Owner from manufacturer's full range of colors.
- B. Sealant:
  - 1. Pressure sensitive tape sealant, 100 percent solid, with a release paper backing.
  - 2. Manufacturer of metal panel system shall approve all joint sealant used in contact with metal panel system.
- C. Accessories:
  - 1. Provide manufacturer's standard accessories and other items essential to completeness or roof installation, including anchor clips, trim, ridge and hip caps, closures, flashing and fascia.
  - 2. Flashing, trim, metal closure strips, caps, gutters, downspouts and similar metal components shall be not less than the minimum thickness of metal panel system.
  - 3. Exposed metal components shall be finished to match roof panels.
  - 4. Molded closure strips shall be closed-cell or solid-cell synthetic rubber or neoprene, or polyvinyl chloride pre-molded to match configuration of the roof panel and shall not absorb or retain water.
  - 5. Thermal spacer blocks and other thermal barriers at concealed clip fasteners shall be as recommended by the roofing system manufacturer.
  - 6. Roof Penetrations: Premolded EPDM boot with collar.
  - 7. Underlayment: 30 lb, asphalt saturated fiberglass felt, non-perforated.

- D. Sheathing:
1. As Specified in SECTION 061600 – SHEATHING.
  2. Provide roof sheathing at areas of new roof construction.
  3. Exam existing roof sheathing and replace areas that are damaged or deteriorated with same materials as existing.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Comply with metal panel system manufacturer's approved installation drawings, instructions and recommendations. For highest quality installations comply with all applicable codes and standards. Meet or exceed applicable wind resistance standards.
- B. Install underlayment on roof sheathing under sheet metal roofing.
- C. Anchor roofing securely in place, with provisions for thermal and structural movement. Space fasteners as required to resist building code design uplift, but not more than 18 inches o.c.
- D. Install with exposed fasteners.
- E. Separate dissimilar metals with a bituminous coating or polymer-modified, bituminous sheet underlayment.
- F. Install work with lines and corners of exposed units true and accurate. Form exposed faces flat and free of buckles, excessive waves, and avoidable tool marks, considering temper and reflectivity of metal. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant. Fold back sheet metal to form a hem on concealed side of exposed edges unless otherwise indicated.
- G. Install flashing, trim, metal closure strips, caps, gutters, and downspouts as required for a complete installation and as indicated on the Drawings.
- H. Seal joints as required for leak-proof construction.

**END OF SECTION 076100**

**DIVISION 8 - OPENINGS**

**SECTION 081113 - HOLLOW METAL DOORS AND FRAMES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section includes hollow-metal work.

**1.2 DEFINITIONS**

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

**1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
- B. Shop Drawings: Include elevations, door edge details, frame profiles, metal thicknesses, preparations for hardware, and other details.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: For each type of exposed finish required.
- E. Schedule: Prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Product test reports.

**PART 2 - PRODUCTS**

**2.1 EXTERIOR HOLLOW-METAL DOORS AND FRAMES**

- A. Heavy-Duty Doors and Frames: SDI A250.8, Level 2. At locations indicated in the Door and Frame Schedule.
  - 1. Physical Performance: Level B according to SDI A250.4.
  - 2. Doors:
    - a. Type: As indicated in the Door and Frame Schedule.
    - b. Thickness: 1-3/4 inches.
    - c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A40 coating.
    - d. Edge Construction: Model 1, Full Flush.
    - e. Core: Manufacturer's standard insulation material.

3. Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.
4. Exposed Finish: Prime Factory.

## 2.2 FRAME ANCHORS

- A. Jamb Anchors:
  1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
  2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
  3. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.
  4. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch-diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.
- B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:
  1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
  2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

## 2.3 MATERIALS

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- C. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- D. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- E. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
  1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- F. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- G. Power-Actuated Fasteners in Concrete: From corrosion-resistant materials.
- H. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- I. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing).
- J. Retain "Bituminous Coating" Paragraph below if required for grouted frames.

- K. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat.

## 2.4 FABRICATION

- A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Hollow-Metal Doors:
1. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
- C. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
  2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

## 2.5 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
1. Shop Primer: SDI A250.10.
- B. Factory Finish: SDI A250.3.
1. Color and Gloss: White Semi.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Non-Fire-Rated Steel Doors:
    - a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch.
    - b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch.
    - c. At Bottom of Door: 5/8 inch plus or minus 1/32 inch.
    - d. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch.
  2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

### 3.2 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

- B. Remove grout and other bonding material from hollow-metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- E. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

**END OF SECTION 081113**

**DIVISION 8 - OPENINGS**

**SECTION 081416 – 6 PANEL HOLLOW WOOD DOORS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Hollow-core doors with wood-veneer faces.
  - 2. Factory finishing hollow core wood doors.
  - 3. Factory fitting hollow core wood doors to frames and factory machining for hardware.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. ReliaBilt
- B. Masonite
- C. Woodport
- D. Or approved equal

**2.2 RAISED PANEL WOOD DOORS, GENERAL**

- A. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors."
  - 1. Provide AWI Quality Certification Labels indicating that doors comply with requirements of grades specified.
- B. Hollow-Core Doors:
  - 1. Construction: Standard hollow core.

**2.3 DOORS FOR OPAQUE FINISH**

- A. Interior Hollow-Core Doors Sheet A-5:
  - 1. Grade: Premium.
  - 2. Faces: Hardboard or MDF.

**2.4 FABRICATION**

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
  - 1. Comply with NFPA 80 requirements for fire-rated doors.
- B. Factory machine doors for hardware that is not surface applied.

**2.5 SHOP PRIMING**

- A. Doors for Opaque Finish: Shop prime faces, all four edges, edges of cutouts, and mortises with one coat of wood primer specified in Section 09910 "Painting."

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Hardware: See plans schedule.
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
  - 1. Install fire-rated doors according to NFPA 80.
  - 2. Install smoke- and draft-control doors according to NFPA 105.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

**END OF SECTION 081416**

DIVISION 8 - OPENINGS

SECTION 085313 - VINYL WINDOWS

PART 1 - GENERAL

**1.1 SUMMARY**

- A. Section includes vinyl-framed windows.

**1.2 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
- B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Product Schedule: For vinyl windows. Use same designations indicated on Drawings.

**1.3 INFORMATIONAL SUBMITTALS**

- A. Product test reports.
- B. Sample warranties.

**1.4 WARRANTY**

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace vinyl windows that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period:
    - a. Window: Limited Lifetime from date of Substantial Completion.
    - b. Glazing Units: 1years from date of Substantial Completion.

PART 2 - PRODUCTS

**2.1 MANUFACTURERS**

- A. Jeld-Wen Premium Windows

**2.2 WINDOW PERFORMANCE REQUIREMENTS**

- A. Product Standard: AAMA/WDMA/CSA 101/I.S.2/A440.
  - 1. Minimum Performance Class: R.
  - 2. Minimum Performance Grade: As indicated on Drawings.
- B. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of .45 Btu/sq. ft x h x deg F.

- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of .56.

## 2.3 VINYL WINDOWS

- A. Operating Types: As indicated on Drawings.
- B. Frames and Sashes: Impact-resistant, UV-stabilized PVC complying with AAMA/WDMA/CSA 101/I.S.2/A440.
  - 1. Finish: Integral color, white.
  - 2. Gypsum Board Returns: Provide at interior face of frame.
- C. Insulating-Glass Units: ASTM E 2190.
  - 1. Glass: ASTM C 1036, Type 1, Class 1, q3.
    - a. Tint: Clear
    - b. Kind: Fully tempered where indicated on Drawings.
  - 2. Lites: Two.
  - 3. Filling: Fill space between glass lites with air.
  - 4. Low-E Coating: Pyrolytic on second surface.
- D. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.
- E. Hardware, General: Manufacturer's standard corrosion-resistant material sized to accommodate sash weight and dimensions.
  - 1. Exposed Hardware Color and Finish: As indicated by manufacturer's designations.
- F. Hung Window Hardware:
  - 1. Counterbalancing Mechanism: AAMA 902.
  - 2. Locks and Latches: Operated from the inside only.
  - 3. Tilt Hardware: Releasing tilt latch allows sash to pivot about horizontal axis.
- G. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- H. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
  - 1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

## 2.4 INSECT SCREENS

- A. General: Fabricate insect screens to fully integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.
  - 1. Type and Location: Full, outside for double-hung sashes.
- B. Aluminum Frames: Complying with SMA 1004 or SMA 1201.
  - 1. Finish for Exterior Screens: White.

## 2.5 FABRICATION

- A. Fabricate vinyl windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

- B. Glaze vinyl windows in the factory.
- C. Weather strip each operable sash to provide weathertight installation.
- D. Provide mullions and cover plates, compatible with window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units. Provide manufacturer's standard finish to match window units.
- E. Mount hardware through double walls of vinyl extrusions or provide corrosion-resistant reinforcement.
- F. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.
- B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- C. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- D. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
- E. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

**END OF SECTION 085313**

**DIVISION 120000 - FURNISHINGS****SECTION 123530 - RESIDENTIAL CASEWORK****PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data, Shop Drawings, and material Samples. Manufactures warranty minimum five years.
- B. Comply with KCMA A161.1. Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semi-exposed location of each unit.
- C. Comply with KCMA A161.2 for plastic-laminate countertops.
- D. Verify dimensions by field measurements; measure for countertops after base cabinets are installed.

**1.2 RELATED SECTIONS**

- A. Section 224100 – Residential Plumbing Fixtures.
- B. Section 26100 – Wiring Methods.
- C. Section 26140 – Wiring Devices.
- D. Section 12370 – HUD Specifications Aid.

**PART 2 - PRODUCTS****2.1 CASEWORK**

- A. Cabinets:
  - 1. Available Products:
    - a. Debut Cabinetry.
    - b. Kraftmaid Cabinetry
    - c. Or approved equal
  - 2. Face Style: Flush overlay.
  - 3. Cabinet Style: Face Frame.
  - 4. Door and Drawer Fronts: Wood. Flat panels.
  - 5. Face Frame Finish: Wood.
  - 6. Exposed Cabinet End Finish: Wood.
  - 7. Exposed Wood: Oak or Maple
  - 8. Cabinet Shelves: ¾" wood, finish to match cabinet exterior.
  - 9. Semi-exposed Materials: Solid wood or hardwood plywood with Grade C faces per HPVA HP-1.
- B. Plastic-Laminate Countertops and Splashes:
  - 1. Plastic Laminate: NEMA LD 3, Grade HGP through-color plastic laminate.
  - 2. Substrate: Particleboard, ANSI A208.1, Grade M-2 or exterior plywood, PS 1, Grade C-C Plugged, touch sanded. Use exterior plywood at vanities and tops with sinks.
  - 3. Backing: Plastic-laminate backer sheet, NEMA LD 3, Grade BKL.

- C. Solid-Surface-Material Countertops and Splashes: Homogeneous solid sheets of filled plastic resin complying with ISSFA-2, 1/4 inch (6.4 mm) thick, laminated to 3/4-inch- (19-mm-) thick particleboard.
  - 1. Available Products: As approved by Owner.
- D. Solid-Surface-Material Integral Sink Bowls: Comply with ISSFA-2 and ANSI Z124.3, Type 5 or Type 6, without a precoated finish.
- E. Countertop Configuration:
  - 1. Front Style: Rolled Self-edge.
  - 2. Cove Type: Postformed laminate supported at junction of top and backsplash by wood-cove molding.
  - 3. Backsplash: Curved
  - 4. End Splash: Curved.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Install cabinets with no variations in flushness of adjoining surfaces by using concealed shims. Where casework abuts other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.
- B. Install cabinets without distortion so doors and drawers fit openings properly and are aligned.
- C. Install level and plumb to a tolerance of 1/8 inch in 8 feet (3.2 mm in 2.4 m).
- D. Fasten each cabinet to adjacent unit and to structural members of wall construction. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches (600 mm) o.c.
- E. Fasten plastic-laminate countertops by screwing through corner blocks in base units into underside of countertop. Spline and glue joints in countertops and use concealed mechanical clamps.
- F. Fasten solid-surface countertops by screwing through corner blocks in base units into underside of countertop. Align adjacent surfaces. Form seams 1/8 inch (3.2 mm) wide and adhere with manufacturer's recommended joint adhesive in color to match countertop. Dress joints smooth, remove surface scratches, and clean entire surface.

END OF SECTION 123530

**SECTION 22 1005  
PLUMBING PIPING**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Pipe, pipe fittings, valves, and connections for piping systems.
  - 1. Sanitary sewer.
  - 2. Domestic water.
  - 3. Gas.

**1.02 RELATED REQUIREMENTS**

- A. Section 31 2316 - Excavation.
- B. Section 31 2323 - Fill.
- C. Section 22 0719 - Plumbing Piping Insulation.
- D. Section 22 0516 - Expansion Fittings and Loops for Plumbing Piping.

**1.03 REFERENCE STANDARDS**

- A. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2012 (ANSI B16.18).
- B. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2013.
- C. ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings - DWV; The American Society of Mechanical Engineers; 2011.
- D. ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes; The American Society of Mechanical Engineers; 2011.
- E. ASME B31.2 - Fuel Gas Piping; The American Society of Mechanical Engineers; 1968.
- F. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.
- G. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2011a.
- H. ASTM B32 - Standard Specification for Solder Metal; 2008.
- I. ASTM B42 - Standard Specification for Seamless Copper Pipe, Standard Sizes; 2010.
- J. ASTM B68/B68M - Standard Specification for Seamless Copper Tube, Bright Annealed; 2011.
- K. ASTM B75/B75M - Standard Specification for Seamless Copper Tube; 2011.
- L. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2009.
- M. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings; 2004 (Reapproved 2011).
- N. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2012.
- O. ASTM D2661 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings; 2011.
- P. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2011.
- Q. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings; 2005.
- R. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings; 1996 (Reapproved 2010).

- S. ASTM F628 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core; 2012.
- T. ASTM F876 - Standard Specification for Crosslinked Polyethylene (PEX) Tubing; 2013a.
- U. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems; 2011.

#### **1.04 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.

#### **1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with applicable codes.
- B. Valves: Manufacturer's name and pressure rating marked on valve body.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. 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 SANITARY SEWER PIPING, ABOVE GRADE**

- A. ABS Pipe: ASTM D2751 or ASTM F628.
  - 1. Fittings: ABS.
  - 2. Joints: Solvent welded with ASTM D2235 cement.
- B. PVC Pipe: ASTM D2729.
  - 1. Fittings: PVC.
  - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

#### **2.02 WATER PIPING, ABOVE GRADE**

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
  - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
  - 2. Joints: ASTM B32, alloy Sn95 solder.
- B. Cross-Linked Polyethylene Pipe: ASTM F876 or ASTM F877.
  - 1. Manufacturers:
    - a. Zurn Industries, Inc: [www.zurn.com](http://www.zurn.com).
    - b. Viega LLC: [www.viega.com](http://www.viega.com).
    - c. Or equal performance..
  - 2. Fittings: Brass and copper.
  - 3. Joints: Mechanical compression fittings.

#### **2.03 NATURAL GAS PIPING, ABOVE GRADE**

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
  - 1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, wrought steel welding type.
  - 2. Joints: NFPA 54, threaded or welded to ASME B31.1.

#### **2.04 FLANGES, UNIONS, AND COUPLINGS**

- A. Unions for Pipe Sizes 3 Inches and Under:
  - 1. Ferrous pipe: Class 150 malleable iron threaded unions.
  - 2. Copper tube and pipe: Class 150 bronze unions with soldered joints.
- B. Flanges for Pipe Size Over 1 Inch:
  - 1. Ferrous pipe: Class 150 malleable iron threaded or forged steel slip-on flanges; preformed neoprene gaskets.
  - 2. Copper tube and pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.

- C. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

#### **2.05 GATE VALVES**

A. Manufacturers:

1. Conbraco Industries; Model \_\_\_\_\_: [www.apollovalves.com](http://www.apollovalves.com).
2. Nibco, Inc; Model \_\_\_\_\_: [www.nibco.com](http://www.nibco.com).
3. Milwaukee Valve Company; Model \_\_\_\_\_: [www.milwaukeevalve.com](http://www.milwaukeevalve.com).
4. Or equal performance.

#### **2.06 GLOBE VALVES**

A. Manufacturers:

1. Conbraco Industries: [www.apollovalves.com](http://www.apollovalves.com).
2. Nibco, Inc: [www.nibco.com](http://www.nibco.com).
3. Milwaukee Valve Company: [www.milwaukeevalve.com](http://www.milwaukeevalve.com).
4. Or equal performance.

#### **2.07 BALL VALVES**

A. Manufacturers:

1. Conbraco Industries: [www.apollovalves.com](http://www.apollovalves.com).
2. Grinnell Mechanical Products, a Tyco International Company: [www.grinnell.com](http://www.grinnell.com).
3. Nibco, Inc: [www.nibco.com](http://www.nibco.com).
4. Milwaukee Valve Company: [www.milwaukeevalve.com](http://www.milwaukeevalve.com).
5. Or equal performance.

#### **2.08 PLUG VALVES**

A. Manufacturers:

1. Conbraco Industries:.
2. Grinnell Mechanical Products:.
3. Nibco, Inc:.
4. Milwaukee Valve Company:
5. Or equal performance.

### **PART 3 EXECUTION**

#### **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. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 22 0516.
- E. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.

**END OF SECTION**

**SECTION 22 0500  
BASIC PLUMBING MATERIALS AND METHODS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
1. Plumbing Basic Requirements specifically applicable to Divisions 21, 22, and 23 in addition to the requirements of Division 1 - General Requirements and the General Conditions of the Contract.
  2. Electric motors.
  3. Plumbing Identification.
  4. Sleeves
  5. Plumbing sleeve seals.
  6. Altitude rating.

**1.02 RELATED SECTIONS**

- A. Work described in this section is related to other work described in Divisions 21, 22, 23, 27, and 28 and may be related to work in other Divisions concerning structure or appearances. Review and become familiar with work required in other Sections in this Division and with work required in the other Divisions. Coordinate with other subcontractor(s) to assure that all issues arising between related Sections are resolved.
- B. Bring to the attention of the Engineer prior to the cutoff date for Addenda, any and all discrepancies in related work. Submission of a bid or proposal indicates that all costs for this work and related work are included in the bid for this work or within the bid or proposal for the related work.

**1.03 SYSTEM DESCRIPTION**

- A. Provide complete and fully operational systems with facilities and services to meet requirements indicated and in accordance with applicable codes and ordinances.

**1.04 REGULATORY REQUIREMENTS**

- A. All Plumbing work shall be performed in strict accordance with the New Mexico Building Codes, IBC, UPC, UMC, NFPA, National Gas Code, Model Energy Code, and all applicable provisions of the local authorities having jurisdiction. All materials and labor necessary to comply with rules, regulations, and ordinances shall be provided. Where the drawings and/or specifications indicate material or construction in excess of code requirements or visa-versa, the more stringent application shall govern.

**1.05 SUBMITTALS**

- A. Submit all data as a single package, as the Engineer will commence review only when all data has been received.
- B. Submittal form to identify project, contractor, sub-contractor, supplier, and pertinent contract document references.
- C. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents.
- D. The Contractor shall determine and verify field measurements and field construction criteria for conformance with drawings and specifications and for conflicts with other items of construction, past or present. He shall coordinate each submittal with the requirements of the work and of the contract documents and notify the Engineer in writing, at the time of the submission, of any and all deviations in the submittals from requirements of the work and contract documents.
1. No fabrication or work, which requires submittals, shall begin until submittals are returned with the Engineer's approval.

- E. Identify variations for contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- F. Engineer's review does not constitute acceptance or responsibility for accuracy or dimensions, nor shall it relieve the Contractor from meeting any requirements of the work and contract documents, nor shall it constitute approval for any deviation from the contract documents, unless such deviations are specifically stated as such on the submittal and specifically allowed by the Engineer by specific written notification for each such variation. The Engineer's review will not relieve the Contractor from responsibility for errors or omissions in the shop drawings.
- G. Revise and resubmit submittals as required. Identify all changes made since previous submittal.

#### **1.06 SUBSTITUTIONS**

- A. Prior approval of materials and equipment will not be considered. Contract documents indicate specified equipment and acceptable alternatives. Any other equipment/material proposed must meet or exceed that specified. Equipment/material will be reviewed for compliance during submittal review process per Paragraph 1.5.
- B. Engineer will consider requests for substitutions only at submittal review. Clearly identify substitution.
- C. Document each request with complete data substantiating compliance of proposed substitution with contract documents.
- D. A request for substitution constitutes a representation that the Contractor:
  - 1. Has investigated the proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other work, which may be required for the work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extensions which may, subsequently, become apparent.
  - 5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. In accordance with the requirements of Division 1.

### **PART 2 PRODUCTS**

#### **2.01 PLUMBING SLEEVE SEALS**

- A. Modular Plumbing type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

#### **2.02 ALTITUDE RATINGS**

- A. Unless otherwise noted, all specified equipment capacities, air quantities, etc., are for the altitude of the job site, as scheduled on the drawings, and adjustments to manufacturer's ratings must be made accordingly.

#### **2.03 ACCESS PANELS**

- A. Install wall and ceiling access panels for access to valves and water hammer arrestors in plumbing walls or above hard ceiling. Coordinate location with architect.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION - IDENTIFICATION**

- A. Install materials in accordance with manufacturer's instructions.
- B. Degrease and clean surfaces to receive adhesive for identification materials.
- C. Install plastic nameplates with adhesive.

- D. Install plastic tags with corrosion-resistant metal chain.
- E. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.
- F. Label piping at all changes in direction and at a minimum of every 20 feet of straight runs of pipe.
- G. Record actual location of valves on Project Record Documents.

### **3.02 INSTALLATION - CONDENSATE AND OVERFLOW DRAINS**

- A. Install condensate and overflow drain piping from all mechanical equipment drain points. Extend and terminate per UPC/UMC.

### **3.03 INSTALLATION - SLEEVES**

- A. Verify openings are ready to receive sleeves.
- B. Exterior watertight entries: Seal with Plumbing sleeve seals.
- C. Set sleeves in position in forms. Provide reinforcing around sleeves.
- D. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- E. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- F. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with firestopping insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- G. Install chrome plated steel or, if allowed by the authority having jurisdiction, plastic escutcheons at finished surfaces.

### **3.04 EXISTING SERVICES**

- A. The Contractor shall carefully examine the drawings and specifications, visit the site of the work, be fully informed as to all existing conditions, dimensions, and limitations before starting work.
- B. If existing active or non-active services, which are not shown on plans, are encountered which require relocation or disconnection, the Contractor shall notify the Engineer for a decision on proper handling of these services. The Contractor shall not proceed with the work until so authorized.

### **3.05 EXCAVATION AND BACKFILL OF TRENCHES**

- A. All excavation, trenching, and backfilling, as required for the Plumbing installation, shall be provided by the Contractor.
- B. All piping laid in trenches shall be bedded evenly and firmly. The trench bed shall consist of undisturbed native soil or shall be compacted to an equally firm bedding. Recesses shall be formed below the trench bed to receive the flange or hub off each section of pipe or fitting.
- C. Where firm bedding is not obtainable, sand or gravel fill, compacted with water or low strength concrete fill around the bottom half of the pipe, shall be used.
- D. Backfill all trenches as soon as possible after inspection. Spread backfill in layers, not to exceed 8 inches, and compact each layer to ninety-five percent (95%) of maximum density based on Modified Proctor Density, in such areas as streets, driveways, alleys, or walks to prevent settling. Backfill shall be neither excessively wet or dry. Puddling or flooding shall not be used, except in sand or gravel-bearing soil, and as specifically approved. Street cuts shall be made 8 inches wider than required trenches and shall be repaired to match the finish surface of the street and be flush with existing grades.
- E. Use plastic underground pipe markers for all buried piping.

### **3.06 PAINTING**

- A. Surfaces of all equipment and material shall be thoroughly cleaned and left ready for painting.

- B. Painting shall be performed according to other specifications in these contract documents.

**3.07 ELECTRICAL WIRING AND CONTROL EQUIPMENT**

- A. All motor starters, disconnects overload protection equipment, and low voltage control equipment and wiring specified under this Division will be the responsibility of this Contractor. Installation of line voltage components and wiring specified under this Division will be the responsibility of the electrical contractor. Purchase and installation of low voltage components and wiring specified under this Division will be this Contractor's responsibility.
- B. The Plumbing contractor must coordinate with the electrical contractor on the division of responsibility pertaining to the purchase and installation of electrical control components. Any changes or additions required due to the specific nature of equipment furnished shall be the complete responsibility of the Contractor furnishing the equipment.
- C. All electrical work performed under this Division will be in compliance with the NEC and all applicable city and state ordinances. All controllers furnished with Plumbing equipment shall have overload protection on all phases.
- D. The Plumbing contractor must coordinate with the electrical contractor to ensure that all required components of control work are included and fully understood. No additional costs shall accrue to the Owner as a result of lack of such coordination.

**3.08 SUBSTANTIAL COMPLETION AND FINAL INSPECTION REQUIREMENTS**

- A. Before substantial completion can be granted, the following items must be completed and submitted to the Owner/Engineer:
  - 1. An approved Test and Balance Report.
  - 2. Operation test demonstrating proper operation of all equipment.
  - 3. Control diagrams, wiring diagrams, control sequences, and engineering data on components.
- B. Prior to the final inspection or consideration of final payment, the Contractor shall:
  - 1. Provide copies of permits, operating permits, and/or inspection certificates.
  - 2. Provide a check-out report.
- C. Provide operating and maintenance manual(s).
  - 1. Provide record as-built drawings.
  - 2. Return keys to the Owner.
  - 3. Deliver all spare parts.
  - 4. Touch up any damaged finishes.
  - 5. Provide a copy of attendance roster for equipment training sessions.
  - 6. Provide all warranty certificates and documentation.

**END OF SECTION**

**SECTION 22 3000  
PLUMBING EQUIPMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Water heaters.

**1.02 REFERENCE STANDARDS**

- A. ANSI Z21.10.1 - Gas Water Heaters - Volume I - Storage Water Heaters with Input Ratings of 75,000 Btu per Hour or Less; 2011.
- B. ANSI Z21.10.3 - Gas Water Heaters - Volume III - Storage Water Heaters with Input Ratings Above 75,000 Btu per Hour, Circulating and Instantaneous Water Heaters; 2011.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittals procedures.
- B. Product Data:
  - 1. Provide dimension drawings of water heaters indicating components and connections to other equipment and piping.

**1.04 CERTIFICATIONS**

- A. Water Heaters: NSF approved.
- B. Gas Water Heaters: Certified by CSA International to ANSI Z21.10.1 or ANSI Z21.10.3, as applicable, in addition to requirements specified elsewhere.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

**PART 2 PRODUCTS**

**2.01 WATER HEATER MANUFACTURERS**

- A. A.O. Smith Water Products Co: [www.hotwater.com](http://www.hotwater.com).
- B. Rheem Manufacturing Company: [www.rheem.com](http://www.rheem.com).
- C. Or equal performance.

**2.02 RESIDENTIAL GAS FIRED WATER HEATERS**

- A. Type: Automatic, natural gas-fired, vertical storage.
- B. Performance:
  - 1. Storage Capacity: 40 gal.
  - 2. Input: 40,000 Btuh.
  - 3. Minimum recovery rate: 38.5 gph with 100 degrees F temperature rise.
  - 4. Maximum working pressure: 150 psig.
- C. Tank: Glass lined welded steel with single flue passage, flue baffle and draft hood; thermally insulated and encased in corrosion-resistant steel jacket; baked-on enamel finish; floor shield and legs.
  - 1. Insulation: Glass fiber.
- D. Controls: Automatic water thermostat and built-in gas pressure regulator; temperature range adjustable from 120 to 170 degrees F, cast iron or sheet metal burner, safety pilot and thermocouple.
- E. Accessories: Provide:
  - 1. Water Connections: Brass.
  - 2. Dip Tube: Brass.
  - 3. Drain Valve.
  - 4. Anode: Magnesium.
  - 5. Temperature and Pressure Relief Valve: ASME labelled.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related fuel piping work to achieve operating system.

**END OF SECTION**

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PLUMBING EQUIPMENT

**SECTION 22 4000  
PLUMBING FIXTURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Water closets.
- B. Lavatories.
- C. Sinks.
- D. Bathtubs.
- E. Showers.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 9005 - Joint Sealers: Seal fixtures to walls and floors.
- B. Section 22 1005 - Plumbing Piping.
- C. Section 22 3000 - Plumbing Equipment.

**1.03 REFERENCE STANDARDS**

- A. ANSI Z124.1.2 - American National Standard for Plastic Bathtub and Shower Units; 2005.
- B. ASME A112.18.1 - Plumbing Supply Fittings; The American Society of Mechanical Engineers; 2012.
- C. ASME A112.19.2 - Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals; The American Society of Mechanical Engineers; 2013.
- D. ASME A112.19.3 - Stainless Steel Plumbing Fixtures (Designed for Residential Use); The American Society of Mechanical Engineers; 2008.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Accept fixtures on site in factory packaging. Inspect for damage.
- B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

**PART 2 PRODUCTS**

**2.01 TANK TYPE WATER CLOSETS**

- A. Tank Type Water Closet Manufacturers:
  - 1. Glacier Bay
  - 2. American Standard, Inc: [www.americanstandard-us.com](http://www.americanstandard-us.com).
  - 3. Kohler Company: [www.kohler.com](http://www.kohler.com).
  - 4. Or equal performance..
- B. Bowl: ASME A112.19.2; floor mounted, vitreous china reverse trap, close-coupled closet combination with regular rim, insulated vitreous china closet tank with fittings and lever flushing valve, bolt caps.
  - 1. Water Consumption: Maximum 1.6 gallon per flush.
- C. Seat: Solid white plastic, closed front, brass bolts, with cover.

**2.02 LAVATORIES**

- A. Lavatory Manufacturers:
  - 1. American Standard, Inc: [www.americanstandard-us.com](http://www.americanstandard-us.com).
  - 2. Kohler Company; Model \_\_\_\_\_: [www.kohler.com](http://www.kohler.com).

3. Or equal performance.
- B. Vitreous China Wall Hung Basin: ASME A112.19.2; vitreous china wall hung lavatory, \_\_\_\_\_, with 4 inch high back, rectangular basin with splash lip, front overflow, and soap depression.
  1. Drilling Centers: 4 inch.
- C. Supply Faucet: ASME A112.18.1; chrome plated combination supply fitting with pop-up waste, water economy aerator with maximum flow of 2.2 gallons per minute, indexed handles.

### 2.03 SINKS

- A. Sink Manufacturers:
  1. Sterling
  2. Elkay
  3. American Standard, Inc: [www.americanstandard-us.com](http://www.americanstandard-us.com).
  4. Or equal performance..
- B. Double Compartment Bowl: ASME A112.19.3; 33 by 33 by 33 inch outside dimensions 20 gage thick, Type 302 stainless steel, self rimming and undercoated, with ledge back drilled for trim.
  1. Drain: 1-1/2 inch chromed brass drain.

### 2.04 BATHTUBS

- A. Bathtub Manufacturers:
  1. Sterling
  2. American Standard, Inc: [www.americanstandard-us.com](http://www.americanstandard-us.com).
  3. Kohler Company: [www.kohler.com](http://www.kohler.com).
  4. Or equal performance
- B. Bathtub:
  1. ANSI Z124.1.2; molded glass fiber reinforced polyester, with slip-resistant bottom surface, contoured shape, color as selected.
  2. Length: 60 inches.
  3. Width: 30 inches.
- C. Bath and Shower Trim: ASME A112.18.1; concealed shower and over rim supply with diverter spout, indexed handles, bent shower arm with adjustable spray ball joint showerhead with maximum 2.5 gallons per minute flow and escutcheon, lever operated pop-up waste and overflow.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- B. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

### 3.02 PREPARATION

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

### 3.03 INSTALLATION

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Provide chrome plated rigid or flexible supplies to fixtures with loose key stops, reducers, and escutcheons.
- C. Install components level and plumb.
- D. Install and secure fixtures in place with wall supports and bolts.
- E. Seal fixtures to wall and floor surfaces with sealant as specified in Section 07 9005, color to match fixture.
- F. Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.

**3.04 ADJUSTING**

- A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

**3.05 CLEANING**

- A. Clean plumbing fixtures and equipment.

**3.06 PROTECTION**

- A. Protect installed products from damage due to subsequent construction operations.
- B. Do not permit use of fixtures by construction personnel.
- C. Repair or replace damaged products before Date of Substantial Completion.

**END OF SECTION**

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PLUMBING FIXTURES

**SECTION 23 0500**  
**BASIC MECHANICAL MATERIALS AND METHODS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
1. Mechanical Basic Requirements specifically applicable to Divisions 21, 22, and 23 in addition to the requirements of Division 1 - General Requirements and the General Conditions of the Contract.
  2. Electric motors.
  3. Mechanical Identification.
  4. Sleeves
  5. Mechanical sleeve seals.
  6. Altitude rating.

**1.02 RELATED SECTIONS**

- A. Work described in this section is related to other work described in Divisions 21, 22, 23, 27, and 28 and may be related to work in other Divisions concerning structure or appearances. Review and become familiar with work required in other Sections in this Division and with work required in the other Divisions. Coordinate with other subcontractor(s) to assure that all issues arising between related Sections are resolved.
- B. Bring to the attention of the Engineer prior to the cutoff date for Addenda, any and all discrepancies in related work. Submission of a bid or proposal indicates that all costs for this work and related work are included in the bid for this work or within the bid or proposal for the related work.

**1.03 SYSTEM DESCRIPTION**

- A. Provide complete and fully operational systems with facilities and services to meet requirements indicated and in accordance with applicable codes and ordinances.

**1.04 REGULATORY REQUIREMENTS**

- A. All mechanical work shall be performed in strict accordance with the New Mexico Building Codes, IBC, UPC, UMC, NFPA, National Gas Code, Model Energy Code, and all applicable provisions of the local authorities having jurisdiction. All materials and labor necessary to comply with rules, regulations, and ordinances shall be provided. Where the drawings and/or specifications indicate material or construction in excess of code requirements or visa-versa, the more stringent application shall govern.

**1.05 SUBMITTALS**

- A. Submit all data as a single package, as the Engineer will commence review only when all data has been received.
- B. Submittal form to identify project, contractor, sub-contractor, supplier, and pertinent contract document references.
- C. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents.
- D. The Contractor shall determine and verify field measurements and field construction criteria for conformance with drawings and specifications and for conflicts with other items of construction, past or present. He shall coordinate each submittal with the requirements of the work and of the contract documents and notify the Engineer in writing, at the time of the submission, of any and all deviations in the submittals from requirements of the work and contract documents.
1. No fabrication or work, which requires submittals, shall begin until submittals are returned with the Engineer's approval.

- E. Identify variations for contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- F. Engineer's review does not constitute acceptance or responsibility for accuracy or dimensions, nor shall it relieve the Contractor from meeting any requirements of the work and contract documents, nor shall it constitute approval for any deviation from the contract documents, unless such deviations are specifically stated as such on the submittal and specifically allowed by the Engineer by specific written notification for each such variation. The Engineer's review will not relieve the Contractor from responsibility for errors or omissions in the shop drawings.
- G. Revise and resubmit submittals as required. Identify all changes made since previous submittal.

#### **1.06 SUBSTITUTIONS**

- A. Prior approval of materials and equipment will not be considered. Contract documents indicate specified equipment and acceptable alternatives. Any other equipment/material proposed must meet or exceed that specified. Equipment/material will be reviewed for compliance during submittal review process per Paragraph 1.5.
- B. Engineer will consider requests for substitutions only at submittal review. Clearly identify substitution.
- C. Document each request with complete data substantiating compliance of proposed substitution with contract documents.
- D. A request for substitution constitutes a representation that the Contractor:
  - 1. Has investigated the proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other work, which may be required for the work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extensions which may, subsequently, become apparent.
  - 5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. In accordance with the requirements of Division 1.

### **PART 2 PRODUCTS**

#### **2.01 ELECTRIC MOTORS**

- A. Motors shall be of sufficient size for the duty to be performed and shall not exceed their full-rated load when the driven equipment is operating at specified capacity under the most severe conditions likely to be encountered.
- B. Each motor shall be of the horsepower specified and suitable for operation at the elevation of the job site as scheduled on the drawings.
- C. Motors shall conform to NEMA standards, applicable to IEEE Standards and ASA C50 Standards, and shall be suitable for direct coupling mounting or V-belt mounting in accordance with the drawings.
- D. Motors controlled by variable frequency drives/adjustable frequency drives, "VFD/AFD", shall be rated for use on "VFD/AFD" controllers.

#### **2.02 MECHANICAL IDENTIFICATION**

- A. Equipment Nameplates: Laminated three-layer plastic with engraved black letters on light background color.
- B. Valve Tags: Laminated three-layer plastic with engraved black letters on light background color, minimum 1-1/2 inches diameter.
- C. Piping:
  - 1. Conform to ASME A13.1.

2. Minimum information indicating flow direction arrow and identification of fluid being conveyed.
3. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener.
4. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.
5. Plastic Underground Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4 mil thick, manufactured for direct burial service.

### **2.03 SLEEVES**

- A. Sleeves for pipes through non-fire rated floors: 18 gage thick galvanized steel.
- B. Sleeves for pipes through non-fire rated beams, walls, footings, and potentially wet floors: steel pipe or 18 gage thick galvanized steel.
- C. Sleeves for round ductwork: galvanized steel.
- D. Sleeves for rectangular ductwork: galvanized steel or wood.
- E. Sealant: acrylic

### **2.04 MECHANICAL SLEEVE SEALS**

- A. Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

### **2.05 ALTITUDE RATINGS**

- A. Unless otherwise noted, all specified equipment capacities, air quantities, etc., are for the altitude of the job site, as scheduled on the drawings, and adjustments to manufacturer's ratings must be made accordingly.

### **2.06 ACCESS PANELS**

- A. Install wall and ceiling access panels for access to hidden mechanical equipment in walls or above hard ceiling. Coordinate location with architect.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION - IDENTIFICATION**

- A. Install materials in accordance with manufacturer's instructions.
- B. Degrease and clean surfaces to receive adhesive for identification materials.
- C. Install plastic nameplates with adhesive.
- D. Install plastic tags with corrosion-resistant metal chain.
- E. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.
- F. Label piping at all changes in direction and at a minimum of every 20 feet of straight runs of pipe.
- G. Record actual location of valves on Project Record Documents.

### **3.02 INSTALLATION - CONDENSATE AND OVERFLOW DRAINS**

- A. Install condensate and overflow drain piping from all mechanical equipment drain points. Extend and terminate per UPC/UMC.

### **3.03 INSTALLATION - SLEEVES**

- A. Verify openings are ready to receive sleeves.
- B. Exterior watertight entries: Seal with mechanical sleeve seals.
- C. Set sleeves in position in forms. Provide reinforcing around sleeves.

- D. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- E. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- F. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with firestopping insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- G. Install chrome plated steel or, if allowed by the authority having jurisdiction, plastic escutcheons at finished surfaces.

#### **3.04 EXISTING SERVICES**

- A. The Contractor shall carefully examine the drawings and specifications, visit the site of the work, be fully informed as to all existing conditions, dimensions, and limitations before starting work.
- B. If existing active or non-active services, which are not shown on plans, are encountered which require relocation or disconnection, the Contractor shall notify the Engineer for a decision on proper handling of these services. The Contractor shall not proceed with the work until so authorized.

#### **3.05 EXCAVATION AND BACKFILL OF TRENCHES**

- A. All excavation, trenching, and backfilling, as required for the mechanical installation, shall be provided by the Contractor.
- B. All piping laid in trenches shall be bedded evenly and firmly. The trench bed shall consist of undisturbed native soil or shall be compacted to an equally firm bedding. Recesses shall be formed below the trench bed to receive the flange or hub of each section of pipe or fitting.
- C. Where firm bedding is not obtainable, sand or gravel fill, compacted with water or low strength concrete fill around the bottom half of the pipe, shall be used.
- D. Backfill all trenches as soon as possible after inspection. Spread backfill in layers, not to exceed 8 inches, and compact each layer to ninety-five percent (95%) of maximum density based on Modified Proctor Density, in such areas as streets, driveways, alleys, or walks to prevent settling. Backfill shall be neither excessively wet or dry. Puddling or flooding shall not be used, except in sand or gravel-bearing soil, and as specifically approved. Street cuts shall be made 8 inches wider than required trenches and shall be repaired to match the finish surface of the street and be flush with existing grades.
- E. Use plastic underground pipe markers for all buried piping.

#### **3.06 PAINTING**

- A. Surfaces of all equipment and material shall be thoroughly cleaned and left ready for painting.
- B. Painting shall be performed according to other specifications in these contract documents.

#### **3.07 ELECTRICAL WIRING AND CONTROL EQUIPMENT**

- A. All motor starters, disconnects overload protection equipment, and low voltage control equipment and wiring specified under this Division will be the responsibility of this Contractor. Installation of line voltage components and wiring specified under this Division will be the responsibility of the electrical contractor. Purchase and installation of low voltage components and wiring specified under this Division will be this Contractor's responsibility.
- B. The mechanical contractor must coordinate with the electrical contractor on the division of responsibility pertaining to the purchase and installation of electrical control components. Any changes or additions required due to the specific nature of equipment furnished shall be the complete responsibility of the Contractor furnishing the equipment.
- C. All electrical work performed under this Division will be in compliance with the NEC and all applicable city and state ordinances. All controllers furnished with mechanical equipment shall have overload protection on all phases.

- D. The mechanical contractor must coordinate with the electrical contractor to ensure that all required components of control work are included and fully understood. No additional costs shall accrue to the Owner as a result of lack of such coordination.

**3.08 SUBSTANTIAL COMPLETION AND FINAL INSPECTION REQUIREMENTS**

- A. Before substantial completion can be granted, the following items must be completed and submitted to the Owner/Engineer:
  - 1. An approved Test and Balance Report.
  - 2. Operation test demonstrating proper operation of all equipment.
  - 3. Control diagrams, wiring diagrams, control sequences, and engineering data on components.
- B. Prior to the final inspection or consideration of final payment, the Contractor shall:
  - 1. Provide copies of permits, operating permits, and/or inspection certificates.
  - 2. Provide a check-out report.
- C. Provide operating and maintenance manual(s).
  - 1. Provide record as-built drawings.
  - 2. Return keys to the Owner.
  - 3. Deliver all spare parts.
  - 4. Touch up any damaged finishes.
  - 5. Provide a copy of attendance roster for equipment training sessions.
  - 6. Provide all warranty certificates and documentation.

**END OF SECTION**

**SECTION 23 0700  
MECHANICAL INSULATION**

**PART 1 GENERAL****1.01 GENERAL**

- A. This specification section defines the minimum quality, labor and supervision, tools and equipment, methods and procedures, materials, and assemblies for furnishing, fabricating, assembling, and installing complete permanently-installed, commercial insulation systems as shown on the drawings, design data sheets, lists and schedules, and other instructions included in these technical specifications.
- B. Modifications, alterations, exceptions, or additions to these specifications shall be as detailed on the mechanical drawing(s), in special instructions, or published in numbered addenda described in these specifications. Changes to the work shall be made only by change order procedure as described in these specifications.
- C. By submission of bid, Contractor assures the Owner/Engineer that he/she fully understands the work and has included all items and costs for a complete system as described above.

**1.02 DESIGN CRITERIA**

- A. The Contractor shall review and consider the project design criteria in the selection of materials and accessories in the insulation system.

**1.03 DEFINITIONS**

- A. Insulation terminology within this specification shall be that included in the "Glossary" of MICA.

**1.04 SUBMITTALS**

- A. Procedures for submittals: See Section 23 0500.
- B. Insulation Schedule: Product Data — Submit product description, list of materials and thickness for each service or equipment scheduled and locations.
- C. Manufacturer's Installation Instructions: Submit manufacturer's installation instructions for each product type.
- D. Samples: If insulation schedule submitted outlining the method of the installation and the material to be used is in compliance with this specification, submission of samples or data is not required. If the Contractor proposes material or methods not exactly as specified, but is intended to be of equal or higher quality and performance, then catalog data sheets, samples, and other supporting information shall be submitted.

**1.05 CLARITY OF INFORMATION**

- A. It shall be noted that the drawings, specifications, and standards are complementary to each other, meaning that what is called for in one is called for in all. Where conflicts occur between drawings, specifications, and standards, specifications shall govern.

**1.06 SCOPE OF WORK**

- A. Installation shall mean, but is not limited to, purchasing, receiving, transporting, storing, fabricating, applying, inspecting, and proving complete insulation systems in accordance with MICA national standards, addenda, and those technical specifications for the individual insulation systems under the contract.

**1.07 EQUIPMENT**

- A. Contractor shall provide all tools, ladders, staging, platforms, scaffolding, and other devices required for a complete installation of the complete insulation systems, and shall maintain these items in a safe and operating condition.

**1.08 ENVIRONMENTAL REQUIREMENTS**

- 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 twenty-four (24) hours. Monitoring will be required at intervals and tolerances recommended by manufacturer. Materials exposed to conditions outside manufacturer's recommendations will be subject to reinstallation.

### **1.09 QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience and with service facilities within 100 miles of Project.
- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience, approved by manufacturer.

## **PART 2 PRODUCTS**

### **2.01 GENERAL**

- A. Materials furnished under this specification shall be standard, cataloged products, new and commercially available, suitable for service, requiring high performance and reliability with low maintenance, and free of all defects.
- B. Materials include, but are not limited to, insulation materials, accessories (staples, bands, mesh, wire, clips, pins, tape, anchors, corner angles, and similar recommended accessories), and compounds (cements, adhesives, coatings, sealers, protective finishes, and similar other recommended items for the systems).
- C. All adhesives, sealants and sealant primers VOC limits shall comply with the South Coast Air Quality Management District (SCAQMD) Rule #1168.
- D. The Contractor, unless clearly stated otherwise, shall supply materials, which meet the Engineer's requirements with respect to the design criteria, thermal conductivity, and standards.
- E. The Contractor shall warrant the materials in accordance with these specifications.
- F. Specified components of the insulation system, including accessories and compounds as listed above, shall have a fire hazard rating not to exceed:
  - 1. Flame spread:25
  - 2. Smoke developed:50
- G. All accessories and materials are to be shipped to the job site in marked, unopened containers as received from the manufacturer.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. All insulation work shall be performed by skilled mechanics regularly engaged in the insulation trade.
- B. The Contractor shall be responsible for coordination and cooperation with the Owner/Engineer and all other trades, so that the installation is performed with minimum interference and conflict. Verify that ductwork has been tested before applying insulation materials.
- C. Final appearance: Neat, workmanlike, and attractive.
- D. Progressive testing: Shall be completed and approved by Engineer or designate before insulation is applied.
- E. Cleaning: Prior to applications of insulation, all surfaces shall be cleaned, dry, and free of dust, dirt, grease, frost, moisture, and other imperfections.
- F. Applications temperature and conditions: Contractor shall assure that all conditions are met for the application of the insulation systems and that the recommended durations are met.
- G. Moisture protection: All insulation shall be protected from moisture and weather during storage, installation, and until Owner/Engineer has taken beneficial occupancy of facility. Applied insulation which has become wet, shall be thoroughly dried before sealing or jacketing is applied.

- H. Protection from damage: Insulation, fabric, jacketing, and all accessories and compounds shall be protected from damage by the Contractor. All damage shall be repaired prior to the final inspections of the project.
- I. Storage: Contractor is responsible for proper material storage at site.
- J. Work starting: No work shall commence until Contractor has received approved submittals for all insulation systems required in the project.
- K. Clearances and accesses: The installation of insulation systems shall, in no way, reduce or interfere with the access and adequate clearances for control mechanisms, dampers, sleeves, columns, walls, vibrations isolation, flexibility components, and other job features. Maintain service clearances to strainers so that drain port is clear of all obstructions.
- L. Finishing: All insulation at handholes, access doors, or other openings and adjacent to flanges and valves shall be neatly finished where exposed to view.
- M. Sleeves: Where insulated pipes or ducts pass through sleeves or openings, the full specified thickness of insulation shall pass through the sleeve or openings.
- N. Vapor barriers: Vapor barriers shall be continuous through sleeves, hangers, etc. If pierced, vapor barriers shall be covered and suitably resealed.

**3.02 OWNER/ENGINEER ACCEPTANCE**

- A. All materials, accessories, compounds, and methods of installation and fabrication are subject to the Owner's/Engineer's inspections and approval at any phase of the work.

**END OF SECTION**

**SECTION 23 3300  
AIR DUCT ACCESSORIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Flexible duct connections.

**1.02 REFERENCE STANDARDS**

- A. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; National Fire Protection Association; 2012.
- B. SMACNA (DCS) - HVAC Duct Construction Standards; 2005.

**1.03 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Protect dampers from damage to operating linkages and blades.

**PART 2 PRODUCTS**

**2.01 FLEXIBLE DUCT CONNECTIONS**

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards and as indicated.
- B. 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.
    - a. Net Fabric Width: Approximately 3 inches wide.
- C. Leaded Vinyl Sheet: Minimum 0.55 inch thick, 0.87 lbs per sq ft, 10 dB attenuation in 10 to 10,000 Hz range.

**PART 3 EXECUTION**

**3.01 PREPARATION**

- A. Verify that electric power is available and of the correct characteristics.

**3.02 INSTALLATION**

Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA HVAC Duct Construction Standards. Refer to Section 23 3100

- A. At fans and motorized equipment associated with ducts, provide flexible duct connections immediately adjacent to the equipment.

**END OF SECTION**

**SECTION 23 3700  
AIR OUTLETS AND INLETS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Registers/grilles.
- B. Roof hoods.
- C. Goosenecks.

**1.02 REFERENCE STANDARDS**

- A. ASHRAE Std 70 - Method of Testing the Performance of Air Outlets and Inlets; American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.; 2006 (R2011).
- B. SMACNA (DCS) - HVAC Duct Construction Standards; 2005.

**1.03 SUBMITTALS**

- A. 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. Test and rate air outlet and inlet performance in accordance with ASHRAE Std 70.

**1.05 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 CEILING SUPPLY REGISTERS/GRILLES**

- A. Type: Streamlined and individually adjustable curved blades to discharge air along face of grille, two-way deflection.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting and gasket.
- C. Construction: Made of aluminum extrusions with factory enamel finish.
- D. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.

**2.02 WALL SUPPLY REGISTERS/GRILLES**

- A. Type: Streamlined and individually adjustable curved blades to discharge air along face of grille with two-way deflection.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting and gasket.
- C. Fabrication: Aluminum extrusions with factory clear lacquer finish.
- D. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.

**2.03 WALL EXHAUST AND RETURN REGISTERS/GRILLES**

- A. Type: Streamlined blades, 3/4 inch minimum depth, 3/4 inch maximum spacing, with spring or other device to set blades, vertical face.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting.
- C. Fabrication: Steel frames and blades, with factory baked enamel finish.
- D. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.

**2.04 WALL GRID CORE EXHAUST AND RETURN REGISTERS/GRILLES**

- A. Type: Fixed grilles of 1/2 x 1/2 x 1/2 inch louvers.

- B. Fabrication: Aluminum with factory clear lacquer finish.
- C. Frame: 1-1/4 inch margin with countersunk screw mounting.

**2.05 ROOF HOODS**

- A. Fabricate air inlet or exhaust hoods in accordance with SMACNA HVAC Duct Construction Standards.

**2.06 GOOSENECKS**

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards of minimum 18 gage galvanized steel.

**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.

**END OF SECTION**

**SECTION 26 0500**  
**BASIC ELECTRICAL MATERIALS AND METHODS**

**PART GENERAL**

**1.01 SUMMARY**

- A. Section includes
  - 1. Electrical Basic Requirements specifically applicable to Division 26, 27, and 28 in addition to the requirements of Division 01 - General Requirements and the General Conditions of the Contract.
  - 2. Grounding electrodes and conductors
  - 3. Bonding methods and materials
  - 4. Conduit and equipment supports
  - 5. Anchors and fasteners
  - 6. Nameplates and wire markers.

**1.02 RELATED SECTIONS**

- A. Work described in this section is related to other work described in Divisions 21, 22, 23, 26, 27, and 28 and may be related to work in other Divisions concerning structure or appearances. Review and become familiar with work required in other Sections in this Division and with work required in the other Divisions. Coordinate with other subcontractor(s) to assure that all issues arising between related Sections are resolved.
- B. Bring to the attention of the Engineer prior to the cutoff date for Addenda any and all discrepancies in related work. Submission of a bid or proposal indicates that all costs for this work and related work are included in the bid for this work or within the bid or proposal for the related work.

**1.03 SYSTEM DESCRIPTION**

- A. Grounding systems use metal frame of building and driven ground rod as grounding electrodes. Grounding system connections use mechanical fasteners.
- B. Select materials, sizes, and types of anchors, fasteners, and supports to carry loads of equipment and raceway, including weight of wire and cable in raceway. Anchor and fasten electrical products to building elements and finishes as follows:
  - 1. Concrete Structural Elements: Expansion anchors and preset inserts.
  - 2. Steel Structural Elements: Beam clamps, spring steel clips, steel ramset fasteners, and welded fasteners.
  - 3. Concrete Surfaces: Self-drilling anchors and expansion anchors.
  - 4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Toggle bolts and hollow wall fasteners.
  - 5. Solid Masonry Walls: Expansion anchors and preset inserts.
  - 6. Sheet Metal: Sheet metal screws.
  - 7. Wood Elements: Wood screws.
- C. Identify Electrical components as follows:
  - 1. Nameplate for each electrical distribution and control equipment enclosure.
  - 2. Wire marker for each conductor at panelboard gutters, pull boxes, and outlet and junction boxes.

**1.04 REGULATORY REQUIREMENTS**

- A. All electrical work shall be performed in strict accordance with the New Mexico Building codes, IBC, ANSI, NEC, NFPA, Model Energy Code, and all applicable provisions of the local authorities having jurisdiction. All materials and labor necessary to comply with rules, regulations, and ordinances shall be provided. Where the drawings and/or specifications indicate material or construction in excess of code requirements or visa-versa, the more stringent application shall govern.

**1.05 SUBMITTALS**

- A. Submit all data as a single package, as the Engineer will commence review only when all data has been received.
- B. Submittal form to identify project, contractor, sub-contractor, supplier, and pertinent contract document references.
- C. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents.
- D. The Contractor shall determine and verify field measurements and field construction criteria for conformance with drawings and specifications and for conflicts with other items of construction, past or present. He shall coordinate each submittal with the requirements of the work and of the contract documents and notify the Engineer in writing, at the time of the submission, of any and all deviations in the submittals from requirements of the work and contract documents.
  - 1. No fabrication or work, which requires submittals, shall begin until submittals are returned with the Engineer's approval.
- E. Identify variations for contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- F. Engineer's review does not constitute acceptance or responsibility for accuracy or dimensions, nor shall it relieve the Contractor from meeting any requirements of the work and contract documents, nor shall it constitute approval for any deviation from the contract documents, unless such deviations are specifically stated as such on the submittal and specifically allowed by the Engineer by specific written notification for each such variation. The Engineer's review will not relieve the Contractor from responsibility for errors or omissions in the shop drawings.
- G. Revise and resubmit submittals as required. Identify all changes made since previous submittal.
- H. The Engineer will review a submittal and, if necessary, a resubmittal of the same item. Subsequent resubmittals shall be accompanied by Contractor's purchase order to Engineer for all Engineer's review time and costs at Engineer's standard hourly billing rates. These reviews will be performed at the convenience of the Engineer.

**1.06 SUBSTITUTIONS**

- A. Prior approval of materials and equipment will not be considered. Contract documents indicate specified equipment and acceptable alternatives. Any other equipment/material proposed must meet or exceed that specified. Equipment/material will be reviewed for compliance during submittal review process per Paragraph 1.5.
- B. Engineer will consider requests for substitutions only at submittal review. Clearly identify substitution.
- C. Document each request with complete data, substantiating compliance of proposed substitution with contract documents.
- D. A request for substitution constitutes a representation that the Contractor:
  - 1. Has investigated the proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other work, which may be required for the work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension which may, subsequently, become apparent.
  - 5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities.

**1.07 PROJECT CONDITIONS**

- A. Existing project conditions indicated on Drawings are based on casual field observation and existing record documents.

- B. Verify field measurements and circuiting arrangements are as shown on Drawings.
- C. Verify removal of existing electric work.
- D. Report discrepancies to Architect/Engineer before disturbing existing installation.

#### **1.08 COORDINATION**

- A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other Sections to determine connection locations and requirements.
- B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other Sections.

#### **1.09 DELIVERY, STORAGE, AND HANDLING**

- A. In accordance with the requirements of Division 1.

### **PART 2 PRODUCTS**

#### **2.01 ROD ELECTRODES**

- A. Manufacturers:
  - 1. Thompson
  - 2. Harger
  - 3. NLP
  - 4. Or equal performance
- B. Product Description: Copper or copper-clad steel, 1/2 inch diameter rod electrode, 10 feet in length.

#### **2.02 NAMEPLATES**

- A. Product Description: Engraved three-layer laminated plastic nameplate, black letters on white background.
- B. Letter Size:
  - 1. 1/8 inch letters for identifying individual equipment and loads.
  - 2. 1/4 inch letters for identifying grouped equipment and loads.

#### **2.03 WIRE MARKERS**

- A. Product Description: Cloth tape, split sleeve, or tubing type wire markers with circuit or control wire number permanently stamped or printed.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Install rod electrodes at locations indicated. Install additional rod electrodes as required to meet Regulatory Requirements.
- C. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing where indicated. Bond steel together.
- D. Provide bonding to meet Regulatory Requirements.
- E. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.
  - 1. Verify that wiring and outlet rough-in work is complete and that utilization equipment is ready for electrical connection, wiring, and energization.
  - 2. Make wiring connections in control panel or in wiring compartment of pre-wired equipment. Provide interconnecting wiring where indicated.
  - 3. Install and connect disconnect switches, controllers, control stations, and control devices as indicated.
  - 4. Make conduit connections to equipment, using flexible conduit. Use liquid-tight flexible conduit in damp or wet locations.

5. Install pre-fabricated cord set where connection with attachment plug is indicated or specified, or use attachment plug with suitable strain-relief clamps.
  6. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection boxes.
- F. Install support systems sized and fastened to accommodate weight of equipment and conduit, including wiring, which they carry.
1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors.
  2. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.
  3. Do not fasten supports to piping, ceiling support wires, ductwork, mechanical equipment, or conduit.
  4. Do not use powder-actuated anchors.
  5. Do not drill structural steel members.
  6. Fabricate supports from structural steel or formed steel members.
  7. Install free-standing electrical equipment on concrete pads.
  8. Install surface-mounted cabinets and panelboards with minimum of four (4) anchors.
  9. Install steel channel supports to stand cabinets 1 inch off wall in wet locations.
  10. Install sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.
- G. Identify electrical distribution and control equipment and loads served to meet regulatory requirements.
1. Degrease and clean surfaces to receive nameplates and tape labels.
  2. Install nameplate parallel to equipment lines. Secure nameplate to equipment front using screws or rivets. Secure nameplate to inside face of recessed pannelboard doors in finished locations.
- H. Install wire markers on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at load connections.
1. Use branch circuit or feeder number to identify power and lighting circuits.
  2. Use control wire number as indicated on schematic and interconnection diagrams to identify control wiring.

### **3.02 SUBSTANTIAL COMPLETION AND FINAL INSPECTION REQUIREMENTS**

- A. Before substantial completion can be granted, the following items must be completed and/or submitted to the Owner/Engineer.
1. Test, adjust, and calibrate all systems.
  2. Provide typed panel directories installed in each panelboard.
  3. Label all electrical equipment properly.
- B. Prior to the final inspection or consideration of final payment, the Contractor shall:
1. Provide copies of permits and/or inspection certificates.
  2. Provide a check-out report.
  3. Provide Operation and Maintenance Manual(s).
  4. Provide Record As-built Drawings.
  5. Return keys to the Owner.
  6. Deliver all spare parts.
  7. Touch up any damaged finishes.

**END OF SECTION**

**SECTION 26 0501  
MINOR ELECTRICAL DEMOLITION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Electrical demolition.

**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 that abandoned wiring and equipment serve only abandoned facilities.
- B. Report discrepancies to Owner before disturbing existing installation.
- C. 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.
- 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. Disconnect and remove abandoned panelboards and distribution equipment.
- F. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- G. Repair adjacent construction and finishes damaged during demolition and extension work.
- H. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.

**END OF SECTION**

**SECTION 26 0510  
WIRING METHODS****PART 1 GENERAL****1.01 SUMMARY**

- A. Section includes:
1. Building wire and cable.
  2. Conduit and tubing
  3. Surface raceway.
  4. Boxes
  5. Wiring devices
  6. Wiring connectors
  7. Connections.

**1.02 RELATED SECTIONS**

- A. See Section 26 0500 - Basic Electrical Materials and Methods.

**1.03 SYSTEM DESCRIPTION**

- A. Wiring Products:
1. Solid conductor for feeders and branch circuits 10 AWG and smaller.
  2. Stranded conductors for control circuits.
  3. Conductor not smaller than 12 AWG for power and lighting circuits.
  4. Conductor not smaller than 16 AWG for control circuits.
  5. 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- B. Wiring Methods:
1. Concealed Dry Interior Locations: Building wire, Type THW THHN/THWN insulation, in raceway. Nonmetallic-sheathed cable. Armored cable. Metal clad cable.
  2. Exposed Dry Interior Locations: Building wire, Type THW THHN/THWN insulation, in raceway. Nonmetallic-sheathed cable. Armored cable. Metal clad cable.
  3. Above Accessible Ceilings: Building wire, Type THW THHN/THWN insulation, in raceway. Nonmetallic-sheathed cable. Armored cable. Metal clad cable.
  4. Wet or Damp Interior Locations: Building wire, Type THW THHN/THWN insulation, in raceway. direct burial cable. Armored cable with jacket. Metal clad cable.
  5. Exterior Locations: Building wire, Type THW THHN/THWN insulation, in raceway. direct burial cable. Armored cable with jacket. Metal clad cable. Service-entrance cable.
  6. Underground Locations: Building wire, Type THW THHN/THWN insulation, in raceway. direct burial cable. Armored cable with jacket. Metal clad cable. Service-entrance cable.
  7. Conductor sizes are based on copper unless indicated as aluminum or "AL". When aluminum conductor is substituted for copper conductor, size to match circuit requirements for conductor ampacity and voltage drop.
  8. Raceway and boxes are located as indicated on Drawings, and at other locations where required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements.
- C. Raceway Products:
1. Underground More than 5 Feet outside Foundation Wall: Use rigid steel conduit and thickwall nonmetallic conduit. Use cast metal boxes or nonmetallic handhole.
  2. Underground Within 5 Feet outside Foundation Wall: Use rigid steel conduit and thickwall nonmetallic conduit. Use cast metal boxes.
  3. In or Under Slab on Grade: Use rigid steel conduit and thickwall nonmetallic conduit. Use cast metal boxes.
  4. Outdoor Locations, Above Grade: Use rigid steel conduit and electrical metallic tubing. Use cast metal outlet, pull, and junction boxes.
  5. In Slab Above Grade: Use rigid steel conduit and thickwall nonmetallic conduit. Use cast sheet metal boxes.

6. Wet and Damp Locations: Use rigid steel conduit, electrical metallic tubing, thickwall nonmetallic conduit and, nonmetallic tubing. Use cast metal or nonmetallic outlet, junction, and pull boxes. Use flush mounting outlet box in finished areas.
7. Concealed Dry Locations: Use rigid steel and aluminum conduit, electrical metallic tubing, thickwall nonmetallic conduit and nonmetallic tubing. Use sheet-metal boxes. Use flush mounting outlet box in finished areas. Use hinged enclosure for large pull boxes.
8. Exposed Dry Locations: Use rigid steel and aluminum conduit, electrical metallic tubing and thickwall nonmetallic conduit. Use sheet-metal boxes. Use flush mounting outlet box in finished areas. Use hinged enclosure for large pull boxes.
9. Minimum Raceway Size: 3/4 inch unless otherwise specified.

#### **1.04 SUBMITTALS**

- A. Procedures for submittals: See Section 26 0500.
- B. Product Data:
  1. Provide wiring device configurations, ratings, dimensions, and color selections.
  2. Provide service fitting configurations, dimensions, finish, and color selections.

#### **1.05 CLOSEOUT SUBMITTALS**

- A. Operations and Maintenance Data: Submit manufacturer's descriptive literature, operating instructions, cleaning procedures, replacements parts list, and maintenance and repair data. Submit recommended maintenance schedule.
- B. Project Record Documents: See Section 26 0500.
- C. Accurately record routing of conduits larger than 2 inches.

#### **1.06 QUALITY ASSURANCE**

- A. Perform work in accordance with NECA Standard of Installation.

#### **1.07 REGULATORY REQUIREMENTS**

- A. Conform to requirement of NFPA 70.
- B. Furnish products listed by Underwriters Laboratories, Inc. or other testing firm acceptable to authority having jurisdiction.

### **PART 2 PRODUCTS**

#### **2.01 CONDUIT AND FITTINGS**

- A. Conduit:
  1. Metal conduit and tubing: Galvanized steel.
  2. Flexible conduit: Steel jacket only.
  3. Liquid-tight flexible conduit: Flexible conduit with PCV jacket.
  4. Plastic conduit and tubing: NEMA TC 2; PVC. Use Schedule 40 conduit.
  5. RGS or IMC, 90 degree bends. PVC is not acceptable.
- B. Conduit fittings:
  1. Metal fittings and conduit bodies: NEMA FB 1.
  2. Plastic fittings and conduit bodies: NEMA TC 3.

#### **2.02 SURFACE METAL RACEWAY**

- A. Manufacturers:
  1. Wiremold
  2. Square D.
  3. Or equal performance.
- B. Product Description: Sheet metal channel with fitted cover, suitable for use as surface metal raceway, with manufacturer's standard enamel finish. Furnish manufacturer's standard accessories; match finish on raceway.

#### **2.03 SURFACE NONMETALLIC RACEWAY**

- A. Manufacturers:

1. Wiremold
  2. Carlon
  3. Or equal performance.
- B. Description: Plastic Fiberglass channel with fitted cover, suitable for use as surface raceway, with manufacturer's standard finish. Furnish manufacturer's standard accessories, finish to match raceway.

#### **2.04 ELECTRICAL BOXES**

- A. Boxes:
1. Sheet Metal: NEMA OS 1; Galvanized steel.
  2. Cast Metal: Aluminum, deep type, gasket cover, threaded hubs.
  3. Non-metallic: NEMA OS 2.

#### **2.05 WIREWAY**

- A. Manufacturers:
1. Square D
  2. Siemens
  3. Hoffman
  4. Or equal performance.
- B. Product Description: General purpose Raintight type wireway with hinged screw cover and manufacturer's standard enamel finish.

#### **2.06 WALL SWITCHES**

- A. Single Pole Switch:
1. Hubbell 1221-I
  2. Pass & Seymour 660 IG
  3. Or equal performance.
- B. Double Pole Switch:
1. Hubbell 1222-I
  2. Pass & Seymour
  3. Or equal performance.
- C. Three-way Switch:
1. Hubbell 1223-I
  2. Pass & Seymour 663 IG
  3. Or equal performance.
- D. Four-way Switch:
1. Hubbell 1224-I
  2. Pass & Seymour 664 IG
  3. Or equal performance.
- E. Color: Selected by Owner/Architect.

#### **2.07 RECEPTACLES**

- A. Single Convenience Receptacle:
1. Leviton 5361-I
  2. Pass & Seymour 26261-I
  3. Or equal performance.
- B. Duplex Convenience Receptacle:
1. Hubbell 5362
  2. Pass & Seymour 885-I
  3. Or equal performance.
- C. GFCI Receptacle:
1. Hubbell GF5362
  2. Pass & Seymour 2091-I

3. Or equal performance.

D. Color: Selected by Owner/Architect.

### 2.08 WALL PLATES

A. Manufacturers: to match device

B. Cover Plate: Nylon or Stainless Steel. Finish selection by architect.

C. Jumbo Cover Plate: Smooth plastic nylon. Smooth stainless steel. Finish selection by architect

D. Weatherproof Cover Plate: Gasketed cast metal Stainless steel plate with hinged threaded and gasketed device cover.

### 2.09 SERVICE FITTINGS

A. Receptacle service fitting:

1. Walker S125R
2. Or equal performance
3. Housing: Zinc die cast material
4. Device plate: Polycarbonate
5. Configuration: One duplex

B. Communication outlet service fitting:

1. Walker S126R
2. Or equal performance
3. Housing: Zinc die cast material
4. Device plate: Polycarbonate
5. Configuration: Telephone/data combination

## PART 3 EXECUTION

### 3.01 EXAMINATION AND PREPARATION

- A. Verify that supporting surfaces are ready to receive work.
- B. Verify that interior of building is physically protected from weather.
- C. Verify that mechanical work, which is likely to injure conductors, has been completed.
- D. Completely and thoroughly swab raceway system before installing conductors.
- E. Electrical boxes are shown on drawings in approximate locations unless dimensioned.
  1. Obtain verification from Architect and/or Owner of floor box locations, and locations of outlets in offices and work areas prior to rough-in.

### 3.02 INSTALLATION

- A. Route raceway and cable to meet Project conditions.
- B. Set wall mounted boxes at elevations to accommodate mounting heights indicated.
- C. Adjust box location up to 10 feet prior to rough-in when required to accommodate intended purpose.
- D. Arrange conduit to maintain headroom and to present neat appearance.
  1. Route exposed raceway parallel and perpendicular to walls and adjacent piping.
  2. Maintain minimum 6 inch clearance to piping and 12 inch clearance to heat surfaces, such as flues, steam pipes, and heating appliances.
  3. Maintain required fire, acoustic, and vapor barrier rating when penetrating walls, floors, and ceilings.
  4. Route conduit through roof openings for piping and ductwork where possible. Otherwise, route through roof jack with pitch pocket.
  5. Group in parallel runs where practical. Use rack constructed of steel channel. Maintain spacing between raceways or derate circuit ampacities to NFPA 70 requirements.
  6. Use conduit hangers and clamps. Do not fasten with wire or perforated pipe straps.
  7. Use conduit bodies to make sharp changes in direction.
  8. Terminate conduit stubs with insulated bushings.

9. Use suitable caps to protect installed raceway against entrance of dirt and moisture.
  10. Provide No. 12 AWG insulated conductor or suitable pull string in empty raceways, except sleeves and nipples.
  11. Install expansion joints where raceway crosses building expansion joints.
  12. Install plastic conduit and tubing in accordance with manufacturer's instructions.
- E. Install auxiliary gutter and wireway in accordance with manufacturer's instructions.
- F. Install electrical boxes as shown on the drawings and as required for splices, taps, wire pulling, equipment connections, and regulatory requirements.
1. Use cast outlet box in exterior locations exposed to weather and wet locations.
  2. Use hinged cover enclosure for interior pull and junction box larger than 12 inches in any dimension.
  3. Locate and install electrical boxes to allow access. Provide access panels if required.
  4. Locate and install electrical boxes to maintain headroom and to present neat mechanical appearance.
  5. Install pull boxes and junction boxes above accessible ceilings or in unfinished areas.
  6. Provide knockout closures for unused openings.
  7. Align wall-mounted outlet boxes for switches, thermostats, and similar devices.
  8. Coordinate mounting heights and locations of outlets above counters, benches, and backsplashes.
  9. Install lighting outlets to locate luminaries as shown on reflected ceiling plan.
- G. Use recessed outlet boxes in finished areas and where indicated.
1. Secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness.
  2. Use stamped steel stud bridges for flush outlets in hollow stud wall and adjustable steel channel fasteners for flush ceiling outlet boxes.
  3. Locate boxes in masonry walls to require cutting corner only. Coordinate masonry cutting to achieve neat openings for boxes.
  4. Do not install boxes back-to-back in walls; install boxes with minimum 24 inches separation.
  5. Do not damage insulation.
- H. Install floor boxes in accordance with manufacturer's instructions.
1. Set boxes level and flush with finish flooring material.
  2. Use cast floor boxes for installations in slab on grade.
- I. Install service fittings in accordance with manufacturer's instructions.
- J. Neatly train and secure wiring inside boxes, equipment, and panel boards.
- K. Use wire-pulling lubricant for pulling 4 AWG and larger wires.
- L. Support cables above accessible ceilings to keep them from resting on ceiling tiles.
- M. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.
- N. Terminate spare conductors with electrical tape.
- O. Install wiring devices in accordance with manufacturer's instructions.
1. Install wall switches 48 inches above floor, "OFF" position down.
  2. Install wall dimmers 48 inches above floor. Derate ganged dimmers as instructed by manufacturer. Do not use common neutral.
  3. Install convenience receptacles 18 inches above floor, 4 inches above counters, backsplash, grounding pole on bottom.
  4. Install specific purpose receptacles at heights shown on drawings.
  5. Install cord and attachment plug caps on equipment. Size cord for connected load and rating of branch circuit overcurrent protection.
- P. Install wall plates flush and level.
1. Install decorative plates on switch, receptacle, and blank outlets in finished areas.

2. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface-mounted outlets.

**END OF SECTION**

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WIRING METHODS

## SECTION 26 0519

### LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Single conductor building wire.
- B. Nonmetallic-sheathed cable.
- C. Wiring connectors.

##### 1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.
- B. Section 26 0501 - Minor Electrical Demolition: Disconnection, removal, and/or extension of existing electrical conductors and cables.
- C. Section 26 0526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.
- D. Section 28 3100 - Fire Detection and Alarm: Fire alarm system conductors and cables.

##### 1.03 REFERENCE STANDARDS

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2012.
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2011.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010.
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2009).
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; National Electrical Contractors Association; 2010.
- F. NECA 121 - Standard for Installing Nonmetallic-Sheathed Cable (Type NM-B) and Underground Feeder and Branch-Circuit Cable (Type UF); National Electrical Contractors Association; 2007.
- G. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; National Electrical Manufacturers Association; 2009 (ANSI/NEMA WC 70/ICEA S-95-658).
- H. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- I. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- J. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.
- K. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.
- L. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.
- M. UL 719 - Nonmetallic-Sheathed Cables; Current Edition, Including All Revisions.

##### 1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

**PART 2 PRODUCTS****2.01 CONDUCTOR AND CABLE APPLICATIONS**

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Nonmetallic-sheathed cable is permitted only as follows:
  - 1. Where not otherwise restricted, may be used:
    - a. For branch circuit wiring in dry locations within one- and two-family dwellings and their attached or detached garages, and their storage buildings.
  - 2. In addition to other applicable restrictions, may not be used:
    - a. Where exposed to view.
    - b. Where exposed to damage.
    - c. For damp, wet, or corrosive locations.

**2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS**

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed and classified by Underwriters Laboratories Inc. as suitable for the purpose indicated.
- 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. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
  - 2. 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.
  - 3. Tinned Copper Conductors: Comply with ASTM B33.
- H. Minimum Conductor Size:
  - 1. Branch Circuits: 12 AWG.
    - a. Exceptions:
      - 1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
- I. 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:
    - a. 240/120 V, 1 Phase, 3 Wire System:
      - 1) Phase A: Black.
      - 2) Phase B: Red.
      - 3) Neutral/Grounded: White.
    - b. Equipment Ground, All Systems: Green.

**2.03 SINGLE CONDUCTOR BUILDING WIRE**

- A. Manufacturers:
  - 1. Copper Building Wire:
    - a. Cerro Wire LLC: [www.cerrowire.com](http://www.cerrowire.com).
    - b. Encore Wire Corporation: [www.encorewire.com](http://www.encorewire.com).

- c. Southwire Company: [www.southwire.com](http://www.southwire.com).
- d. Or equal performance..
- B. Description: Single conductor insulated wire.
- C. Conductor Stranding:
  - 1. Feeders and Branch Circuits:
    - a. Size 10 AWG and Smaller: Solid.
    - b. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation:
  - 1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.

#### **2.04 NONMETALLIC-SHEATHED CABLE**

- A. Manufacturers:
  - 1. Cerro Wire LLC: [www.cerrowire.com](http://www.cerrowire.com).
  - 2. Encore Wire Corporation: [www.encorewire.com](http://www.encorewire.com).
  - 3. Southwire Company: [www.southwire.com](http://www.southwire.com).
  - 4. Or approved equal..
- B. Description: NFPA 70, Type NM multiple-conductor cable listed and labeled as complying with UL 719, Type NM-B.
- C. Conductor Stranding:
  - 1. Size 10 AWG and Smaller: Solid.
  - 2. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.

#### **2.05 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.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as shown on the drawings.
- E. Verify that conditions are satisfactory for installation prior to starting work.

#### **3.02 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Install conductors and cable in a neat and workmanlike manner in accordance with NECA 1.
- C. Install nonmetallic-sheathed cable (Type NM-B) in accordance with NECA 121.
- D. Installation in Raceway:
  - 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
  - 2. Pull all conductors and cables together into raceway at same time.
  - 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
  - 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

- E. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
- G. Terminate cables using suitable fittings.
- H. Install conductors with a minimum of 12 inches of slack at each outlet.
- I. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- J. Make wiring connections using specified wiring connectors.
  - 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
  - 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
  - 3. Do not remove conductor strands to facilitate insertion into connector.
  - 4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
- K. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
- L. Insulate ends of spare conductors using vinyl insulating electrical tape.
- M. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- N. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

**END OF SECTION**

**SECTION 26 0526**  
**GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.
- D. Ground rod electrodes.

**1.02 RELATED REQUIREMENTS**

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

**1.03 REFERENCE STANDARDS**

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; National Electrical Contractors Association; 2010.
- B. NEMA GR 1 - Grounding Rod Electrodes and Grounding Rod Electrode Couplings; National Electrical Manufacturers Association; 2007.
- C. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

**1.04 SUBMITTALS**

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.

**1.05 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.

**PART 2 PRODUCTS**

**2.01 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.

**2.02 GROUNDING AND BONDING COMPONENTS**

- A. General Requirements:
  - 1. Provide products listed, classified, and labeled by Underwriter's Laboratories Inc. (UL) or testing firm acceptable to authority having jurisdiction as suitable for the purpose indicated.
  - 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 0519:
  - 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.
- D. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
  2. Material: Copper-bonded (copper-clad) steel.
  3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Install grounding and bonding system components in a neat and workmanlike manner in accordance with NECA 1.
- C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or provide ground plates.
- D. Make grounding and bonding connections using specified connectors.
1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
  2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
  3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
  4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
  5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- E. Identify grounding and bonding system components in accordance with Section 26 0553.

#### **END OF SECTION**

**SECTION 26 2416  
PANELBOARDS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Power distribution panelboards.
- B. Overcurrent protective devices for panelboards.

**1.02 RELATED REQUIREMENTS**

- A. Section 26 0526 - Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 - Hangers and Supports for Electrical Systems.

**1.03 REFERENCE STANDARDS**

- A. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service; Federal Specification; Revision E, 2013.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; National Electrical Contractors Association; 2010.
- C. NECA 407 - Standard for Installing and Maintaining Panelboards; National Electrical Contractors Association; 2009.
- D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2008.
- E. NEMA PB 1 - Panelboards; National Electrical Manufacturers Association; 2011.
- F. NEMA PB 1.1 - General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less; National Electrical Manufacturers Association; 2007.
- G. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- J. UL 67 - Panelboards; Current Edition, Including All Revisions.
- K. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures; Current Edition, Including All Revisions.
- L. UL 943 - Ground-Fault Circuit-Interrupters; Current Edition, Including All Revisions.
- M. UL 1699 - Arc-Fault Circuit-Interrupters; Current Edition, Including All Revisions.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

**1.05 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Receive, inspect, handle, and store panelboards in accordance with manufacturer's instructions and NECA 407.
- B. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- C. Handle carefully in accordance with manufacturer's written instructions to avoid damage to panelboard internal components, enclosure, and finish.

**PART 2 PRODUCTS****2.01 MANUFACTURERS**

- A. Siemens Industry, Inc: [www.usa.siemens.com](http://www.usa.siemens.com).
- B. Eaton Corporation; Cutler-Hammer Products: [www.eaton.com](http://www.eaton.com).
- C. General Electric Company: [www.geindustrial.com](http://www.geindustrial.com).
- D. Schneider Electric; Square D Products: [www.schneider-electric.us](http://www.schneider-electric.us).

**2.02 ALL PANELBOARDS**

- A. Provide products listed and labeled by Underwriters Laboratories Inc. as suitable for the purpose indicated.
- B. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
  - 1. Altitude: Less than 6,600 feet.
  - 2. Ambient Temperature:
    - a. Panelboards Containing Circuit Breakers: Between 23 degrees F and 104 degrees F.
- C. Short Circuit Current Rating:
  - 1. Provide panelboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.
- D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.
- E. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.
- F. Bussing: Sized in accordance with UL 67 temperature rise requirements.
  - 1. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.
- G. Conductor Terminations: Suitable for use with the conductors to be installed.
- H. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
  - 1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
  - 2. Boxes: Galvanized steel unless otherwise indicated.
    - a. Provide wiring gutters sized to accommodate the conductors to be installed.
  - 3. Fronts:
    - a. Fronts for Surface-Mounted Enclosures: Same dimensions as boxes.
    - b. Fronts for Flush-Mounted Enclosures: Overlap boxes on all sides to conceal rough opening.
- I. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

**2.03 OVERCURRENT PROTECTIVE DEVICES**

- A. Molded Case Circuit Breakers:
  - 1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
  - 2. Interrupting Capacity:
    - a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated.
      - 1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
    - b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
  - 3. Conductor Terminations:
    - a. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
  - 4. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.
  - 5. Provide the following circuit breaker types where indicated:

- a. Ground Fault Circuit Interrupter (GFCI) Circuit Breakers: Listed as complying with UL 943, class A for protection of personnel.
  - b. Arc-Fault Circuit Interrupter (AFCI) Circuit Breakers: Combination type listed as complying with UL 1699.
6. Do not use tandem circuit breakers.
  7. Do not use handle ties in lieu of multi-pole circuit breakers.
  8. Provide multi-pole circuit breakers for multi-wire branch circuits as required by NFPA 70.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that field measurements are as shown on the drawings.
- B. Verify that the ratings and configurations of the panelboards and associated components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive panelboards.
- D. Verify that conditions are satisfactory for installation prior to starting work.

#### **3.02 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Install panelboards securely, in a neat and workmanlike manner in accordance with NECA 1 (general workmanship), NECA 407 (panelboards), and NEMA PB 1.1.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Provide required supports in accordance with Section 26 0529.
- E. Install panelboards plumb.
- F. Install flush-mounted panelboards so that trims fit completely flush to wall with no gaps and rough opening completely covered.
- G. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform.
- H. Provide grounding and bonding in accordance with Section 26 0526.
- I. Install all field-installed branch devices, components, and accessories.
- J. Provide filler plates to cover unused spaces in panelboards.

#### **3.03 CLEANING**

- A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.
- B. Repair scratched or marred exterior surfaces to match original factory finish.

### **END OF SECTION**

**SECTION 26 5150  
GENERAL LIGHTING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section includes:
  - 1. Interior luminaires.
  - 2. Lamps.
  - 3. Accessories.

**1.02 RELATED SECTIONS**

- A. See Section 26 0500 - Basic Electrical Materials and Methods.

**1.03 SUBMITTALS**

- A. Procedures for submittals: See Section 260500.
- B. Product Data: Submit dimensions, ratings, and performance data for each luminaire and lighting unit.

**1.04 CLOSEOUT SUBMITTALS**

- A. Operations and Maintenance Data: Submit manufacturer's descriptive literature, operating instructions, cleaning procedures, replacements parts list, and maintenance and repair data. Submit recommended maintenance schedule.
- B. Project Record Documents: See Section 260500
  - 1. Record actual location of fixtures.

**1.05 REGULATORY REQUIREMENTS**

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed by Underwriters Laboratories, Inc. or other testing firm acceptable to authority having jurisdiction.

**PART 2 PRODUCTS**

**2.01 LUMINAIRES**

- A. Product Description: Complete luminaire assemblies, with features, options, and accessories as indicated on Drawings.
- B. Accessories: Provide for mounting and operation of each luminaire.
- C. Thermal Protection: Provide thermal protection devices to meet NFPA 70 requirements.

**2.02 INCANDESCENT LAMPS**

- A. Manufacturers:
  - 1. General Electric Corp.
  - 2. Philips Electronic North America
  - 3. Sylvania-Osram
  - 4. Or equal performance.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Install suspended luminaires using pendants supported from swivel hangers.
- B. Locate recessed ceiling luminaires as indicated on Drawings.
- C. Install surface mounted ceiling luminaires plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- D. Install lamps in luminaires and lampholders.

**3.02 ADJUSTING AND CLEANING**

- A. Aim and align luminaires and lampholders as indicated or directed.

- B. Clean lenses and diffusers at completion of work.
- C. Clean paint splatters, dirt, and debris from installed luminaires.
- D. Touch up luminaire and pole finish at completion of work.
- E. Relamp luminaires, lighting units, and exit signs with failed lamps at Substantial Completion.

**END OF SECTION**

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GENERAL LIGHTING